

A DISCOURSE STRUCTURAL APPROACH TO ANAPHORA IN CHINESE

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ABSTRACT

This study presents the results of a detailed linguistic analysis of the distribution of anaphora in a corpus of 44 written Chinese expository texts. A central assumption of this study is that discourse is hierarchically structured and anaphora in discourse is determined to a great extent by the hierarchical structure of a discourse. The investigation uses the framework of Rhetorical Predicate Analysis developed from the rhetorical predicate theory and AI theory on discourse representation and discourse interpretation.

The results of the investigation are the various discourse structural patterns and the conditions on the use of anaphora in these patterns. These discourse structural patterns include the Active pattern, Controlling pattern, Closed pattern, Return Pop pattern and Rhetorical Unit pattern. It is found that the choice of different anaphora forms is constrained by the type of discourse structural patterns they occur in as well as by the topic status of their referents in the discourse. Another important finding is that although the structural organisation of a discourse plays a major role in patterning anaphora, there are uses of anaphora that are exceptional to it. A set of non-structural factors which fulfil other functional ends are thus identified.

The findings of the study suggest that the distribution of anaphora in discourse is determined by the three constraints: Discourse Structural Constraint, Discourse Topical Constraint and Discourse Functional Constraint. The discourse structural constraint constrains the use of anaphora across different discourse structural patterns, the discourse topical constraint constrains the selection of different types of anaphora within a particular discourse structural pattern while the discourse functional constraint accounts for the "deviant/marked" uses of anaphora.

With these three discourse constraints, the present study offers a principled account of anaphora in discourse and contributes to the understanding of the nature or mechanism of anaphora in discourse.

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DECLARATION

A few of the ideas in this study and earlier versions of Sections 3.3.1.1 and 4.3.3.1 and Chapter 7 have appeared in print in the following publications:

Wu, G.-B. 1992. Discourse Anaphora in Chinese: A Rhetorical Predicate Account. *York Papers in Linguistics* 16.

Wu, G.-B. 1993. Discourse Units and Anaphora in Chinese. *Leeds East Asia Papers*, No. 15, ISSN 0965-8548.

KEY TO ABBREVIATIONS USED

A	argument
A'	non-argument
BA	a preposition in Chinese used to introduce a fronted direct object in a BA sentence
BEI	a preposition in Chinese used to introduce the agent of an action in a BEI sentence
e	empty category
ECP	Empty Category Principle
IP	INFL Phrase
NP	Noun Phrase
PP	Prepositional Phrase
VP	Verb Phrase

CHAPTER 1 INTRODUCTION

1.1 Aims and hypotheses

This thesis is a study of the distribution and the nature of the anaphoric expressions, i.e. zero anaphora, pronominal anaphora and nominal anaphora, in written Chinese expository texts. Dealing with anaphoric expressions can be seen as falling into two complementary tasks: (a) identifying what a text potentially makes available for anaphoric reference and (b) constraining the candidate set of a given anaphor down to one possible choice.¹ The former task may be called anaphor generation and the latter anaphor resolution. Viewed from this perspective, the present study is mainly concerned with the problem of identifying what the text makes available for anaphoric reference and how it does so.

A basic assumption made in this study is that discourse is hierarchically structured, and therefore that any proper treatment of a discourse phenomenon (in the present case, anaphora) must seek an understanding of that phenomenon in terms of the hierarchical structure of the discourse.² Discourses may be produced and heard/read in a linear order, but they are designed and understood hierarchically, and this fact has consequences for the choice of anaphoric forms. Thus, a major claim made in this thesis is that anaphora in discourse is determined, to a great extent, by the structural organisation of the discourse.

Another, somewhat counterbalancing, claim made is that although the hierarchical structure of discourse plays a crucial role here, such a structural approach cannot, however, account for all instances of anaphora. Certain patterns of anaphora "deviate" from what one would have expected using predictions based on the structure of the discourse. As these patterns of anaphora are used to fulfil other functional goals, so it is important that they are brought up in this investigation.

¹Webber (1979) makes a similar observation of the two tasks.

²This assumption is shared, explicitly or implicitly, in works on anaphora within the discourse-structural framework, e.g. Reichman (1981) and Fox (1984).

Since, to my knowledge, no complete accounts of anaphora in Chinese from a discourse structural point of view have been ever offered, it is hoped that this investigation will be able to provide insights into a largely-neglected phenomenon.

1.2 Scope of the study

The present study attempts to provide a complete account of the distribution of a subset of anaphora -- reference to third-person humans -- in expository texts. I have limited the scope of this research to third-person humans so as to examine anaphora in its prototypical use: tracking a participant through a discourse. In other words, this study is concerned with definite anaphoric expressions, that is, definite zero anaphora, definite pronominal anaphora and definite nominal anaphora. Zero anaphora may be seen as an unrealised type of anaphora that occurs in syntactic positions occupied by an NP. It can occur in subject and object position but not in a prepositional object position.³ The following example illustrates the use of zero anaphora in subject position:⁴

- (1) 1. 1959-nian, Li Guixian zai Zhongguo Keji Daxue xuexi.
 in 1959 at China technology university study
 "In 1959 Li Guixian studied at China University of Technology"
2. 1960-nian hou, 0 zai Sulian Mosike Menshi Daxue gongdu
 after 1960 at USSR Moscow Menshi University study
 dianzhenkong huaxue zhuanye.
 electro-vacuum chemistry faculty
 "After 1960 he studied at Moscow Menshi University in USSR,
 specialising in electro-vacuum chemistry"

The definite zero anaphor represented by "0" in the second sentence refers to the just-mentioned NP *Li Guixian* who studied at Chinese University of Technology in 1959.

Now consider (2) in which a definite pronominal anaphor occurs:

- (2) 1. Jijie gongchengshi Zhou Jiahua jintian zai qijie renda
 mechanic engineer today at 7th people's congress
 yici huiyi shang bei renming wei xinzujian de jijie
 1st session be-appointed as newly-established mechanic
 dianzi gongye bu buzhang.
 electronics industrial department minister

³Henry (1987) suggests that the prepositional object position does not permit an unrealised pronoun (or zero anaphor) because this position is Case-marked.

⁴An occurrence of zero anaphora is represented by "0" in the examples in the thesis.

"Zhou Jiahua, a former mechanics engineer, has been appointed today minister of the newly-established Machinery & Electronics Industrial Department, at the first session of the seventh People's Congress"

2. Ta tongshi ye shi Guowuyuan de jiuming guowu-weiyuan zhiyi.
 he meanwhile also is State Council nine Councillors one-of
 "He is also one of the nine Councillors of the State Council"

Ta "he" in the second sentence is a definite pronominal anaphor which refers to the just-mentioned NP *Zhou Jiahua*, the former mechanic engineer, who was appointed minister of the Department.

The following is an instance of definite nominal anaphora:

- (3) 1. Women dou hen xihuan wuli xi de xizhuren Lao Wang Tongzhi.
 we all very like Physics Dept. chairman Old Wang comrade
 "We all like Comrade Old Wang, the head of the Physics Department, very much"
2. Lao Wang yiqian shi yisuo zhongxue de xiaozhang.
 before is a secondary-school headteacher
 "Old Wang used to be a headteacher of a secondary school"

Lao Wang in the second sentence refers to the just-mentioned NP *Comrade Old Wang* who was liked by all of us, and thus is a definite nominal anaphor.

Since I am interested here in the relationships between higher-level discourse considerations (e.g. relationships between parts of texts) and anaphora, the patterns of anaphora I have examined represent what some have called "discourse anaphora", in that the instances examined here are not controlled syntactically (as illustrated in (1-3) above where the anaphor and the antecedent occurred in separate sentences). Thus, I have not examined anaphora of the kind as exemplified in (4) and (5) where *tade* "his" in (4) and *ta* "he" in (5) are coindexed with their respective antecedent *Zhangsan*.

- (4) Zhangsan_i bu xihuan tade_i tongshi
 not like his colleague
 "Zhangsan didn't like his colleague(s)"
- (5) Zhangsan_i shuo ta_i bu xihuan Lisi
 say he not like
 "Zhangsan said that he didn't like Lisi"

Anaphora occurring in what are traditionally called complex sentences containing adverbial sentences, which do show syntactic properties (see Reinhart, 1983), was however included in the analysis, because the structures of these complex sentences

parallel some of the discourse structures proposed in this thesis. This is illustrated in (6)

- (6) 1. Yinwei Zhangsan_i bing le,
 because ill
 "Because Zhangsan was ill"
2. ta_i mei canjia huiyi.
 he not attend meeting
 "he did not attend the meeting"

I have adopted a discourse structural approach here, and at the same time attempted, where appropriate, to compare this approach with syntactic approaches. Having said this, it should be noted that the majority of the instances of anaphora analysed in the thesis are clearly of an inter-sentential type.

1.3 The data and methodology

The analysis in this study centres primarily on a particular type of discourse -- newspaper articles. These articles, which are basically of an expository genre, present arguments, problems and issues of a factual nature which sometimes require solutions, but at other times are descriptive in nature, ranging in style over being journalistic vs. pseudo-literary, formal vs. informal, informational vs. emotional.

There was a selection of a total of 44 articles, taken in full from the People's Daily (overseas edition), one of the main official newspapers in China. The criteria for their selection were mainly that they must be multi-paragraph texts containing multiple references to at least one person. Most of the articles chosen contain a major participant with several minor participants. Since this research focused on third-person humans, articles centring primarily on first/second-person humans or on nonhumans (animate or inanimate) were excluded from consideration.

The original texts are all in Chinese characters and organised in paragraphs (indented at the beginning). These articles are all marked with the conventionalised punctuation system. These features of paragraphing and punctuation were very useful to the analysis in the thesis, because paragraph boundary and sentence boundary were relevant notions in this study, though they were approached in a different way. All the examples used in the analysis are presented in Pinyin, the official romanised transcription system, and the original punctuations in the examples are retained.

The average length of the articles is about 1000 characters organised in 6 to 8 orthographic paragraphs, the longest article being 2916 characters in 11 paragraphs and the shortest being 141 characters in 3 paragraphs. The list of these articles is as follows:

1. Deng Xiaoping wei Xia Lixun ji'nianbei tici (People's Daily, 8/1/1988, page 4)
2. Nongjianü shi-nian limi weijin yanxing ziru (People's Daily, 8/1/1988, page 4)
3. Fenjin xiangshang de xuanlù -- Xuke erhu duzou yinyuehui ceji
(People's Daily, 21/1/1988, page 7)
4. Nongmin Lin Kexiu ziban yeyu xunlianguan (People's Daily, 22/1/1988, page 6)
5. Wei xiangzi xingwang jinli -- Ji Xiangang yongzhen tongxianghui lishizhang
Yan Binsheng (People's Daily, 23/1/1988, page 5)
6. Weiqi mingrenzhan zaidu baochu lengmen (People's Daily, 28/1/1988, page 6)
7. Zhuming qiyejia Li Guangqian (People's Daily, 1/2/1988, page 5)
8. Meiji nüqiangren yu Pan Hong xianghui (People's Daily, 3/2/1989, page 7)
9. Kangri "Wengao" shi shui qicao de (People's Daily, 11/2/1988, page 7)
10. Xueguan Zhong-Xi zhixinshi -- Fang xinlixue dashi Gao Juefu xiansheng
(People's Daily, 26/2/1988, page 2)
11. Zixinde Li Xiaolong (People's Daily, 1/3/1988, page 7)
12. He renmin yiqi ji'nian Zhou Enlai tongzhi (People's Daily, 1/3/1988, page 2)
13. Kou Zhenhai congying qianhou (People's Daily, 8/3/1988, page 7)
14. Si Maqian bixia de san-nüxing (People's Daily, 8/3/1988, page 2)
15. Deng Xiaoping: Ji gemingjia zhengzhijia junshijia waijiaojia yu yishen
(People's Daily, 9/4/1988, page 3)
16. Wang Zhen: Xinren guojia fuzhuxi (People's Daily, 9/4/1988, page 3)
17. Wan Li: Xinren renda changweihui weiyuanzhang
(People's Daily, 9/4/1988, page 3)
18. Zhao Ziyang: Guojia zhongyang junwei fuzhuxi
(People's Daily, 11/4/1988, page 3)
19. Fuzongli Yao Yilin (People's Daily, 13/4/1988, page 3)

20. Fuzongli Tian Jiyun (People's Daily, 13/4/1988, page 3)
21. Fuzongli Wu Xueqian (People's Daily, 13/4/1988, page 3)
22. Guowuweiyuan Li Tieying (People's Daily, 13/4/1988, page 3)
23. Guowuweiyuan Qin Jiwei (People's Daily, 13/4/1988, page 3)
24. Guowuweiyuan Wang Bingqian (People's Daily, 13/4/1988, page 3)
25. Guowuweiyuan Song Jian (People's Daily, 13/4/1988, page 3)
26. Guowuweiyuan Wang Fang (People's Daily, 13/4/1988, page 3)
27. Guowuweiyuan Zhou Jiahua (People's Daily, 13/4/1988, page 3)
28. Guowuweiyuan Li Guixian (People's Daily, 13/4/1988, page 3)
29. Guowuweiyuan Chen Xitong (People's Daily, 13/4/1988, page 3)
30. Guowuweiyuan Chen Junsheng (People's Daily, 13/4/1988, page 3)
31. Wu Tianming yu Xiying zhi jueqi (1) (People's Daily, 22/4/1988, page 7)
32. Wu Tianming yu Xiying zhi jueqi (2) (People's Daily, 23/4/1988, page 7)
33. Tansuo zhi-ai xin tujing -- Ji Beijing zhongyi yiyuan zhongliu-ke yishi Yan Zhiying (People's Daily, 23/4/1988, page 4)
34. Ta feixiang Taipinyang -- Ji Wuxi nongmin qiyejia Xu Fumin (People's Daily, 3/5/1988, page 3)
35. Zaoqi Aozhou qiaoling -- Mei Guangda (People's Daily, 7/5/1988, page 5)
36. Weiren, shenshi, wushi -- Ji Xianggang zhengxie weiyuan Wu Duotai (People's Daily, 10/5/1988, page 5)
37. Huang Yiyun yu Ma Sicong de youyi (People's Daily, 18/5/1988, page 7)
38. Shuoshuo Hou Yuehua (People's Daily, 18/1/1993, page 7)
39. Xie Jin Taiwan xing (People's Daily, 27/1/1993, page 7)
40. Tuoxing zhiren (People's Daily, 19/2/1993, page 7)
41. Lüye dui gen de qingyi -- Ji Meiji huaren Gu Yanshi xiansheng (People's Daily, 23/2/1993, page 5)
42. Meiguo nüqiangren -- Diyi furen Xilali (People's Daily, 20/2/1994, page 5)

43. Ma Xiaochun weimian chenggong (People's Daily, 24/2/1993, page 6)
44. Xiri "sida-tianwang" suoguo-jinchun, Zhao Jianhua libu-congxin gaida hunshuang (People's Daily, 26/2/1993, page 6)

These articles are referred to in the thesis by their number in the above list, preceded by the capital letter D(ata), placed in square brackets. For example, the article heading the list "Deng Xiaoping wei Xia Lixun ji'nianbei tici (People's Daily, 8/1/1988, page 4)" is referred to as [D1] in the thesis.

1.4 Organisation of the thesis

The thesis is organised as follows. In Chapter 2 I will present a review of the major theories of anaphora in discourse, both in English and in Chinese. In Chapter 3 I will propose a theoretical framework, the Rhetorical Predicate Analysis, for the enquiry undertaken in the thesis. The application of this theoretical apparatus to the analysis of the Chinese data will be presented in Chapters 4-7. In Chapters 4 and 5 I will consider the distribution and nature of anaphora in the discourse structures represented by Active and Controlling patterns respectively. In Chapter 6 I will examine the effect on anaphora of the discourse structures represented by Return Pop and Closed patterns. The relationship between rhetorical units and the use of anaphora will be considered in Chapter 7. I will, in Chapter 8, discuss the role of non-structural factors in anaphor generation/resolution. Chapter 9 will be devoted to the comparison of the approach adopted for this study with other approaches to anaphora in discourse through the analysis of crucial examples. Finally in Chapter 10 I will present a summary of the findings of the study.

CHAPTER 2 THE PROBLEM OF ANAPHORA RESOLUTION

2.1 Introduction

Within the last dozen years or so, work on inter-sentential or discourse anaphora in English has blossomed in scope and depth. What was once a completely neglected area of linguistic inquiry has become a source of interest to researchers in linguistics and cognitive psychology as well as artificial intelligence. Discourse anaphora in Chinese, however, remains, comparatively speaking, a little exploited piece of land, and whatever work has been done in this respect in Chinese draws substantially on similar work in English. The present chapter presents a survey of the highlights of the recent studies concerning discourse anaphora in English and in Chinese. In the section on English (2.2), I examine some linguistic approaches to anaphora under the heading of linear approaches, and paragraph-structure approaches, AI approaches and rhetorical predicate approaches under the heading of discourse structural approaches. In the section on Chinese (2.3), I first consider discourse-pragmatic approaches and then consider discourse-structural approaches.

2.2 Approaches to discourse anaphora in English

There have been, broadly, two basic types of approaches to anaphora in discourse: linear approaches and discourse structural approaches. Linear approaches (e.g. Givon, 1983, Clancy, 1980, among others) attempt to account for anaphora in terms of such discourse factors as referential distance between two mentions of a referent and possible interference from other referents in the discourse, whereas discourse structural approaches (e.g. Hinds, 1977, 1979, Reichman, 1981, 1985, and Fox, 1984, 1987, among others) seek to account for anaphora from the perspective of the structural organisation of the discourse. In Section 2.2.1, I examine linear approaches, and in Section 2.2.2 discourse structural approaches.

2.2.1 Linear approaches to anaphora

Givon (1983) deals with anaphora in order to understand the linguistic codings of topics/participants in discourse. He proposes the CONTINUITY PRINCIPLE, in which it is claimed that "the more disruptive, surprising, discontinuous or hard to process a topic is, the more coding material must be assigned to it" (p. 18). According to Givon, the factors that influence the continuity of topics include:

1. Distance to the last mention. "If a topic is definite and returns to the register after a long gap of absence, it is still difficult to process. The shorter is the gap of absence, the easier is the topic identification; so that a topic that was there in the preceding clause is by definition easiest to identify and file correctly" (p. 11)
2. Potential interference from other topics. "If no other topics are present in the immediately preceding discourse environment... topic identification is easiest. The more other topics are present in the immediate register, the more difficult is the task of correct identification..." (p. 11)
3. Availability of thematic information. "Thematic information available from the preceding discourse could help in topic identification especially when other topics in the register may potentially interfere. Such information establishes specific probabilities... as to the topic identification within a particular clause and in a particular role. It also establishes, for particular discourses, some ranking of importance of the various topics..." (p. 11-12)

The first two factors, distance and interference, are the major foci of the studies while the third factor, thematic information, is merely hinted at in the introduction and subsequently neglected. Givon claims that the role of the less obvious factors affecting the grammar of topic identification, namely those of semantic and thematic information, is less dominant, whereas the role of the more easily measurable factors, namely distance and interference, is in some sense decisive. Thus although Givon makes explicit mention of something that sounds slightly structural and hierarchical (i.e. the thematic information of a discourse), the end result is a model that views anaphora as a function of distance and a rather vague notion of interference.

This is evident in the discourse measures that Givon adopts to assess the topic continuity of referents. These are REFERENTIAL DISTANCE, POTENTIAL INTERFERENCE and PERSISTENCE. The first two measurements, referential distance and potential interference,

which correlate to the first two factors influencing topic continuity noted above, involve the preceding discourse context and thus are associated with the hearer's task of identifying referents. The third measure, persistence, reflects the topic's importance in the discourse, and measures the speaker's topical intent. Givon suggests that the linguistic coding of various topics correlates with the exact position of those topics in the discourse in terms of referential distance, potential interference and persistence. In an impressive collection of data from several unrelated languages,¹ pronouns are shown to be used when the distance to the last mention of the referent is small and there are no interfering referents, while nouns are shown to be used when that distance is greater and/or there are interfering referents.

Although the specific quantitative predictions made are clearly borne out by the cross-linguistic counts, the model they presuppose is open to question. As revealed by the discourse measurements, the degree of a referent's continuity with the preceding discourse is measured in clauses to the most recent appearance in the discourse. This is a clear indication that continuity derives from and thus is governed by clauses as syntactic units, rather than by their textual function. It also suggests that all clauses are equal in their contribution to the measure of continuity. Consequently, whether a clause serves as an assertion or just as a piece of evidence for an assertion is irrelevant to the count; all clauses have the value 1 for the purposes of continuity measurement. The consequence of such a model is that discourse is seen as composed of an undifferentiated string of clauses that follow one another in time or space but do not form larger units which could perform communicative functions in relation to one another.

Moreover, the roughness of the predictions about anaphoric distributions also needs to be recognised. For example, the model is unable to explain the occurrence of a pronoun at places where there are other possible antecedents and/or a long referential distance, or the occurrence of a noun at places where referential distance and potential interference are both minimal, as evidenced in the following passages (taken from Fox, 1984:225/231).

¹Chen (1986), which deals with anaphora in Chinese, could be seen as further evidence for the kind of approach adopted in Givon (1983). I will discuss Chen's work shortly.

- (1) 1. We see many *Vanessas* in the portraits that remain of her, especially those painted by Duncan Grant.
 2. The young face was smooth, with firmly lined brows and liquid grey-green eyes.
 3. She had sensuous lips.
 4. She rarely used make-up.
 5. Sometimes *Virginia* speaks of "her passionate mouth".
 6. Her voice was beautifully modulated.
- (2) 1. *Virginia's* characterisations were a matter of moods.
 2. Sometimes Vanessa was "marmoreally chaste"...
 3. Vanessa has "a genius for stating unpleasant truth in her matter of fact voice".

In the first passage the anaphor in (6) is encoded with a pronoun *her* despite the occurrence of another (same-gender) NP *Virginia* as subject in (5), whereas in the second passage the anaphor in (3) takes the form of a noun *Vanessa* although the sentence containing the anaphor follows immediately the sentence containing the antecedent and no other competing NPs are present between the two mentions of the NP. These two examples clearly go against Givon's distance-based predictions and it is not clear how they are to be tackled within his model.

Below is another example in which the references to *Albert* are all realised by full NPs despite the fact that neither distance nor interference is relevant, and that if all the nominal references were replaced by pronouns no semantic ambiguity would arise whatever (this example is taken from Reichman, 1981:126):

- (3) 1. I put everything, my feeling, in a total intellectual basis.
 2. I said that - It's funny 'cause, by the way,
 3. when I was thinking about Albert, I was thinking about
 4. how I would think about Albert, years from now. You
 5. know look back upon it and what context Albert would
 6. fit in my life.
 7. And my gut phrase was, and I said, "And I decided that
 8. history will really be kind to Albert."

An instance of long-distance pronominalisation is reported in Grosz (1977:23) in which a pronoun was used to refer to an NP even though that NP had not been mentioned for over 30 minutes:

- (4) E: Good morning. I would like for you to reassemble the compressor.
 ...
 E: I suggest you begin by attaching the pump to the platform.
 ... (other sub-tasks)
 E: Good. All that remains then is to attach the belt housing cover to the belt housing frame.
 A: All right. I assume the hole in the housing cover opens to the pump pulley rather than to the motor pulley.
 E: Yes, that is correct. The pump pulley also acts as a fan to cool the pump.

A: Fine. Thank you.

A: All right, the belt housing cover is on and tightened down.
(30 minutes + 60 utterances after beginning)

E: Fine. Now let's see if it works.

Here a pronominal *it* was used in the last utterance to refer to *the air compressor* last mentioned over a half-hour before, during which several other potential referents were mentioned.

Examples like (1)-(4) show that pronouns are not necessarily used if the distance to the last mention of the referent is small and no other referents are present, and that nouns are not necessarily used if the reverse holds. They indicate that distance-directed approaches like Givon (1983) with the linear view of texts may only reflect superficial features of discourse and thus do not offer an adequate account for discourse anaphora.

Clancy (1980) investigates the referential choices in spoken English and Japanese narratives. This study starts with the two linear constraints of time/distance and interference, that is, the amount of time that has elapsed since the last mention of a referent and the number of other referents mentioned in that interval, in an attempt to account for the distribution of different referential forms. Clancy found that in her English and Japanese data, at least 97% of all inexplicit references (pronominals and zero pronominals) occurred with no more than one intervening referent and over 80% of all inexplicit references occurred after intervals of two or fewer clauses. Her study thus suggests that both time and interference are important factors for referential choices in English and Japanese, a result that seems to be consistent with Givon (1983).

But these figures may not give a whole picture because, to take her English data for example, while 80% of the inexplicit references occurred after intervals of one or two clauses, 24% of all nominal anaphors occurred in the clause immediately following the last mention of the referent and 33 percent occurred after a gap of two to four clauses. Furthermore, 23% of all nominal references in English occurred with no intervening mention of any other referents, and 54 percent follow the mention of only one referent. What is responsible for the selection of the "unusual" forms such as noted above? Clancy suggests that a major reason is the occurrence of EPISODE BOUNDARIES.

Episodes, according to Clancy, "tend to begin with hesitations of longer than two seconds and are unified in terms of character configurations, spacial location, and coherent temporal and event sequences" (1980:130). Clancy finds that full NPs usually occur with episode boundaries even though there are very short intervals when there is not question of interference, as in the following passage (Clancy's example 45, p.171):

- (5) 1. ...And--..they see what's happened to the l..little boy,
and they come over sort of very calmly
...and--..help him get on his feet,
pick up his pears for him,
5. ...and-- put them back in the basket
...and..brush him off,
..and everything,
...and-- um--...tsk then they..um--...put him...tsk
um..back on his bike,
10. and he goes off.
...The little boy..that was on the bike had been wearing a hat.
...And--...in the f...in passing the little girl,
it had..fallen off.

In this example, the speaker is describing the events in the "helping" episode, and at line 11, stops to fill in the necessary background information before proceeding to the events of the "exchange" episode, in which the bicycle boy will be given his hat by the threesome and will give them three pears in return. The occurrence of a full NP at line 11 is thus controlled by the episode boundary at that line.

On the basis of examples like (5) above Clancy made the following observation:

It is, however, apparent that in addition to the factors of time and interference, which may represent fundamental cognitive limitations, referential choices are sensitive to various "optional" discourse factors, such as episode boundaries, world shifts, and digressions. Since these factors were often the sole reason for unusual referential choices, it seems likely that the marking of discourse boundaries is one of the important factors operating in conjunction with the forces of time and interference to guide speakers' choice in the ordinary cases as well. (1980:178)

The "unusual" referential choices that are related to the marking of discourse boundaries are shown to be associated with the use of full NPs, as in (5) above.² Here, we can see a parallel between Clancy's association of discourse boundaries (e.g. episode boundaries) with the occurrence of nominal anaphora and Hinds' association of paragraph/segment

²Clancy provided figures showing the distribution of coreferential forms in her corpus with respect to time and interference, but for reasons not given, she did not give figures of coreferential forms in relation to episode boundaries. Thus we are not clear of the extent to which her proposal holds.

boundaries with the occurrence of nominal anaphora (to be discussed shortly).

Thus we see that Clancy started with a linear approach to anaphora and ended up with a sort of synthesis of linear and hierarchical approaches. Although the notion of discourse structure is not fully integrated into the account, Clancy explicitly brings out the association between discourse units (e.g. episode boundaries) and nominal reference. Thus, though it does not provide a full account of the relationship between discourse structure and anaphoric patterning, Clancy's work shows a very strong attempt to move beyond treating anaphora as responsive only to linear notions of time and interference.

In summary, we have seen that although linear notions of distance and interference on which Givon (1983) and Clancy (1980) are based do influence the distribution of anaphora in discourse to some extent, they cannot account for all referential choices. For instance, the figures provided by Clancy showed that in her English corpus, 24% of the nominal anaphors had their referents mentioned in the immediately preceding clause (no referential gap) and 23% of the nominal anaphors occurred with no intervening mention of other referents (no interference). Counter-evidence like this suggests that linear notions like distance/time and interference may not be crucial (and certainly are not adequate) in anaphor production/resolution. Clancy recognised this and argued for the occurrence of discourse units such as episode boundaries and their effect on the use of anaphora. But, although Clancy's recognition of the effect of discourse units on anaphora moves beyond treating anaphora as responsive only to linear factors of distance/time and interference, her approach is still some distance away from offering a coherent discourse structural account and thus only represents a first attempt in the right direction. Can a coherent discourse structural approach work better for anaphora? In the next section, I will present an overview of several studies that seek to account for the distribution of anaphora from the perspective of discourse structure. These include Hinds (1977), Grosz (1977), Reichman (1981), Sidner (1983) and Fox (1984).

2.2.2 Discourse structural approaches to anaphora

In this section I will consider, under the umbrella of discourse structural approaches, three types of approaches differentiated by their way of representing discourse structure.

These are paragraph structure approaches (Hinds, 1977), AI approaches (Grosz, 1977, Reichman, 1981 and Sidner, 1983) and RP (rhetorical predicate) approaches (Fox, 1984).

2.2.2.1 Paragraph structure approaches

Since linear approaches to anaphora based on notions of distance and interference leave many instances of anaphora unaccounted for, researchers on anaphora began to wonder whether those linear notions are really necessary for accounting for anaphoric choice in discourse. Among these researchers is Hinds (1977) who attempts to address discourse anaphora in English expository texts in terms of PARAGRAPH STRUCTURE.³

... I have shown that paragraph structure influences the appearance or non-appearance of pronouns. Paragraphs are made up of segments which are closely connected strings of sentences which develop the paragraph topic. Within a segment there will be a single peak sentence which contains the most important information in that segment. Other sentences in the same segment are semantically subordinate to the peak. Full noun phrases occur in peak sentences while pronouns occur in non-peak sentences. (1977:95)

It is clear from this passage that Hinds recognises a kind of structuring that Givon does not: Hinds' notion of PEAK sentence moves in the direction of hierarchical, textured, structure. His hierarchical view of the discourse is manifested not only in his recognition of the different levels of structure within a paragraph but also in his explicit claims about paragraph structure and direct correlations with anaphora. The way Hinds' analysis works is illustrated in (6) (Hinds' original example, p. 78):

- (6) a. Sentato Iwata, a celebrated artist and 1961 winner of the Medal of Honor with Purple Ribbon known for the sensuous illustrations of slim, kimono-clad women he did for periodicals, died of cerebral haemorrhage in Tokyo Tuesday.
 b. He was 73.
 c. He complained of a severe headache and nausea at about 8 pm. Monday while working on magazine illustrations at his house in Shibuya Ward, Tokyo, and soon fell unconscious.
 d. He was taken to the Keio University Hospital in Shinanomachi, Tokyo, where he died at 10.35 am. Tuesday.

³In his (1979) work, Hinds applies the notion of paragraph structure to the study of other types of discourse, e.g. conversational, procedural, and comes up with the conclusion that discourses of all types are organised in terms of paragraphs which are themselves optionally composed of successively smaller units of uniform orientation (e.g. segments in expository texts) larger than the sentence. However, in terms of paragraph structure and its correlations with anaphora, Hinds does no more than merely recapitulate his (1977) observations concerning expository discourse and therefore we will here focus on his (1977) work.

- e. Born as the son of a printer in Asakusa, Tokyo, in 1901, Iwata became one of Japan's most popular illustrators when, at 25, he worked for the famous novel 'Ako Roshi' (The Tale of 47 Ronin) written by the late Jiro Osaragi.
- f. In 1955, Iwata won the Kan Kikuchi Prize, an award for those having done outstanding work in art and journalism.

According to Hinds, this paragraph consists of three segments. The first segment, sentences (a-d), is the introductory segment which addresses the main theme of the paragraph/article and is thus the most important segment. The second segment, sentence (e), departs from a comment about Iwata's death by noting one of the major achievements of his life and constitutes a highlight segment. The third and last segment of this paragraph is sentence (f), which constitutes another highlight segment presenting a second major achievement in Iwata's life. We now consider the peak sentence within each of these segments. According to Hinds, each segment consists of at least one sentence, the peak, and an optional number of non-peak sentences. The peak sentence of a segment is defined as one that is of particular importance and contains the most important information in that segment, and the non-peak sentences build around the peak sentence either setting the stage or elaborating it. Thus, in the first segment, the initial sentence qualifies as the peak since it contains a statement that addresses the major purpose of the article, the announcement of Iwata's death, and the other sentences of the segment serve as elaborations on the peak. Sentences (e, f) are the peak sentence of their own segments since they are the only sentence within their own segments presenting achievements of Iwata's life. Just as Hinds' analysis predicts, full NPs are used in the peak sentences (a, e, f) while pronouns are used in the non-peak sentences (b, c, d).

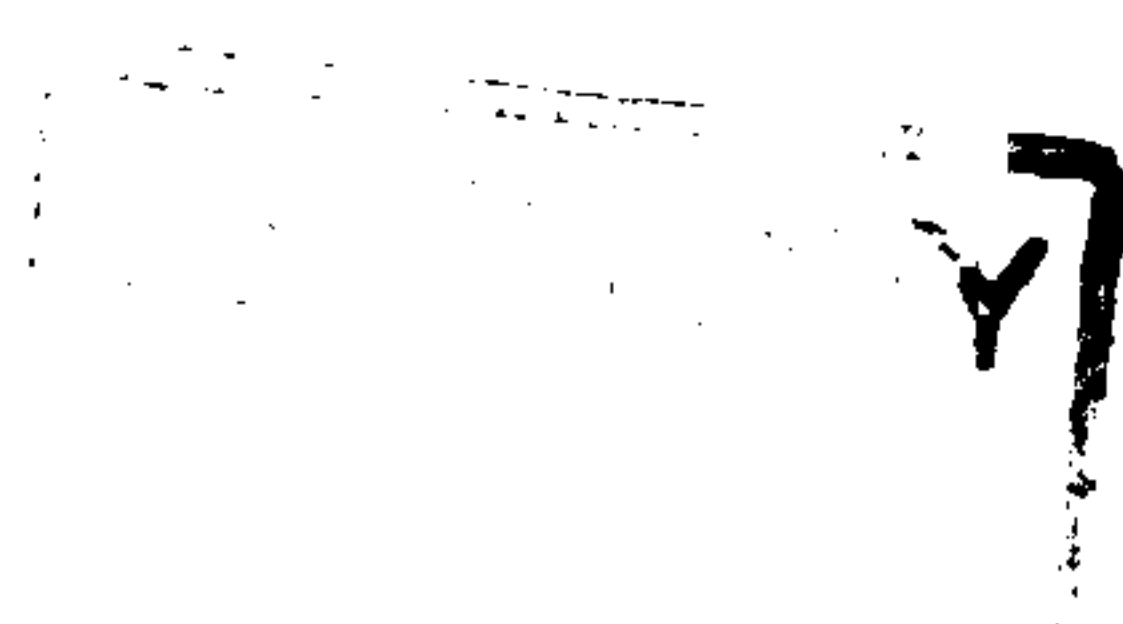
Hinds' work is interesting at least for the following two reasons. Firstly, this work makes explicit claims about discourse structures in terms of paragraph, segment and sentence. That is, a discourse consists of paragraphs and a paragraph consists of segments, which in turn consist of sentences. It illustrates that these structures of different levels impose different conditions on anaphora. Secondly, it makes explicit claims about the association of such discourse structures with the use of different coreferential forms, that is, within a paragraph, full NPs occur with peak sentences and within a segment pronouns occur with non-peak sentences. Hinds' proposal as demonstrated above illustrates that anaphors occurring at the boundaries of paragraph segments has nothing to do with the linear nature of discourse, but has everything to do

with the hierarchical organisation of discourse.

However, a problem with Hinds' analysis, as it is presently formulated, is that it offers no clear guidelines for identifying paragraph segments and the peak sentences within these segments, except that a full NP is associated with the peak sentence which, with an optional number of non-peak sentences, forms a segment. For example, in the above passage (which forms a "paragraph"), sentences (c) and (d) could be a segment giving the circumstances of Iwata's death, which would then require a noun instead of the pronoun. And sentences (e) and (f) could join together to form a segment presenting the achievements of Iwata's life, in which case the noun in (f) should then give way to a pronoun, according to Hinds' proposal.

Moreover, although Hinds' proposed associations between full NPs and peak sentences on the one hand and between pronouns and non-peak sentences on the other are intriguing, it is not difficult to show that it cannot be the only principle at work in governing patterns of anaphora even for expository texts. If Hinds' principle is the only factor influencing anaphora, we should expect that each segment or paragraph will have a peak sentence, and that each peak sentence will have its references done with full NPs. Put another way, we should not expect to find pronouns in peak sentences, nor should we expect to find full NPs in non-peak sentences. In the following text, however, a noun is used in a non-peak sentence: the initial sentence presents a statement and the following sentences including the one containing the noun give additional background information for that statement, hence, according to Hinds' definition of peak and non-peak sentences given above, the former ought to be seen as the peak sentence and the latter the non-peak sentences (the antecedent and the anaphor in question are underlined):

- (7) 1. Paul Rowlands joined us in 1986 as the second researcher on Peter Roach's Alvey project.
 2. Paul must be the only native of the Falkland Islands working in speech research.
 3. He has done a BSc and MSc in electronics at UMIST (Manchester) and worked briefly as a coal miner.
 4. He has worked wonders with the computational side of the LUPINS project, and has plenty of outside interests: he has a Karate black belt, plays lead guitar in a rock band and is keen on high-speed motoring in his XR3.
 (News Letter, Dept. of Linguistics, University of Leeds)



The following text provides a source of instances in which all of the references (except the first) to the relevant person take the form of pronouns, irrespective of the "peakness" of their sentences:

- (8) 1. Patrick Leach joined the Department in 1971, after a first degree in French, a Postgraduate Certificate in Education and Diploma in TEFL and periods of teaching English in West Africa, Algeria and Saudi Arabia.
2. He is interested in the linguistic description of French, especially of French intonation (the topic of his PhD) and discourse.
3. But he has maintained his ELT interests; he is at present particularly interested in classroom discourse and 'textual maturity' in foreign students' writing.
4. He has just completed a ten-part video course on Morphology (with accompanying exercises) -- to be marketed by the University Audio Visual service -- and is more than half way through writing a book on the linguistics of French.
(News Letter, Dept. of Linguistics, University of Leeds)

The first sentence presents a statement that Patrick Leach has been a member of the Department since 1971 with various qualifications achieved earlier. Sentences 2 and 3 describe two of his academic interests. And sentence 4 mentions two of his recent achievements. According to Hinds' definitions, the first sentence should be the introductory segment, the second and third sentences should be a highlight segment and the last sentence should be treated as another highlight segment. Since in Hinds' analysis, each segment should have a peak sentence correlated with the use of a full NP, one of the sentences in the second segment and the only sentence in the third segment should contain a nominal reference. However, contrary to Hinds' prediction, all the references are pronominally realised in segments 2 and 3.

Furthermore, Hinds' principle appears to rule out the possibility that a segment or paragraph might consist of several equal-status sentences instead of a peak sentence together with some non-peak ones. In the paragraph below, for example, all of the sentences seem to be equal in status, though the reference in the first sentence is encoded in a noun and the references in the others are encoded in pronouns:

- (9) 1. Andrea Dew was born in Lancashire and joined the Department in April 1985.
2. She has obtained the Licentiate of the College of Speech Therapists from Leicester Polytechnic, an MA in speech Therapist Sciences from Leeds University and a Diploma from the International Phonetic Association.
3. Her interests are especially in Automatic recognition and the application of speech technology to the handicapped.
(News Letter, Dept. of Linguistics, University of Leeds)

We can thus easily find cases in which pronouns occur in peak sentences and nouns occur in non-peak sentences.⁴

Despite these apparent inadequacies of his principle of paragraph structure and its correlations with anaphora, however, Hinds' structural view of discourse and his attempt to associate anaphora with discourse structure are of interest and thus is a source of inspiration for the view of texts in this study.⁵

2.2.2.2 AI approaches

The field of Artificial Intelligence has seen the most significant breakthroughs in research on anaphora. One of the pioneering studies on discourse anaphora and discourse interpretation in AI is the research by Grosz (1977).⁶ Grosz's study of discourse structure is based on task-oriented dialogues between an expert and a novice. Grosz finds that the structure of the task-oriented dialogue closely parallels the structure of the task being performed, so that the task breaks down into main task and sub-tasks and the dialogue breaks down into main dialogue and sub-dialogues. Furthermore, she finds that when one sub-dialogue is completed the participants return to the main dialogue, just as when one sub-task is completed, the participants return to the main task. The most exciting finding of her study is that the topic of the main dialogue can in such a return be immediately pronominalised, even if there are "interfering" NPs present in the just-completed sub-dialogue. In a striking instance (cited above) she found that a pronoun was used to refer to the object being built (the main task) even though that object had not been mentioned for over 30 minutes. This example is given below (Grosz, 1977:23):

⁴It should also be noted that Hinds' proposal only deals with topic NPs that normally occur as subjects and says nothing about anaphoric choices of non-topic NPs.

⁵For example, the notion of rhetorical units in this thesis is, in a way, related to Hinds' proposal of paragraph structuring.

⁶Webber (1979) is another interesting and very influential piece of research on anaphora in AI. However, as it is a formal approach to discourse anaphora which occurs in two consecutive sentences, and thus it is not very relevant to the present study, I will not review her work here.

- (10) L1 E: Good morning. I would like for you to reassemble
the compressor.
- ...
 L3 E: I suggest you begin by attaching the pump to the platform.
 ... (other sub-tasks)
 E: Good. All that remains then is to attach the belt housing
 cover to the belt housing frame.
- L7 A: All right. I assume the hole in the housing cover opens to
 the pump pulley rather than to the motor pulley.
 E: Yes, that is correct. The pump pulley also acts as a fan to
 cool the pump.
 A: Fine. Thank you.
- L12 A: All right, the belt housing cover is on and tightened down.
 (30 minutes + 60 utterances after beginning)
- L13 E: Fine. Now let's see if it⁷ works.

The *it* in the last utterance refers to the air compressor last mentioned over a half-hour before. Here, the piece of dialogue skipped over is a whole segment relating to the sub-task of installing the cover; the completion of the belt housing cover attachment closes this sub-task and the dialogue returns to the main dialogue (main task of reassembling the air compressor). Examples like (10) led Grosz to make the following observation:

Another indication of the segmentation phenomenon is the use of pronouns whose referents lie far back in the previous discourse. In every case, the piece of dialogue skipped over are whole segments relating to some distinct sub-task or sub-tasks. (1977:29)

Based on her analysis of task oriented dialogues, Grosz develops a theory of focus. FOCUS, in this study, refers to the effect of a composite of contextual influences, such as the preceding linguistic context and the situational context and is divided into two ranges: immediate and global. IMMEDIATE FOCUS refers to how a speaker's centre of attention shifts or remains constant over two consecutive sentences; it affects both the ordering of sentence constituents and the interpretation of sentence fragments. GLOBAL FOCUS, on the other hand, describes the effect of a speaker's centre of attention throughout a set of discourse utterances on succeeding utterances; it influences what gets talked about, how different participants get introduced, and how participants are

⁷It should be noted that the use of "it" here might be deictic. Although the two persons referred to as E and A here were in separate rooms in the experiment and could not see each other, this might not rule out the possibility of the pronominal being a deictic use, because a) at this point in the dialogue, now that the compressor is fully assembled, E knows for the first time that there is just one thing to talk about, instead of separate parts, and b) empathy with someone working under close instruction could justify deixis; the expression "let's" suggests empathy. This is a potential problem for the analysis.

referenced. Grosz points out that although both types of focus play roles in anaphoric interpretation, global focus is more important for full NPs and immediate focus for pronouns. In her work, Grosz focused on defining the representation and use of global focus. She did not address the problem of defining and using immediate focus.

Grosz represented global focus by partitioning a subset of the whole knowledge base that contains items in focus from the remaining knowledge base and she terms this subset a FOCUS SPACE. A focus space can have different states at different points of discourse development. For example, a focus space is OPEN (i.e. its contents are currently in focus) if items within it have been recently mentioned. An open focus space is CLOSED when conversation returns to an old/stacked open focus space. In this case, conversation returns to an earlier topic thereby closing recent discussion. The highly structured task domain in which this work was done was used to guide changes in focus, and it was shown that changes in focus or relationships between focus spaces are determined by the structure of the discourse. For example, in (10) above the conversation in Lines 1-2, which represents the main task/dialogue, is an open space when it is being produced. This initial space becomes stacked when the conversation proceeds to the sub-task/sub-dialogue contained in Lines 3-12. This new open space is closed when the conversation returns to the main task/dialogue, now in an old/stacked space, at Line 13. Thus we see that a shift in focus takes place in a task-oriented dialogue when the particular sub-task that is being performed changes.

Grosz concludes that

When the resolution of definite references is considered from the perspective of focus, questions like how far back in a discourse to look for a referent are no longer relevant. Instead, the problem is how long an item stays in focus and what can cause a shift in focus. (p. 7-8)

Grosz thus explicitly denies the validity of the recency/distance explanation of anaphora and substitutes for it a structurally based account, in which the hierarchical structure of a discourse plays a crucial role in determining anaphoric choice.

Grosz's work leaves a number of open questions, particularly from the perspective of anaphoric interpretation. Among them are how a focus can be used for pronoun

disambiguation besides the "striking" use of a pronoun in a return to the main dialogue following completion of a sub-dialogue, e.g. how focus can be used to interpret pronouns within a focus space or a sub-dialogue, and specification of rules for what makes an immediate focus and its use for pronoun disambiguation. What is significant about Grosz's work, however, is that it initiated a line of research that was later adopted and elaborated by other AI researchers such as Reichman (1981) and Sidner (1983).

Reichman (1981) studies the structure of naturally occurring conversations in English and uses a structurally based approach to anaphora similar to Grosz's. While the structural units in Grosz's work are limited to one relation (dialogue-sub-dialogue), Reichman identifies twelve relations: direct challenge, indirect challenge, support, restatement, contrastive re-specification, interruption, digression, return, analogy, concede sub-argument, prior logical abstraction, further development.

In contrast to Grosz's focus spaces, which are meant to describe a unit of attention, Reichman proposes the notion of CONTEXT SPACE:

... I attempt to characterise a level of discourse structure in which utterances fulfilling a single communicative goal (i.e., constituting a single conversational move) are said to lie in a single discourse unit. These units, I refer to as context spaces. (1981:15-16)

According to Reichman, there are seven possible states that a context space may have at any given point in the conversation. For example, a context space can be ACTIVE, CONTROLLING, OPEN or CLOSED.⁸ The definitions of each of these states are as follows (Reichman, 1981:87):

Active: The context space in which the utterances currently being stated are placed. There can only be one active context space at a given point in the conversation.

Controlling: The context space in direct relation to which an active context space is being developed. There can only be one controlling context space at a given point in the conversation.

⁸The other context space states are CONTROLLING*, GENERATING and SUPERSEDED. In her (1985) work the state CONTROLLING* is replaced by PRECONTROL.

Open: A previously active context space that was interrupted before completion of its corresponding communicative goal.

Closed: A context space, discussion of which is believed completed for the present time (i.e., it is reasonable to believe that its point has been reached).

I present an example from Reichman (p. 135) to illustrate context spaces.

- (11) G: 1. It's just a pure electrostatic field, which, between
 2. two points, and the proton accelerates through the
 3. electrostatic potential.
 J: 4. Okay.
 G: 5. Same physical law as if you drop a ball. It accelerates
 6. through a gravitational potential.
 J: 7. Okay.
 G: 8. And the only important point here is that the potential
 9. is maintained with this Crock-Ford Walton unit.

Lines 1 - 4: Context Space C1 - the Initiating Context Space

Lines 5 - 7: Context Space C2 - the Analogous Context Space

Lines 8 - 9: Context Space C1 - the Resumption

The initiating context space is active when it is being developed, and becomes controlling when the analogous context space comes on to the scene and takes over the active status. Upon resumption of context space 1 on lines 8-9, the initiating space becomes active again, and the intervening analogous context space is closed.

Of these states, the most prominent are said to be the active and controlling context spaces that constitute the current relevant context in direct relation to which utterances are generated and interpreted.

Just as a context space can have different statuses, so an individual element within a context space can have different FOCUS LEVELS that reflect its level of prominence in the context space. Reichman postulates several focus level rules which involve the previous linguistic coding of an NP and its grammatical and/or semantic role. Some of the focus level rules, taken from Reichman (1981:123), are given below.⁹

F1. A constituent appearing in the subject position of an utterance is assigned a high focus level assignment.

⁹Surprisingly enough, Reichman did not provide any motivations for her focus level rules.

F4. A constituent referenced by name after previous references by description is re-assigned a high focus assignment.

F5. A constituent specified as the agent of an event is assigned a high focus assignment.

F10. An entity referenced by name is assigned a medium focus level assignment.

F11. An entity referenced by description (e.g. "her boy friend") is assigned a low focus level assignment.

F13. If an entity's high focus level assignment is usurped by another constituent..., then, the old high focus constituent is reassigned to a medium focus level.

Based on the state assignment rules and focus level rules, Reichman proposes a number of reference rules, the most important of which are as follows:

- (12)
1. Only elements in high focus in the active and controlling context spaces may be referenced pronominally.
 2. Full definite NPs are needed for all other elements in the active and controlling spaces.

She further restricts these rules by assuming that pronominalisation is limited to one entity at a time. The way these rules work is shown in the following passages taken from Reichman (p. 124):

- (13)
1. And, so steam goes into the turbine. And, it goes in as
 2. very high pressure steam, come out as very low pressure
 3. steam, okay? And it goes into a thing called *the condenser*.
 4. *The condenser's job* is to convert the steam into
 5. Water, okay? And, *it's* actually at a vacuum.

What is interesting about this passage is the nominal occurrences of the NPs (i.e. *the condenser* and *the steam* in Line 4, since one of the two, if not both, could have been pronominally realised without any resulting semantic ambiguities. From the focus rules, we know that *the steam* is in high focus on Lines 1-3 (i.e. it is the subject of all these utterances). On Line 4 the speaker is ready to turn his attention to *the condenser*. However, he cannot immediately pronominalise his next reference to *the condenser*, since *the steam*, not *the condenser*, is currently in high focus, given that only an element in high focus may be pronominalised (and that there is only one filler per space for such a slot). The effects of *the condenser* being in subject position on Line 4 are to simultaneously assign it a high focus level and re-assign *the steam* a medium focus level

(F1 and F13 above). Thus, *the steam* is not pronominalisable in Line 4, and by Line 5, *the condenser* is (as evidenced by the speaker's subsequent pronominal reference to it). Let us now look at the passage in (14) (taken from Reichman, p.126):

- (14) 1. I put everything, my feeling, in a total intellectual basis.
 2. I said that - It's funny 'cause, by the way,
 3. when I was thinking about Albert, I was thinking about
 4. how I would think about Albert, years from now. You
 5. know look back upon it and what context Albert would
 6. fit in my life.
 7. And my gut phrase was, and I said, "And I decided that
 8. history will really be kind to Albert."

In this passage we see instances of nonpronominalisation that cannot be explained by ordinary measures of distance or potential interference, namely, the speaker's repetitive nonpronominalisations of *Albert*, because if we replaced all following occurrences of the NP with pronouns no semantic ambiguity would arise whatever. But this can be accounted for by the context space theory. This passage consists of three context spaces, an initial Issue context space (Line 1), a digression context space (Lines 3-6), and a support context space (Lines 7-8). According to the focus level rules for digression and support context spaces, only elements previously in high focus in the initial context space interrupted or supported receive automatic high focus levels in the digression and support spaces. Where no such carry-over elements exist, focus level assignments are as per all first-mentioned constituents (this is actually specified in focus level rules 7 and 8). Since the NP *Albert* does not appear in the initial Issue context space, and since it does not appear as subject of an utterance, or as an agent of an event in the following two context spaces, it is not in high focus, or considered as a thematic subject of discourse (it is the speaker and her own emotional state that is). Hence, the NP *Albert* is nominally encoded in all these cases. Finally, consider the passage in (15) (taken from Reichman, p. 140-141):

- (15) B: We could briefly discuss something, my mother - you see, I don't really want to because I don't really want to sit and talk about her here. You know, in a way I'm talking poorly of her, I guess.
 (APPROXIMATELY THIRTY MINUTES OF TALK)
 B: I think in a way that's what she does to me, and I don't like it. So, I try not to do it to her.
 ("SHE" refers to B's mother)
 A: But, you said you have some feelings about bringing up this whole topic of what goes on between you and your mother. you said because it was negative?

In this passage, A mentions B's mother via a full NP in spite of the fact that B's mother

was just mentioned pronominally and that there are no intervening NPs competing for the referent of the pronominal. The motivation lies in that the context space containing the nominally realised NP is one of Contrastive-Respecification in which the Respecification segment has the function of closing the Contrastive segment, a currently active context space before such a closure (in the present case, the one in which B's remark is contained), by skipping over the Contrastive segment and returning to the initiating context space which was in a closed state before such a return. Since closing a context space zeroes-out all of its focus level assignments and subsequent reference interpretation is not done in terms of it, the appearance of A's mother in this closed space is basically irrelevant to following reference interpretation. However, since the context space returned to was also in a closed state upon resumption, by the time of A's reference, A's mother, an NP of this space still has its zeroed-out focus level, hence, A's nominal reference to her.

This and the earlier examples demonstrate that what determines anaphora is not recency or distance, but the structural organisation of the talk. This basic finding is consistent with those of Grosz discussed earlier.

Reichman's work, however, leaves open important questions, among them are how a context space is recognised and how one identifies its topic (i.e. what context space is it). These are important issues yet to be addressed by the theory.

In addition, the study based on the context space theory is limited in several ways. First, the twelve relations distinguished (with their cue words) seem insufficient to apply to a wide range of data (even if the data were limited to conversations), because they do not cover the vast number of activities interactants engage in when they talk or write. The theory does not, for example, accommodate such social activities as requesting, questioning, inviting, offering, etc., nor does it accommodate such basic informational relations as background, elaboration, circumstance, condition, etc.

Moreover, in this work the hierarchical structure of the discourse is assumed to be the only source of influence on anaphora. However, as shown in Sidner (1983) and Fox (1984), among others, other factors including syntactic, semantic and pragmatic factors

are also relevant to referential choice. As we hope to show in this study, there are many non-structural factors that also bear on anaphora and thus a purely structural approach to anaphora leaves some cases of anaphora unaccountable for.

Finally, although Reichman's findings, as far as they go, seem basically convincing to me, I disagree with some of her theoretical assumptions as well as a few of her minor claims. In particular, her assumption that pronominalisation is limited to one element at a time in an active or controlling space is shown to be invalid in the light of examples like the following ((16) is taken from Sidner, 1983:282 and (17) from Fox, 1984:33):

- (16) 1. Jerome took his pigeon out on a leash.
 2. Since he was trying to train it,
 3. he hollered "heel" and "run" at it,
 4. as they sauntered along.
- (17) H: 1. Does Peterson have a copy of the paper that
 2. you could read?
 S: 3. Evidently Ward's not letting him talk about
 4. what he wanted to talk about.
 S: 5. M-he's making him talk about something else
 6. that everybody's heard.¹⁰

There are two occurrences of pronominalisation in (16.2) and in (17.5), which are clearly against Reichman's claim that there is only one high-focus element at a time which receives pronominal encoding. These counter-examples to Reichman's reference rules also pose problems for her focus level assignments. In (17) for example, the occurrence of the NP *Ward* in subject position in Line 3 establishes its high focus level (F1), which gives rise to its pronominal realisation in Line 5. Now problems arise with the NP in object position of Lines 3 and 5. According to Reichman's F13, if an entity's high-focus level is usurped by another constituent, then the old high-focus constituent is reassigned a medium focus level, which requires nominal encoding (cf. example 13). However, the object NP takes the form of a pronoun. Thus, we have seen that Reichman's reference rules as well as her focus level assignment rules are at least potentially problematic.

In spite of these limitations, Reichman's work represents an important step forward in research on discourse anaphora and is one of the primary sources of insight to the

¹⁰I have left out the notations for time gaps from this passage for ease of reading.

study presented in this thesis. For example, the key notion of states assigned to context spaces is incorporated, with modifications, into the present study, where I use it to refer to the prominence level of individual propositions and rhetorical predicates in discourse.

Sidner (1983) extends Grosz's work with an extensive analysis of immediate focus. She uses focus for the interpretation of definite anaphora and thus for aiding in the interpretation of discourse.

In her study, Sidner uses FOCUS as a means of finding the possible set of entities that an anaphor could refer to. A focus is defined as a particular discourse element that speakers centre their attention on and it is the element which is elaborated by a portion of the discourse (1983:273). For example, in

- (18) 1. I want to schedule a meeting with Ira.
 2. It should be at 3 p.m.
 3. We can get together in his office.
 4. Invite John to come, too.

the focus of discussion is *a meeting* in (1) because all four sentences give information about it.

A major result of her work is the specification of detailed algorithms for maintaining and shifting focus. Focus tracking involves maintaining three pieces of information: the focus of a sentence (represented by the CURRENT FOCUS), the items of a sentence which are potential candidates for a change in focus (represented by a POTENTIAL FOCUS LIST), and past foci (represented by a FOCUS STACK). Current focus indicates the item of a sentence being focused on (e.g. *a meeting* in the above passage). The potential focus list contains items within the sentence that are candidates for a shift in focus (e.g. *Ira* in the above passage is a member of the list). The focus stack is updated every time a change in focus occurs. When conversation shifts to a member of the potential focus list, the current focus is pushed on the stack and the new focus becomes the current focus.¹¹ When conversation returns to an element previously discussed, the stack is popped to

¹¹For instance, in example 19 below *Mark* becomes the new focus in (4) and (5) and the current one *the strawberries* becomes an old focus pushed on the stack.

yield that element.¹² These three pieces of information are captured by an interrelated three-stage process model for focusing and focus tracking:

A process model of focusing and focus tracking consists of three sub-processes. The first, the focus recognizer, chooses an expected focus based on what the speaker initially says. Then an interpreter applies its rules of interpretation, which make use of the focus to interpret the anaphoric expressions in the next sentence of the discourse. A third processor updates the focus using the anaphor interpretations to decide either to confirm an initial discourse phrase as expected focus, maintain an established discourse focus, move the focus to a new phrase in the discourse or shift the focus back to a phrase which was once in focus. (1983:304)

To illustrate, I present an example from Sidner (p. 279):

- (19) 1. Last week there were some nice strawberries in the refrigerator.
 2. They come from our food co-op and were unusually fresh.
 3. I went to use them for dinner, but someone had eaten them all.
 4. Later I discovered it was *Mark* who had eaten them.
 5. *Mark* has a hollow leg, and it's impossible to keep food around when his stomach needs filling.

According to Sidner, the first process initially chooses *strawberries* as the focus (or the expected focus) in (1) since it is the subject of a there-insertion sentence.¹³ Then the pronoun interpreter would apply a rule that says "A pronoun that can be replaced by the focus phrase, with the resulting sentence remaining syntactically acceptable, co-specifies with the focus, unless some pragmatic knowledge rules out that co-specifier" to determine that *strawberries* can replace *they* in (2) with no syntactic failure

¹²Example 20 below illustrates the point where *the meeting* in (4) returns to a previous focus on stack, e.g. *a meeting* in (1).

¹³Sidner proposes an algorithm for the expected focus, in which constituents of a sentence to be chosen as the expected focus are ordered in the following way: (i) The subject of a sentence in a *be* copulative or *there*-insertion sentence, (ii) The theme of the sentence (roughly, the "affected object"), (iii) other thematic positions, with the agent last in this list. Here we can see some parallels between Sidner's rules for choosing the expected focus and Reichman's focus level rules, but they seem to differ in the status of the agent (which is assigned a high focus level in Reichman's model). Sidner chooses the theme role as the topic candidate for the focus of a sentence, in apparent conflict to the normal opinion that the subject of a sentence or the agent in an event is generally the focus (e.g. Reichman, 1981). This conflict, as explained in Allen (1987:425), is "resolved by realizing that Sidner actually uses the preferences for determining the focus of the next sentence rather than the focus of the present. Given this, Sidner's preference for the object reflects that this role is the most likely to be the focus in the next sentence".

(p.279).¹⁴ An inference process, based on general world knowledge and governed by the pronoun interpreter, could then confirm that strawberries can come from food co-ops and can be fresh. Finally, the third process can confirm *strawberries* as the focus since it has been re-mentioned and other objects mentioned in (1) were not discussed in (2). As the process model functions in a cycle for each sentence of a discourse, the analysis of *they* in (2) can basically be applied to the occurrence of *them* in (3) and (4). That is, *strawberries* is the focus of the discourse up to that point and serves as the referent for the pronominal anaphor *them*. In (5) the talk switches to *Mark*, a member of the previous potential focus list. As a result of this shift of focus, the old focus of *strawberries* is stacked in the focus stack and the current focus, namely, *Mark*, becomes the new discourse focus.

Sidner's process model, as illustrated above, includes not merely structural factors but non-structural factors as well in order to carry out anaphor resolution.¹⁵ For example, the identification of the initial expected focus makes use of grammatical or syntactic information about a sentence, while the pronoun interpretation rules make use of semantic and pragmatic information. These non-structural factors, which are syntactic, semantic and pragmatic in nature, are utilised to establish potential foci and then to select an entity from the potential foci as the correct interpretation.

An important notion related to the updating of focus is FOCUS POPPING, in which the focus shifts back to an element previously in focus. According to Sidner, to retain previous foci, a stack is used. Generally, when an expression mentions an item listed as a focus in the stack, the current focus is pushed, and the stacked focus becomes the focus again. Sidner suggests that focus popping is typically accompanied by the use of a definite NP to specify the old focus. An example is given below (taken from Sidner, 1983:299):

¹⁴In the present case, if *strawberries* is substituted for *they*, we get a false sentence: a generic one, to the effect that all strawberries come from the co-op. If on the other hand *some nice strawberries* is put in the place of *they*, then we do have syntactic well-formedness but no longer coreference. Perhaps this is the kind of thing that pragmatic knowledge is meant to exclude. But this points to a potential problem for Sidner's pronoun interpretation rules.

¹⁵This feature makes Sidner's model different from both Grosz and Reichman in which discourse structure plays a major role in anaphor interpretation.

- (20) 1. I want to schedule a meeting with Harry, Willie and Edwina.
 2. We can use *my office*.
 3. *It's* kind of small,
 4. but the meeting won't last long anyway.

In this passage, the NP *a meeting* is the focus in (1), but the NP *my office* becomes the focus in (2) and (3). In (4), however, the focus shifts back to the NP previously in focus in (1). Notice that the anaphor that fulfills the focus popping is encoded with a full NP.

Sidner points out that pronouns can also be used for focus popping, but their use is more restricted and governed by what she calls the STACKED FOCUS CONSTRAINT by which the pronoun interpreter rules are employed to prevent a pronoun from referring to a stack item if the current focus is an acceptable antecedent. Below I present an example taken from Sidner (p. 301):

- (21) A: Have you ever thought of a career in law?
 B: I have some friends who are lawyers, and I've talked with them about their jobs, but I don't think it's for me.

In this example, the focus begins on *a career in law* and then moves to *some friends* of the speaker, with a potential focus of *their jobs*. In the last sentence the pronoun *it* is used to pop back to the old focus *a career in law* and re-establishes it as focus. Note that the use of a pronoun here is not rejected by the interpreter rules since the pronoun differs from the (current) discourse focus *some friends* in number and gender, and from the potential focus *their jobs* in number.

However, there are occasions where the stacked focus constraint fails to account adequately for the anaphoric forms used. As we saw in our discussion of Grosz and Reichman earlier in this chapter, a pop back to an old focus (or NP) can occur with a pronoun even if many foci (or NPs) intervene and the pronoun could co-refer with one of the foci (or NPs). In these cases, the non-local, popping back movement with a pronoun is allowed because the discourse structures involved (main task vs. sub-task in Grosz's scheme and context spaces in Reichman's) help the hearer to discern where to pop to. Here is an additional example:

- (22) 1. A: Bolt the pump to the base plate. There are 4 bolts, 4 nuts and 4 washers. <here follows an explanation of where to put the bolts and what tools to use.>
 2. B: I would like to know if I can take off the back plate.
 3. A: You shouldn't have to. Are you having trouble with the bolts?

4. B: Yes.
5. A: <Now follows a long discussion of the use of the ratchet wrench, the extension and the socket for the wrench. The discussion ends with:> You will use the 2" extension and a 1/2" socket.
6. B: It is bolted. Now what should I do?

Here in (6) a pronoun *it* is used to pop back to the old focus *pump* mentioned in (1) in spite of the presence of several foci (NPs) in the intervening material which have the same gender and number as the pronoun. The pronoun is used in the above example where it skips over the intervening material representing sub-tasks (to use Grosz's terminology) and return to the material representing the main task. As such the intervening foci (or NPs) are not likely to cause interference even though they are identical in gender or number to the pronoun. This example shows that the stack focus constraint alone is not adequate and a mechanism that recognises the structure of discourse should be incorporated into the model.¹⁶

Another problem with Sidner's model, as she herself recognised, is that it may give incorrect predictions for anaphors in sentences involving parallel structure. For example, Sidner's pronoun interpretation rules give a correct prediction for the first example below, whereas they would give an incorrect prediction for the second one:

- (23) 1. Put the mud pack on your face.
2. After 5 minutes, put it off.
- (24) 1. The green *Whitierleaf* is most commonly found near the wild rose.
2. The wild violet is found near it too.

The pronoun interpretation rules predict the proper coreference in example 23 because the thematic relations of the verb follow the similarity of structure. In example 24, the pronoun is coreferential with *the wild rose* and not with *the green Whitierleaf*; the initial focus after the first sentence is *the green Whitierleaf*, but the parallel syntactic structure of the sentences appears to govern the coreference option and hence the pronoun is anteceded by *the wild rose*, but not by *the green Whitierleaf*.

Finally, we will look at a previous example repeated below.

¹⁶Sidner herself recognises that the focusing algorithm and the anaphor interpreter might be joined with a mechanism which recognises the task structure assumed by a speaker, though how this could be achieved remains to be seen.

- (25) 1. I want to schedule a meeting with *Ira*.
 2. It should be at 3 p.m.
 3. We can get together in *his* office.
 4. Invite John to come, too.

As noted before, the focus of this passage is *the meeting* which first occurs in (1). What we are interested in here is the possessive pronoun *his* in (3), which refers to *Ira*, a potential focus, in (1). According to Sidner's model the occurrence of a pronoun coreferential with a member in the potential focus list suggests a change in focus. However, since we can observe no such change in focus, it is not clear how cases like the present one are accounted for in Sidner's model.

Sidner's model, which takes into consideration both structural and non-structural information in determining pronoun interpretation, is a source of insight into pronominalisation. Some of Sidner's important notions have been adapted in the present study. For example, the notion of discourse topic in this study is in some respects related to her notion of current focus, and the notion of return pop here is also related to that of focus popping in Sidner's model.

I have, in this sub-section, examined several studies on anaphora in AI. Grosz (1977) developed a theory of focusing and presented a procedure for interpreting non-pronominal NPs as well as pronominal NPs using the focusing and focus space notions. Reichman (1981) has expanded Grosz's work by producing a theory of context space to represent discourse units. Within a context space entities receive various focus levels; only NPs that are in high focus may be pronominalised. Sidner (1983) builds on Grosz's theory of focusing by concentrating on coreference of NPs between sentences, an area which was largely left unattended to in Grosz (1977). Sidner presents a procedure for establishing the current focus to be used for resolving anaphora relationships. These studies show that for the purpose of anaphor interpretation one must consider what the speaker is talking about (i.e. the current focus). However, since hearers do not have privileged access to a speaker's mind, other than through what a speaker says, imposing structure on the speaker's discourse will provide a framework for establishing the interpretation of anaphors. However, although these discourse structural accounts provide an interesting alternative to those linear accounts examined in the preceding section, e.g. Givon (1983a) and Clancy (1980), there are weaknesses

with them. As discussed above, we can point out at least two general weaknesses. One of these is that the structural relations identified are rather limited, for example, the structural units in Grosz's work are limited to one relation (dialogue-sub-dialogue), and in Sidner structural relations are not fully incorporated into the system of focusing algorithm and the anaphor interpreter. The other weakness is the lack of explicit recognition procedures. For example, in Reichman's work, how a context space is determined and how one identifies its topic are yet to be solved. In the next sub-section, we will examine Rhetorical Predicate approaches to anaphora which appear to be a step forward towards solving these weaknesses evidenced in AI approaches discussed above.

2.2.2.3 Rhetorical predicate approaches

There have been several studies in which RHETORICAL PREDICATES are used, under various names and disguises, as an aid in anaphor resolution. Among these are Lockman (1978), Hobbs (1978) (these two studies use the term COHERENCE RELATION) and Fox (1984) (this study uses the term RHETORICAL STRUCTURE). As Fox (1984) is more comprehensive than any of the other studies using a rhetorical predicate approach to anaphora, this section will concentrate on Fox.

Fox (1984) provides a very rich and detailed structural account of the distribution of anaphora in written and conversational English,¹⁷ drawing on studies in rhetorical predicates (Grimes, 1975, Mann & Thompson, 1983), and also on studies in AI (Grosz, 1977 and Reichman, 1981).

Fox posits that anaphora is determined by the hierarchical structure of a discourse. To account for anaphora in the discourse, it is thus crucial to have a means to describe and represent the structure of the discourse. To this end, Fox proposes a rhetorical structure analysis which is used to investigate anaphora in expository English. The model has a basic unit, the proposition, and a class of rhetorical structures which describe the structural relationships between discourse propositions. By proposition, Fox means the kind of structure that is "more abstract than a clause or sentence and is

¹⁷I confine myself here to the discussion of Fox's work on expository texts because it relates to my main concern in this study.

intended to represent the smallest unit that enters into informational and/or interactional relationships with other parts of the text and the reader" (p. 139). Fox proposes the following rhetorical structures: Conditional, Circumstance, Issue, List, Narrate, Reason, Concession, Opposition, Purpose, Response, Contrast, Joint, Comment, Inference, and Conclusion.

Rhetorical structures are said to fall into two groups: the first group of structures consist of a core portion (called nucleus) and a subsidiary portion (called adjunct), and the second group consist only of nuclei, i.e. all propositions are of equal status. Among the rhetorical structures proposed by Fox, List, Narrate and Joint belong to the second group while all the others belong to the first group. Below I present two examples to illustrate the two groups of rhetorical structure:

- (26) 1. He knew his Rousseau;
 2. he knew his Voltaire;
 3. he even knew his President de Brosse!

This is a List structure in which each proposition is seen as an equal member of the List unit.

- (27) 1. If Judy Blume were the protagonist of a novel,
 2. she'd be pretty hard to stomach.

Here we have a Conditional structure in which the adjunct (1) provides the condition under which the nucleus (2) holds.

The above examples demonstrate simple rhetorical structures, with all of their slots realised by propositions. Fox's model also permits rhetorical structures which have at least one of their slots realised by an embedded rhetorical structure. An example is given below (Fox, p. 162):

- (28) 1. I personally favour the initiative
 2. and ardently support disarmament negotiations to
 reduce the risk of war.
 3. But I don't think endorsing a specific nuclear freeze
 proposal is appropriate for CCC.
 4. We should limit our involvement in defence and weaponry
 to matters of process.

The structure encompassing this whole piece of text is a Concession structure, which display embedding at both slots. Its nucleus is realised by an Opposition structure (propositions 3-4), and its adjunct is realised by a Joint structure (propositions 1-2).

The rhetorical structures Fox proposes for representing discourse structure are shown to involve every proposition and occur in a pattern that connects all of the propositions together; they are explicit and highly recursive in nature and thus capture the hierarchical organisation of the discourse.

An important feature in Fox's study is that propositions are assigned different statuses which reflect their prominent levels at a given point in discourse. The most important of these statuses are ACTIVE and CONTROLLING.¹⁸ According to Fox, a proposition in a rhetorical structure is active while its rhetorical partner (i.e. the following proposition) is being produced. A proposition is controlling while its partner is active. For example, in example 28 above (1) is active when (2) is being produced, and becomes controlling when (3) is being produced with respect to which (2) is active.

With the help of these rhetorical structures, coupled with their various states, Fox conducted a detailed analysis of her texts and came up with a convincing argument that anaphora is patterned to a great extent by the structural organisation of a discourse. Her findings were embodied in the various anaphora patterns she proposed. The basic pattern for anaphora is given in (29) (Fox, p. 168):

- (29) A pronoun is used to refer to a person if there is a previous mention of that person in a proposition that is active or controlling; otherwise a full NP is used.

To illustrate, consider the following passages:

- (30) 1. MacPike will use the second half of her day to complete an administrative fellows program.
 2. She will work under Vice-president Gerald Scherba in the areas of resource allocation and academic personnel.

This is an instance of an active pattern in which the nucleus of an Issue structure (1) is active when its adjunct (2) is being produced. As a result, the anaphor in (2) which is coreferential with the NP *MacPike* in (1) is realised by a pronoun *she*. The passage below illustrates how a controlling pattern works:

¹⁸The third status Fox proposes is CLOSED. A closed proposition is one whose discussion is considered complete and thus has no influence on the succeeding discourse (also cf. Reichman, 1981).

- (31) 1. Leonard saw these as a "series of psychological curtains which one interposed between oneself and the outside world of other people".
 2. It was all a part of the process of growing up and also a means of self concealment and self-defence.
 3. Particularly valuable in this process was his learning of a peculiar ecstasy....

This passage involves an Issue structure with its adjunct realised by an embedded Issue structure (2, 3).¹⁹ The higher Issue nucleus (1) is active while the embedded Issue nucleus (2) is being produced, and becomes controlling when the embedded adjunct (3) is being produced. Notice that the anaphor *his* in the embedded adjunct (3) that is coreferential with the NP *Leonard* in the controlling proposition (1) takes the form of a pronoun, just as the basic pattern predicts.

In addition to the active and controlling patterns, Fox identifies another structural pattern, i.e. the RETURN POP. In a return pop, the current proposition skips over the immediately preceding proposition(s) to another, usually superordinate, one. Return pop is treated as a special case of an active pattern because popping to a previous proposition makes it active again and thus the referent in it can serve as a reference point and pronominalisation is still possible (cf. Reichman, 1981). An example follows.

- (32) 1. Like most hedonists, Leonard preferred to look neither backward nor forward.
 2. The here and now, the picture in front of him, the woman he was with, the bird in flight -- this was life:
 3. the rest was history.
 4. The future would assuredly take care of itself.
 5. He found himself at one with Provost in the thought that "the only certainty in life is change".

In this text, the proposition in (5) is not tied to any of the preceding propositions except the proposition in (1) which presents an assertion about the referent. The return to a previous proposition by crossing some intermediate material constitutes a return pop. Again, as the basic pattern predicts, a pronoun *he* is used for the anaphor in the "popping" proposition (5) which co-refers with the NP *Leonard* in (1). However, as reported in Fox, pronominalisation is possible in a return pop only if the skipped material is structurally simple or contains mentions of the referent, as shown in the

¹⁹In Fox's model, relative clauses are treated as belonging with their modified clause in one proposition, rather than as their own propositions. Thus, the relative clause in (1) is regarded as part of the proposition (1).

above example (in which the skipped material is a simple List structure); if these conditions do not hold, a full NP is employed. This restriction accounts for the non-pronominalisation in the return pop of the following text (from Fox, p. 197):

- (33) 1. He (Lytton Strachey) spoke, as all his friends have testified, with two voices.
 2. One was deep and manly,
 3. the other was tiny and squeaky;
 4. One had warm baritone notes filled with emotion,
 5. the other was somehow the piping voice of childhood, perhaps learned from a bevy of sisters who filled the Strachey house.
 6. It has been said that the entire Strachey family possessed this kind of squeak.
 7. Leonard Woolf remarked that after being with a Strachey one somehow went away squeaking a little inside.
 8. However that may be, the two voices of Lytton Strachey were the voices of the masculinity to which he genuinely aspired and the femininity that was by virtue of his rearing and environment.

An Issue structure encompasses the entire chunk of text. Proposition 1 is the nucleus of this text containing an assertion about the topic NP *Lytton Strachey*. Propositions 2-7 serve as an elaboration adjunct on the nucleus and proposition 8 constitutes a return pop. As the elaboration adjunct has a very complex internal structure, the return pop is realised by a full NP, although the use of a pronoun would not give rise to ambiguity.

The anaphor pattern (29) accounts for anaphora where no alternative possible antecedents are present, as shown in the above examples. It will not work, however, where there are other NPs that are possible candidates for the antecedent. Thus, Fox finds it necessary to formulate separate patterns for anaphora in environments where there are different-gender and same-gender antecedents. The anaphor pattern for the different-gender situation is as follows (p. 211):

- (34) A pronoun is used to refer to a person in different gender environment if there is a previous mention of that person in a proposition which is active; otherwise a full NP is used.

As this pattern is stated, pronominalisation is restricted to the active pattern. To illustrate, consider the following example (from Fox, p. 212):

- (35) 1. This time he married a sturdy Scotswoman with all the hardihood and endurance of the north and of her race.
 2. Year after year she bore him children.

This is an active pattern in which a pronoun *she* occurs as an anaphor in (2) coreferential with *a sturdy Scotswoman* in (1) though a different-gender NP *he* occurs in subject position of the clause. Let us look at an example of the controlling pattern (from Fox, p. 219):

- (36) 1. Still later she had John Singer Sargeant as her master.
 2. Like Furse, he had studied in France.
 3. He was a sympathetic and encouraging teacher, a large imposing presence.
 4. Vanessa liked his voice.

The antecedent *she* occurs in (1), the nucleus of an Issue structure, and the anaphor *Vanessa* occurs in (4), the adjunct of an embedded Issue structure. The anaphor is realised by a full NP because its antecedent occurs in the controlling proposition (1) and between the two mentions occurs a different-gender NP *John Singer Sargeant*.²⁰

We turn now to the basic pattern Fox proposed for anaphora occurrences where there are possible same-gender antecedents. The pattern for same-gender environment is close to the pattern for different-gender environment, except for a few more restrictions. Specifically, pronominalisation is possible in a rhetorical partner if two same-gender NPs are mentioned in the same proposition under the following conditions: a) if the NP mentioned in the second proposition is the subject of the first proposition, or the subject of an embedded (objective) clause within the first proposition, b) if the grammatical roles of the two NPs are maintained. I present two examples from Fox (pp. 221, 223).

- (37) 1. This is not to say that Virginia's rivalry with *Vanessa* had diminished.
 2. She oscillated between abasement and respect.
- (38) 1. Lytton had written an earlier essay on *Hastings*.
 2. He had seen *him* as a "superman".

In (37), the antecedent *Virginia* occurs inside the subject NP *Virginia's rivalry with Vanessa* in proposition 1 and its anaphor in subject position of proposition 2 is done with a pronoun. In (38), two same-gender NPs *Lytton*, *Hastings* occur in proposition 1, and since they maintain their grammatical roles in the following proposition, they both take the form of a pronoun. If, on the other hand, the above two conditions are not met,

²⁰The use of a pronoun is equally possible in proposition 4, although such a use is explicitly ruled out by (34).

then full NPs are called for, as shown below:

- (39) 1. *She* had lived to keep shock and suffering from
 her (i.e. Violet).
 2. But Violet needed no such defence.

In this example, two same-gender NPs occur in the first proposition but only one of them (i.e. the object) is mentioned as subject in the second proposition. It takes the form of a noun since it does not satisfy the conditions for pronominalisation.

Fox's findings on anaphora, as far as they go, seem basically convincing to me, but they are not without problems. First of all, her separate treatment of anaphora in the environments of different-gender and same-gender antecedents as well as in the environment of no other possible antecedents appears to me to be somewhat problematic and carries some undue theoretical and practical implications.²¹

To begin with, the separate treatment of anaphora may encourage a false impression that possible interference from other referents has such an impact on anaphora that it should be dealt with separately. By so doing, Fox actually imposes interference on top of discourse structure which is obviously against her view of discourse. The simple introduction of another referent does not necessarily cause interference or ambiguity; it is the structural organisation of the relevant discourse that determines what will count as interfering or ambiguous and what not. For instance, we saw earlier in our survey of Grosz and Reichman's work that pronominalisation is possible with a return pop which skips over a portion of text containing possible antecedents which agree in person and number with the anaphor. Such pronominalisation is possible because the skipped material is on a relatively lower level than the returned-to material which, in Grosz's model, represents the main task, and which, in Reichman's model, is in a controlling state (or is not in a closed state). A consequence of such a treatment is that it loses the opportunities to explicate and compare the effects of different structural organisations

²¹Fox examines the distribution of anaphora in three different environments, i.e. environments of different-gender, same-gender referents and no interfering referents, but she does not provide any reasons or criteria for such division of discourse contexts.

or discourse environments on anaphora.

Furthermore, the separate treatment of anaphora in the three environments creates practical difficulties in data analysis. That is, there are no clear lines to be drawn between these three environments. We can in fact find occurrences of other referents, both different- and same-gender referents, in Fox's example passages in all three environments. For example, the passage in (40) below is treated as an environment of no other referents though obviously it involves a different-gender referent in proposition 2. Thus, it is not clear what parameters are used in her model to identify the supposed environments for anaphora.

A more specific problem is with Fox's claim that pronominalisation is limited to active patterns in the environments of different-gender and same-gender antecedents (see her formulations of the basic pattern in these two discourse contexts). This claim effectively rules out the possibility of pronouns occurring in controlling patterns. However, in the following passage (taken from Fox, p. 178),²² we find a pronoun being used in a controlling pattern although there is another different-gender antecedent:

- (40) 1. He prospered.
 2. When *Victoria* came to throne,
 3. he was living in a comfortable house.

A pronoun *he* is used in (3) to refer to the antecedent *he* in the controlling proposition (1), despite the presence of a different-gender NP *Victoria* in (2). Fox's formulation incorrectly blocks the use of the pronoun here. When making the above claim, Fox admitted that this was the only passage in her corpus in which a pronoun is possible in a different-gender context when the relevant proposition is in a controlling state. However, counter-examples like this are not hard to find.²³ In the following passage, the anaphor in (3) is realised by a pronoun coreferential with its antecedent *John* in the controlling proposition (1) although a different-gender NP *Mary* occurs in (2):

²²This is actually an example passage which Fox used in the context of no other possible antecedents.

²³As noted in the footnote related to example 36, a pronoun *she* could equally be used in the place of a full NP *Vanessa* in proposition 4 of (36), in spite of the fact that there is a different-gender referent present in the intervening propositions.

- (41) 1. John was a very nice guy.
 2. When *Mary* felt down,
 3. he would do all the housework and never complained.

As a matter of fact, pronominalisation is possible not only in a controlling pattern in the different-gender environment, but also in the same-gender environment. For instance, in the passage below, although another same-gender NP occurs in (2), the subject anaphor in (3), which is anteceded by *John* in (1), takes the form of a pronoun.

- (42) 1. John was a very nice guy.
 2. When *Tom* felt down,
 3. he would try to tell jokes and cheer him up.

Again, the use of pronoun here would be wrongly ruled out by Fox's generalisation. Arguably, these counter-examples could be tackled if Fox's anaphor patterns were modified so that pronominalisation extends, with certain restrictions, to controlling patterns in all discourse contexts.

To summarise, in spite of the inadequacies noted above, Fox offers a very promising account of anaphora in discourse. Her study shows that anaphora is determined not by recency or distance, but by the hierarchical organisation of the discourse. Her study is thus in a sense in parallel with those by AI researchers such as Grosz and Reichman. Compared to the discourse structures identified by AI researchers, however, Fox's rhetorical structures are more comprehensive and explicit, and thus provide a better descriptive framework for investigating anaphora in discourse.

Since her rhetorical structure approach is shared by the present study in which I use the term RHETORICAL PREDICATE, and since the notion of rhetorical structure or predicate is not necessarily familiar to the majority of linguists in the discipline, I will devote a section in Chapter 3 to trace its origin and recent development so as to set the scene for the framework that I will propose for this study in that chapter.

2.2.3 Summary

In this section (2.2), I have presented and discussed various approaches to discourse anaphora in English. I first examined linear approaches, i.e. Givon (1983a), and Clancy (1980). We saw that notions of referential distance/time and possible interference that these approaches assume may not be the crucial factors on anaphora, and the predictions based on them were shown to be rather rough -- they leave, as the figures in Clancy (1980) showed, a significant number of anaphora instances unaccounted for. Thus these approaches are some distance away from offering anything like a satisfactory account. I then examined, under the heading of hierarchical approaches, paragraph structure approaches (Hinds 1977), AI approaches (Grosz (1977), Reichman (1981) and Sidner (1983a)), and rhetorical structure approaches (Fox, 1984). Paragraph structure accounts such as Hinds (1977) show that discourse structure (e.g. paragraph and segment) does bear significantly on the use of anaphora, though these accounts are limited in scope and predictions based on paragraph structuring are sometimes too rigid. As a critique to distance-oriented approaches, AI approaches provide a discourse structural account of anaphora characterised by the focusing mechanism and these accounts were shown to be both interesting and convincing, though the structural relations identified in these studies are still somewhat limited, e.g. Grosz's structural units are limited to one relation (dialogue-subdialogue). The rhetorical structural approach examined (i.e. Fox, 1984), while maintaining the spirit of AI hierarchical approaches, offers a very promising alternative for discourse representation and anaphora interpretation because the structural relations (rhetorical structures) are more explicit and more comprehensive than those of paragraph structure approaches and AI approaches. It seems therefore that a discourse structural approach, especially one based on rhetorical structure/predicate theory, offers a better account of anaphora in discourse.

2.3 Approaches to discourse anaphora in Chinese

Having examined different approaches to discourse anaphora in English, I will in this section look at different proposals for discourse anaphora in Chinese. Broadly speaking, most of the proposals for anaphora resolution in extended texts in Chinese can be considered as discourse-pragmatic oriented ones. For example, Li & Thompson (1979, 1981), and Chen (1984, 1986) belong to this category. These proposals, although still characterised by their linear views of texts, tend to give a more prominent role to semantic and pragmatic factors in interpreting anaphora. There have been also attempts to account for anaphora from the perspective of discourse structure. Tai (1978) and Li C-i. (1985) are two of these attempts. These discourse structural accounts take a similar stance as that of Hinds (1977) and attempt to interpret anaphora in terms of paragraph structure. In the sections to follow, I discuss Li & Thompson (1979, 1981) and Chen (1984, 1986) under the heading of discourse-pragmatic approaches, and Tai (1978) and Li C-i. (1985) under the heading of discourse-structural approaches.²⁴

2.3.1 Discourse-pragmatic approaches

Li & Thompson (1979, 1981) study the use of third-person pronouns and zero anaphora in Chinese discourse. In their 1979 work, they propose the CONJOINABILITY PRINCIPLE as the major factor controlling the occurrence of overt and zero pronouns in written Chinese. In their 1981 work, they propose the HIGHLIGHTING PRINCIPLE to account for the appearance of pronouns in written and spoken discourse. Below we will examine their treatment of overt and zero pronouns in these two works in more detail.

Li & Thompson (1979) argue that an important factor that governs the appearance of third-person pronouns is CONJOINABILITY, which they define as "the degree of connection between clauses in discourse":

Two successive clauses are "conjoinable" if the speaker/writer perceives them to share enough to warrant being presented to the hearer/reader together as one grammatical unit rather than separately as two independent units. (1979:330)

²⁴It should be pointed out that these two types of approaches are not distinguished in absolute, black and white terms. For example, Chen comments on paragraph boundaries and the use of anaphora; Li, C-i also considers syntactic and semantic aspects of anaphora.

They suggest that the occurrence of a pronoun in a clause thus inversely corresponds to the degree of its conjoinability with the preceding clause. In other words, the lower the degree of conjoinability between two clauses, the higher is the likelihood of a pronoun occurring in the second clause. To demonstrate how the Conjoinability Principle works, they give, among others, the following examples (p. 328-329):

(43) 1. Zhangsan jin-le da men,
 enter-aspect main door

2. {0/?? ta} tuo-le da-yi,
 {0/ he} take off-aspect coat

3. {0/?? ta} zuo-xialai.
 {0/ he} sit-down

"Zhangsan entered the main door, took off his coat, and sat down."

(44) 1. congqian you yige ren jiao Zhangsan
 once-upon a time exist a person call Zhangsan

2. {?? 0/ta} neng fei
 { 0/he} can fly

"Once upon a time there was a person called Zhang-san. He can fly."

In (43), all three clauses form a pragmatically natural chain of actions and are highly conjoinable to each other to form a single unit, thus the use of zero anaphora is preferred. In (44), on the other hand, the use of a pronoun is more appropriate because the connection or conjoinability between the two clauses is low, that is, the relationship between what someone is named and his ability to fly is not an easily inferred one.

Li & Thompson also single out some factors that affect conjoinability and hence trigger the use of pronouns. For example, conjoinability is greatly impaired when the clauses involve a switch from background to foreground information or vice versa (cf. Tai's (1978) "types of description"). This is illustrated in the following passage (taken from Chen, 1984:10):

(45) 1. Zheshi turan cong qiangshang tiaoxia ge qingnian ren lai,
 this:time suddenly from wall jump:down a young person come

2. 0 cong dao menqian,
 dash to door:front

3. 0 ba men yi jiao ti kai,
 BA door one foot kick open

4. 0 la kai diandeng,
 pull open light

5. 0 zhi wang loushang benqu.
straight toward upstairs rush:go
6. Ta jiu shi cai cong wu-hao jianyu-li taochulaide Xiao Hu.
he exactly be just from 5-number prison-in escape Xiao Hu

"At this time, suddenly there was a young man jumping from the wall. (He) dashed to the door, (he) kicked it open with one blow, (he) turned on the light, and (he) rushed straight upstairs. He was none other than Xiao Hu, who had just broken out from Prison No. 5."

In this text, (1) through (5) provide foreground information, the action sequence of the narrative, while (6) provides background information. The switch from foreground information to background information gives rise to the use of a pronoun in (6).

Conjoinability between two clauses is also greatly impaired when the second clause is preceded by adverbial expressions such as time phrases or contrastive conjunctions.²⁵ The reason for this, according to Li & Thompson, is that "such elements signal the beginning of a new sentence rather than a connected clause" (p. 332). Notice that by such a statement, Li & Thompson actually imply that zero anaphora should not be expected to occur across the boundary of sentences, a claim which we will challenge later. But for the moment, let us consider the following (from Li & Thompson, p. 323):

- (46) 1. Zhe Wang Mian tianxing congming
this nature smart
2. 0 nianji bu man ershi sui
age not exceed twenty year
3. 0 jiu ba na tianwen, dili, jingshi shang de
already BA that astronomy geography classics in
da xuewen wu-yi bu-guantong
great knowledge not a bit not master
4. dan ta xingqing bu tong, ...
however he personality not similar
"This Wang Mian was gifted. (He) was not more than twenty years of age. (He) had already mastered everything in astronomy, geography, and classics. However, he had a different personality...."

In (46) clause 1 introduces the topic *Wang Mian*, which is zero-mentioned in clauses 2 and 3, forming a topic chain.²⁶ Clause 4 then begins with the word *dan* "however",

²⁵A third factor affecting conjoinability occurs when the two clauses constitute different conversational turns. But this is only briefly mentioned by Li & Thompson since their concentration is on narrative discourse.

²⁶A topic chain in Chinese refers to a sequence of clauses, where the topic established in the first clause serves as the referent for the unrealised topics in the chain of clauses following it.

which signals the end of that topic chain and the start of a new sentence.

Although the Conjoinability Principle appears to account well for the data as presented above, there are a number of problems with the constraints on this principle. For example, Li & Thompson claim that a switch from background to foreground information or vice versa requires the use of a pronoun, but in the following passage we find a zero pronoun being used at a place involving a switch of information type.

- (47) 1. Zheshi menwai zoujinlai yigeren,
 at:this:time from:outside walk:enter a person
2. 0 yuemo you ershi sui,
 about has twenty years old
3. 0 pangpangde yuan-lian,
 fat round-face
4. 0 habagoude bian-bizi, ...
 Pekingese:dog:like flat-nose

"At this moment a man walked in. (He) is about twenty years of age, with a plump round face and a nose of a Pekingese dog."
 (Taken from *The Wildness* by Cao Yu)

In this example, the first clause describes the foreground action whereas the following clauses provide descriptive background information. Notice that, against the conjoinability condition, no pronoun occurs at the boundary of the switch of the information types.²⁷

The following passage poses a counter-example for their second constraint on conjoinability, i.e. the appearance of a connective adverbial before a sentence triggers the use of a pronoun.

- (48) 1. 1920-nian wuyue Zhu Ziqing tiqian zai Beijing Daxue biye.
 in 1920 May earlier in Peking University graduate
 "Zhu Ziqing graduated from Peking University in May, 1920
 after a shortened period of study"
2. Congci, 0 zhanzhan yu Jiang-Zhe yidai ...,
 since-then frequently-move in Jiangsu & Zhejiang provinces,
 "Since then, (he) was frequently moving in Jiangsu and
 Zhejiang Provinces"

²⁷Li & Thompson argue that examples like (47) are not counter-evidence to their generalisation on the ground that this kind of clause which typically contains "a verb of appearance" performs a dual function in discourse. That is, on the one hand it forms part of the action sequence, and on the other hand it introduces a new discourse topic that the following clause(s) goes to describe, and hence it is highly conjoinable with the following clause(s) (Li & Thompson, 1979:331).

3. 0 zai xuduo xuexiao jiaoshu,
 in many school teach
 "(he) taught in various schools there"
4. 0 guole wu-liu-nian zhuantuwuchangde shenghuo.
 live five-or-six-year unsettled life
 "(he) had an unsettled life for five or six years"
 (Taken from *A Biography of Zhu Ziqing*)

In this passage, clauses 2-4 are separated from clause 1 by a sentence boundary signalled by a time adverbial, *congci* "then". According to Li & Thompson's conjoinability constraint which requires pronouns to occur at sentence boundaries marked by adverbial expressions, we should have expected a pronominal anaphor instead of a zero anaphor in clause 2.

A third point is its limitation to clauses sharing a common referent in a topic chain and thus anaphora outside a topic chain is not accountable for by the conjoinability principle. However, discourse contexts are so diverse that such a narrow principle, even if it is a valid one in its own right, can hardly be sufficient to account for the widespread use of anaphora in discourse. We may look at a previous example repeated as (49).

- (49) 1. Tongxuemén yì jiǎnlè xīnláide lǎoshī,
 students as-soon-as see new teacher
 "As soon as the students met their new teacher"
2. 0 jiù fēicháng xǐhuān 0.
 then very much like
 "(they) liked her"

The instance of the zero anaphor in subject position of (2) can be accounted for by the Conjoinability Principle since it occurs in a topic chain. How about the occurrence of the zero anaphor in the object position of (2)? This anaphor is anteceded by the object NP in (1), but they cannot form a topic chain since there is already a topic chain in the sentence. As the Conjoinability Principle can only account for alternation between overt and non-overt pronouns in a topic chain, this instance of zero anaphora is left unaccounted for.

Apart from the above problems with Li & Thompson's (1979) work, I disagree with a few of their minor claims about anaphoric distribution. In particular they claim that there may be a reluctance on the part of the speaker/writer to continue an unbroken

string of clauses with zero pronouns for "too long" (even in a topic chain) and where speakers decide to break the string of zero pronouns seems to be a matter of personal preference, with no governing principles discernible at present. In my view, speakers/writers' use of pronoun or zero pronoun is not totally arbitrary as Li & Thompson suggest, but rather, as I hope to demonstrate in this study, is governed by discourse structural considerations. Personal preference or variation should be interpreted as reflecting differences in displaying or viewing the discourse structure on the part of the speaker/writer, and is thus discernible in a structural approach.

Li & Thompson (1981) propose HIGHLIGHTING as a general guideline to be followed in interpreting pronoun/zero pronoun alternation in both written and spoken Chinese.²⁸ They argue that the decision to use a pronoun in referring to discourse participants depends not only on whether the referent can be understood or figured out from the context, but on whether there is reason to highlight the referent of the pronoun in the context in which it occurs (1981:674). If there is a reason to highlight the referent, a pronoun will be used; if not, a zero pronoun will occur. For example, in (50) (taken from Li & Thompson), clauses 1 through 3 offer descriptions about Mr Bai, while clause 4 provides a piece of additional information that is distinct from or unexpected in relation to what has gone before, and it is thus necessary for a pronoun to be used in clause 4 to highlight this change of information type.

- (50) 1. Bai Xiansheng zai keting li deng Lisi,
 Mr Bai at living-room in wait Lisi
2. 0 daizhe yanjing, zai nali kan baozhi,
 wear glasses at there read newspaper
3. 0 haoxiang you dian bu naifan,
 seem have a little not patient
4. ta shuo: "...."
 he say "...."
 "Mr Bai was waiting for Lisi in the living room. (He) was wearing glasses and reading a newspaper there, (He) seemed to be a little impatient. He said:'....'"

However, the notion of highlighting seems to be extremely vague. From Li & Thompson's discussion, it is by no means clear what they consider as constituting "a reason to highlight", or what it is that is being highlighted by the use of pronoun. For

²⁸Li and Thompson did not give any explicit definition of the term *highlighting* except saying that its function is to "emphasize or mark explicitly something because of certain reasons".

example, in (51) below either a pronoun or a zero pronoun may occur with equal felicity as the subject anaphor in the second clause without any apparent difference in interpretation or emphasis.

(51) 1. Youyu Zhangsan bing le,
as Zhangsan is ill

2. 0/ta mei lai shangke.
he not come-to class

"As Zhangsan was ill, (he) did not come to class."

Change of information type or unexpectedness of the information, which are the constraints on conjoinability that favour the occurrence of overt over zero pronouns, may be factors that contribute to the need for highlighting, but they are certainly not all that there is. Until a proper specification of all its relevant factors can be given, this principle does not offer a convincing account of the phenomenon.

Furthermore, its narrowness of scope should be noted. Like the Conjoinability Principle, the principle of highlighting is only used to account for the occurrence of overt or zero pronouns in the context of a topic chain, i.e. clauses sharing a common referent, and thus makes no predictions about the occurrence of anaphora in contexts involving a switch of reference or non-topic NPs (see example 49 above and the related discussion).

From what has been said, it is clear that Li & Thompson's 1981 work does not go any further than their 1979 work and these two pieces of work are both vague and limited and thus do not offer a satisfactory account of anaphora in discourse in general and overt-zero pronoun alternation in particular.

Chen (1984) presents a discourse analysis of third person zero anaphora in Chinese. In this work, Chen claims that zero anaphora is triggered by the fulfilment of two conditions: the PREDICTABILITY CONDITION and the NEGLIGIBILITY CONDITION, each of which may be measured in terms of independent, empirically ascertainable parameters.

According to Chen, the Predictability Condition, which indicates the ease of predicting the identification of the referent in the context, is judged on the basis of the following three parameters:

1. Availability vs. unavailability of competing noun phrases
2. Low vs. high conjoinability with preceding clauses
3. Low vs. high on the accessibility hierarchy. (1984:6)

As the first parameter indicates, if there is more than one NP in the context eligible to be the antecedent of the anaphor, predictability will be greatly reduced, and the use of zero anaphora will be unacceptable. To judge whether other NPs are in competition for the intended antecedent, Chen argues, involves the exploitation of syntactic, semantic and pragmatic information in the sentence as well as world knowledge on the part of the participants in the linguistic communication.

Following Li & Thompson (1979), Chen proposes CONJOINABILITY as one of the parameters bearing on the Predictability Condition. Conjoinability is defined, in Chen's model, in terms of topic continuity and semantic continuity. Topic continuity refers to the phenomenon of topic chain (cf. the definition given in a previous footnote), while semantic continuity means a cluster of clauses centred around a common theme. Chen singles out some of the factors which are said to interrupt or affect semantic continuity (similar to those proposed by Li & Thompson, 1979):

1. Turning from foreground information to background information, or vice versa; or turning to something downright unexpected from what has been established before.
2. Insertion of some digression into the development of the theme.
3. Insertion of temporal, locative, adversative adverbials, or other types of adverbials.
4. Pauses, or hesitation, especially when the theme tends to become longer and longer.
5. Paragraph boundary.
6. Switch or turn in conversation, and so on. (p. 12)

Chen notes that when clauses display one or more of the above features, their conjoinability will become too low to warrant the predictability of zero anaphora, and thus pronoun anaphors are usually employed.

Borrowing the notion of ACCESSIBILITY HIERARCHY from Keenan & Comrie (1977), Chen suggests the following hierarchy for Chinese which indicates how anaphors vary in predictability according to their syntactic position in the sentence:

Topic/Subject -> Direct Object -> Indirect Object -> Pivotal Object -> Oblique Object

Chen argues that the higher an NP is in the hierarchy, the more likely it is to be identified as coreferential with its antecedent and the more likely it is to be expressed as zero, though no motivations are given for the behaviour of anaphors as regards this hierarchy.

The second condition which supplements the Predictability Condition in regulating the choice of anaphora types is the Negligibility Condition. It relates to the need to emphasise the identity of the anaphor. That is, the less need there is for specific mention of the referent, the more negligible it is said to be. The Negligibility Condition is assessed in terms of the following parameters:

1. Specific vs. non-specific and generic reference
2. Positions in main vs. subordinate clauses
3. Animate vs. inanimate reference. (p. 20)

Chen takes the position that if an anaphor is of non-specific or generic reference, it is considered to be more negligible and therefore more likely to be realised as zero, as illustrated below (from Chen, 1984:21):

(52) 0 youyong yiqian, 0 yiban yao xian zuo zhunbei huodong.
 swim before generally ought first do preparation activity
 "Usually (you) should get warmed up before (you) go to swim."

With regards to the second parameter, Chen suggests that the subject of a subordinate clause stands higher in negligibility than that of the main clause when they are coreferential, because the subordinate clause is dependent on the main assertion.

Following Comrie (1981), Chen says that as people tend to pay greater attention to animates than inanimates, an inanimate reference is more negligible, and more likely to be realised by zero.

After a detailed discussion of the two Conditions, Chen concludes that anaphoric choice is determined not by the value of one single parameter, but by a combination of the values assigned to each of the parameters. Thus, the more parameters that contribute positively to the predictability and negligibility of the referent, the more likely it is to

be zero-encoded. To illustrate, consider a previous passage repeated below (Chen's own example):

- (53) 1. Zheshi turan cong qiangshang tiaoxia ge qingnian ren lai,
 this:time suddenly from wall jump:down a young person come
2. 0 cong dao menqian,
 dash to door:front
3. 0 ba men yi jiao ti kai,
 BA door one foot kick open
4. 0 la kai diandeng,
 pull open light
5. 0 zhi wang loushang benqu.
 straight toward upstairs rush:go
6. Ta jiushi cai cong wu-hao jianyu-li taochulaide Xiao Hu.
 he exactly-be just from No. 5 prison-in escape Xiao Hu

"At this time, suddenly there was a young man jumping from the wall. (He) dashed to the door, (he) kicked it open with one blow, (he) turned on the light, and (he) rushed straight upstairs. He was none other than Xiao Hu, who had just broken out from Prison No. 5."

In this example, the subject anaphor in clauses 2-5 is coreferential with *qingnian ren* "a young man" in clause 1 and is realised as zero. The reasons for this zero realisation can be explained through both the Predictability and Negligibility Conditions. For example, in the context established by (1) through (5), no human being is mentioned besides *the young man* in (1), and thus there is simply no other referent that competes with it for the subject of these clauses -- this satisfies the first parameter of the Predictability Condition. In terms of the second parameter of this condition, i.e. the conjoinability parameter, since clauses 1 through 5 describe a sequence of actions happening one after another, involving no switch of information type, this parameter is also met. And since all occurrences of the anaphor appear in subject slot, they meet the requirements of the third parameter of the condition, i.e. high accessibility. Now if we look at the Negligibility Condition, we find that they basically satisfy that parameter as well. That is, the referent is animate/human, and occurs in the subject position of the main clauses (all the clauses are in a co-ordinate relationship). All these factors contribute to the zero realisation of the anaphor. The pronominal anaphor as subject in (6), however, is determined by the conjoinability parameter only, that is, the change from foreground information (clauses 1-5) to background information (clause 6) gives rise to the use of a pronominal instead of a zero anaphor here. The instance of the pronominal anaphora in (6) seems to suggest that the number of contributing factors may not be so decisive

as Chen apparently suggests and different factors may carry differing significance in anaphoric choice.

The main contribution of Chen's (1984) work lies in its singling out, in a detailed way, the specific factors/parameters involved in triggering zero anaphora, thus bringing one's understanding of the restrictions on the use of zero anaphora to a better informed stage. The depth and scope of this research undoubtedly surpasses the studies by Li & Thompson discussed earlier. However, although Chen's analysis is intriguing, it is not without problems.

First, while predictability is an important factor in determining how an anaphor is to be realised, I disagree with her view that predictability bears on zero anaphora specifically, because when predictability is low, both zero pronouns and overt pronouns are avoided. For example, in the following passage the pronoun anaphor *ta* "he" occurs in a context where the referent is highly predictable: both the anaphor and its antecedent are subjects of their clauses and also no other (human) NPs occur in the context:

- (54) 1. Lin Kexiu hai ku'ai tiyu.
besides love sport
2. Ta ceng shi sheng juzhongdui de yundongyuan,
he once is province lift-weight-team player
3. 0 bing qudeguo hao chengji, ...
and achieve good records
"Lin Kexiu is particularly keen on sports. He used to be a member of the provincial weight-lifting team and achieved good records" [D4]²⁹

Examples like (54) suggest that pronoun anaphora, like zero anaphora, may occur when the referent is highly predictable. If the referent of an anaphor is low in predictability, e.g. when there are competing NPs in the context, neither pronoun nor zero pronoun will be chosen; rather a noun will be employed. Consider the following example (from Chen, 1984:7):

- (55) 1. Da Xiu he Xiao Yun yiyang da yiyang gao,
and same big same tall
2. zhishi 0 chuanzhuo butong,
only clothes different

²⁹[D4] refers to the text numbered 4 in the corpus in the Appendix. As noted in Chapter 1, each of the quotations from the texts in the corpus that is used in the body of the thesis is accompanied by a reference to the quoted text in the Appendix.

3. Da Xiu chuan-zhe yitiao laoshide yiku,
wear a old-fashioned pant-suit
4. Xiao Yun chuan-zhe yitiao xinzude lianshangqun.
wear a newly-made dress

"Da Xiu and Xiao Yun are of the same build and same height. (They) differ only in the clothes (they) wear. Da Xiu has an old-fashioned pant-suit, while Xiao Yun has a newly-made dress."

Here two NPs *Da Xiu* and *Xiao Yun* are mentioned in (1) and later mentioned separately via full NPs in (3) and (4). The reason for the instances of nominal anaphora in (3) and (4) is that if pronoun or zero pronoun is used, it will be unclear which of the two NPs is meant; in other words, predictability is too low to warrant the use of pronominal anaphora.

On the other hand, we often find cases where a noun is used to encode an anaphor whose referent is clearly predictable in the discourse. Consider the following:

- (56) 1. Yi danren Zhongguo Caizhen Buzhang qinianduode Wang Bingqian
already be China's Treasury Minister over-7-years

jingtian zaici bei renming danren zheyi zhongyao zhiwu.
today again be appointed be-in this important post
"Wang Bingqian, who had been Minister of the Treasury of China for over seven years, was appointed today to carry on in this capacity"

2. Wang Bingqian 1925-nian yuanyue shengyu Hebei Li Xian.
in 1925 January be-born in Hebei Li County
"Mr Wang was born in January 1925, in Li County, Hebei Province"

3. 0 1940-nian yiyue jiaru Zhongguo Gongchandang.
in 1940 January join Chinese Communist Party.
"(He) joined the CCP in January 1940" [D24]

This text is centred on the NP *Wang Bingqian*, whose second mention in (2) is clearly predictable. However, a full NP is used, although no ambiguity would arise if a pronoun or even a zero pronoun was used.³⁰

Furthermore, Chen attributes the occurrence of zero anaphora as subject in a subordinate clause to negligibility, but this is quite unintuitive since pronouns can occur in this position without any apparent consequences to the meaning of the sentence. This is illustrated below:

³⁰This instance of nominal anaphora may be explained, in a discourse structural approach, by its occurrence at the boundary of a discourse unit.

- (57) 1. 0/ta qu Meiguo yiqian,
 he go America before
 "Before he went to America"
2. ta/0 zai Zhongguo xuele sannian Yingyu.
 in China learn three:year English
 "he had studied English for three years in China"

If we attribute the instance of zero anaphora as subject in the subordinate clause in (1) to the negligibility factor as Chen apparently suggests, how are we going to explain the use of zero subject in the main clause coreferential with the pronoun subject in the preceding subordinate clause? The following is another example in which the subject anaphor in the main clause can take the form of either a zero or a pronoun coreferential with the subject antecedent in the preceding adjunct clause.

- (58) 1. Youyu Zhangsan xuexi bu yonggong,
 because Zhangsan study not hard
 "because Zhangsan does not work hard"
2. ta/0 changchang kaoshi bu jige.
 he often exam not pass
 "he often fails in his exams"

Examples like (57) and (58) demonstrate that negligibility is simply not the issue here.³¹

Chen (1986) expands her scope of investigation to include pronoun and noun as well as zero anaphora. In an attempt to distinguish the use of these three anaphora types in Chinese narratives, Chen proposes some discourse-pragmatic factors governing anaphoric choices.

HIGH CONTINUITY and HIGH NEGLIGIBILITY of the referent are the two factors that Chen proposes for the selection of ZA in discourse. Continuity of the referent, according to Chen, "relates to how easily the referent can be identified in the discourse" (1986:175), and is assessed in terms of referential distance, potential interference and persistence (cf. the section on Givon earlier in this chapter). Thus, zero anaphora tends to "be chosen when the anaphor is very close to its antecedent in the linear order and there is no interfering referent between the two" (p. 177). Here we can see a close

³¹The choice between zero pronouns and overt pronouns may depend on the grammatical status of the constructions involved, that is, whether they are coordinated VPs or coordinated clauses/sentences. Zero pronouns are used in the case of VP coordination while either zero or overt pronouns are used in the case of sentential coordination (see Harlow & Cullen, 1992).

resemblance between Chen's continuity factor and Givon's Continuity Principle, as well as her own Predictability Condition (Chen, 1984). The other factor, high negligibility, refers to the low salience of the referent, which is manifested in one of the following two situations. That is, zero anaphora is used when it encodes an inanimate (and thus low-salience) referent or when it occurs in the subject slot of a pre-posed subordinate clause. The latter is considered as "low salience" because the subordinate clause is structurally and semantically dependent on the main clause. This is again reminiscent of those parameters bearing on the Negligibility Condition in her 1984 work. It is apparent then that these two factors that contribute to the choice of zero anaphor over pronoun or noun anaphora, with an added element of Givon's distance theory (e.g. referential distance and interference), are largely a recapitulation of the conditions of predictability and negligibility Chen suggests in her 1984 work.

For the use of pronoun anaphora in discourse, Chen (1986) suggests two contributing factors, that is, location at a minor discontinuity in discourse and high noteworthiness. Chen argues, in explaining the minor discontinuity factor, that pronoun anaphora usually occurs at the beginning of a sentence, separated from the preceding one by connective adverbials such as *ranhou* "then", *keshi* "but", and *suoyi* "therefore". Here is an example from Chen:

- (59) 1. Ta meiyou chengben,
he not-have capital
2. 0 meiyou benr,
not-have capital
3. 0 mai bu qi zhongzi,
buy not up seed
4. er, suoyi, ta jiji shengchan hai hen kunnan.
eh therefore he active produce still very difficult

"He didn't have the capital, (he) didn't have any capital.
(He) couldn't afford seeds. Eh, as a result, he still has
many difficulties in getting into active work."

Note that the occurrence of a pronoun *ta* in (4) is preceded by the connective *suoyi* "therefore". It should be pointed out that there is some hesitation on the part of the speaker, as shown in the use of *er* "eh". Both the features contribute to a minor discontinuity that triggers the use of a pronoun.

The high noteworthiness factor is just the opposite of the high negligibility for zero

anaphora. That is, pronoun anaphora is more likely to be used than zero anaphora if the referent is high in salience (e.g. animate reference) or if it appears in the main/nuclear clause. These two factors, namely, minor discontinuity and high noteworthiness, can be seen as implied in the two conditions related to the use of zero anaphora proposed by Chen in her 1984 work. (For illustrations see example 57 for high noteworthiness and the use of a pronoun at clause 2.)

The major discourse-pragmatic factor that determines the choice of noun anaphora in Chinese, as suggested by Chen, is low continuity of the referent in discourse, which manifests itself in one of two situations. In the first situation, noun anaphora is chosen because of the availability of competing antecedents and/or the great distance between the anaphor and the antecedent. In the second situation, noun anaphora is chosen because of its occurrence at major breaks in discourse, i.e. "paragraph boundaries" in Chen's terminology. The correlation of noun anaphora with factors such as interference and distance is based on Givon's Continuity Principle and the correlation of noun anaphora with paragraph boundaries is motivated by Hinds (1977), Chafe (1979) and Clancy (1980).

Chen's (1986) analysis is successful as far as it goes, particularly in singling out the specific discourse-pragmatic factors responsible for the selection of zero, pronoun or noun anaphora in the discourse. There are, however, some problems in her analysis. Firstly, Chen suggests that pronoun anaphora usually occurs at such minor breaks as sentence boundaries, but very often we find zero anaphora occurring across sentence boundaries.³² For example, in (48) we saw a zero anaphor occurring across a sentence boundary marked by the connective *congci* "since then". Below is another counter-example in which, contrary to Chen's predictions, a zero pronoun is used as subject at the beginning of a sentence preceded by the connective *tongshi* "meanwhile":

- (60) 1. Enlai tongzhi nashi du-dang-yi-mian zai Guomindang-tongzhiqu
 then be-in-charge in KMT-ruled-area
 tuanjiele ge-dang-ge-pai he wu-dang-wu-pai de renshi...
 unite people-of-all-parties and independent people

³²The definition of the term *sentence* is rather problematic in Chinese but that should not bother us here. In Chen's treatment, she seems to regard a period as a marker for a sentence as she deals with written texts.

"Comrade Enlai was then in full charge of the Communist Party's work in the Nationalist Party ruled areas, where he united people of different parties and factions as well as people without party backgrounds"

2. Tongshi, 0 zai qingnian xuesheng jiaoshi gongren nongmin
meanwhile in young student teacher worker peasant
shangren deng gege jieceng-zhong jinxingle shenrude gongzuo.
businessman etc all ranks-among carry out deep work
"At the same time, he did an excellent job among young
students, teachers, workers, peasants and businessmen" [D12]

As a matter of fact it is not uncommon for zero anaphora to occur across sentence boundaries (and even across more than one sentence boundary). The following are just two of these instances:

- (61) 1. Ta yuanji Fujian Sheng Nan'an Xian, jiajing pinhan.
he home town Fujian Province Nan'an county, family poor
"He was born into a poor family in Nan'an county, Fujian Province"
2. 0 Shisui na'nian sui fu guofan daole Xingjiapuo.
at age of ten with father cross-channel go-to Singapore
"At the age of ten (he) went to Singapore with his father."
3. Zai nali, ta jieshoule Zhong Yinwen jiaoyu.
at there he received Chinese English education
"There he received his formal education in Chinese and English"
4. 0 Yijiulingjiu-nian hui-guo shen-xue,
in 1909 return-home attend-school
"In 1909 (he) returned China to continue his education"
5. 0 lian-nian hou yi minglie quanban diyi de youyi chengji
two years later with the best in the class achievement
biyeyu Nanjing Jinan Xuetaang.
graduate from Nanjing Jinan School
"two years later (he) graduated from Nanjing Jinan School with best records in his class"
6. Jiezhe, 0 ru Beijing Qinghua Gaocheng Xuetaang,
Then attend Peking Qinghua higher school
"Then, (he) went to Peking Qinghua College"
7. erhou 0 zhuanwang Jiaotong Daxue de qiansheng --
after that transfer-to Jiaotong University's predecessor
Tangshan Lukuang Zhuanmeng Xuetaang jiudu.
Tangshan Mining specialised school study
"from there (he) transferred to Tangshan Mining College --
predecessor of Jiaotong University" [D7]
- (62) 1. 1959-nian, Li Guixian zai Zhongguo Keji Daxue xuexi.
in 1959 at China technology university study
"In 1959 Li Guixian studied at China University of Technology"
2. 1960-nian hou, 0 zai Sulian Mosike Menshi Daxue gongdu
after 1960 at USSR Moscow Menshi university study
dianzhenkong huaxue zhuanye.
electro-vacuum chemistry faculty
"After 1960 (he) studied electro-vacuum chemistry at Moscow Menshi University in USSR"

3. 0 1965-nian huiguo hou, zai Gong'anbu de
in 1965 return after at public-security-bureau
yige yanjiusuo gongzuo.
a research-institute work
"(He) worked at a research institute affiliated to the Public Security Bureau after returning home in 1965"
4. Yijiugiqi-nian hou, 0 ren Liaoningsheng Jingzhoushi
after 1977, was Liaoning province Jingzhou-city
dianzi gongyeju fujuzhang, zong-gongchengshi ...
electric industry dept. deputy director, chief engineer,
"After 1977, (he) was deputy director and chief engineer of the Department of Electricity Industry of Jingzhou Municipality, Liaoning Province"
5. Yijiuba'er-nian, 0 ren Liaoningsheng fushengzhang
In 1982, was Liaoning province vice-chairman
jian sheng kouwei zhuren.
and province science-dept. director
"In 1982 (he) was elected vice-chairman of Liaoning Province and director of the Department of Science and Technology"
6. Yijiubashan-nian hou, 0 ren Liaoningsheng fushengzhang.
after 1983, was Liaoning Province vice-chairman
"After 1983 (he) was vice-chairman of Liaoning Province" [D28]

In (61) we have zero anaphora at the beginning of sentences 2, 4, 6. In (62) we have an extreme case of zero anaphora occurring across five consecutive sentence boundaries. Note also that in these two passages most sentence boundaries are initiated by connectives. Thus, Chen's proposed correlation between minor discontinuity (sentence boundary) and use of pronoun anaphora leaves instances of anaphora like those above unaccounted for.

In addition, Chen's association between the position of the anaphor in the nuclear (main) vs. adjunct (subordinate) clause and high vs. low noteworthiness or negligibility is at least not a convincing one. As we noted earlier in discussing Chen's (1984) predictability condition, both types of anaphora (i.e. overt and zero anaphora) can occur freely in both types of clause (i.e. main and subordinate clauses, see example 57 above), and thus it would not be sustainable just to attribute the occurrence of zero anaphora in a pre-posed subordinate clause to the negligibility factor and the occurrence of pronoun anaphora in the main clause to the high noteworthiness factor. Another passage follows:

- (63) 1. Ta/0 fanhui Jianada hou,
he go-back Canada after
"After he went back to Canada"
2. 0/ta xiexin ganxie Yang daifu,
he write-letter thank Dr Yang
"he wrote to thank Dr Yang" [D33]

That being the case, how do we then explain the occurrence of a pronoun anaphor in the pre-posed adjunct clause on the one hand and the occurrence of zero anaphor in the nucleus clause on the other?³³

In comparison to her 1984 study, Chen's 1986 study, which deals with all three types of anaphora in Chinese, is more comprehensive in scope, with more data used. Although these two pieces of work have adopted similar approaches and reached similar conclusions, Chen (1986) incorporates a discourse structural element into her otherwise linear approach, that is, the association of paragraph boundaries with the use of nominal anaphora. In a sense, Chen's approach is similar to Clancy (1980) discussed earlier in this chapter.

To summarise the section (2.3.1), discourse pragmatic approaches such as Li & Thompson (1979, 1981) and Chen (1984, 1986) attempt to account for anaphora in terms of semantic and pragmatic factors. In Li & Thompson, the factors are Conjoinability (which determines the choice between zero anaphora and pronominal anaphora) and Highlighting (which gives rise to the use of pronominal anaphora). In Chen, the discourse factors are Continuity vs. Discontinuity (which bears on the use of zero, pronominal and nominal anaphora, and Negligibility vs. High-Noteworthiness (which determines the occurrence of zero vs. pronominal anaphora). While these discourse pragmatic factors are relevant to the use of anaphora in discourse, as discussed before, there are problems with them. Li & Thompson's conjoinability and highlighting factors are shown to be rather vague and narrow in scope. Chen's proposed conditions such as those above, while interesting and useful, still leave instances of anaphora unaccounted for. It appears therefore that discourse pragmatic approaches to anaphora cannot offer a full account of the problem.

³³It is worth pointing out that instead of attributing the occurrence of zero pronoun in the preceding adjunct clause to negligibility and the occurrence of overt pronouns in the main clause to high noteworthiness, it seems to be more interesting to look at the constraints on the choice of these two types in the main clause (and this is precisely what Harlow and Cullen (1992) did, cf. a previous footnote).

2.3.2 Discourse structural approaches

As noted earlier, there have been some attempts to deal with anaphora in Chinese in terms of discourse structure. For instance, Tai (1978) suggests some discourse structural conditions on anaphora in Chinese narratives. Li, C-i. (1985) maintains that anaphora is determined by discourse structure represented by the three levels of discourse unit, i.e. clause, topic chain and paragraph. Chen (1987) argues that the use of zero anaphora in Chinese is influenced by the structural status in discourse of the clause in which it occurs. By and large, however, studies on anaphora in Chinese from the perspective of discourse structure are rather sketchy. In this section I discuss the work by Tai (1978), which represents one of the earliest attempts to account for anaphora from the perspective of discourse structure, and the work by Li, C-i (1985), which is one of the most comprehensive works in this vein.

Tai (1978) investigates the conditions on the occurrence of anaphora in Chinese narrative discourse at both sentence and discourse levels.³⁴ He argues that at the discourse level the occurrence of anaphora is influenced by the hierarchical organisation of the discourse and proposes different levels of structural units to describe this organisation. Tai takes the view that "a discourse can be analyzed into distinct paragraphs", which "can be analyzed as consisting of groups of sentences called segments" (1978: 306-307). Tai defines a PARAGRAPH as having a discourse topic, describing a certain event and set in a particular scene, such that "one paragraph moves to another, when it is separated by the introduction of a new referent, a new event, or a new scene" (p. 306). Within a paragraph, SEGMENT boundaries are marked by "changes in description involving the same discourse topic or from differences between peak and non-peak sentences (cf. Hinds, 1977).

It is clear from the above that Tai holds a similar view to Hinds in proposing the decomposing of a discourse into paragraphs and segments. Like Hinds, Tai maintains

³⁴The paper by Tai (1978) did not come to my attention until I began to write my final version of the thesis. I decided to include it in this chapter because I found his discourse-structural approach to anaphora is very interesting and is shared by this study. In particular, his approach to anaphora in terms of paragraph structure and his association of the topicality of a referent and the occurrence of zero and pronominal anaphora find their echoes in this study.

that these different levels of discourse structures impose different conditions on discourse anaphora. But while Hinds makes very strong claims about these conditions (e.g. within individual segments full NPs occur in peak sentences while pronouns occur in non-peak sentences), Tai approaches anaphoric conditions in a more realistic manner. In the following, I present Tai's proposals for the use of anaphora in different discourse structures.

Tai suggests that for zero anaphors to occur across segment boundaries they must satisfy the following three criteria:

- (64) a. Both the antecedent and its coreferential NP are subjects.
 b. The segments containing the coreferential NPs under consideration must be adjacent.
 c. The segments must be of the same type of description. (p. 311)

The way these conditions work is illustrated in (65):³⁵

- (65) 1. Xiao Laoda huidao jiali, yibianr sao yuanzi, shoushi
 return home while sweep yard put in order
 jiaju, yibianr deng-zhe erzi.
 furniture while wait for son
 "Xiao Laoda returned home, swept the yard, put the furniture in order, and waited for his son at the same time."
2. 0 dengdao taiyang luoshan, dengdao xingxing chulai,
 wait-till the sun set wait till the stars come out
 dengdao donglin-xishe yijing xiangqi guanzhu-ganji he
 wait-till neighbourhood already start get-in pig-chicken and
 shuanmen-bimen de shengyin, ye mei ba erzi deng hui jia,
 close-door sound yet not BA son wait back home
 you zhihao hong-zhe sunzi shang kang shui-le.
 then have-to coax grandson get-onto brick-bed sleep
 "(he) waited until the sun went down, waited until the stars came out, waited until in the neighbourhood there arose a sound of closing the doors, but didn't see his son come home, therefore coaxed his grandson to climb into the brick bed to sleep."

In this example, both the antecedent *Xiao Laoda* and the anaphor are subjects of their segments that are adjacent to each other involving the same type of description (i.e. describing the same kind of action). As a result, the anaphor is realised as zero.

³⁵In examples 65-68, the numbers 1, 2, etc. indicate a segment.

An anaphor cannot take the form of a zero pronoun across adjacent segments if the antecedent and/or the anaphor are objects, as illustrated in (66) and (67):

- (66) 1. Xiao Laoda huidaο jiali, ... deng-zhe erzi.
 return home wait for son
 "Xiao Laoda returned home, ... waited for his son."
2. Linju hen guanxin, dou guo-lai kan ta.
 neighbour very concerned all come-over see him
 "(His) neighbours were all very concerned (about him) and came over to see him."
- (67) 1. Xiao Laoda huidaο jiali, ... deng-zhe Xiao Changchun.
 return home wait for
 "Xiao Laoda returned home, ... waited for Xiao Changchun."
2. Cunzi li de ren dou zai deng-zhe ta.
 village people all be waiting for him
 "People in the village were all waiting for him."

In (66) the antecedent is a subject but the anaphor is an object. In (67) both the antecedent and the anaphor are objects of their clauses. In both cases the anaphors are realised by a pronoun because they do not meet the restriction (64a).

Tai suggests that the restriction in (64c) can be superseded by "a high degree of semantic dependency of the elaboration segment on the peak segment" (p. 311). In the following passage the anaphor in the second segment is realised as zero, although the two segments involve different types of description:

- (68) 1. Xiao Laoda sheng chi jian yong guo rizi, dundun jin,
 lead a very thrifty life simple food

 koukou cuan, cunxia le jige qian.
 less food save a little money
 "Xiao Laoda led a very thrifty life, had a low budget for groceries, and saved a little money"
2. 0 shi zhiwang jinnian neng mai dong fangzi, na zhidao
 is hope this year can buy a house not expect

 fangjia jingran zhang de zheme gao.
 house-price simply increase so high
 "(He) hoping that (he) could save enough money to buy a house, but it turned out the price had soared too high"

The zero anaphor is allowed across segment boundaries involving different types of description because the adjacent segments are linked by "the semantic axis of action-purpose-result" (p. 312). This example shows that an anaphor is more likely to be realised as zero if the segment it occurs in is semantically and structurally dependent on the segment in which its antecedent is contained.

pronominal anaphors to occur across paragraph boundaries, their referents must be the topic of the relevant discourse. These two factors are shown to determine, to a great extent, the occurrence of different types of anaphors.³⁷

The main problem with Tai's analysis is lack of sufficient characterisation and justification for the different discourse structures proposed. For example, Tai does not provide any definitions for such key structures as paragraph and segment other than a very brief introduction to Hinds' characterisations of these structures, not to mention any justifications for those structures. Thus, it is not entirely clear what constitutes a paragraph, or what constitutes a segment. For example, a segment is said to be "consisting of groups of sentences" (p. 307), but in Tai's examples, a segment seems to consist of one sentence (consisting of one or more clauses). Hinds (1977) talks about peak sentence and non-peak sentence within a segment as bearing on the use of anaphora (see the section on Hinds in this chapter). Tai talks, instead, about peak segment and non-peak segment within a paragraph, so it seems likely that a segment in Tai's work is actually a sentence rather than a group of sentences.

Another problem is that the relationships between the same discourse structures (i.e. between paragraphs or between segments) and the relationships between different discourse structures (i.e. between paragraphs and segments) are not properly addressed in this research. Tai says that there are basically two types of paragraph boundaries and three types of segment boundaries, but fails to offer any details and this statement seems to be neglected in the subsequent discussion.³⁸

As for the various anaphor patterns Tai proposed, I want to raise two points of doubt. The first point concerns the use of pronominal anaphora across segment boundaries. Tai claims that pronouns are allowed across segment boundaries within a paragraph, regardless of the grammatical functions of the antecedent and the anaphor. This is at least an oversimplification in the light of the counter-evidence such as (73) where the

³⁷It should be noted that the spirit of these two factors finds its expression in other discourse structure-oriented approaches, most notably in AI approaches (where FOCUS is used instead of TOPIC). We will see that this spirit is also shared by the present study.

³⁸Tai mentions "peak segments" and "elaboration segments" on several occasions, without giving any explanation as to what constitutes a peak and what constitutes an elaboration.

antecedent *Old Wang* occurs as object in (1) and is referred to as subject via a full NP in (2).

- (73) 1. Lao Li yiqian yizhi meiyou jihui renshi Lao Wang.
 before ever not-have chance know
 "Old Li hasn't got any chance to get to know Old Wang
 personally before"
2. Zheci Lao Wang ye qu canjia huiyi dao shi yige
 this-time also go attend meeting then is a
 huxiang renshi de hao jihui.
 each-other know good chance
 "Now that Old Wang is also going to attend the conference,
 this offers a good opportunity for them to know each other"

If the anaphor in (2) was realised by a pronoun, it would be taken as coreferential with the subject NP *Lao Li* in (1). The reason is that the subject NP is a topic in (1) whereas the object NP is a non-topic. If a switch of topic occurs, it will be done through the use of a full NP. This example shows that there are some restrictions on the occurrence of pronominal anaphora across segment boundaries.

Tai says that a second mention of a topic referent at paragraph boundaries takes the form of a full NP if it is separated from the first mention of the referent by an intervening paragraph containing a different topic referent or if the topic referent ceases to be a topic. But he seems to rule out the possibility of the occurrence of nominal anaphora for topic referents at the boundaries of paragraphs where there is no question of interfering referents. In other words, the simple existence of a paragraph boundary is not considered as a sufficient reason for the use of a full NP. However, as we saw earlier in Hinds, Clancy (where a different term "episode" is used) and Chen, a paragraph boundary can be a sufficient trigger for the use of a full NP. Since no clear definition of paragraph is given in Tai, it is difficult to assess his claims of anaphor choices related to particular discourse structures.

Li, C-i. (1985) deals with anaphora in terms of the three levels of syntax, semantics and discourse. His main focus however is clearly on discourse factors, which, as he puts it, "seem to be the more decisive factors" (1985:52). In what follows, I will examine each of the factors in more detail.

Li explores the issue of syntactic factors through a detailed examination of the behaviour of zero anaphora in different syntactic positions of the sentence and comes

up with the conclusion that "what syntax may decide is only whether a zero element is allowed at a certain position; as to whether zero anaphora actually occurs, we have to resort to the meaning of the sentence as well as the structure of the discourse" (p.54). For example, the syntax of the sentence clearly rules out the possibility of a zero occurring as a prepositional or pivotal object, but for other positions, it only tells us that zero is possible and nothing more.³⁹ It does not appear to be able to decide whether zero should be used in a particular slot in a given context, or whether zero is more permissible in one slot than in another. Thus, it is clear that syntactic information can provide very little information as to the actual use of anaphora.

Semantic factors, in Li's study, refer to human vs. non-human and referential vs. non-referential features of the NP.⁴⁰ Li argues that the selection of anaphor type is in part determined by the humanness (cf. Chen 1984, 1986, where she uses "animacy" instead) of the participant, as well as its referential status. Li points out that pronouns in Chinese are commonly used for reference to human participants but may only be used to refer to non-human participants when they are personified or when they function as a structural filler in positions where zero pronouns may not occur. In other words, non-human participants tend to be realised as zero when their identification causes no problem (cf. Chen's negligibility factor). As to the referential status of the participant, of the three forms, pronouns may only be used when the antecedent is both referential and definite, and zero may be used when the antecedent is either referential and definite or non-referential and indefinite, while nouns may be used in all these cases.

Although semantic factors, like syntactic factors, are necessary for the account of anaphora, they are not sufficient. In many cases, as Li correctly points out, these factors

³⁹Li does not say anything about the non-occurrence of a zero pronoun in the positions held by pivotal and oblique objects.

⁴⁰A note on referentiality is in order. A participant in discourse, according to Li, is referential if it is intended by the speaker to refer to a particular entity in the real world, the identity of which he or she has knowledge of, while it is non-referential if it is not used for any specific referent (Li, 1985:110). Thus, in

Wo	xihuan	naben	shu
I	like	that	book

naben shu "that book" is referential (and definite) and in

Wo	xihuan	shu
I	like	books

shu "books" is non-referential (and indefinite).

usually leave open several apparently acceptable options. However, there is often a definite preference favouring one form over the others when the discourse context is taken into account.

Discourse factors that are the focus of this study involve cognitive constraints such as time and interference as well as the structure of discourse. Here Li appears to take a similar position to the one held by Clancy (see the section on Clancy earlier in this chapter), but we will see that considerations of discourse structure are given more prominence than cognitive considerations in Li's work. Li maintains that the universal constraints that time and interference impose on the human ability to process anaphoric forms play a significant role. The tendency is, as he points out, "toward using the least explicit form, the zero anaphor, when time and interference are minimal, and the most explicit, the nominal anaphor, when they are the greatest" (p. 194).

The structure of discourse, however, is a more important factor than the factors of time/distance and interference in governing anaphoric choices. Li holds that Chinese narratives are hierarchically structured into three levels of constituents: clause, topic chain and paragraph.⁴¹ Apart from semantic criteria,⁴² Li proposes some formal criteria for these three units. That is, pronouns are used to mark the beginning of a topic chain with zero occurring within the topic chain, while nouns are used to mark the beginning of a paragraph. Correlations of this kind are said to reflect the speaker/writer's decision on the organisation of discourse and consequently to influence the selection of anaphor type. Thus, by using a zero pronoun, the speaker/writer displays to the hearer/reader that it is still within the same topic chain, whereas by using a pronoun, he intends to show that a new topic chain has started. Similarly, the use of a noun is intended to indicate the occurrence of a new paragraph. To see how these three levels of discourse structures influence the use of anaphora, consider the following two passages (from Li, p. 163/183).

⁴¹Here we can see some parallels between Tai's discourse units of segment and paragraph and Li's discourse units of topic chain and paragraph. However, while Tai's segment seems to be equivalent to a sentence (marked by a period in writing), Li's topic chain is not always so. Furthermore, these two structural units do not appear to impose the same restrictions on the occurrence of anaphora: A topic chain is invariably correlated with a pronoun.

⁴²The semantic criterion for paragraph, for example, is based upon "thematic unity", which is defined in terms of participant, setting and event, etc.

- (74) 1. Zhege guniang budan zhangde piaoliang,
 this girl not-only grow attractive
 "This girl was not only beautiful"
2. ergie 0 tebie congming,
 but-also especially intelligent
 "but (she) was exceptionally intelligent"
3. ta xinli shifen tonghen huomo,
 she heart-in extremely resent fire-demon
 "She resented the fire demon very much"
4. dan 0 biao mianshang que buloushengse.
 but surface-on conversely not-reveal-feeling
 "However, (she) hid her animosity (against the demon)"
5. ta zhunbei shasi huomo,
 she prepare kill fire-demon
 "She planned to kill the fire-demon"
6. 0 wei renmin chu hai.
 for people rid evil
 "in order (for her) to get rid of the public enemy"

This passage centres on the NP *this girl* and it falls into three semantic units (or topic chains). The first topic chain describes her physical appearances and mental intelligence. The second topic chain talks about her hatred towards the fire demon. The third chain then reveals her plan to kill the demon. Notice that the two instances of pronominal anaphora (clauses 3 and 5) correspond to the boundaries between these topic chains, while zero anaphors are used within each of the topic chains (clauses 2, 4, 6). This example illustrates that the alternation between zero and pronominal anaphora is interpretable in terms of topic chain. The following passage sees the occurrence of nominal anaphora at the beginning of a new paragraph:

- (75) 1. Ta (Lu Ban) hui gai fangzi zao qiao
 he can build house construct bridge
 zhizao jixie diaoke shitou,
 make machinery carve stone
 "He could build houses, bridges, make machinery and
 carve stones"
2. dan ta zui tuchu-de chengjiu shi zai mugong fangmian.
 but he most outstanding accomplishment is at carpentry side
 "but he accomplished the most in carpentry"
3. Youyici, Lu Ban yong mutou zuo yizhi niaor. ...
 one day use wood make a bird
 "One day, Lu Ban made a bird out of wood"

The NP *Lu Ban* is the topic throughout the passage in which there is no mention of other potential NPs. The nominal anaphor in (3) can only be explained by its occurrence at the boundary of a new paragraph.

As illustrated above, the three levels of discourse structures, the clause, the topic chain and the paragraph, bear significantly on the occurrence of anaphora. They offer an interesting and useful alternative in accounting for the choice between zero anaphora and pronominal anaphora on the one hand (via topic chain boundary) and the choice between pronominal anaphora and nominal anaphora on the other (via paragraph boundary).

Li's formal characterisation of the three discourse units that reflect the hierarchical structure of discourse and his putative correlation between these discourse units and the anaphoric forms, though interesting, are somewhat problematic. Circularity appears to be an inevitable problem with such a formal definition of discourse units. One may assume that whenever one encounters a pronoun in the topic position, a new topic chain is started, and that whenever there is an instance of an anaphoric noun, a new paragraph is supposed to begin. As such, one can attribute all occurrences of a pronoun or a noun in the topic position to the function of marking the demarcation of topic chain or paragraph, thus making redundant all other explanations of the appearance of pronouns or nouns in this position. Such an irrefutable characterisation is too powerful to offer a convincing account.

If such a criterion holds, we should not expect to find paragraphs that are started by anaphoric forms other than nouns, nor should we expect to find nouns occurring within a paragraph. In the following passages, however, a pronominal anaphor is found to occur at the beginning of a new paragraph in (76) and a nominal anaphor to occur within the same paragraph in (77).

(76) 1. Tian Jiyun zai zhixing Zhao Ziyang zongli changdao de
in carry-out premier advocate

li-gai-shui de gaige zhong qile zhongyao zuoyong,
profit-to-tax reform in play important role
"Tian Jiyun played a major role in implementing the profit-to-tax reform designed by former Premier Zhao Ziyang"

2. zhexiang gaige bei-zhengming dui qiye guanli he
this reform be-proved to industrial management and

guojia caizheng shouru chanshengle jijide yingxiang.
country financial income produce positive effect
"This reform has proven to bear positive results on industrial management as well as national financial income"

3. Guoqu Zhongguo de qiye jihu jiang tamen quanbude lirun
before China's factory almost give their whole profit

- dou shangjiao gei guojia,
all contribute to state
"In the past all enterprises in China were required to turn over nearly all their profits to the state"
4. xuyao qian zai you guojia pizhun buogei.
need money then by state approve give
"when they need money they had to apply to the state"
5. Kuisunde qiye keyi bu shangjiao lirun,
loosing factory may not contribute profit

bingqie you guojia wei tamen zhifu kuisun'e.
and let state for them pay debt
"Loss-making enterprises did not have to turn over any of their profits to the state; instead, the state would cover their deficits"
6. Zheyangde tizhi buneng qubie duidai
such system cannot differently treat

chenggongde he buchenggong qiye.
successful and unsuccessful factory
"Such a system could not discriminate between the successful and unsuccessful enterprises"
7. Yinci, qiye he gongren dui shengchan shiqule xingqu.
therefore factory and worker to production lose interest
"Consequently both the enterprises and their workers lost interest in production"
8. Er gaige hou, guojia zhi yaoqiu qiye shangjiao shuikuan,
but after reform state only require factory pay tax
"However since the reform, the state has now only required the enterprises to pay tax"
9. qiye qude lirun yueduo jiu keyi liuxia gengduode
factory get profit more then can leave-behind more

zijin yongyu jishu gaizao, kuoda zaishengchan,
fund used-for technical reform expand reproduction

gaishan zhigong fuli he fa jiangjin.
improve worker benefit and pay bonus
"the more profits enterprises can make, the more money they can have to advance technology, expand reproduction, improve their workers' benefits and pay bonuses"
10. Zhege banfa diaodongle zhigong de jijixing.
this method give-rise-to workers' initiative
"This has resulted in a great initiative on the part of the enterprises and their workers"
11. Ta hai canyu wujia gaige he gongzi gaigede lingdao gongzuo.
he also involved price reform and wage reform leading work
"He was also involved in policy making and implementing in prices reform and wage reform"
12. Zhe shi liangxiang jiqizhongyao er you jiqifuzade gongcheng,
this is two extremely-important and also complicated project
"These are two extremely important and complicated reforms"
13. keyishuo shi zhengge jingji tizhi gaige de guanjian.
may-be-said is whole economic system reform key
"This may be seen as a key-point in the overall reform of the economical system"

[D20]

In this passage, we can identify three paragraphs, which correspond to the orthographic

4. Dan Tian Jiyun zai pinkun diqu xunshi shi
but in poor region inspect when
"When Tian Jiyun inspects the poor regions however"
5. 0 zongshi qiangdiao, neixie diqude zhengfu he renmen
always stress those region's government and people
yao nuli tansuo shihe zishen fazhan de menjing, buduan
must hard find suit own development way continually
zengqiang zishende "zaoxue jineng".
strengthen own make-blood capability
"(he) always stresses that the local governments and the
people in those regions should make continuous efforts to
explore ways for their own development and enhance their
'capacity to produce blood'" [D20]

The above two examples show that a new paragraph does not necessarily start with a noun; a pronoun can do the job as well, and the occurrence of a noun does not necessarily suggest the beginning of a new paragraph; an anaphoric noun can occur within the same paragraph.

Following is another example in the form of an orthographic paragraph in which there are several instances of the nominal realisation of the topic NP *Li Xiaolong*, though no other possible antecedents are present:

- (78) 1. Li Xiaolong cengjing zibei guo,
ever self-abased
"Li Xiaolong had once felt himself inferior"
2. yinwei ta gezi-aixiao, renmen kanbuqi ta,
because he is-short people look-down-on him
"because he was short and thus looked down upon by others"
3. houlai, ta nuli zai duofangmian zhengshi zijide shili.
later he try in many-respects prove his ability
"Later he tried to prove his abilities in different areas"
4. Ta xue youhua,
he learn oil-painting
"He learned to paint"
5. yifu "Qiu Ri Si Yu" juran zai mou-sheng de
a 'Autumn day thoughts' surprisingly at a provincial
qingnian huazhan zhong huo-jiang.
young people painting:exhibition get prize
"to his surprise, one of his oil paintings 'Thoughts in an
Autumn Day', was awarded a prize at a provincial painting
exhibition for young people"
6. Zai jiaxiang yishu zhongxin yici yanchu zhong Li Xiaolong
at home-town art centre a performance
you yiwaide faxianle zijide yinyue caineng.
again unexpectedly discover his music talent
"During a performance at the Arts Centre in town, Li
Xiaolong discovered, quite unexpectedly, his talent for music"
7. Yuedui you wei gushou linshi sheng-bing,
band have a drummer just-before-show fall-ill

buneng shangchang, shei neng daiti ne?
 cannot perform who can replace
 "A drummer of the band was taken ill just before the
 performance and could not act in the performance.
 Who could take his place?"

8. Congwei dengguotaide Li Xiaolong yipaixiongpu shuo: "Wo lai".
 never appear: on: stage stuck out his chest say I come
 "Li Xiaolong, who had not had any stage experience before,
 stuck out his chest and said, 'I can do it' "
9. Yanchu jing yiwaide chenggong.
 performance unexpectedly successful
 "He did his part unexpectedly well"
10. Yinian-hou, Li Xiaolong kaoshangle Tianjin Yinyue Xueyuan.
 a year later is-enrolled-by Tianjin Musical College
 "A year later, Li Xiaolong took the exam and was
 admitted to the Tianjin Musical College" [D11]

This passage satisfies Li's requirements for a paragraph because it centres on the topic NP *Li Xiaolong* and focuses on the theme that Li tried to prove his abilities in many respects. If that is correct, then we should not find several occasions of the topic being referenced by the use of a full NP in the paragraph (clauses 6, 8, 10).⁴⁶ This demonstrates once more that the appearance of a noun does not necessarily indicate the boundary of a paragraph and that repeated full NPs can occur within the paragraph.⁴⁷

Furthermore, Li's characterisation of the three levels of discourse units is static rather than dynamic. That is, it does not allow any discourse return (cf. AI approaches), nor does it allow any recursive embedding of structure within structure (cf. rhetorical structure approaches). For example, it is possible, as demonstrated in Longacre (1979), for a paragraph to be embedded within another paragraph. It is even possible for a structure realised by a topic chain to have another structure also realised by a topic chain occurring within itself. Take example 76. The second paragraph (clauses 3-10) provides background information for the assertion contained in the first paragraph (clauses 1-2) and thus is attached to, but not at the same level as, the first paragraph. If we treat the second paragraph as a subordinate one embedded within the first paragraph, the first paragraph and the third paragraph (clauses 11-13), which is connected to the first paragraph by the word *hai* "also" and thus is at the same level in the discourse hierarchy, will then be "closer" to each other, and this accounts for the

⁴⁶By whatever criteria, sentences 6-9 should form a paragraph, in which case the second nominal occurrence at (8) is against Li's proposal.

⁴⁷Tai (1978) also shows that pronominal anaphora can occur across paragraph boundaries and nominal anaphora can occur within paragraphs.

pronominalisation at (11) (which skips over the embedded paragraph (3-10) and returns to (1) containing its antecedent.

Following is a passage showing the embedding of a topic chain within another one.

- (79) 1. Ta dui Li Xiansheng yizhi feichang guanxin,
 he with Mr Li always very concerned
 "He always showed great concern for Mr Li"
2. meidang Li Xiansheng gongzuo zhong yudao nanti,
 when Mr Li work in have problem
 "whenever Mr Li had problems in his work"
3. huozhe 0 shenghuo shang pengdao kunnan shi,
 or life in have difficulty
 "or had difficulties in his life"
4. 0 zongshi zhudongde bangzhu ta.
 always offer help him
 "(he) would help him without being asked"

In this text, the topic NP *ta* occurs as a pronoun in (1) and is zero-mentioned in (4), constituting a topic chain. In the meantime another topic chain occurs in (2-3) where the NP *Li Xiansheng* "Mr Li" is nominally mentioned in (2) and zero-mentioned in (3). The traditional account of a topic chain does not seem to allow for a topic chain being split by another topic chain. The reason for this is simple: the separated zero anaphor such as the one in (4) would be taken as coreferential with the referent of the second topic chain. However, examples like (79) are possible, and consequently the zero anaphor in (4) is not predicted by Li's scheme. If, however, we bring in the notion of embedding, this difficulty is easily solved. That is, if we take the topic chain in (2-3) as embedded, because of its occurrence in a subordinate sentence, in the higher topic chain consisting of (1) and (4), then, from a hierarchical point of view, the embedded topic chain will not cause interference to the identification of the referent for the zero anaphor at (4) because the clauses in this higher topic chain containing the antecedent and the anaphor appear at the same discourse level at which no other clauses intervene between them. The notion of dynamic embedding thus accounts well for the kind of disjoint topic chains as in (79).

The above discussion shows that although Li attaches a great deal of importance to the hierarchical structure of discourse and strives to incorporate a discourse structural component into his studies, his approach as a whole is still some distance away from being a convincing and satisfactory one for a full account of anaphora in Chinese.

In sum, Tai's work is an attempt to account for anaphora in terms of discourse structure. It shows that the hierarchical organisation of discourse must be taken into account when considering anaphoric choices in discourse. But, while his explanations of anaphor occurrences are largely convincing to me, the different structural units on which his explanations are based require more explicit characterisations and elaborations. Li's three levels of discourse units offers an interesting description of the hierarchical structure of the discourse. His work shows that these discourse units control the selection of different forms of anaphora. The weaknesses of this research are that the anaphoric predictions based on these units are too rigid and too narrow (Li's correlation of anaphora with the demarcation of topic chain and paragraph only accounts for the NPs in subject/topic position).

2.3.3 Summary

In this section (2.3), I have examined different approaches to discourse anaphora in Chinese. I started by considering the work by Li & Thompson (1979, 1981) and the work by Chen (1984, 1986) under the heading of discourse-pragmatic approaches. This was followed by a review of Tai (1978) and Li, C-i. (1985) under the heading of discourse-structural approaches. We saw that although the discourse-pragmatic approaches are interesting and successful to varying degrees, there are weaknesses which prevent them from being fully satisfactory accounts of the phenomenon. For instance, the major constraints proposed in Li & Thompson were shown to be both vague and limited. The various constraints that Chen proposed, although an improvement on those by Li & Thompson, were shown to be somewhat problematic and leave instances of anaphora unaccounted for. The discourse structural approaches examined offer a potential interesting alternative to the discourse pragmatic approaches by demonstrating that the occurrence of anaphora has more to do with the structural than with the linear organisation of the discourse. But as we have seen, these discourse structural approaches are rather mechanical and narrow and the structural units proposed are in need of further characterisations. Without further work on the characterisation of the structural units and on the elaboration of anaphoric patterns, this line of approach would not succeed as a satisfactory full account of anaphora in discourse.

2.4 Conclusion

To conclude, I have, in this chapter, examined a range of studies on discourse anaphora both in English and in Chinese, under the headings of linear and discourse structural approaches. The linear approaches are based on such cognitive notions as referential distance/time and interference from other referents. While these notions are certainly not irrelevant ones for generating and interpreting anaphora in discourse, there is reason to believe that they might not be crucial ones, and certainly not the only ones. This is clearly borne out by instances of anaphora which so obviously go against predictions based on distance and interference.

Discourse structural approaches may well have provided a clue as to the weaknesses of linear approaches by demonstrating that anaphora in discourse has more to do with the structural organisation of the discourse than with notions of distance and interference. Among the discourse structural approaches considered, the AI approaches go a step ahead by introducing the focusing mechanism into their discourse structural approaches. These approaches have shown that a representation of discourse structure and a mechanism of focusing are two of the most essential components for any account of anaphora in discourse⁴⁸

The present study aims to build on the strength of the previous researches on discourse structure and discourse anaphora, both in English and in Chinese, by adopting a more fine-grained system of discourse structure (rhetorical predicate structure) and a mechanism of discourse processing in an attempt to find realistic and comprehensive patterns of anaphora in discourse. I will, in the next chapter, present the framework to be used in the subsequent chapters to investigate anaphoric patterning in Chinese expository texts.

⁴⁸Grosz & Sidner (1986) propose a theory of discourse structure in which discourse structure is composed of three separate but interrelated components: the linguistic structure, the intentional structure and the attentional state. The attentional state refers to the state of focus of attention, which is a kind of focusing mechanism. The intentional structure which relates to the role of purposes in discourse is, however, a new formulation in the theory.

CHAPTER 3 RHETORICAL PREDICATE ANALYSIS

3.1 Introduction

This chapter introduces the basic concepts of rhetorical predicate theory. In section 3.2, I present and discuss some previous studies on rhetorical predicates and in section 3.3, I propose and characterise the Rhetorical Predicate Analysis which will be used in the subsequent chapters for analysing anaphoric patterning in Chinese expository texts.

Our discussion of the researches on discourse anaphora, particularly those of the AI and RP approaches, in the preceding chapter indicates that the use of anaphora is at least in part determined by the hierarchical organisation of the discourse in which it is contained, and that a proper treatment of discourse anaphora must seek an understanding of the structural organisation of discourse. Given this, it is then crucial that we have an appropriate means for modelling that structural organisation. There have been several proposals for modelling discourse structure, and we have considered three of them in the preceding chapter, i.e. AI models, paragraph structure models and rhetorical predicate models. The AI models (Grosz's focus space and Reichman's context space) were originally proposed to deal with dialogues and conversations, while the other two types of models were originally proposed to deal with written monologues, particularly of the expository text-type. Just as it is important to consider the strengths and weaknesses of a structural model according to the text-type it is proposed for, so it is equally important to choose a structural model that best suits the text-type examined. Since I am concerned in this study with written expository texts, and since paragraph structure models (e.g. Hinds, 1977) were shown to be rather narrow, rhetorical predicate models seem to be a natural candidate for the structural model for this thesis.

The concept of rhetorical predicates, viewed as means for organising and describing structural relations between the propositions in a text or discourse, has, in the last few decades, attracted more and more attention from researchers on discourse structure and discourse interpretation (Beekman & Callow 1974, Grimes 1975, Longacre 1976, 1983, Mann & Thompson 1983, 1985, Fox 1984, 1987 and McKeown 1985, among others),

but it is not necessarily one which the majority of linguists will be familiar with, and therefore I shall, in section 3.2, provide a general review of the historical background of the concept as well as its later development and modifications in order to put the present study in a proper context.

3.2 Survey of the rhetorical predicate theory

The notion of rhetorical predicates as the means that a speaker has for describing and organising information in discourse is related to Rhetoric, and goes back to Aristotle (Winterowd, 1975). In Aristotle's day, Rhetoric was viewed as an essential means of achieving one's communicative goal, either in a public speech or a written discourse, and Aristotle described the means available to a speaker in terms of "topics of invention", which include Definition, Comparison, Analogy, Cause, Effect, and Consequence, etc. (see Wu, 1992). This line of direction has been carried through over centuries (see D'Angelo, 1975 and Winterowd, 1975 for a history of this) until more recent years when rhetorical predicates, under one name or another, have been used with more rigour by linguists like Grimes (1975) as an important component of a theory of discourse.

The motivations for this revived interest in rhetorical predicates are not hard to find. First of all, this intensified interest is a direct result of the realisation in the seventies that "a sentence grammar would not work unless it was part of a discourse grammar, because certain factors are needed for the understanding of elements in sentences that are not available within those sentences themselves but only elsewhere in the discourse" (Grimes, 1975:8). This means that not only the relationships between elements within the sentence but also the relationships between sentences within the discourse are important for the functioning and understanding of language. These relationships have motivated the formulation of such concepts as rhetorical predicates whose function is to organise and describe various relationships of this kind. Thus the recent interest in rhetorical predicates has come in the wake of the realisation of the limitations of sentence grammar and the need for a discourse grammar. Grimes (1975), for example, represents an influential effort to develop a theory of discourse in which rhetorical predicates are used as an important discourse strategy. A more direct motivation for

adopting rhetorical predicates as a descriptive apparatus is the need to describe and account for the structural organisation of a discourse. Since the semantic/structural relationships represented by rhetorical predicates are recursively embeddable such that lower-level rhetorical predicates are combined into higher-level rhetorical predicates until the whole discourse is reached, they are most appropriately used to describe and interpret that structural organisation of discourse.

Apart from the above two motivations for using rhetorical predicates for discourse representation and interpretation in a theory of discourse, there are motivations of a more practical nature. One of these concerns the interpretation of anaphora. The argument is that since discourse is hierarchically structured, a proper account of discourse anaphora must seek an understanding of the structural organisation of the discourse in which anaphora is contained. Since rhetorical predicates are a means for modelling and describing structural relations between parts of a discourse, it is natural that they have been used as an aid to anaphora resolution (e.g. Hobbs 1978, Lockman 1978, and Fox 1984, among others).

In what follows, I consider Fuller (1959), Beekman & Callow (1974) and Grimes (1975). More recent work in this area will be considered in section 3.2.2.

3.2.1 Previous studies on rhetorical predicates

One of the earliest works in the field of Linguistics that is related to the notion of rhetorical predicates is Fuller (1959), which deals with Bible study and translation. Fuller claims that the study and translation of the Bible from the original languages into another language must proceed from an understanding of the relationships between the structural units of text. His work shows that interestingly large sections of text are grouped according to a small number of explicit organising relations.

Fuller's analysis of a text gives groupings that are equivalent to an outline, then goes on to explore the semantic basis for each grouping. He distinguishes two types of relationships between propositions, EQUALITY OF CLASS and EQUALITY BY SUPPORT,

logically parallel to the grammatical notions of co-ordination and subordination, which are presented as follows:

Equality of class: Series, Progression, and Alternative.

Equality by support: General-specific, Fact-interpretation, Negative-positive, Way-end Comparison, Cause-effect, Inference, Fact-illustration, Setting-happening, Adversive, Question-answer, Ground, Means-end, and Situation-response.

Beekman & Callow (1974) deal with the same phenomenon. Like Fuller, their main interest is to develop a theory as well as a method for Bible study and translation by identifying "a system of relations between propositions in the context of a discourse" (Beekman & Callow, 1974:287). They argue that the set of semantic relationships are essential for the functioning of discourse as well as for the understanding of discourse.

Based on their analysis of entire books of the Bible, they develop a theory of semantic units representing the semantic structure of a discourse. The semantic units they distinguish are PROPOSITION, STATEMENT, PARAGRAPH, SECTION and DISCOURSE. According to Beekman & Callow, a PROPOSITION is a grouping of concepts, with one of the concepts central, i.e. nuclear. A grouping of propositions of which one is central or nuclear is called a STATEMENT. In a STATEMENT one of the constituent propositions that is nuclear is called the main proposition and the other propositions support the main one in various ways. STATEMENTS are then combined into larger units called SEMANTIC PARAGRAPHS which will have a THEME proposition that is central. Finally, SEMANTIC PARAGRAPHS combine into SECTIONS which in turn combine into larger units until the total discourse is reached.

Their main focus, however, is to identify the semantic relations that connect one proposition to another. They propose that propositions in discourse are related to one another according to a small set of relations and that it is these underlying relations that make the discourse a coherent one. Beekman & Callow divide the set of propositional relations into two types, namely, ADDITION and ASSOCIATION. This distinction is similar to Fuller's between "equality of class" and "equality by support". That is, if two or more propositions sustain the same relation to another proposition or if they are of equal rank

relative to one another, then they are related to each other by Addition. If one of the propositions is the supported one and the other(s) the supporting one(s), they are related to each other by Association. In other words the propositions related by Association are of unequal rank relative to one another. This is illustrated in (1) and (2) (their original examples, pp. 292/310), where (1) is an example of an Addition relation (Alternative) in which the two propositions are equal partners while (2) is an instance of an Association relation (Reason-result) in which the first proposition, which gives the reason, is the supporting proposition and the second proposition, which indicates the result, is the supported proposition.

- (1) "...what shall we eat? or what shall we drink? or, wherewithal shall we be clothed?" (Alternative)
- (2) "...there arose a great tempest in the sea, in so much that the ship was covered with waves..." (Reason-result)

The following is the complete set of relations proposed by Beekman & Callow:

Addition Relations: Sequence, Simultaneous, Alternative.

Associative Relations: Manner, Comparison, Contrast, Equivalence, Generic-specific, Amplification-contraction, Content, Reason-result, Means-result, Means-purpose, Comment, Condition-consequence, Location, Time, Circumstance, Identification, Grounds-conclusion, Concession-contraexpectation.

These relations between propositions are identified by Beekman & Callow on the basis of their analysis of the Bible. They analysed a text from the Bible to demonstrate how propositions and relations between the propositions are identified and displayed. They also show how these propositions and the relations between them combine into paragraphs, and paragraphs combine into sections. However, they seem to rule out the possibility of a semantic unit embedded within another same-level unit, e.g. a statement (represented by a relation) within another statement, or a paragraph within another paragraph (cf. Longacre (1979), in which he argues that there is recursive embedding of paragraph within paragraph).

Although Beekman & Callow's primary concern is for Bible study and translation, their work holds the potential for modelling text-structure in general.

Grimes (1975) discusses the same kind of relationships under the label of

RHETORICAL PREDICATE.¹ As mentioned above, Grimes takes the view that sentence grammar is not sufficient for a full description of a language and that a discourse grammar which includes sentence grammar must be developed. He proposes the use of rhetorical predicates as a device to capture the relationships between discourse propositions in an attempt to develop a theory of discourse.

Rhetorical predicates, according to Grimes, are parts of larger propositions. For example, the form *the bridge is out; I saw it fall* (Grimes, 1975:217) is represented by the rhetorical proposition

Y gives evidence for X (Evidence (X, Y))

with the predicate Evidence, and the arguments X (the bridge is out) and Y (I saw it fall). In other words, rhetorical predicates specify the relations holding between the propositions. Rhetorical predicates take propositions as arguments (as shown by the above example) and are not necessarily realised by explicit structural elements (such as connectives like *therefore, because*) to signify the relations involved. The predicate Evidence in the above example, for instance, is implied rather than explicitly stated.

Grimes suggests that rhetorical predicates are divided into two basic patterns along the dimension of co-ordination and subordination: PARATACTIC and HYPOTACTIC PREDICATES. Paratactic predicates dominate all their arguments in co-ordinate fashion while hypotactic predicates have as one of their arguments, the CENTRE, a term with respect to which a proposition is subordinated to some other proposition (p. 209). For example, in the example sentence above, *the bridge is out; I saw it fall*, argument X, which gives the general statement, is the centre and argument Y, which provides the detail, is the supporting argument for the statement. The passage *Johnny, you may have a hot dog. Or you may have some cotton candy* is an instance of paratactic predicate in which the two arguments are arguments of the Alternative predicate. The predicates Grimes proposes are given below.

¹Grimes is among the first, as far as I know, to use the term *rhetorical predicate* for this kind of relation. I will also use this term to describe the organising relations between discourse propositions in my data for this study.

Paratactic: Alternative, Response.

Hypotactic: Attributive, Equivalent, Specification, Explanation, Evidence, Manner, Analogy, Inference, Setting, Representative, Replacement, Constituency.

We can see that Grimes' distinction between paratactic and hypotactic predicates is similar to Fuller's distinction between "equality of class" relations and "equality by support" relations and also to Beekman and Callow's distinction between "addition" relations and "association" relations, though there are some differences in the number of predicates or relations within each type. (I will discuss this later.)

Grimes also distinguishes a third type of predicate, NEUTRAL PREDICATES, which are: Collection, Reason, Result, Condition, Purpose, and Adversative. He claims that neutral predicates can take either paratactic or hypotactic form. In other words neutral predicates are those whose syntactic realisations, unlike the paratactic or hypotactic predicates, are not restricted. Take the Reason predicate for example. The passage *George eats garlic. Nancy therefore avoids him* (p. 223) is an instance of the paratactic use since the two arguments are related on an equal basis, whereas in *Nancy avoids George because he eats garlic* we have a case of the hypotactic use since the first argument is dominant and the second argument is subordinate.

Grimes argues that whether a neutral predicate is taken as paratactic or hypotactic depends on the STAGING or surface form of the propositions involved, though at deeper levels of structure the distinction between a paratactic and hypotactic neutral predicate may very well not be important (p. 226). Here, by staging of the propositions, Grimes apparently means the surface syntactic relations between the propositions, and by deeper levels of structure, he apparently means the rhetorical or semantic relations underlying the propositions. Thus, he seems to take the position that syntactic rather than rhetorical criteria take precedence in the case of what he calls neutral predicates. This puts him in a position in which he uses different criteria to define rhetorical predicates. On the one hand, he uses rhetorical criteria to define the "ordinary" paratactic and hypotactic predicates, and on the other, he uses surface syntactic criteria to define neutral predicates. This is unsatisfactory. Since rhetorical predicates reflect semantic relations between propositions, the distinction should not be made on the basis of the syntactic

relations between the propositions. I am not, however, saying that syntactic relationship is totally irrelevant here. There is, in some cases, a relationship between rhetorical predicates and their syntactic manifestations. What I am saying is that it is the underlying semantic relationship between propositions but not their syntactic realisations that should be the basis for the characterisation of rhetorical predicates. If we look at the above example in terms of rhetorical structure, we identify the same rhetorical relation, Reason or Cause, in which argument X, i.e. *George eats garlic* provides a rationale for believing the statement made in argument Y, i.e. *Nancy therefore avoids him*. As in this example the Reason predicate relates the rationale-providing argument (X) to the argument (Y) that dominates it, it should be taken as a case of a hypotactic rather than paratactic relation. Thus Grimes' characterisation of neutral predicates, in my view, is equivocal as well as unnecessary because it confuses the underlying rhetorical structures with their surface syntactic manifestations.

Grimes claims that rhetorical predicates are recursive and can be used to identify the structure of text at any level (e.g. proposition, sentence or paragraph), although he does not show how this is done.

From the above discussion of the proposals of Fuller, Beekman & Callow, and Grimes, we see that although they use different terminology (e.g. relations, semantic relations, rhetorical predicates), they are discussing the same discourse phenomenon -- the relationships that hold between the propositions in a discourse. And although they use different types of data (for example Beekman & Callow's data is the Bible in Greek and its English translation while Grimes just uses constructed English sentences), they come up with similar sets of relations/predicates. This seems to suggest that these propositional relationships are meant to be general; they are not subject-specific or language specific, though quite understandably the patterns of predicate occurrence in different subject-matter and different text-types may not be the same. The explanation for this generality of rhetorical predicates is that they are highly abstract concepts underlying all types of human communication.

Another point that needs to be noted is that all these linguists propose a small number of explicit organising relations/predicates. For example, Fuller proposes 17,

Beekman et al 20, and Grimes 20. How, then, do we account for the differences in the contents and number of the propositional relationships proposed by different linguists? It appears that the differences in the contents (i.e. the labels for individual relationships) are partly due to the use of different terms for similar semantic relations. For example, Grimes uses Response for the kind of relation for which Beekman & Callow use Question-answer, and Situation-response. The semantic relation is the same, but the terms used for describing it are different.

The differences in the number of the relations/predicates proposed may be due to the following reasons. In the first place, they have to do with differences in the classification of the relationships. One may seek a more refined classification or prefer a more general classification. For instance, Fuller uses Setting-happening and Grimes uses Setting, which cover the three relations of Time, Location and Circumstance used by Beekman & Callow. And in the previous example, Grimes uses Response which Fuller subdivides into Question-answer and Situation-response. Secondly differences in the number of semantic relationships may be prompted by the type or amount of data on the basis of which these relationships are derived and categorised. Beekman & Callow point out that their list might be modified if more data were examined. Mann & Thompson (1983) express a similar view regarding their rhetorical predicates (which I will consider shortly). This shows that although linguists seem to differ in the number (and labels) of the relations they propose, there is more agreement between them than is apparent on superficial observation and a consensus that their relations are members of a small finite set.

The following table provides a comparison of the predicates proposed by Fuller, Beekman & Callow and Grimes.

(2) Predicates Proposed by Fuller, Beekman & Callow and Grimes²

Fuller	Beekman & Callow	Grimes
<u>Equality of class</u>	<u>Addition</u>	<u>Paratactic</u>
Alternative Series Progression	Alternative Simultaneous Sequence	Alternative (Collection) (Collection) Response
<u>Equality by support</u>	<u>Association</u>	<u>Hypotactic</u>
General-specific Comparison	General-specific Comparison Equivalence	Specification Analogy(?) Equivalent
Setting-happening Fact-illustration	Time/Location/Circumstances	Setting Evidence
	Amplification-contraction Manner	Representative Manner
Inference Fact-interpretation	Ground-conclusion(?)	Inference Explanation
Means-end Cause-effect	Means-purpose Reason-result	(Purpose) (Result)
Ground Way-end	Means-effect Condition-consequence	(Reason) (Condition)
Adversative	Concession-contrarexpectation(?)	(Adversative)
*Negative-positive	Identification	Constituency
*Question-answer	Comment	Replacement
*Situation-response	Content	Attributive

These linguists' rhetorical relations/predicates correspond rather closely to the ones I propose later in this chapter, which will however differ from them in some important respects. Nevertheless their work is a primary source of inspiration for this study. My work also benefits greatly from Mann & Thompson (1983) and McKeown (1985), which may be taken as representing development and modification of rhetorical predicate theory and to which we will now turn our attention.

²In the table predicates in the same line are similar, though not absolute in their value. "*" before a line indicates that predicates in the line are different in their value and are just so placed to save space. "?" after a predicate indicates that the predicate may not be equivalent to the other predicate(s) in the same line. Predicates in parentheses under Grimes are neutral predicates.

3.2.2 Recent development and modification of RP theory

There have been a number of recent studies that have extended and modified the RP theory in various ways. Mann & Thompson (1983) and McKeown (1985) are the representatives of these and will thus be taken up in this section.

Taking as a starting point the descriptive taxonomies proposed by Grimes (and others),³ Mann & Thompson (1983) present an account of relational propositions in discourse in an attempt to provide the first steps for a theory of discourse. They state that "In addition to the propositions represented explicitly by independent clauses in a text, there are almost as many implicit [original emphasis] propositions, here called relational propositions, which arise out of combination of these clauses" (Mann & Thompson, 1983:1). A relational proposition arises from the co-occurrence of two parts of a text, but is not independently derived from either of them. For example, in the passage *I'm hungry. Let's go to the Fuji Gardens*, the relational proposition is that the second part provides a solution to the problem posed by the first part of the text.

A relational proposition, according to Mann & Thompson, is decomposable into a predicate and its arguments. Thus, in the above passage we have the predicate Solutionhood and two arguments realised by the two propositions/clauses. They propose the following list of relational predicates:

Solutionhood, Evidence, Justification, Motivation, Concession, Sequence, Enablement, Elaboration, Restatement, Case, Condition, Circumstance, Reason, Background and Thesis-antithesis.

From Mann & Thompson's characterisation of relational propositions and the predicates in them, we can see that their relational propositions and predicates do not differ significantly from Grimes' rhetorical propositions and predicates or from Fuller and Beekman & Callow's relations between propositions. What marks Mann & Thompson's work as different from the previous studies is their claim that relational

³These include Beekman & Callow (1974), Longacre (1976) and Hobbs (1979).

propositions and predicates are not limited to organisational aspects of texts.⁴ Specifically, they claim that relational propositions are "basic", and are involved in communicative "acts" in the sense of Searle's speech acts, and thus they are essential to the effective functioning of a text.

According to Mann & Thompson, relational propositions are relatively "basic" in the sense that many other sorts of inferences tend to be derived from them, but not conversely. To illustrate, they present the following inferences which could arise from the passage, *I'm hungry. Let's go to the Fuji Gardens.* (p. 10)

- (3)
1. Our going to Fuji Gardens is a (partial) solution to my problem of being hungry.
 2. I cannot eat here.
 3. I want to be somewhere where I can eat.
 4. I want to go to somewhere where I can eat.
 5. The Fuji Gardens is an eating establishment.
 6. I like Japanese food.
 7. I do not mind eating raw fish.
 8. I am partial to Japanese beer.
 9. I can use chopsticks.

Mann & Thompson claim that above list is ordered so that "no item is derived from an item below it", and thus the appearance of the relational proposition on top of the list indicates that relational propositions are basic and other inferences tend to be derived from them. But it seems that this selection (and to some extent, their order) is arbitrary and problematic. For example, an inference could be added between (2) and (3) giving the reason why he could not eat there, and the order of (3) and (4) could be reversed without consequences. Moreover, obviously, propositions 6-8 cannot be inferred from the above passage unless one knows that the Fuji Gardens is a Japanese restaurant, and proposition 9 cannot be inferred unless one also knows that the restaurant only supplies chopsticks.⁵ Thus, it is not clear how Mann & Thompson derive these inferences. Having said this, I would still agree with Mann & Thompson that the relational proposition in (1) is more basic than the others in the list in normal situations.

⁴Grimes maintains that the main function of rhetorical propositions and predicates is "that of organising the content of discourse" (1975:207). This view also underlies Fuller, and Beekman et al's characterisations of their rhetorical relations.

⁵Propositions 6-9 are possible inferences if the participants in the communication have the relevant knowledge. Although that possibility exists, it is however not readily derivable from the passage taken out of context.

Mann & Thompson's explanation of the role of relational propositions as elements of communicative acts is that texts have the force of either assertions, questions, or commands, where the propositional (act-neutral) part of any of these is the very relational proposition we have been talking about. For instance, in the passage (their original example, p. 13), *Go jogging with me this afternoon. You'll be full of energy*, the relational proposition has assertional force; it asserts a motivation relationship, stating something like this: the expectation that you will be full of energy is suitable motive for you to decide to go jogging with me.⁶ They indicate that relational propositions, as asserted or questioned illocutionary acts, are subject to the same felicity conditions as are explicitly stated assertions and questions, in other words, relational propositions are communicated with the illocutionary force of assertions or questions.

They claim also that relational propositions do more than just simply relate parts of text, instead, they convey essential subject matter and are "involved deeply in relating subject-matter-specific conceptions to each other" (p. 16). The examples of Solutionhood and Motivation above, for instance, exhibit relationships in the subject matter rather than relationships which arise from the way the subject matter is presented. These examples show that the arguments in a relational proposition are not literal texts, but rather more conceptual entities derived from the text.

They also argue that relational propositions are vital to the way a text functions, because if we read a piece of text without its intended relational proposition, we would not have a coherent text. For example, if we take the text *I'm Officer Krupke. You are under arrest*, and try to read it without the relational proposition of Justification, we are left with a pair of sentences which cannot be interpreted together as a unit. That is, without the relational proposition, the addressee wouldn't know what being Officer Krupke has to do with the arrest performative.

From the above discussion we can see that although Mann & Thompson's relational predicates do not differ substantially from those proposed by Grimes, their main

⁶It seems possible to assign a Consequence relationship to these two propositions, i.e. "Go jogging with me this afternoon, and, as a result, you'll be full of energy". This raises a more general question, that is, the context of situation in which utterances (propositions) are made should be taken into consideration when assigning rhetorical predicates.

orientations appear different. While Grimes is concerned with establishing and characterising rhetorical predicates, Mann & Thompson are more interested in describing the functions of relational propositions or predicates in texts and providing justifications for the formulation of rhetorical propositions or predicates. Their examination of two natural texts shows that relational propositions involve every clause, and that they occur in a pattern of propositions that connect all of the clauses together, thus being essential to the functioning of the text. In addition, while Grimes only suggests that the predicates are recursive in nature, Mann & Thompson actually demonstrate the recursiveness of the predicates in their analysis. To illustrate these two points, I present one of their example texts (1983:24):

- (4)
1. I don't believe that endorsing the Nuclear Freeze initiative is the right step for California CC.
 2. Tempting as it may be.
 3. We shouldn't embrace every popular issue that comes along.
 4. When we do so
 5. we use precious, limited resources where other players with superior resources are already doing an adequate job.
 6. Rather, I think we will be stronger and more effective
 7. if we stick to those issues of governmental structure and process, broadly defined, that have formed the core of our agenda for years.
 8. Open government, campaign finance reform, and fighting the influence of special interests and big money - these are our kinds of issues.
 9. (New paragraph) Let's be clear:
 10. I personally favour the initiative and ardently support disarmament negotiations to reduce the risk of war.
 11. But I don't think endorsing a specific nuclear freeze proposal is appropriate for CCC.
 12. We should limit our involvement in defence and weaponry to matters of process, such as exposing the weapons industry's influence on the political process.
 13. Therefore, I urge you to vote against a CCC endorsement of the nuclear freeze initiative.

Firstly, this whole text involves the relational proposition of Motivation, in which (1) through (12) can be seen as a motivation for people to comply with the directive made in (13) that the California CC members should not vote to endorse the Nuclear Freeze Initiative.

Next, among (1) through (12), clause 1 presents a claim with all the other clauses serving as evidence for that claim, that is, "here's why you should believe my claim that endorsing the Initiative is wrong for CCC". In fact, the text contains two pieces of evidence for the claim, one consisting of clauses 2-8 and the other of clauses 9-12.

A bit farther down in the hierarchical structure we have a Thesis-antithesis predicate in which clauses 2-5 present a "thesis" which contrasts with the "antithesis" in clauses 6-8. Still farther down in the hierarchical structure of the text, we find a Reason predicate between clauses 2-3 and 4-5; that is, the second part provides a reason for the assertion contained in the first part. At the same level, clause 8 is in an Elaboration relationship with clauses 6 through 7.

Within the second Evidence relational proposition realised by clauses 9-12, according to Mann & Thompson, we can identify a Justification predicate between (9) and (10) through (12). Clause 10, in turn, is in a Concession relationship with clauses 11-12. That is, the author concedes that the initiative should be supported, but asserts that this does not detract from the force of his central point that the CCC should not be endorsing it.

At the lowest level of the text, we find four relational predicates: Concession between (2) and (3), Condition between (4) and (5), another Condition between (6) and (7), and finally Concession between (10) and (11) through (12).

From the above analysis of the text it becomes clear that relational propositions do not just connect every clause in the text, but they collectively connect together the entire text, and thus they play an essential role in accounting for text connectedness, coherence and text function.

The motivations for Mann & Thompson's development and modification of traditional RP theory are its potential role in developing a theory of discourse. For, as they argue, "it provides a potential basis for a new understanding of conjunctions, and it suggests a new perspective for studying coherence. It also makes new testable predictions about the effects of texts on hearer" (1983:26). Although their work is certainly a solid first step towards that end, Mann & Thompson, as they themselves acknowledge, have not answered a number of questions that might be raised about this phenomenon, the most immediate one being a full explanation of just how and when these relational propositions or predicates arise in discourse. With this issue in mind, we now turn and examine another researcher's work that provides some insightful answers.

McKeown (1985) develops a computer system (called TEXT) which allows users to ask questions of a database. She examines the possible relationships between discourse structure and the focusing mechanism in order for the system to produce a coherent, well organised text. Rhetorical techniques, which encode aspects of discourse structure, are used to guide the selection of propositions from a relevant knowledge pool, while the focusing mechanism is used to create discourse coherence by constraining the selection of information to be talked about next to that which ties in with the previous discourse in an appropriate way (McKeown, 1985:ix).

To describe discourse structure, McKeown suggests a set of rhetorical predicates and a set of schemata. The rhetorical predicates, which are largely based on Grimes (1975), include:

Specification, Explanation, Evidence, Alternative, Analogy, Comparison, Contrast, Renaming, Amplification, General-illustration, Particular-illustration, Cause-effect.

In the example, *Mary is quite heavy. She weighs 200 pounds*, she postulates the predicate Specification, where the first proposition gives a general statement and the second proposition provides specific information about the statement.

The most interesting part of McKeown's work is her explicit discussion of the ways in which rhetorical techniques may be combined to form larger units of text: a question that Mann & Thompson and other RP researchers do not address. She observes that "not only are certain combinations of rhetorical techniques more likely than others, but certain ones are more appropriate in some discourse situations than others" (1985:21). For example, she finds that identification of objects is frequently achieved by using some combination of the following means: 1) identification of an object as a member of some generic class, 2) description of that object, 3) analogies made to familiar objects, and 4) examples. The crucial point is that these techniques are rarely used in random order; for example it is common to identify an item as a member of some generic class before providing examples. An illustration will be helpful here (McKeown's original example, p. 28):

- (5) 1. "Eltcille (Germany), an important wine village of the Rheingau region.
 2. The vineyards make wines that are emphatically of the Rheingau style,
 3. with a considerable weight for a white wine.
 4. Taubenberg, Sonnenberg and Langenstuck are among vineyards of note." (Paterson 80)

In this text, *Eltcille* is first identified as an important wine village in (1), then described in (2) and (3), and finally examples are given in (4) to illustrate certain aspects of things related to the place. It would be most unnatural and inappropriate if these propositions were ordered otherwise.

The above observations lead McKeown to propose what she calls SCHEMATA. A schema is "a representation of a standard pattern of discourse structure which efficiently encodes the set of communicative techniques that a speaker can use for a particular discourse purpose" (1985:20). Put another way, a schema is a sequence of rhetorical predicates occurring in a conventionalised pattern. McKeown distinguishes four schemata, which are: Attributive, Identification, Constituency, and Compare-Contrast. A presentation of the Identification Schema is given below.⁷

Identification Schema (ID Schema)

Identification (class & attribute/function)
 { Analogy/Constituency/Attribute/Renaming/Amplification }*
 Particular-illustration/Evidence+
 { Amplification/Analogy/Attributive }
 { Particular illustration/Evidence }

The passage in (5) above may serve as an example of this schema, which has the following classification:

1. Identification (class & attribute)
2. Attribute
3. Amplification
4. Particular illustration

McKeown argues that just as the predicates function recursively, so also do the schemata. That is, each predicate in a schema can expand to another schema. We may

⁷In the presentation, "{}" indicates optional constituents, "/" indicates alternatives, "+" indicates that the item may appear 1 to n times, and "*" indicates that the item may appear 0 to n times.

look at a passage (taken from McKeown, p. 33) to see how schema recursion works:

- (6)
1. A Hobie Cat is a brand of catamaran,
 2. which is a kind of sailboat.
 3. Catamarans have sails and a mast like other sailboats,
 4. but they have two hulls instead of one.
 5. That thing over there is a catamaran.
 6. Hobie Cats have a canvas cockpit connecting the two pontoons and one or two sails.
 7. The 16 ft. Hobie Cat has a main and a jib and the 14 ft. Hobie Cat has only a main.

McKeown's representation of the schema recursion in this passage is as follows:

ID Schema		ID Schema		Compare-Contrast Schema
identification	->	identification		
		analogy	->	similarities
				differences
		particular-illustration		
attributive				
particular-illustration				

In example 6, as McKeown explains, the Identification schema is used in response to the question "what is a Hobie cat?" The first step the speaker takes is to identify the Hobie Cat as a class of catamarans in (1). To do so, however, he also provides a definition for a catamaran. The identification predicate in (1) expands to the Identification schema, where the speaker identifies the catamaran as a sailboat in (2) and presents an Analogy (which expands to the Compare-Contrast Schema) between the two, which involves their similarities in (3) and differences in (4). After providing a particular illustration in (5), the speaker pops back to the original Identification schema to provide additional information about the Hobie Cat in (6) and finally, cites two types of Hobie Cats for Particular-illustration in (7).

The kind of predicate or schema recursion, as illustrated in the above passage, is the representation of the hierarchical structure of the discourse. In this sense, McKeown's notion of schemata is an interesting development of RP theory. It represents an advance towards a full explanation of how and when rhetorical predicates arise and how they may be combined to form larger units of text and thus offers a better account of discourse structure.

3.2.3 Summary

In this section (3.2), I have presented the history and recent development of RP theory. We have seen that the theory has its root in Rhetoric and its recent development is motivated by an effort to incorporate the theory into an overall theory of discourse. RP theory has been developed to describe the various rhetorical/semantic relationships between discourse propositions, in other words, as a linguistic tool for discourse representation and discourse interpretation. Since a discourse is hierarchically structured, a rhetorical representation of the organisation of a discourse is also a hierarchical one. Now, if we consider the central concern of this study -- anaphora, which is an important aspect of discourse interpretation, and if we assume that anaphora is determined at least in part by discourse structure, it is essential then that we have the appropriate means to describe and represent the discourse structure so that an appropriate account of anaphora may be obtained. Our review of the theory (particularly of Mann & Thompson, 1983 and McKeown, 1985) suggests that RP theory is indeed a promising alternative in this respect. Our review of Fox (1984) also indicates that rhetorical predicates (and patterns of rhetorical predicates) are essential not only in representing discourse structure but also in explaining anaphoric expressions. All this provides strong motivations for the adoption of RP theory as a descriptive framework for this thesis.

It should be noted, however, that RP theory, in its present form, has some unsolved problems. One of these concerns the number of rhetorical predicates. Although linguists in the field agree that their predicates are members of a small finite set, they differ in the number (and the labels) of the predicates they propose. As noted earlier, Fuller (1959) proposes 17 rhetorical predicates, Beekman & Callow (1974) propose 20, Grimes (1975) proposes 20, Mann & Thompson (1983) propose 15 and McKeown (1985) proposes 23. Thus, we can see that although researchers all take the position that the list of rhetorical predicates is small/finite, sufficient and universal, there is little consensus as to what the correct list of rhetorical predicates is or how we know when the list is complete. Having said this, it should be pointed out that their differences have to do, as noted earlier, mainly with differences in the classification of predicates, or with the amount of the data on the basis of which their predicates are derived. From a practical point of view the differences in the number of rhetorical predicates among different

proponents of the theory do not matter as long as a particular set of predicates proposed by a researcher suffices for his/her investigation. From a theoretical point of view, however, differences of this kind cannot be satisfactory, because it will ultimately affect the claim that the list of rhetorical predicates is finite, sufficient and universal.

The problem here, in a sense, is similar to the problem with the list of case roles (or semantic relations) in Case Grammar (Fillmore, 1968). Although researchers in this field agree that the case system consists of a small number of elementary case notions such as Agent, Object and Locative, they have produced different lists of cases, and even the same person has produced different lists of cases at different times. For instance, Fillmore, the original proponent of case grammar theory, proposed 7 cases in 1968, i.e. Agentive, Instrumental, Dative, Objective, Locative, Factitive and Comitative. He later revised the list of cases and included a total of 9, i.e. Agent, Experiencer, Instrument, Object, Source, Goal, Location, Time and Benefactive. As for other case grammarians, Chafe (1970) has proposed 7 cases, and Anderson (1971) 4. The case roles proposed by researchers working within the framework of Tagmemics range from 5 to 10.⁸ These different lists of cases reflect different ways of classification⁹ as well as individual preferences. However, in a final analysis, these differences arise from the fact that the relations represented by case roles are underlying semantic relations that are not necessarily matched by surface structure categories (e.g. subject or object). This is where all the differences or preferences start. However, these differences do not necessarily invalidate the claim that the list of cases is finite, sufficient and universal.

The differences in the number of rhetorical predicates among proponents of RP theory can be explained in the same spirit. Since the relations represented by rhetorical predicates are rhetorical/semantic relations that hold between propositions in a discourse and since these relations are not necessarily matched by aspects of the surface structure of a discourse (e.g. clauses, sentences or paragraphs), individual differences are bound to occur, not to mention various other reasons, such as the type and amount of data used as well as individual preferences in the choice of labels. Thus, there is no absolutely

⁸For a thorough summary of cases proposed by case grammarians, see Cook (1989).

⁹For example, these different lists fall into three different models: nonlocal system (e.g. Fillmore, 1968), local system (e.g. Anderson, 1971) and mixed system (e.g. Fillmore, 1971).

correct list of rhetorical predicates and each list must be defended on its own merits. At the same time the claim that the list of rhetorical predicates is small/finite, sufficient and universal has its validity.¹⁰

A related problem is that RP theory lacks explicit procedures for objectively identifying rhetorical predicates. In other words, the theory is somewhat subjective in predicate assignment. A consequence of this is that it may cause problems in discourse representation and discourse interpretation, which may ultimately affect the validity of an account based on the theory.

This problem with predicate assignment, however, is also not unique to RP theory. Case theory has a similar problem in which the assignment of individual cases is by no means entirely consistent. AI models, as noted earlier, are also faced with this problem. Take Reichman (1981) for an example. How a context space is recognised and how its topic/label is identified/assigned remain to be sorted out by this model. Reichman has proposed some procedures for identifying context spaces (e.g. by the use of explicit cue phrases), but in general some other mechanism is needed to yield and assign topics to individual context spaces.

A difficulty for formulating predicate assignment criteria is that rhetorical predicates represent underlying semantic relations between propositions or groups of propositions in a discourse that are not necessarily matched by surface structural units such as clause, sentence or paragraph. As Mann & Thompson (1983) point out, rhetorical predicates arise independently of any specific signals of their existence and thus need not be signalled. If there are identifying criteria, they are yet to be fully established.

These two problems remain to be solved if a full theory of rhetorical predicate is ever attempted.

¹⁰It may be desirable to adopt Cook's 1989 approach to the list of case roles in the form of his matrix model in which he chooses a particular model (i.e. a nonlocal system) with five cases common to all systems; the other proposed cases are then explained as variants of these five cases.

3.3 Rhetorical Predicate Analysis

Having reviewed in the immediately preceding sections the history and central proposals of Rhetorical Predicate accounts of discourse structure, we turn now to a discussion of the application of these ideas which will be utilised in the remainder of this thesis, exemplifying them with material drawn from a corpus of Chinese newspaper articles.

The basic assumption underlying Rhetorical Predicate Analysis is that texts are not merely strings of clauses but are instead hierarchically organised groups of clauses which bear various informational and interactional relations to one another. This framework has in its apparatus a basic unit, the proposition, and a group of rhetorical predicates which describe the various relationships into which the propositions enter. The concepts of propositions and rhetorical predicates are discussed in section 3.3.1. As demonstrated in AI works, notably Reichman (1981), discourse units (context spaces in Reichman) have differing levels of influence on the succeeding discourse at different points of discourse development. This insight has been incorporated into the present model in which propositions assume differing levels of influence on the following propositions at the different points of discourse. The notion of the influential states of propositions is considered in section 3.3.2.

3.3.1 Rhetorical predicate concepts

3.3.1.1 Propositions and rhetorical predicates

Rhetorical predicates may be defined as higher-level predicates in texts that relate to their constituent arguments in much the same way as verbal predicates do to theirs. Rhetorical predicates take PROPOSITIONS as their arguments. A proposition, in this model, represents the smallest unit that stands in informational and/or interactional relationships with other parts of the text and the reader. It is thus a more abstract notion than a clause or a sentence, though it is usually expressed by such syntactic forms. Two types of clauses are excluded from being considered as independent propositions, that is, relative clauses and complement clauses that are treated as belonging to their modified clause in one proposition. The motivation behind this treatment lies in that

these clauses do not bear with other discourse-units the type of structural relationships that this approach attempts to capture. Another reason is that complement and relative clauses tend to be governed by principles of grammar rather than by principles of discourse and hence are less closely involved with principles of discourse organisation.¹¹

Having considered the concept of propositions, we now move onto the concept of rhetorical predicates. The set of rhetorical predicates I am proposing for this thesis is given in the following table.

(7) Rhetorical Predicates Used in This Study

Name of Predicate	Internal Structure
<i>Adjoining predicates:</i>	
Issue	One nucleus, one or more adjuncts
Circumstance	One nucleus, one adjunct
Condition	One nucleus, one adjunct
Concession	One nucleus, one adjunct
Purpose	One nucleus, one adjunct
Reason	One nucleus, one adjunct
Response	One nucleus, one adjunct
Opposition	One nucleus, one adjunct
<i>Conjoining predicates:</i>	
Succession	Two or more nuclei, no adjuncts
Joint	Two or more nuclei, no adjuncts
Contrast	Two or more nuclei, no adjuncts
Alternative	Two or more nuclei, no adjuncts

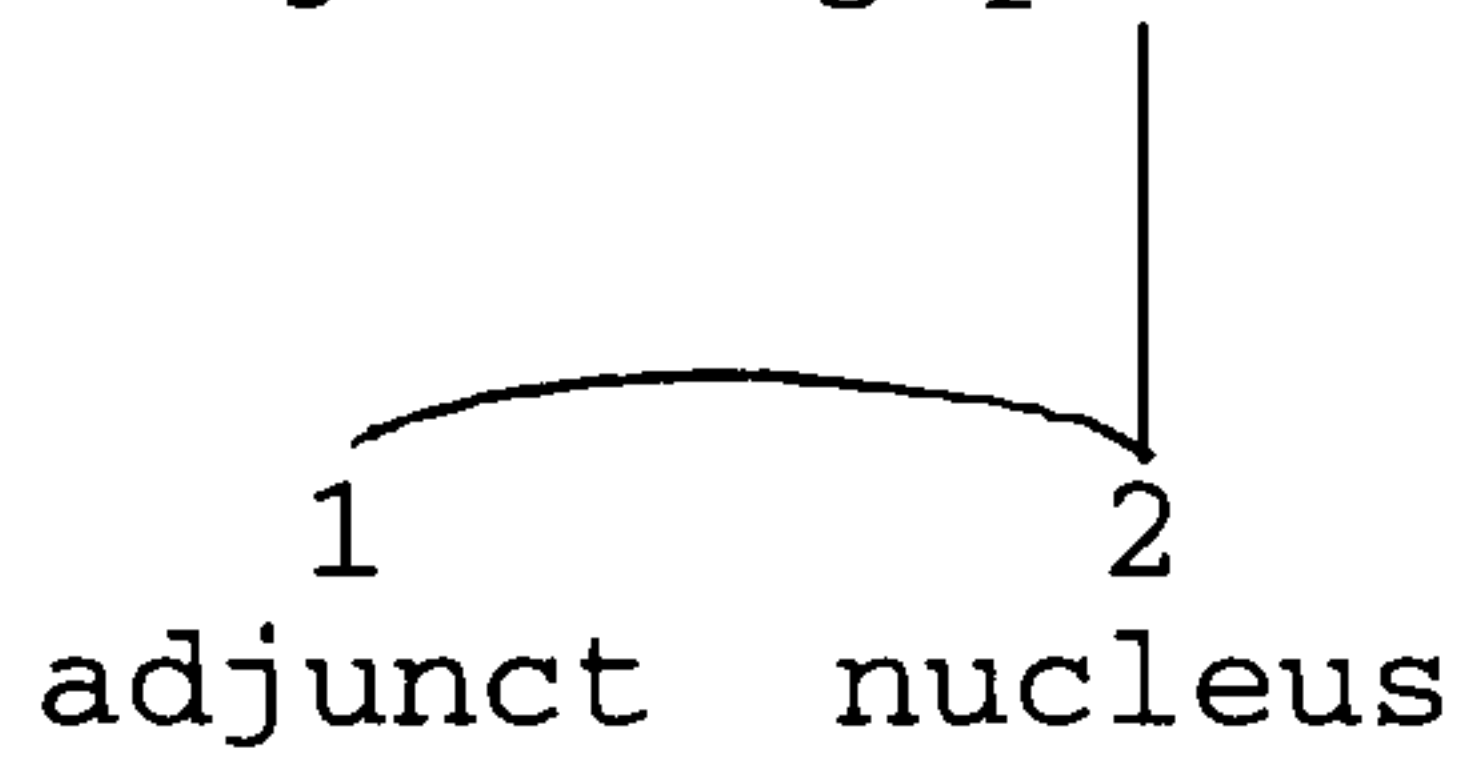
Rhetorical predicates may be recognised and categorised along two major distinct, yet mutually related parameters: STRUCTURAL PARAMETERS and SEMANTIC PARAMETERS. By a structural parameter is meant the structural configurations that characterise rhetorical predicates and their arguments. Rhetorical predicates fall into two major groups: CONJOINING and ADJOINING.¹² With an adjoining predicate, the arguments of the predicate are structurally unequal: one of them is the nucleus and the other(s)

¹¹Both Mann & Thompson (1983) and Fox (1984) take similar views about the rhetorical status of relative and complement clauses.

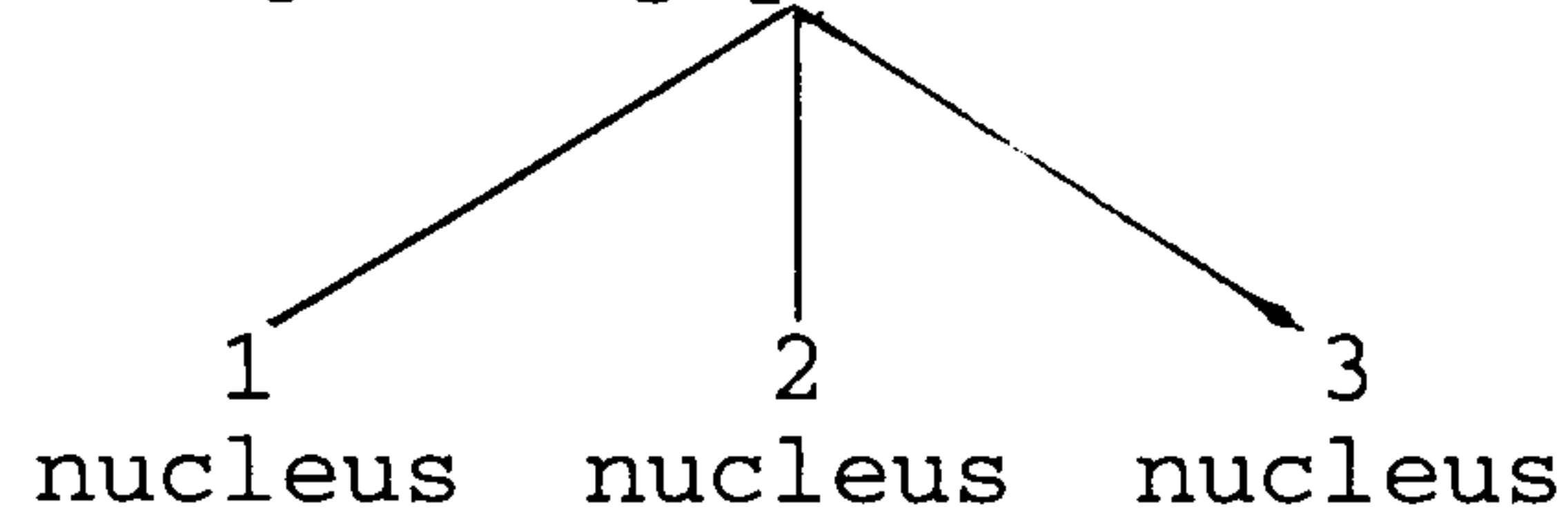
¹²The distinction between conjoining and adjoining rhetorical predicates is similar to that of paratactic and hypotactic predicates of Grimes (1975).

adjunct(s) while the arguments of a conjoining predicate are of equal status, in other words, they are all nuclei. The following diagrams illustrate the structural relationships that hold between the propositions within these two types of rhetorical predicates:¹³

(8) Adjoining predicates



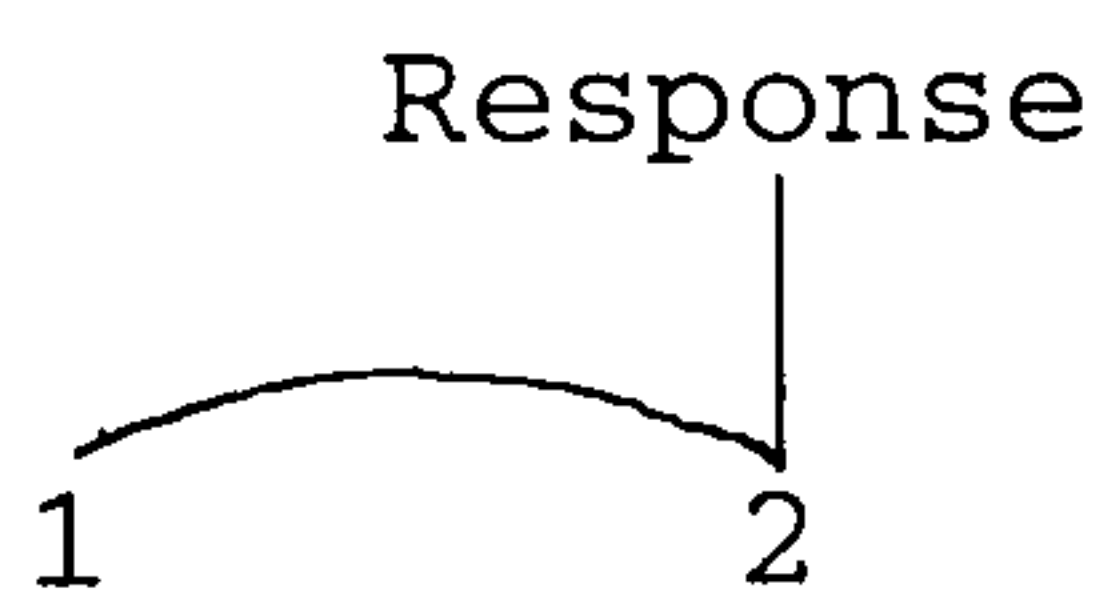
Conjoining predicates



The semantic parameter is concerned with the conceptual content that characterises the relations among the arguments of rhetorical predicates, after which the various rhetorical predicates are named. For instance, we identify a Response predicate in the following combination of two propositions:

- (9) 1. What was this carapace which Leonard Woolf carried for seventy years?
 2. He had above all an unusual capacity to control his feelings.

where proposition 2 provides a response or answer for the question raised in proposition 1. Below I give the diagram showing the rhetorical structure of this example:¹⁴



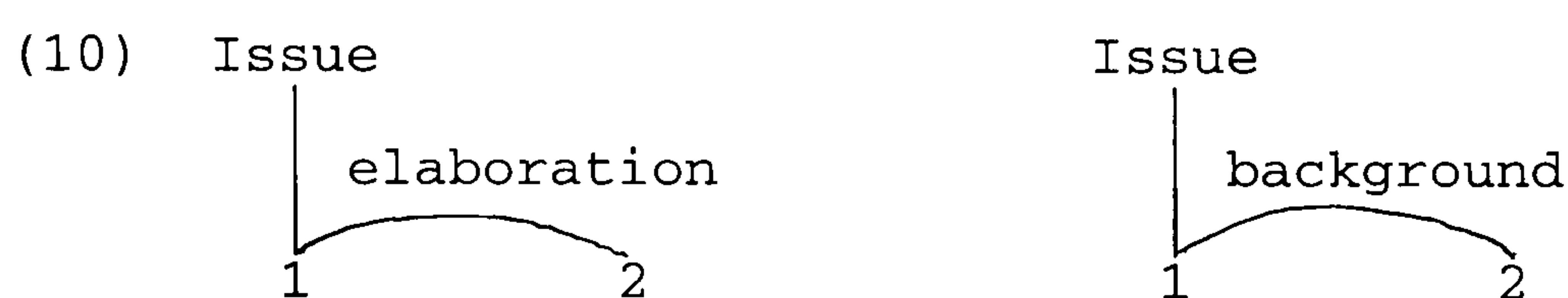
Rhetorical predicate structures are drawn as graphs with their label at the top (e.g. Response in the diagram above), and several lines descending from the top.¹⁵ The nucleus is represented in the diagrams with a vertical line coming down from the predicate label, and an adjunct is represented by an arc from the nucleus to the adjunct

¹³It should be noted that the unmarked order of the predicates which contain an adjunct and a nucleus in Chinese is for the adjunct to occur before the nucleus. For most of the predicates of this type however, either ordering is possible; under certain conditions, the nucleus can precede the adjunct, and under others the adjunct can precede the nucleus. For some of the predicates, however, alternative orderings are not possible. For example, it would be odd to find the response to a problem or question before the problem or question, or an elaboration/evidence before an assertion.

¹⁴In this example, (2) is considered the nucleus because it carries the main focus of this piece of discourse by providing new information in the form of an answer to the question raised in (1).

¹⁵I follow Fox (1984, 1987) and Chen (1987) in this notation.

(e.g. in the above diagram, (1) is an adjunct and (2) the nucleus). This graph is used not only to indicate the subordinate status of the argument under it, but also to indicate the relation which holds between the nucleus and the adjunct. This relation is usually expressed through the label for the rhetorical predicate at the top, e.g. in the preceding example the label *Response* occurring at the top indicates the relationship between the nucleus and adjunct, but in the case of an *Issue* predicate, the arc is labelled with the name of the relation, which is different from the label of the rhetorical predicate, as exemplified in (10).



where (1) represents the nucleus and (2) the adjunct that is in an elaboration or background relation to the nucleus.

The rhetorical predicates proposed in (7) are described and illustrated below:

ISSUE

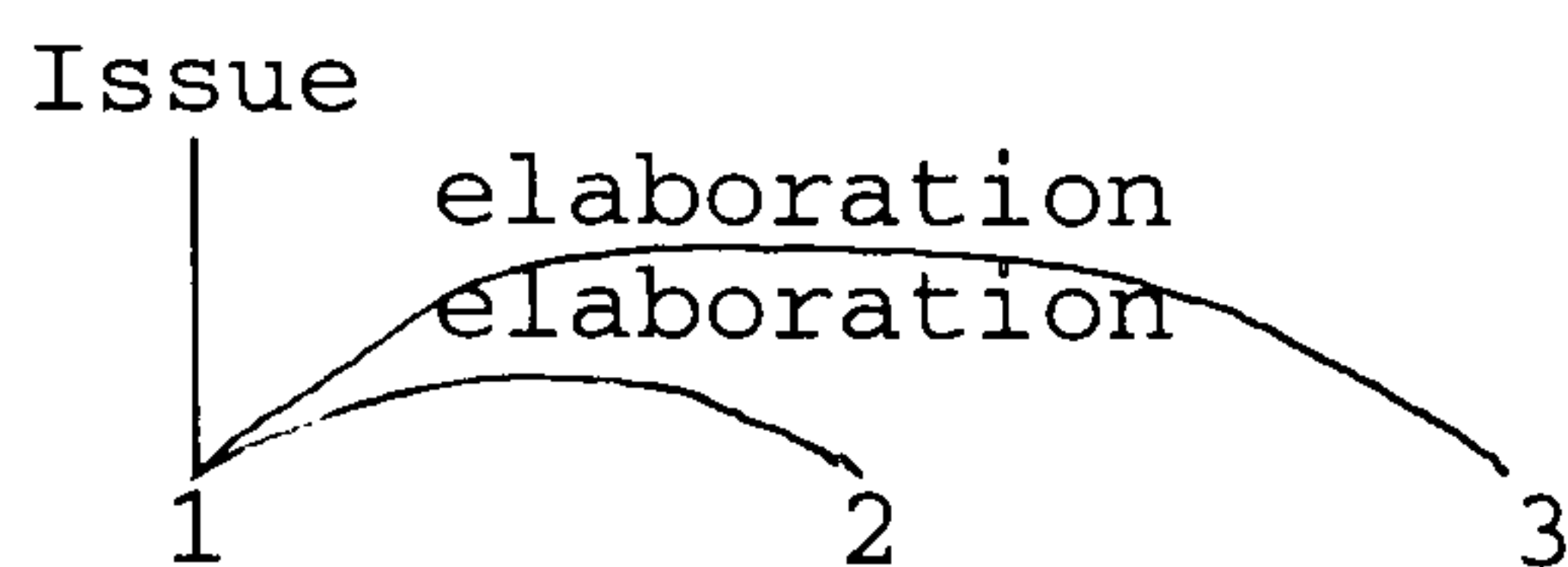
The *Issue* predicate is the most prevalent and important organising unit within the framework and usually occurs as the top-most unit of the text.¹⁶ It is composed of two or more constituents; one of them is the nucleus, presenting a claim, the other(s) are adjunct(s) -- an elaboration adjunct if it provides details about the claim, or a background adjunct if it provides background information for the claim. Following is an illustrative Chinese example:

- (11) 1. Zai xiang shengchan de shendu kaifa de tongshi, Xu Fumin
 at towards production depth explore same-time
 you tong tade nongyoumen yiqi zai jingying shang
 also with his peasant-friend together in management
 daxian-shenshou.
 show-big-skills

"While exploring the depth of production Xu Fumin, together with his peasant friends, has displayed his skill in management to the full"

¹⁶I have taken the term *Issue* from Reichman (1981), who defines it as presenting the main claim of an argument. It functions as a "topic-setter" for a given piece of discourse. This term is used in this study in essentially its original meaning.

2. Tongguo yu gong shang lianhe jingying,
through fishery industry commerce combined management
ta jin cheng kai shipin-dian, kai kaoya-dian,
he enter city open food-shop open roast-duck-shop
ban qinlei jiagong lengdong chang;
run poultry process frozen factory
"Through combined management of fishery, industry and
commerce, he has opened food shops and roast duck
restaurants and run a poultry processing and cold storage
factory in the city"
3. Ta liyong benchang di-chu Tai Hu de youyue tiaojian,
he use his-farm situate Taihu Lake fine condition
xiyin waidi zijin jianzao lüyou sheshi.
attract other-region fund set-up tourism facility
"He has made full use of the excellent location of the
farm in Taihu Lake area to attract the funds from
other regions to establish tourist facilities" [D34]



In this passage, the first proposition is the nucleus in that it presents a claim the text is intended to convey. Propositions 2 and 3 are elaboration adjuncts in that they provide details or evidence about the claim made in the nucleus.

The Issue predicate often displays a complex internal structure; it usually has several adjuncts attached to the nucleus and each of the adjuncts may have its own internal structure, i.e. may be realised by an embedded predicate, thus resulting in a hierarchical organisation of the text (I will return to this point shortly).

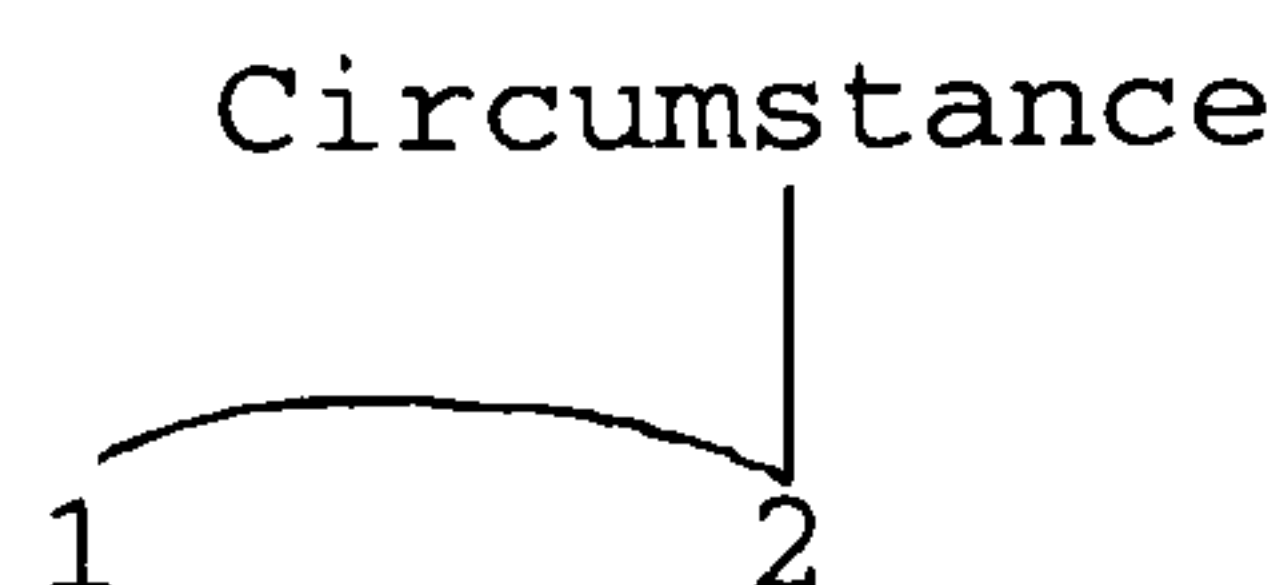
CIRCUMSTANCE

Unlike the Issue predicate, the Circumstance predicate (and the other adjoining predicates) usually occurs at a lower level of the discourse and is often realised directly by simple propositions (with no further embedding).¹⁷ This predicate has a nucleus which describes a situation and an adjunct which usually provides temporal information about the circumstance under which the situation occurred (or will occur). This kind of relation is typically signalled by such cue words as ...*de shihou* "when", ...*yihou* "after". Below is an example for illustration:

¹⁷I will discuss the distinction between the highness and lowness of predicates in 3.3.1.3.

- (12) 1. Fanhui Jianada hou,
return Canada after
"When (he) returned to Canada"
2. ta xiexin ganxie Yang daifu.
he write thank Doctor Yang
"he wrote to thank Doctor Yang"

[D33]



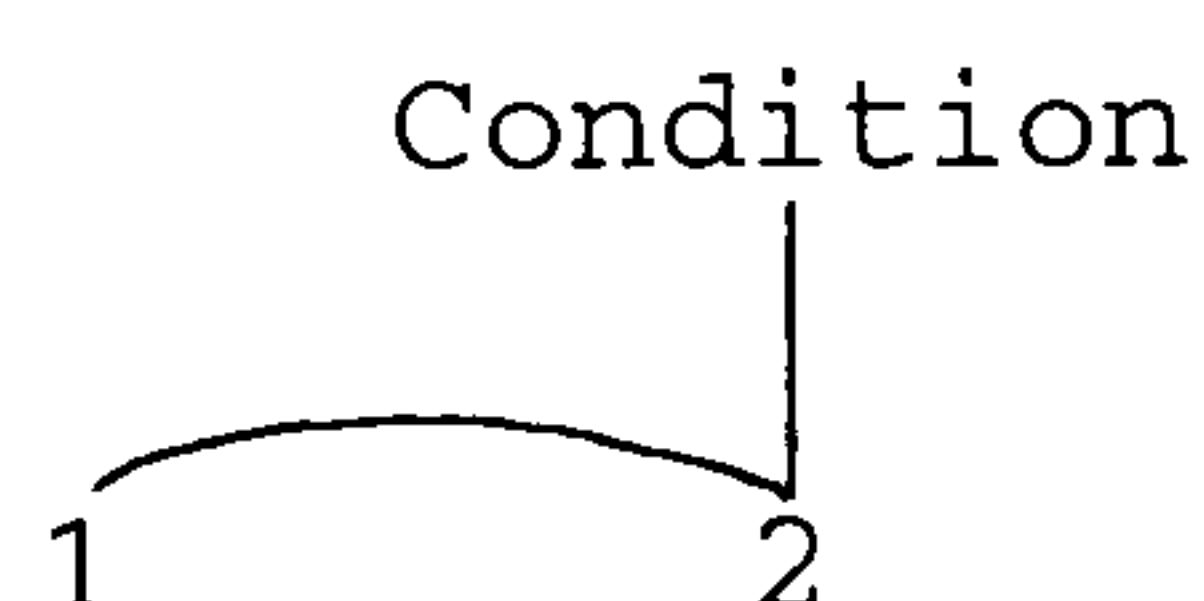
In this text, the first proposition is the adjunct that states the circumstance, the second is the nucleus that states the situation.

CONDITION

In a Condition predicate the adjunct states the condition under which the nucleus proposition holds. The cue words for it include *ruguo* "if", *wanyi* "in case that". An example is given below:

- (13) 1. Ruo wen Xiao Long daxue biye hou zuo he dasuan,
if ask college graduate after have what plan
"If you asked Xiao Long about his plans after graduation
from university"
2. ta hui haobu-youyude huida: chuguo liuxue.
he will without hesitation answer: go abroad study
"he would answer you without hesitation: go abroad for
further study"

[D11]



In this passage, the first proposition is the adjunct stating the condition that must hold for the nucleus proposition to follow.

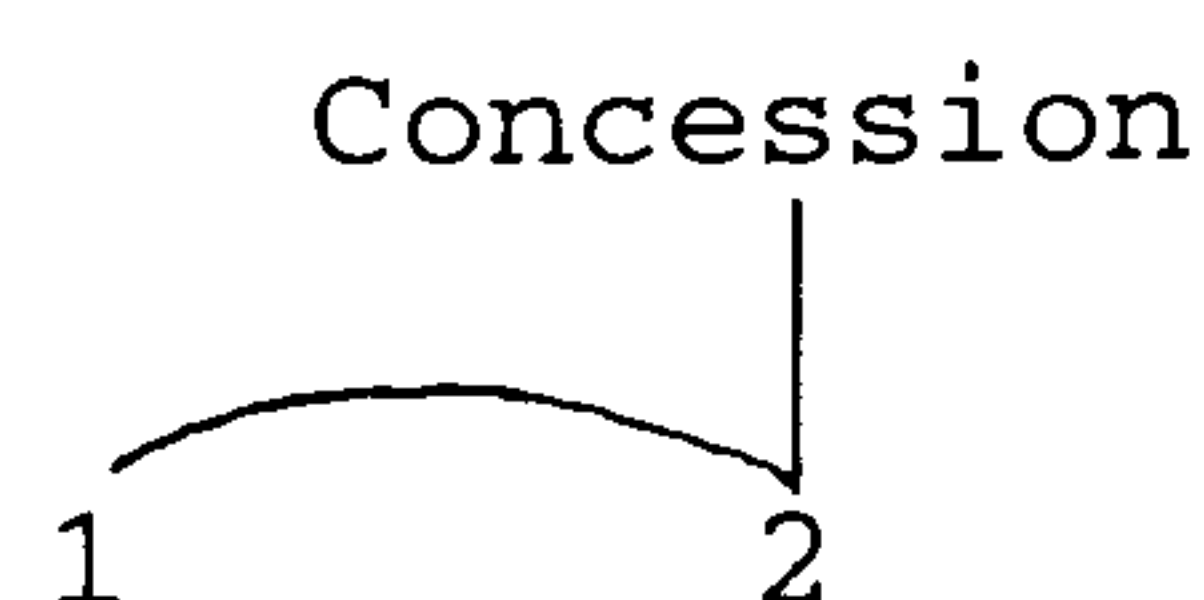
CONCESSION

This predicate contains material in the adjunct that represents a potential refutation to the nucleus. The writer or speaker does not reject the validity of the material in the adjunct, but asserts that the co-occurrence of the nucleus proposition and the adjunct proposition is contrary to expectation. *Suiran*, *jinguan* "although" are among the cues used for this predicate. An example follows:

- (14) 1. Suiran "zaqizaba" shenme dou gan,
though whatever all do
"Although (he) performed different types of drama and opera"

2. dan ta ku'ai de hai shi huaju zhege "zhiye".
 but he love still is opera this profession
 "what he liked most was the modern drama"

[D13]



In the example, the first proposition is the adjunct and the second proposition is the nucleus.

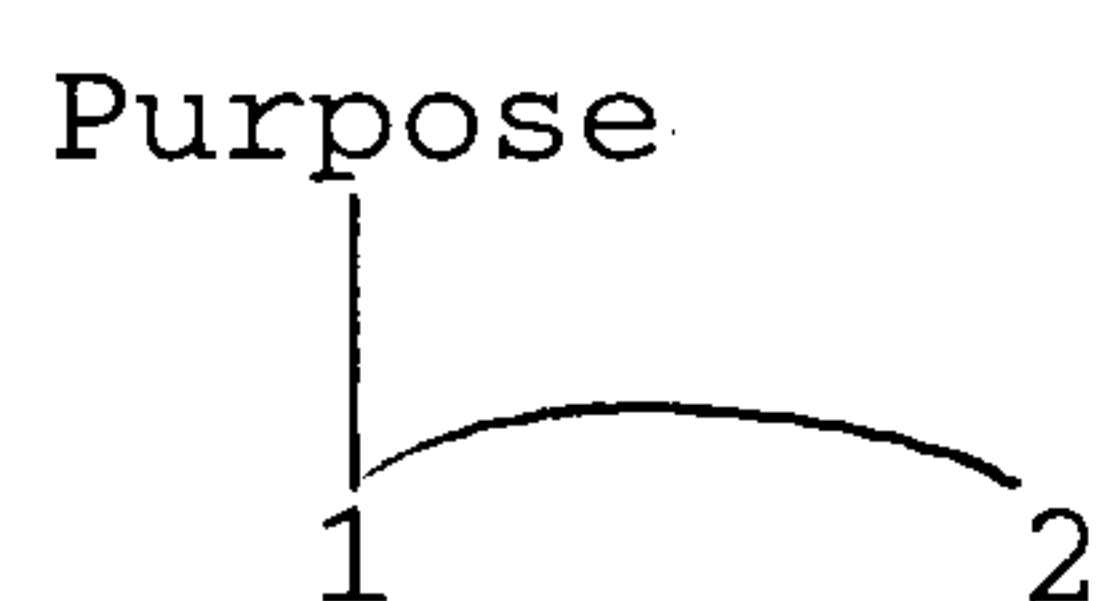
PURPOSE

The Purpose predicate has a nucleus which describes a situation or an action and an adjunct which describes the purpose that situation or action is intended to fulfil. Cue words include *weile*, *yibian* "in order to". An example is given below:

- (15) 1. Yici, Guo Moruo lai zhao Fu Baoshi,
 once come see
 "Once Guo Moruo went to see Fu Baoshi"

2. yao ta xie ge "wengao".
 ask him write an open letter.
 "(he) asked him to draft an open letter"

[D9]



This is an instance of an unsignalled rhetorical predicate in which proposition 1 is the nucleus describing an action and proposition 2 is the adjunct describing the purpose of that action.

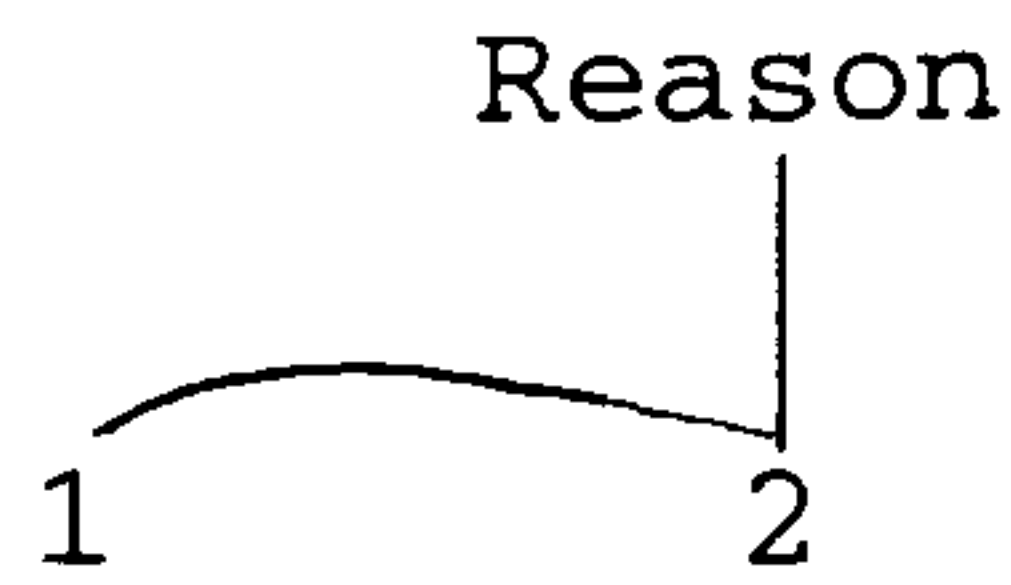
REASON

This predicate has a nucleus that makes a statement about something and an adjunct that gives the reason for that statement. The term Reason is used here in a general sense, which includes cause, result, motivation, etc. *Youyu* "as", *yinwei* "because", *suoyi* "therefore" are among the usual clue words. An example follows:

- (16) 1. Youyu Gao Lao zai xinlixue-shang zaoyi jingshen,
 because in psychology attainment excellent
 "Because Mr Gao had high attainments in psychology"

2. ta zhubian "Xinlixue Shi" yi shu.
 he edit psychology history the book
 "he was appointed chief editor of the book
 A History of Psychology"

[D10]

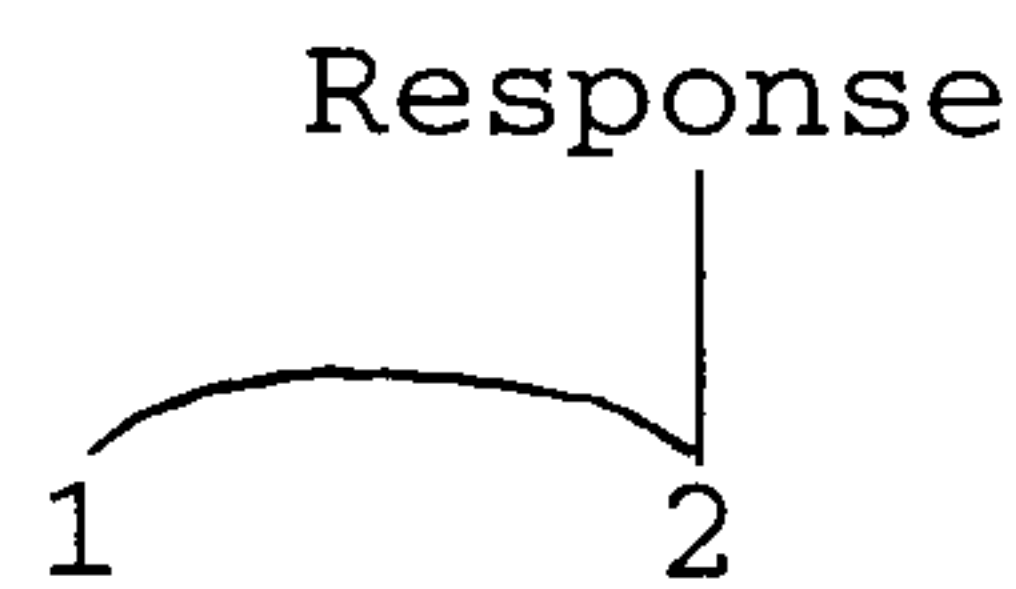


The adjunct (proposition 1) provides the reason for the statement made in the nucleus (proposition 2).

RESPONSE

The nucleus of this predicate offers some sort of answer or response to a question or a problem which is posed with the adjunct. Consider the following example:

- (17) 1. Dan zhepian "Wengao" shi shui qicao de ne?
but the open-letter is who draft
"But who was it that drafted the Open Letter?"
2. Ta chuzi zhuming huajia Fu Baoshi de shoubi.
it come-from famous painter Fu Baoshi's masterpiece
"It was written by Fu Baoshi, a famous painter" [D9]

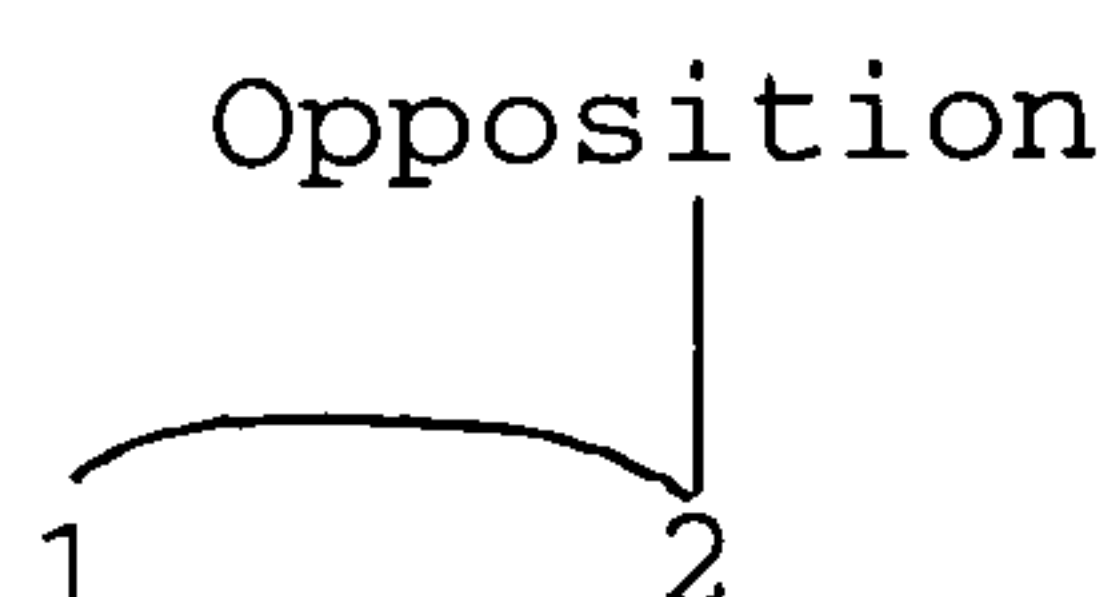


The first proposition is the adjunct that poses the question and the second proposition is the nucleus that provides the answer.

OPPOSITION

As an adjoining predicate this predicate displays two sides of a situation, one, the adjunct, is the side not adhered to by the writer, and the other, the nucleus, is the side which presents the writer's real point of view. Cue words such as *danshi* "but", *bushi...ershi* "not...but" occur in this structure. An example follows:

- (18) 1. Wuyi women yinggai nuli tigao renmin de shenghuo shuiping,
no-doubt we should greatly improve people's living standard
"No doubt we should make every effort to enhance people's
living standards"
2. dan muqian women geng yinggai qiangdiao fazhan shengchan.
but at-present we more should emphasise develop production
"but at present we should lay more emphasis on the
development of production"



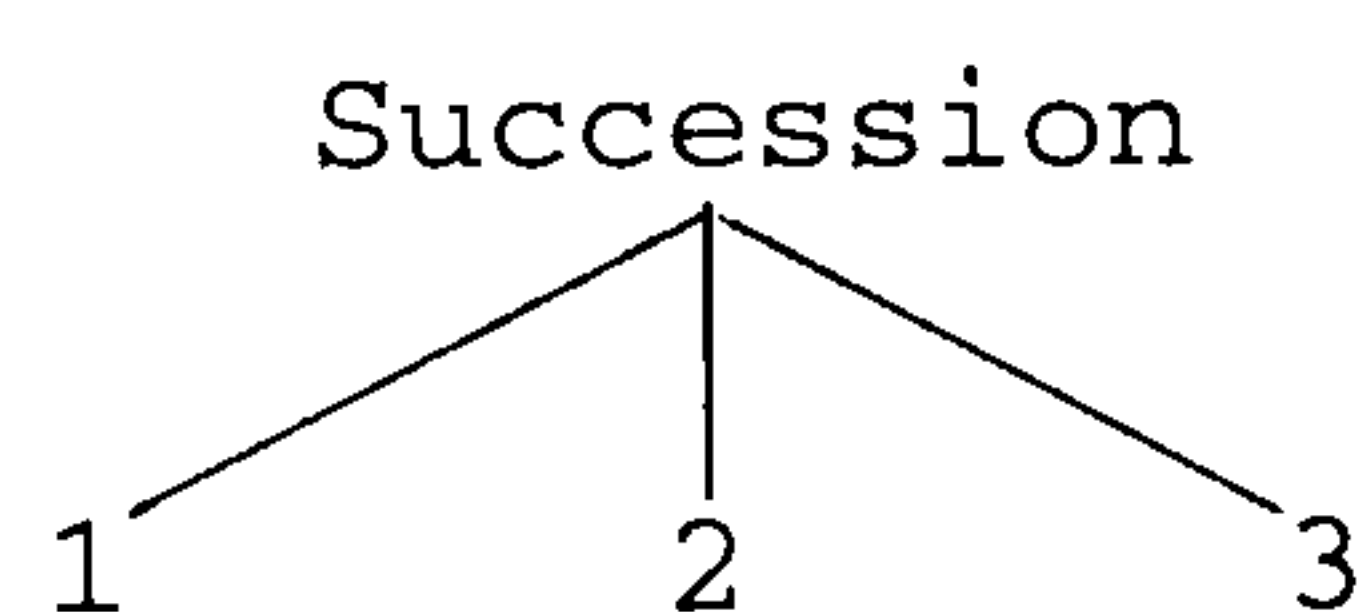
In the example, it is not the first but the second proposition that the writer really supports.

Having presented the adjoining predicates we now turn and look at conjoining predicates.

SUCCESSION

The Succession predicate is one of the most commonly-occurring organising units. It has multiple nuclei and no adjuncts. The arguments of this predicate are related to each other through a chronological or logical sequence and thus usually cannot be reversed without an effect on meaning. Cue words include *suiji*, *jiezhe*, *ranhou*, "then" for chronological sequences and *shouxian...qici...zuihou* "first...then...finally" for logical sequences. An example of this predicate is given below:

- (19) 1. Zai jiunian de shijian li, maodie-zhiniande Gao Lao meitian
 in nine-year time in eighties every-day
 qingchen liu-shi qichuang,
 morning at six get-up
 "For nine years, Old Gao, though in his eighties, got up at
 six every morning"
2. sanbu jianshen,
 walk keep-fit
 "(he) went out for a walk to keep fit"
3. ranhou fu-an gongzuo.
 then at-table work
 "then (he) started to work over the table" [D10]



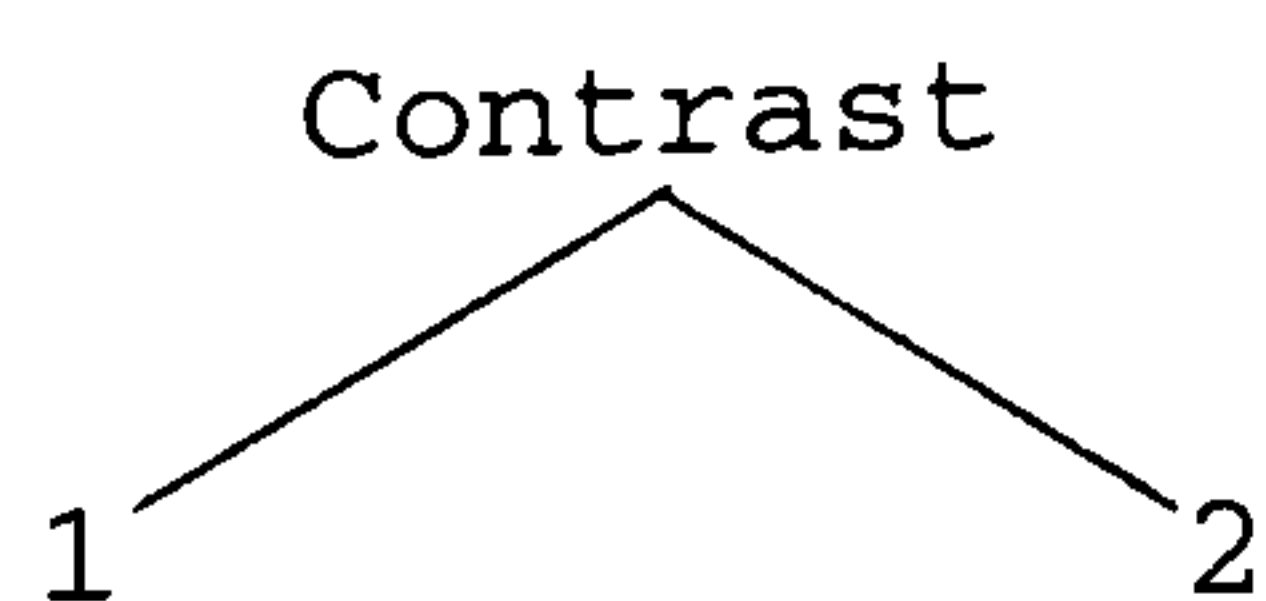
This passage is characterised by a chain of actions which happen one after another.

JOINT

Like the Succession predicate, Joint is also a commonly-occurring predicate and its arguments are related to one another in a co-ordinate fashion. But unlike the Succession predicate, a rather loose relationship holds between its arguments and their order usually can be altered without changing the meaning of the text. As one of the most basic and prevalent organising units, this predicate occurs at various levels in the structural hierarchy of discourse. Syntactic parallelism is very common in this structure. *Erqie* "and", *ye* "also", and *(ling) yifangmian* "on the other hand" are some of the cue words for this predicate. The following is an illustrative example:

"But Xiong Zaiding says that it is the great concern of the Party and the government that has heightened her courage to live on"

[D2]



In this passage, we have a contrast between the two arguments which are related on an equal basis.

3.3.1.2 Recursion of rhetorical predicates

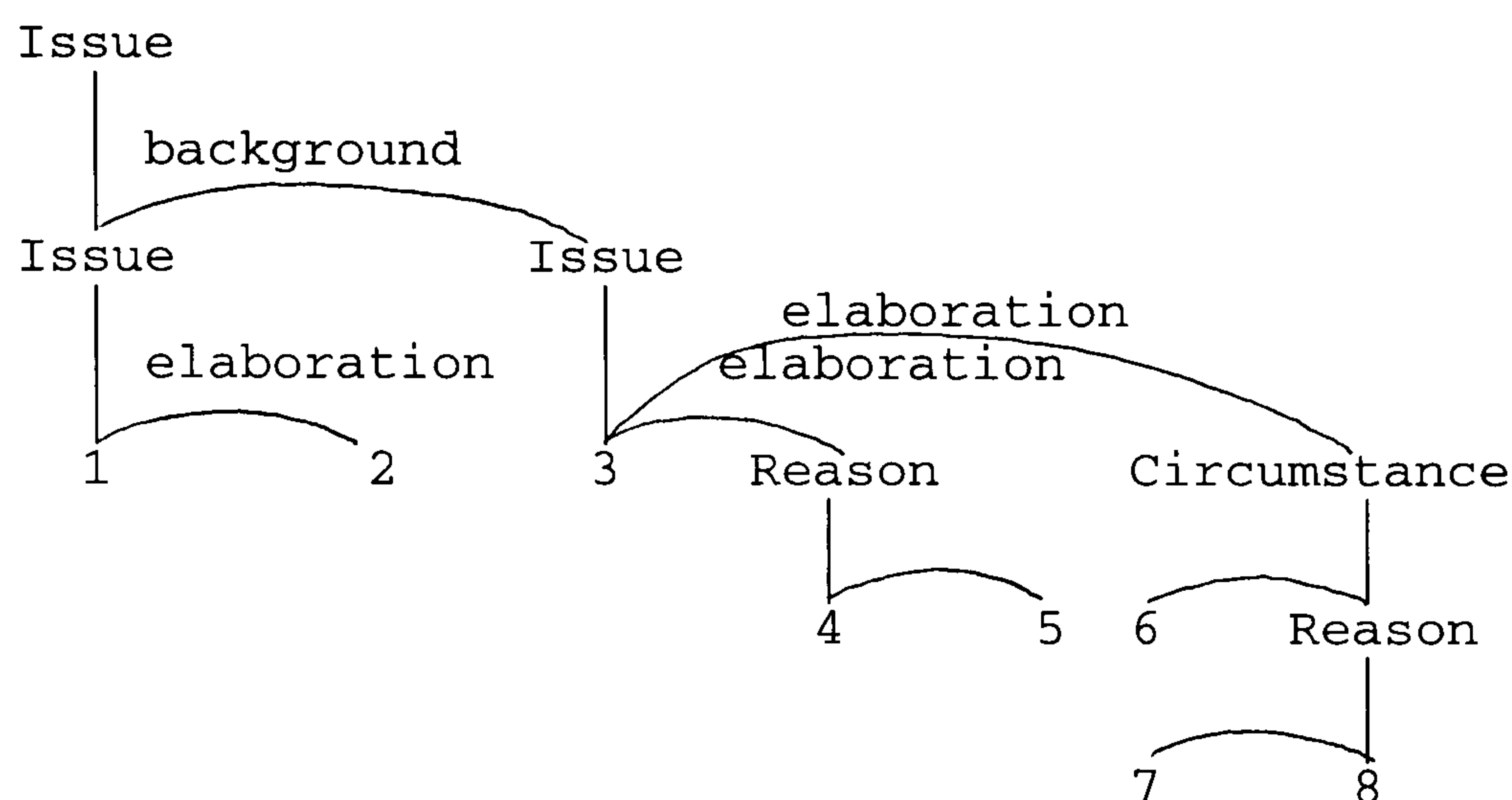
The examples above have demonstrated rhetorical predicates whose arguments are directly realised by propositions. Frequently, however, things are more complicated. The situation is that any argument of a rhetorical predicate, whether it is the nucleus or an adjunct, can itself be realised by an embedded rhetorical predicate which may in turn show further embedding. Let us look at a more complex piece of text that exhibits this kind of embedding.

- (23) 1. Yi caijing guanli jianchang de Tian Jiyun zai jintian
 in finance management good-at at today
 chansheng de yi Li Peng wei zongli de xinde yijie zhengfu
 establish with as premier new term government
 zhong jixu danren fuzongli.
 within continue to be vice-premier
 "Tian Jiyun, a specialist in financial management, will continue in his present position as vice-premier in the new government appointed today, headed by Premier Li Peng"
2. Tong ta yiqi churen de lingwai liangming fuzongli shi jingji
 with him together appoint other two vice-premier be economy
 guanlijia Yao Yilin he qian waijiao buzhang Wu Xueqian.
 administrator and former foreign minister
 "Together with him the other two newly-appointed vice-premiers are Yao Yilin, an economic administrator, and Wu Xueqian, the former foreign minister"
3. Tian Jiyun zai yijiubasan-nian liuyue diyici
 in 1983 June for-first-time
 bei-renming wei fuzongli.
 be-appointed as vice-premier
 "Tian Jiyun was first appointed vice-premier in June 1983"
4. Zai na yiqian daduoshu Zhongguoren dui tade mingzi bingbushuxi
 before that most Chinese to his name not-familiar
 "Before that his name was not familiar to the general public"
5. yinwei ta changqi zai xinan de difang zhengfu-li renzhi.
 as he long-time at west-south regional government work
 "as he had long worked in local governments in the south-western region"

6. Churen fuzongli hou,
 appoint-as vice-premier after
 "After (he) was appointed vice-premier"
7. youyu ta huoyue zai Zhongguo jingji tizhi gaigede wutaishang,
 as he active in China economical system reform stage-on
 "as he was most active on the stage of China's economical reform"
8. tade mingzi jiu changchang he yixie zhongyaode jingji
 his name then often with some important economical
 juece he jingji huodong lianxi-zai-yiqi.
 decision and economical activity associate-together
 "his name was frequently associated with important
 economical decisions and activities"

[D20]

The rhetorical organisation of this passage is as follows:



As the diagram shows, the whole piece of discourse is connected together by a top-most Issue predicate which consists of a nucleus realised by an embedded Issue predicate (propositions 1-2) and a background adjunct realised by another embedded Issue predicate (propositions 3-8). Note that the second embedded Issue predicate has two elaboration adjuncts which show further embedding: the first adjunct expands to a Reason predicate (propositions 4-5), and the second adjunct expands to a Circumstance predicate (propositions 6-8), the nucleus of which subsequently expands to a Reason predicate (propositions 7-8). This text thus exhibits three levels of predicate embedding which function to bind the whole discourse together.

The phenomenon of predicate embedding or recursion is crucial for discourse representation and interpretation because rhetorical predicates are not just concerned with relationships between propositions but with relationships between larger parts of texts consisting of many propositions. It is the recursive occurrence of rhetorical predicates that provides the hierarchical organisation of a discourse.

3.3.1.3 Issue predicates vs. non-Issue predicates

In (23) above, the Issue predicate occurs at the top level of the discourse with the nucleus and the adjunct realised by two embedded Issue predicates at the next highest level. The embedded Issue predicate which realises the higher adjunct then has its own adjuncts realised by the Reason and the Circumstance predicates. This example illustrates a possible division of rhetorical predicates into Issue and non-Issue predicates in terms of the relative level of occurrence of rhetorical predicates.

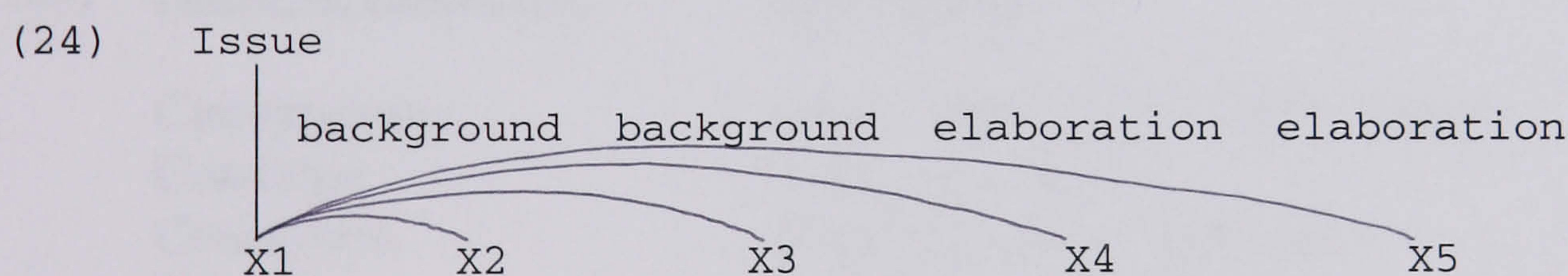
Issue predicates occur at various levels of discourse organisation and are used very commonly in the high-level organisation of discourse. That is to say, at the highest level a discourse usually consists of the nucleus and the adjunct(s) of an Issue predicate, each of which may in its turn be realised by a complex system of lower-level predicates, as shown in (23). Non-Issue predicates, on the other hand, tend to serve as arguments to Issue predicates and usually occur at a lower level of discourse, such as the predicates of Reason and Circumstance in (23), which occur as arguments to the Issue predicate.

It should be pointed out, however, that the level at which a given rhetorical predicate occurs is not an absolute matter. Issue predicates can occur at lower levels as arguments to other Issue predicates or conjoining predicates (e.g. Joint or Contrast). Similarly, lower-level predicates can occur at a relatively higher level in a discourse, especially conjoining predicates. My data indicate however that non-Issue predicates do not occur at the high(est) level in the discourse and non-Issue adjoining predicates do not take Issue predicates as their arguments. A conjoining predicate such as Joint can have two or more arguments realised by Issue predicates, but it does not occur at the highest level of discourse because it cannot serve as a "topic setter", a function unique to Issue predicates.

A unique feature of the Issue predicate that contributes to its occurrence at higher level of discourse and also distinguishes it from other types of rhetorical predicates is the relationship between its arguments. That is, the Issue predicate consists of a nucleus which acts as a "topic setter", presenting a claim or a statement and one or more adjuncts which provide details of information supporting, challenging or elaborating on

the claim contained in the nucleus. For example, in (23) the nucleus presents the main claim that Mr Tian was re-appointed as vice-premier, and the following adjunct provides background information for the claim contained in the nucleus. Depending on its level of occurrence in the discourse organisation, the claim presented in the Issue nucleus can be a global one (for the whole discourse) or a local one (for a segment of discourse). Take (23) again. The claim about Mr Tian's re-appointment in the higher Issue nucleus (proposition 1) is a global one because it has in its scope the whole discourse (propositions 2-8) while the claim about his previous appointment contained in the lower Issue nucleus (proposition 3) is a local one since it only has propositions 4-8 in its scope. Thus, Issue predicates represent the global organisation of the discourse while non-Issue predicates represent local organisation of the discourse.

Another feature that distinguishes Issue from the other predicates is that it can take many same-level adjuncts of different types. In (23) above, the higher Issue predicate has a Background adjunct realised by an embedded Issue predicate. This embedded Issue predicate has two same-level Elaboration adjuncts. The characteristic of the Issue predicate taking many same-level adjuncts of different types is of great importance for discourse representation within this model. It makes possible the representation of the global organisation of a whole discourse. For instance, the highest level of a typical discourse may have the structure in (24):



where X1 is the nucleus that presents a claim for the whole discourse while X2-5 are adjuncts providing elaboration and background information for the claim in the nucleus.

I have identified, in my corpus, the following types of Issue adjuncts: Elaboration, Background, Explanation, Evidence, Comment, and Conclusion.¹⁸ It should be noted that these types of relations tend to be listed as rhetorical predicates in their own right

¹⁸The term *elaboration* is used here as a sort of cover term which includes Grimes' *specification*, *identification*, *attributive*, and *constituency*.

in other rhetorical accounts, e.g. Grimes (1975) and Mann & Thompson (1983). They are, however, subsumed under the Issue predicate in this study. The advantage of this treatment, as mentioned above, is that it makes it possible for the whole discourse to be represented by a top-most Issue predicate with multiple same-level adjuncts of different types (see (24) above). If Elaboration or Evidence were used as independent rhetorical predicates in place of the Issue predicate, such a global representation of a discourse would not be possible.

3.3.1.4 Predicate assignment and cue phrases

As discussed earlier, rhetorical predicates are concerned with relationships between propositions or parts of texts; a given relationship found between propositions could also be found between larger parts of a text. To analyse a text in terms of rhetorical predicates we need to decide on the function of propositions in texts and assign predicates to them. Generally speaking, pragmatics and world knowledge as well as linguistic knowledge are all involved in predicate assignment. Predicate assignment is also facilitated by certain surface linguistic phenomena, such as what may be called cue phrases, e.g. in English *therefore*, *so*, *anyway*, or *because*. In the following I present the most typical Chinese cue words associated with particular rhetorical predicates.

(25) <u>Name of Predicates</u>	<u>Cue phrases</u>
Circumstance	<i>yihou</i> "after", ... <i>de shihou</i> "when"
Condition	<i>ruguo/yaoshi</i> "if"
Concession	<i>jingguan/suiran</i> "although"
Purpose	<i>weile/yibian</i> "in order to"
Reason	<i>yinwei</i> "because", <i>youyu</i> "as", <i>yushi</i> "so"
Opposition	<i>bushi...ershi...</i> "not...but..."
Succession	<i>xian...zhihou...</i> "first...then..."
Joint	<i>erqie/binqie</i> "and", <i>ye</i> "also"
Contrast	<i>danshi</i> "but", <i>er</i> "yet"
Alternation	<i>bushi...jiushi</i> "if not, then", <i>huozhe</i> "or"
Response	(occurring in question-response sequence)
Issue	(not restricted to any particular type of cue words)

These cue phrases are usually concerned with single sentences, though some of them are also concerned with large units of text. The reality is that large units of text can

have very diverse forms, particularly in the case of Issue predicates, and thus are not necessarily restricted to certain cue phrases. On the other hand, although a given type of rhetorical relation is typically associated with certain cue phrases, particularly in the case of non-Issue adjoining predicates, rhetorical relations as a whole are not necessarily signalled by the use of cue words (see Mann & Thompson, 1983). In fact, implicit or unsignalled rhetorical predicates are common in discourse, and this is particularly so in a language like Chinese in which word order and context rather than explicit conjunctions play a vital role in signalling relationships between parts of a discourse.¹⁹ Thus, it is important to point out that predicate assignment for the purposes of text analysis should, first of all, be made on the *functional* basis in terms of the relationship of a particular proposition(s) with the rest of the discourse.

3.3.1.5 Comparison with other lists of rhetorical predicates

As noted before, I take a similar position to Mann & Thompson (1983) who describe their predicates as "members of a small set of general, highly recurrent relational predicates". The set of rhetorical predicates being proposed here is small, but it seems adequate for the structural relations exhibited in the texts used as data for this study, though I do not believe that the list in (7) is necessarily exhaustive. The following table presents a comparison of the rhetorical predicates that I have proposed for this study and the predicates proposed by Grimes (1975) and Mann & Thompson (1983).

¹⁹Since there are no hard and fast rules for predicate assignment (on the part of the reader), the analysis is to some extent subjective, and could have somewhat different results if done by someone else. This could affect the interpretation of discourse structure and consequently the anaphoric patterning in a discourse.

(26) Predicates Proposed by Grimes, Li & Thompson and by This Study²⁰

This Study	Mann & Thompson	Grimes
Alternative	Alternative	Alternative
Contrast	Thesis-Antithesis	(Adversative)
Succession	Sequence	Collection
Joint	(Sequence)	(Collection)
Purpose	Purpose	Purpose
Reason	Reason	Reason
(Reason)	Cause	Result
(Reason)	Motivation	(Reason)
(Reason)	Justification	(Explanation)
Condition	Condition	Condition
Circumstance	Circumstance	Setting
Concession	Concession	(Adversative)
Response	?	Response
Opposition	?	Adversative
?	?	Equivalent
?	?	Replacement
Issue:		
Elaboration	Elaboration	Attributive
(Elaboration)	?	Analogy
(Elaboration)	?	Manner
(Elaboration)	?	Specification
(Elaboration)	?	Constituency
(Elaboration)	?	Representative
Evidence	Evidence	Evidence
Explanation	Explanation	Explanation
Background	Background	(Setting)
Comment	?	?
Conclusion	?	Inference

The table shows that the rhetorical predicates proposed by the three studies are small in number, none exceeding 20. It also shows that in most cases the three studies use identical or similar terms for a given rhetorical relation. However, there are also obvious differences in both the labels and numbers of the predicates proposed in the three studies. These differences, as I discussed in sections 3.2.1 and 3.2.3, may be explained by reasons of classification, the type and amount of data used, or personal preferences. I have adopted a more general classification whereas Grimes has adopted a more refined classification. For example, my use of the predicate Reason includes Reason, Result and

²⁰In the following table, the predicates given in the same line are similar but not necessarily identical in their value even if they bear the same labels. "?" indicates the non-existence of a similar predicate in a given list which however exists in the other list(s). "()" indicates a possible reapplication of a predicate in a given list for the purpose of comparison.

Explanation in Grimes and Reason, Cause, Motivation and Justification in Mann & Thompson.

There is a crucial difference, however, between this study and the other two. That is, I have subsumed under Issue the relations of Elaboration, Evidence, Explanation, Background, Comment and Conclusion, whereas in the other two models corresponding relations are expressed as predicates in their own right. As discussed earlier, the motivation for this classification is that it facilitates the representation of the global organisation of a discourse because the Issue predicate typically occurs at the high level of discourse and can take many same-level adjuncts of different types. It is thus the most important organising unit within the model. This unique characteristic of the Issue predicate motivates as well as justifies its inclusion in the list.

Apart from this important difference, my analysis differs significantly from those of Grimes and Mann & Thompson in that propositions or arguments of rhetorical predicates will be assigned different statuses at different points of discourse development in accordance with their levels of influence on the production and interpretation of the following discourse. The motivation for this is related to the following questions. That is, how are discourse propositions processed in the situation of communication? Are they just put there to fit in certain relationships with one another? Or is it a static or dynamic process? These questions are seldom addressed in accounts based on rhetorical predicates, and it is to these questions we now turn.

3.3.2 Focusing in the rhetorical predicate analysis

The rhetorical predicates presented and characterised in the preceding section (3.3.1) provide a means of identifying and describing the various relationships between the propositions that define coherent discourse. However, due to their static nature, rhetorical predicates on their own play a rather limited role in the production and interpretation of discourse propositions (and discourse anaphora). The reason is that discourse propositions which contain anaphora are produced and interpreted in the context of other discourse units and the reader must be able at any point in a discourse to recognise the currently relevant discourse context for any given proposition. Thus our

rhetorical predicate analysis should be able to provide not only a structural representation of a discourse but also a mechanism to model its active development. This is where the notion of FOCUSING comes into play.²¹

3.3.2.1 The concept of focusing

Focusing is defined in this study as a speaker's focus of attention on the discourse utterances and the discourse entities contained therein. Focusing is a prevalent phenomenon in all types of naturally occurring discourse. Everyone, consciously or unconsciously, focuses on various concepts or objects throughout the process of verbal communication. The use of focusing serves to facilitate processing on the part of participants in communication. When interpreting utterances or propositions, knowledge that the discourse is about a particular topic eliminates certain possible interpretations from consideration. Grosz (1977) observes, in discussing the role of focusing in the interpretation of definite referring expressions, that although a word may have several possible meanings, its use in an appropriate context will usually invoke just the relevant meaning. Focusing also facilitates the interpretation of anaphoric, in particular, pronominal references (Sidner 1979, Reichman 1981). When the coherence or connectivity provided by focusing is missing from discourse, the hearer or reader may experience difficulty in determining what a pronominal or zero anaphor refers to. Focusing not only facilitates the interpretation of anaphoric references, but also influences how a topic is introduced and later referred to. For example, if a discourse is focused on "the car" which is the topic and the specification of the agent is not important or relevant, one would say "the car was sold" rather than "someone sold the car". Continuing discussion of the same topic may just require a pronominal or zero anaphoric reference, whereas changing what is focused may trigger the use of a nominal anaphor in order to mark the change and highlight new information about a previously mentioned topic. The use of focusing is what makes a sequence of utterances or propositions a whole. The fact that a sequence of utterances or propositions is about something makes that sequence connected, coherent, and in some sense, a unit. In order to obtain an appropriate interpretation of discourses, therefore, some account of the use

²¹The term *focusing* is used as computational tool in the interpretation of discourse by several researchers in AI, e.g. Grosz 1977, Reichman 1981. It was not previously used in RP work.

of focusing must be given.

A major aspect of discourse processing on the part of interactants in communication is identification of those discourse units that are currently relevant for the interpretation and production of the succeeding discourse. Such identification of the current relevant discourse units plays a significant role in the choice of anaphora. As demonstrated in a number of studies (Grosz 1977, Reichman 1981, among others), only elements in the currently relevant discourse units may be referenced via pronouns.

In her study of task-oriented dialogues, Grosz (1977) defined the notion of global focus that describes the effect of a speaker's centre of attention throughout a set of discourse utterances on following utterances (see the section on Grosz in the preceding chapter). She analysed the dialogues in terms of a partition of the utterances into related, but distinct, discourse units that contain items in focus. She used a mechanism called FOCUS SPACE to represent these units. As discussed earlier, a focus space can have different states at different points of the development of discourse. A space can be "open", "closed" or "stacked". Grosz showed that after the focus stack is "popped", items in the resumed focus space could be directly pronominalised without explicit reintroduction.

Reichman (1981) studied naturally occurring conversations in English and put forward the notion of CONTEXT SPACE which contains utterances constituting a single conversational move to represent the state of discourse. At any point of discourse, there are at least two context spaces that are relevant to the discourse: the active one, which is currently being developed, and the controlling one, which is the one in direct relation to which an active space is being developed. Reichman's states of context space, in a sense, are comparable to Grosz's states of focus space and thus could be considered as global focus. Reichman, however, also used an analysis of focus for items within a context space: an item can be in high, medium and low focus (see the section of Reichman in the previous chapter).²² Using the focus rules of context spaces, Reichman

²²As noted in the preceding chapter there are problems with Reichman's focus level assignment rules. I did not find the assignment of different focus levels to individuals within a discourse unit necessary in my study. It should be noted however that my use of "topic" for an NP, in some respects, is comparable to Reichman's high focus level for an NP. I shall return to this in the next chapter.

showed that only items in high focus in the active and controlling context spaces may be pronominalised.

These studies not only showed the importance of identifying the current relevant context in discourse processing, but they also provided the mechanisms to represent such relevant context. These studies therefore are primary influence on the development in this section.

3.3.2.2 The influential states of propositions

In this study, the notion of focusing is used to specify the status of a proposition in relation to the production and interpretation of subsequent propositions in the discourse. It reflects the differing and changing relationships between the propositions at the different points of the discourse. It influences what gets talked about and how participants are referenced.

As noted above, subsequent propositions are produced and interpreted in terms of the preceding propositions, however not all preceding propositions exert the same level of influence on the following propositions; in other words, they vary in their degree of influence on the following discourse. It is thus crucial to delineate different levels of influence/prominence of preceding propositions on succeeding ones.

The influential status of a proposition is generally contingent upon its role in the discourse. For example, a proposition's influential status distinguishes the foreground versus background roles that it may play in the discourse. Only propositions in a foreground role have a direct bearing on the way that succeeding discourse propositions are interpreted/generated.

Mirroring the different roles that a proposition may play, three levels of prominence that a proposition may assume at a given point in the development of a discourse have been distinguished, these are ACTIVE, CONTROLLING and CLOSED.

These terms are taken from Reichman (1981:87), who used them to describe the

status of context spaces. As noted in the preceding chapter, in Reichman's framework, a context space refers to a level of discourse structure in which utterances fulfilling a single communicative goal are said to lie in a single discourse unit (Reichman, 1981:15). Thus, "active" is used to refer to the state of a context space in which the utterances being stated are placed, "controlling" is used to refer to the state of a context space in direct relation to which an active context space is being developed, while "closed" is used to refer to the state of a context space, discussion of which is believed to be completed. I give an early example from Reichman to illustrate context spaces and their different statuses at different points of development of discourse.

- (27) G: 1. It's just a pure electrostatic field, which, between two
 2. points, and the proton accelerates through the
 3. electrostatic potential.
 J: 4. Okay.
 G: 5. Same physical law as if you drop a ball. It accelerates
 6. through a gravitational potential.
 J: 7. Okay.
 G: 8. And the only important point here is that the potential
 9. is maintained with this Crock-Ford Walton unit.

Lines 1 - 4: Context Space C1 - the Initiating Context Space

Lines 5 - 7: Context Space C2 - the Analogous Context Space

Lines 8 - 9: Context Space C1 - the Resumption

The Initiating Context Space is active when it is being developed, and acquires a controlling status when the Analogous Context Space (C2) takes over the active status from it. Upon resumption of context space 1 on lines 8-9, the Initiating Space resumes its active status and the intervening Analogous Context Space is closed off.

Although these terms are used with essentially their original meaning in this study, there are differences in their scope. That is, in my framework I will use these terms to refer to the status of a proposition as an argument of a rhetorical predicate; whereas in Reichman's scheme they are used to refer to a whole context space (as shown in the above example), which is roughly equivalent to a rhetorical predicate. To illustrate let us consider a previous passage repeated in (28):

- (28) 1. Zai xiang shengchande shengdu kaifa de tongshi, Xu Fumin
 at towards production depth explore same-time

 you tong tade nongyoumen yiqi zai jingying shang
 also with his peasant-friend together in management

 daxian-shenshou.
 show-big-skills

"While exploring the depth of production Xu Fumin, together with his peasant friends, has displayed his skill in management to the full in multiple"

2. Tongguo yu gong shang lianhe jingying,
through fishery industry commerce combined management

ta jin cheng kai shipindian, kai kaoyadian,
he enter city open food-shop open roast-duck-shop

ban qinlei jiagong lengdong chang;
run poultry process frozen factory

"Through combined management of fishery, industry and commerce, he has opened food shops and roast duck restaurants and run a poultry processing and cold storage factory in the city"

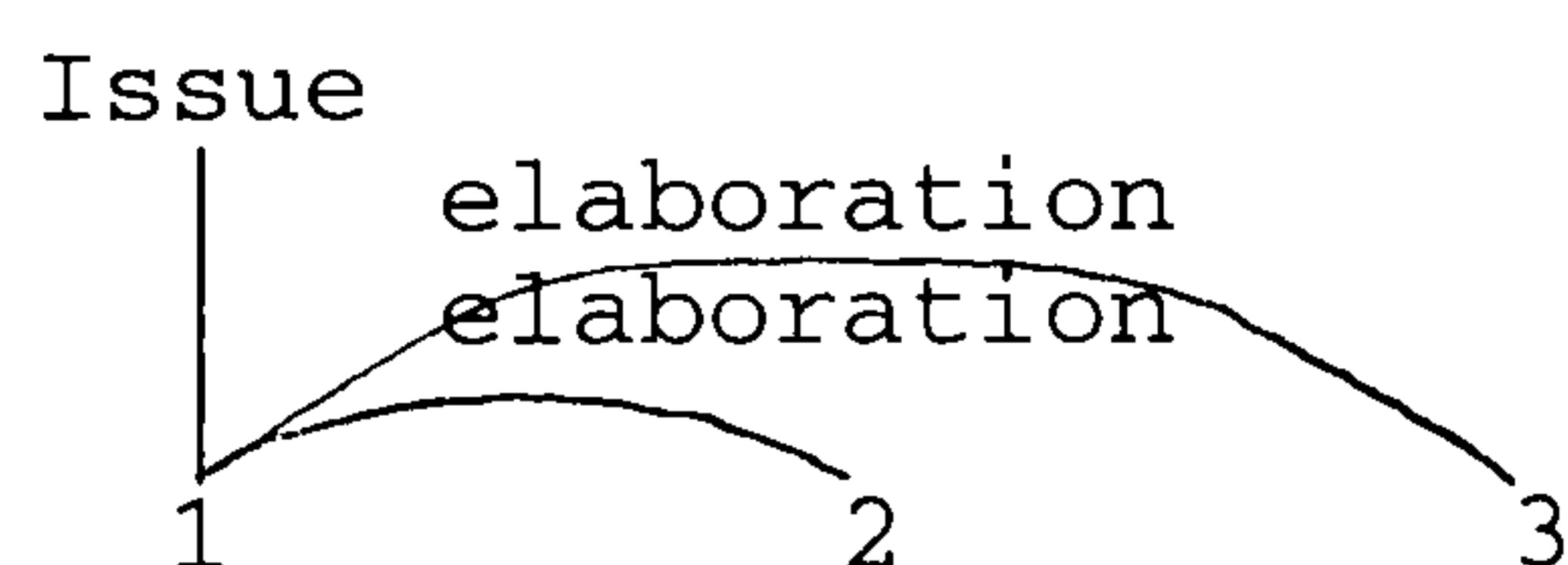
3. Ta liyong benchang di-chu Tai Hu de youyue tiaojian,
he use his farm situate Taihu Lake fine condition

xiyin waidi zijin jianzao lüyou sheshi.
attract other-region fund set up tourism facility

"He has made full use of the excellent location of the farm in Taihu Lake area to attract the funds from other regions to establish tourist facilities"

[D34]

In this text, instead of having three self-contained structural units as would be the case with Reichman's analysis, we have an Issue predicate which consists of a nucleus (proposition 1) and two elaboration adjuncts (propositions 2 and 3). Now, in terms of the states of the propositions, we can say that proposition 1, the nucleus argument of the Issue predicate, is active relative to proposition 2, the first adjunct argument of the Issue predicate, and becomes controlling relative to proposition 3, the second adjunct argument of the Issue predicate. This is diagrammed as follows:



These differences in the use of these terms arise from the different frameworks employed. In Reichman's framework, structural relations are represented by context spaces while in this study rhetorical predicates are used to represent the structural relations holding between discourse propositions. Within a context space which normally contains several utterances, no further distinction is made in the structural relations between the utterances (as can be seen from (27) above).²³ In other words, context

²³Such treatment may be sufficient for a language like English where there is only a variation between pronominal and nominal anaphora, but does not seem to be sufficient for a language like Chinese where there is an additional variation between pronominal and zero anaphora. This problem is better solved by the use of rhetorical predicates since a rhetorical predicate is typically formed of two propositions realising the nucleus and adjunct arguments of the predicate.

spaces are the basic units for state assignments. In the present rhetorical approach on the other hand, a rhetorical predicate consists of two parts/arguments: the nucleus and the adjunct, in the case of an adjoining predicate, and of two or more equal-status members in the case of a conjoining predicate. Since the arguments of rhetorical predicates are realised by propositions, the propositions are naturally taken to be the basic units for state assignments in the focused processing of discourse. The advantage of this treatment is that the hierarchical organisation of a discourse can be represented down to the argument level (i.e. propositions) of rhetorical predicates.

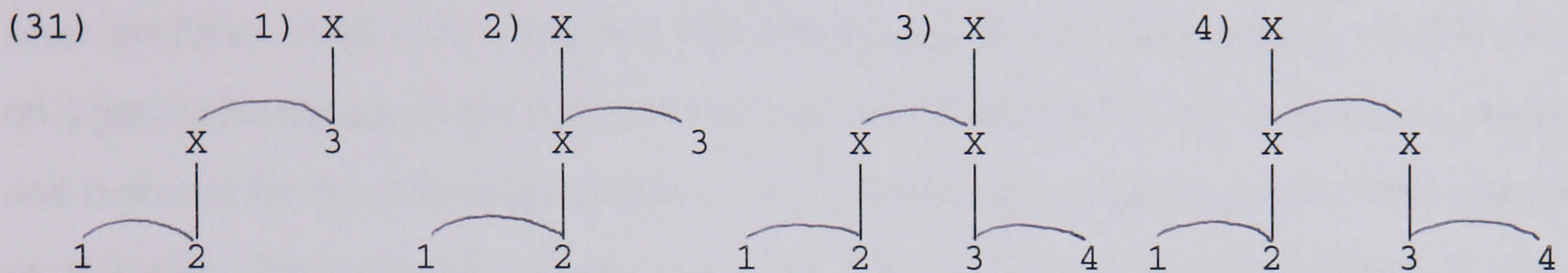
An inherent feature of rhetorical predicates is that their arguments are "typed", so that a particular first argument requires a particular second argument (or range of second arguments, as in the case of the Issue predicate). Take the Response predicate for an example. The first argument that raises the question requires the second argument that provides the answer. Similarly, with the Cause predicate, the first argument, cause, requires the second argument, result/effect. In the case of the Issue predicate, the first argument, assertion, requires the second argument, evidence/elaboration, or a range of second arguments, e.g. evidence followed by elaboration.

What is significant about the typed relationships between the arguments of rhetorical predicates is that it sets up a strong expectation that given a particular first argument a particular second argument will be forthcoming. Such expectations bind the parts of a rhetorical predicate together. Expectations thus created provide a basis for status assignments to the arguments of rhetorical predicates realised by propositions: given a particular first argument, e.g. question, a particular second argument, e.g. answer, is immediately relevant and expectable.

Thus, in this study, a proposition in a rhetorical predicate (either the nucleus or the adjunct argument) is active while the immediately following proposition of the predicate (either the adjunct or the nucleus argument) is being produced. Put it another way, in a sequence of propositions within a rhetorical predicate, the first proposition is active with respect to the immediately following proposition, which is produced and interpreted in terms of the active proposition. I give an example below:

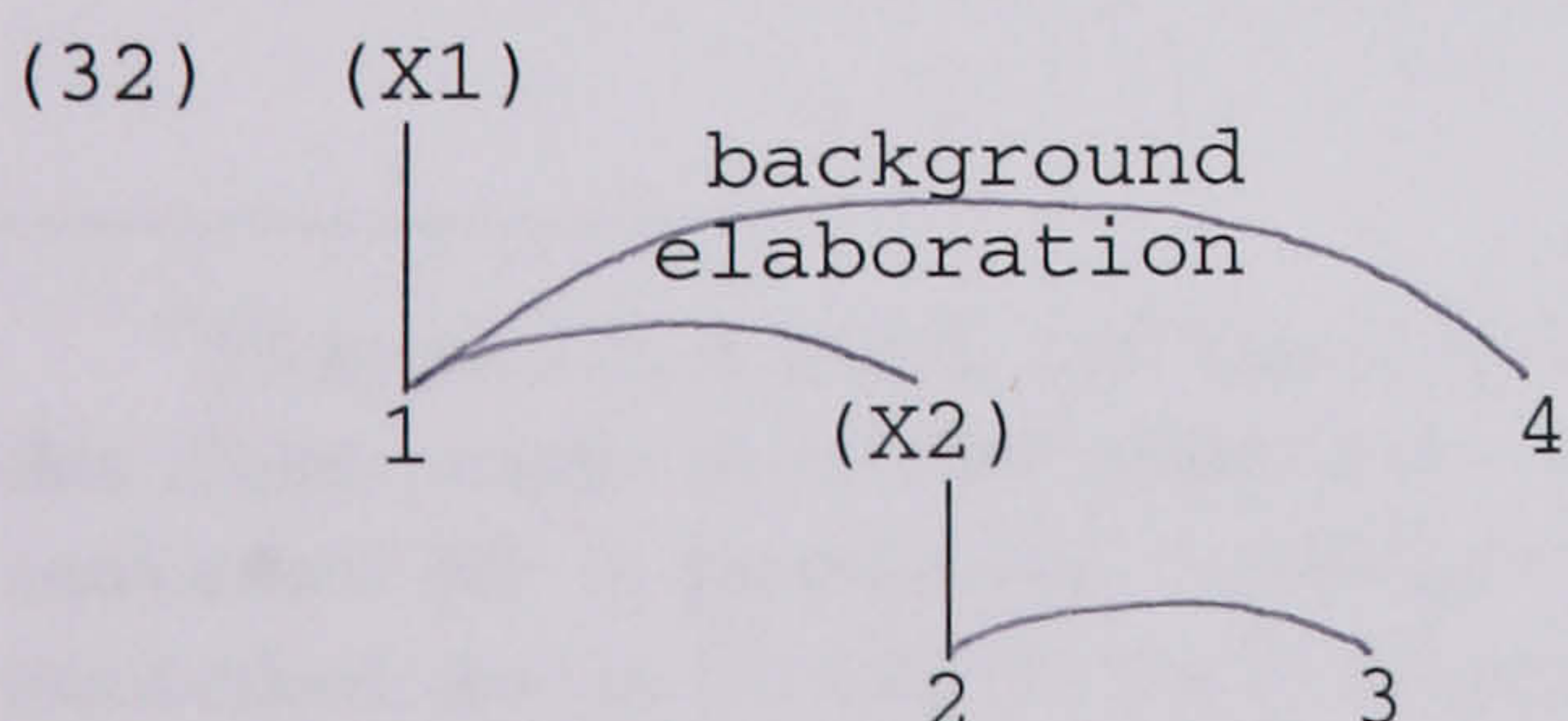
being produced, at which point proposition 1, the higher nucleus, is in a controlling state.

A controlling relation (or pattern) typically involves a rhetorical predicate whose nucleus and/or adjunct are realised by embedded predicates, as illustrated by the diagrams in (31).



In each of the above tree structures proposition 3 is the one controlled by proposition 1; in diagrams 3 and 4 proposition 2 is controlling when proposition 4 is reached.

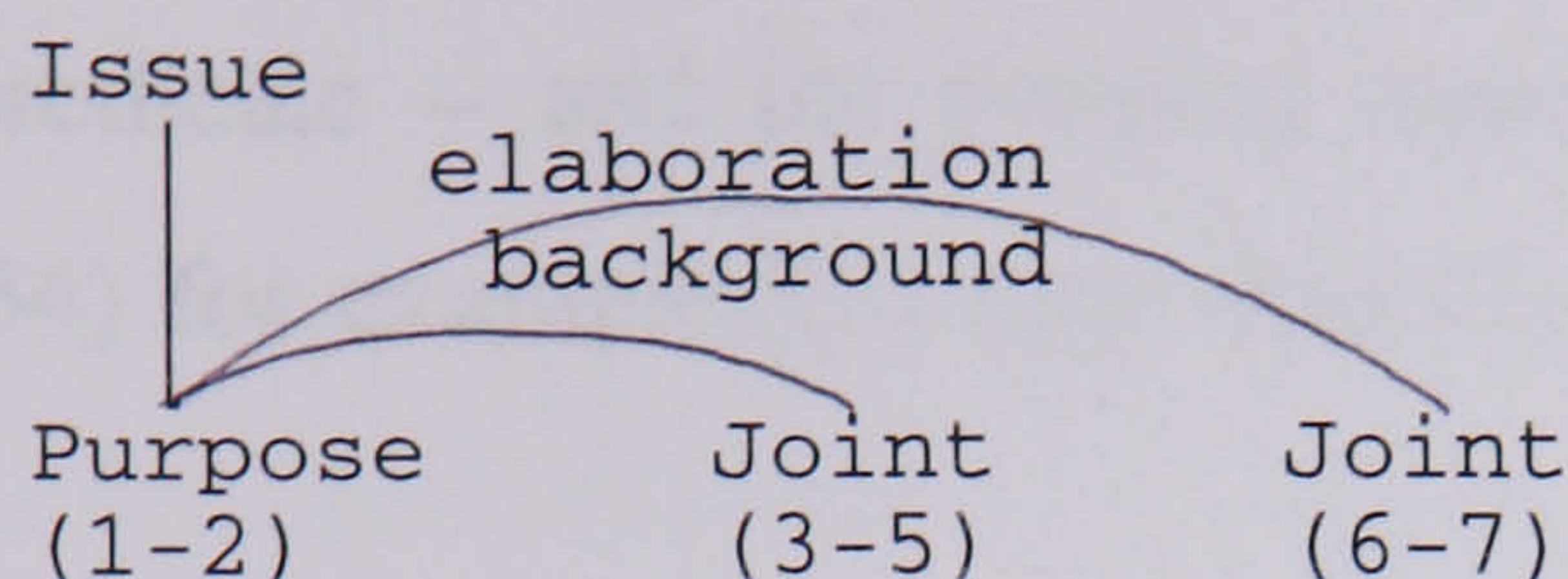
Although a prototypical controlling pattern usually involves three propositions, as in (30) above, it would not be accurate to say that in a sequence of propositions, proposition 1 is active with respect to proposition 2, and becomes controlling with respect to proposition 3, with respect to which proposition 2 is active, because the controlling proposition must have direct control over the controlled proposition in terms of rhetorical structure. That is to say, the two propositions must be structurally closely related, either their immediate predicates or themselves being first and second arguments of a higher rhetorical predicate, as shown by the tree structures in (31) above. In a situation represented by the tree structure in (32), however,



it is incorrect to say that proposition 2 under X2 controls proposition 4 because they are not structurally related: proposition 4 is related not to proposition 2 or proposition 3

7. yige yewan ruqi wanchengle wengao.
 one night as-requested completed proclamation
 "(he) completed it on time"

[D9]



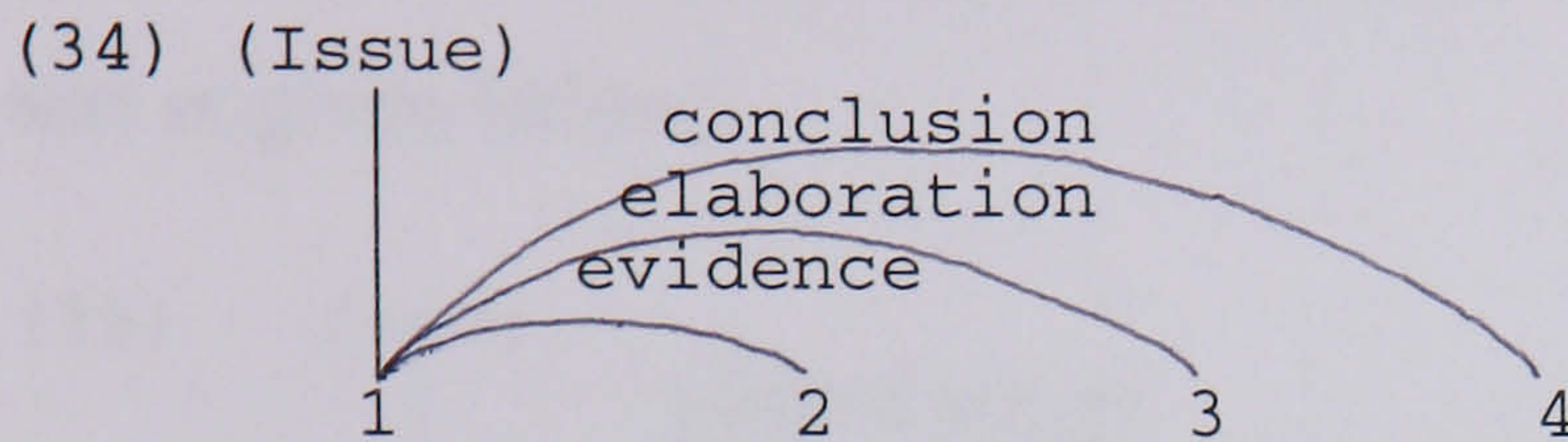
In this text, we have an Issue predicate consisting of a nucleus realised by an embedded Purpose predicate (propositions 1-2) and two adjuncts: a background adjunct realised by a Joint predicate (propositions 3-5) and an elaboration adjunct realised by a Joint predicate (propositions 6-7). The background adjunct acquires a closed status when the elaboration adjunct, which relates directly to the nucleus, skips over it and returns to the nucleus.

Since the closed relation is in fact a consequence of Return Pop, typically associated with Issue predicates, it is necessary to devote some space to a consideration of Return Pop used in this study.

3.3.2.3 The use of Return Pop in this study

The concept of Return Pop is used extensively in work in AI, such as those reviewed in the preceding chapter. My use of the term is similar to Reichman (1981). Reichman identifies several types of Return Pop, e.g. returning to an open context space, or returning to a controlling context space. Returning to an open context space, for example, is like going back in time to the exact discourse situation before the interruption occurred, and therefore all the focus information for reference is still intact when the open context space is resumed. At the point of resumption, all context spaces established in the interim are closed and all of their participants' focus level values are assigned to zero (cf. the section on Reichman in the preceding chapter). While my use of the term is basically similar to Reichman's, e.g. when a pop occurs, the intervening material that is skipped is closed, there are some differences between my use of the term and Reichman's. For example, in this thesis, the returned-to material is not necessarily a whole rhetorical predicate (roughly equivalent to a context space in Reichman's model) which controls the following predicates, rather it is the nucleus of a higher-level predicate (i.e. the Issue predicate) in the form of a proposition or an embedded

predicate. Furthermore, the material containing a return pop and the material that is skipped are usually of equal status -- each being an adjunct to the nucleus of the higher-level predicate -- and the popping material can skip over several equal-status adjuncts. In (34) for example, (3) may skip (2), (4) may skip (3) and (2), returning to (1):



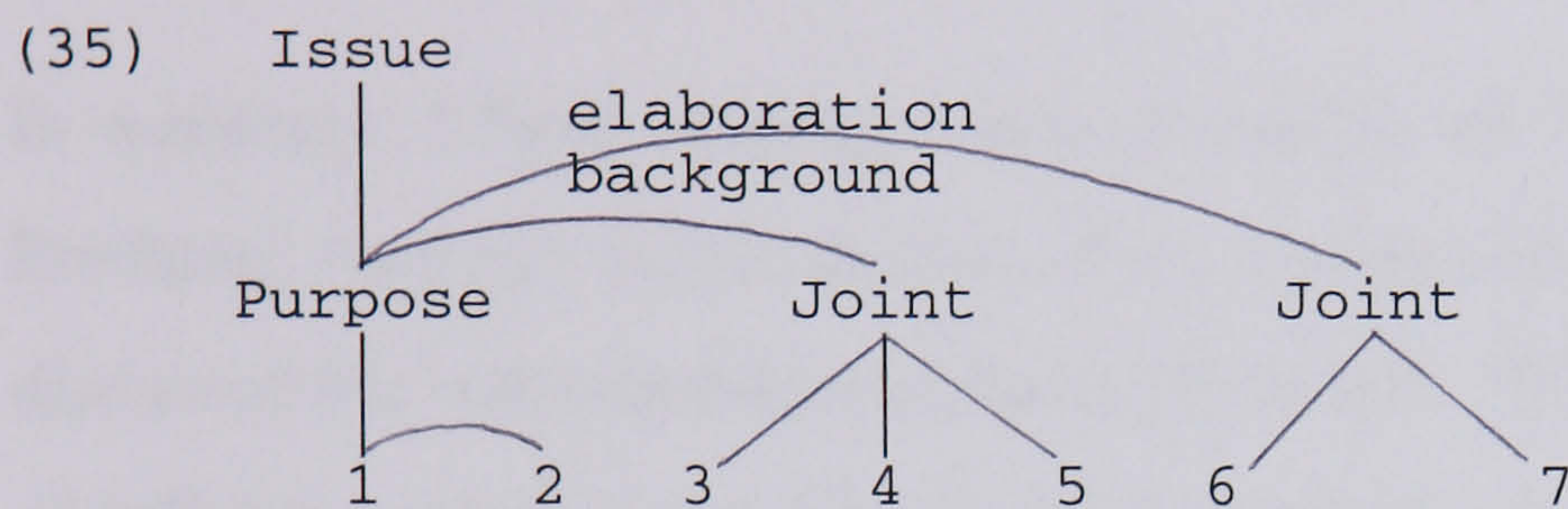
A return pop may be seen as a special case of an active relation. That is, before the return pop takes place, the relevant proposition(s) containing the antecedent is in a controlling state; the action of the return pop in skipping over the intervening material and returning to the currently controlling proposition(s) reactivates it so that it resumes its role as a reference point thus having a direct influence on the succeeding propositions.

The functions of return pop are thus two-fold: it reactivates the returned-to material which thus resumes its influence as a reference point for the generation and interpretation of the subsequent propositions; at the same time it closes off the immediately preceding material which thus loses its role as a reference point for the succeeding propositions, in other words it is placed in the background.

The underlying motivation for return pops is discourse expectations. For example, when a (main) statement/assertion is made in the nucleus of an Issue predicate, there are likely to be strong expectations on the part of the listener/reader that such a statement/assertion is going to be elaborated on. When such an elaboration (possibly taking the form of a sub-statement/assertion) is completed or thought to be completed, the main argument is then expected to be returned to, and this is when a return pop occurs. This indicates that reader expectations of this sort are modelled by the structure of discourse. But while reader expectations are vague and non-precise notions, discourse structure (as represented by rhetorical structures in this study) can be made clear and precise.

3.3.2.4 Changing/Updating of state assignments

Having presented and discussed the different types of status a proposition may have at different points in the discourse, let us now consider how propositions are assigned different statuses at different stages of discourse development. We will look at the text in (33) above and a more detailed diagram exhibiting the rhetorical organisation of the text is given below:



As we said earlier, this text is represented by an Issue predicate consisting of a nucleus (realised by an embedded Purpose predicate) and two adjuncts: the background adjunct (realised by an embedded Joint predicate) and the elaboration adjunct (also realised by an embedded Joint predicate). Initially, proposition 1, the nucleus argument of the embedded Purpose predicate realising the Issue nucleus, is assigned active status when proposition 2, the adjunct argument of the Purpose predicate, is being developed. Proposition 1 is re-assigned controlling status and proposition 2 active status when the Joint predicate (the background adjunct) comes onto the scene. Proposition 3 in this current predicate (Joint) is assigned active state while proposition 4 is being developed, which is assigned active status by the time when proposition 5 is reached. During the development of the Joint predicate (propositions 3-5), the propositions in the Purpose predicate are in a controlling state, in relation to which the propositions in the Joint predicate are produced and interpreted. When the second Joint predicate (the elaboration adjunct) is reached, since this current predicate is not related to the immediately preceding predicate (the background adjunct), but rather to the nucleus of the Issue predicate, it skips over the background adjunct and returns to the nucleus. As the pop occurs, it reactivates the proposition(s) in the nucleus and at the same time closes off the skipped material.

This example shows that propositions are assigned differing states at different points in the discourse: from the most influential (foreground) to the least influential

(background), according to their changing roles in the discourse. Thus, a proposition's status assignment reflects its level of prominence and relevance to current discourse development. It also demonstrates that status assignment to discourse units is a dynamic process: the state assignments to propositions need to be updated in accordance with the different roles that the propositions assume at the different points in the discourse.

3.3.3 Summary

In summary, I have presented and discussed the basic components of the Rhetorical Predicate Analysis in this section (3.3). I proposed the set of rhetorical predicates and discussed the characteristics of these predicates. We have seen that the primary sources of influence come from the rhetorical predicate theory and the focusing theory in AI, and that it is the second source of influence, i.e. the theory of focusing, that makes the present model different from other models using rhetorical predicates, e.g. Grimes (1975), and Mann & Thompson (1983).

As the basic elements of the mechanism for focused processing of discourse propositions, I have suggested the patterns of active, controlling and closed propositions as well as the pattern of return pops. The active and controlling relations or patterns concern the currently relevant propositions and constitute the foreground of discourse development. They thus play an important role in the current discourse development, because as noted earlier, later discourse propositions are produced/interpreted in terms of the active and controlling propositions. By contrast, the closed relation or pattern, which involves an Issue predicate with several adjuncts, represents background information and plays no role in the current discourse development. Thus, as the above analysis indicates, of the different statuses of discourse propositions, the active and controlling relations are the most prominent ones, because it is in direct relation to the propositions in these two statuses that succeeding propositions are produced and interpreted.

These patterns will be used in the following chapters to investigate the distribution of anaphora in the texts in my corpus. As will be shown, these patterns have significant consequences for interpretation of discourse and interpretation of anaphora in discourse.

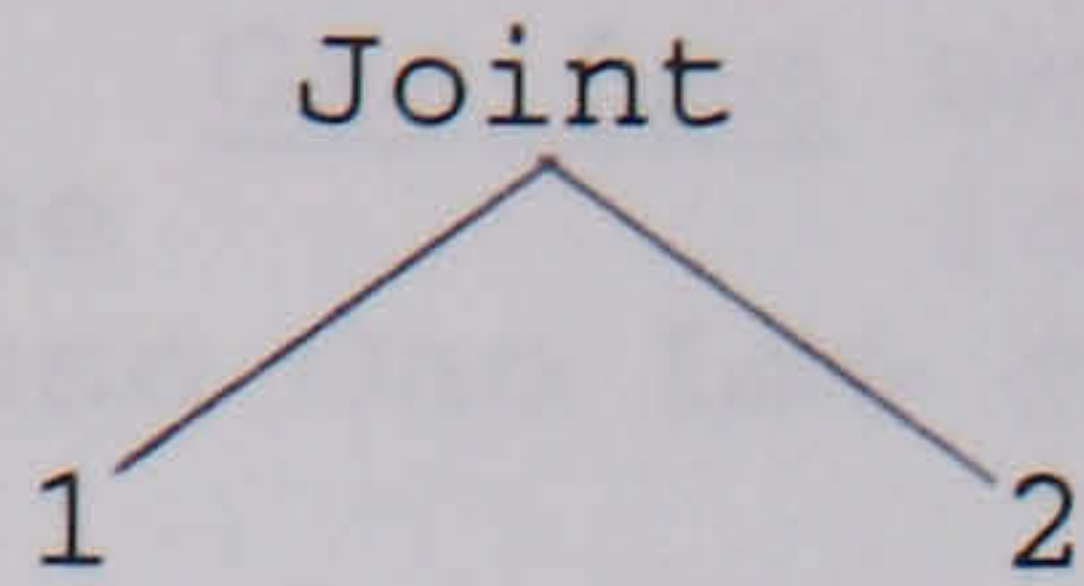
That is, as a preliminary reference rule to make at this stage, zero and pronominal anaphora are restricted to antecedents in the active and controlling propositions while nominal anaphora is necessary for antecedents in the closed propositions.

3.4 Conclusion

In this chapter, I started with a survey of work on the rhetorical predicate theory in both its traditional forms, e.g. Fuller (1959), Beekman & Callow (1974) and Grimes (1975), as well as in its recent modifications, e.g. Mann & Thompson (1983) and McKeown (1985). These studies showed that rhetorical predicates, as a structural device for capturing the relationships between discourse units, provide a useful alternative for the representation of discourse and particularly for the representation of discourse structure. It is for this reason that rhetorical predicates have been chosen as a primary apparatus in the present model.

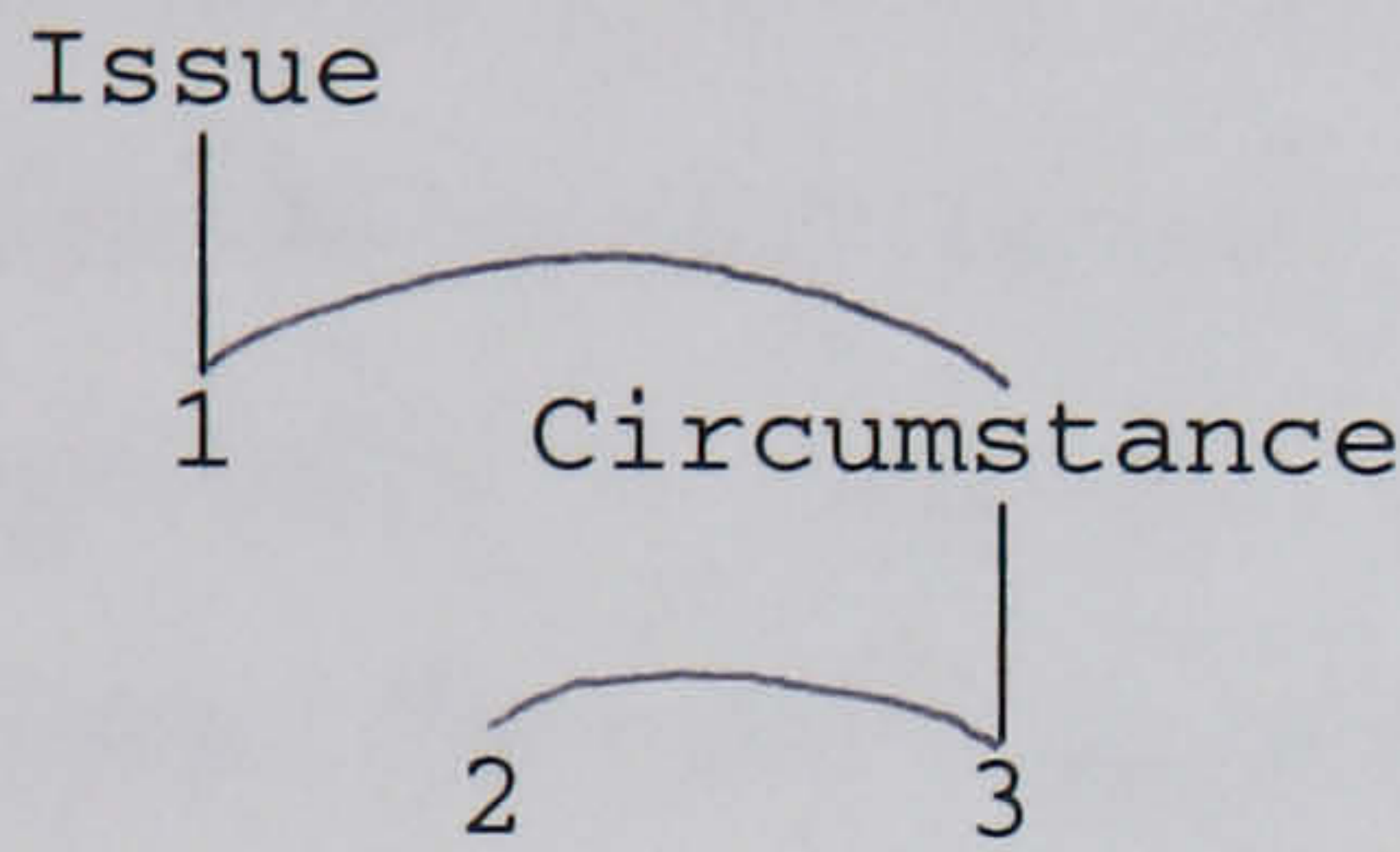
As noted at the beginning of this chapter, however, the system will not be satisfactorily complete without incorporating into it the mechanism of focused processing, because discourse interpretation is a dynamic process. It is thus necessary to use the focusing mechanism, originally suggested in AI, to capture and describe the changing roles of discourse units and their changing levels of influence on the succeeding discourse units. This was exactly what I did in the proposed Rhetorical Predicate Analysis. This analysis has built on the strength of the rhetorical theory and the strength of the focusing theory in AI. With the combined strength of the rhetorical techniques for representing the structural organisation of discourse and the focusing mechanism for processing the changing roles of discourse units and their influence on the succeeding units, the present model, I hope, will provide a better account of the nature and distribution of anaphora in discourse.

A major claim of this study is that anaphora is governed to a great extent by the discourse structure represented by rhetorical predicates. The effect of discourse structure on anaphora is detailed in the succeeding chapters in terms of Active, Controlling, Closed as well as Return Pop patterns.



- (2) 1. Yijiugiqi-nian qiyue, Deng Xiaoping zaici fuchu.
 in 1977 July again come-out
 "In July 1977 Deng Xiaoping came out of obscurity again"
2. Ta yi chulai gongzuo,
 he as-soon-as come-out work
 "As soon as he assumed a responsible position"
3. 0 like biao xian chule zuowei zhanluejiade danlue he zhihui.
 at-once show as strategist courage and wisdom
 "(he) displayed a strategist's courage, resourcefulness
 and wisdom"

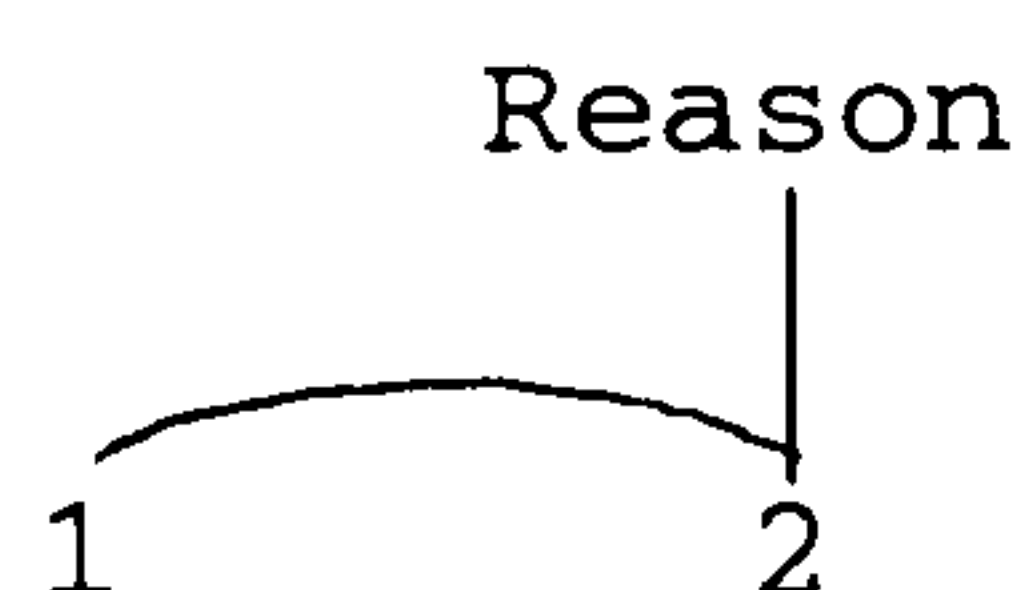
[D15]



In the first passage, proposition 1, the first member of the Joint predicate, is in an active status with respect to proposition 2, the second member of the predicate. The antecedent NP (underlined) occurs in the subject position of proposition 1 and a zero anaphor occurs in the subject position of proposition 2. In the second passage, proposition 1, the nucleus of the Issue predicate, is active while proposition 2, the adjunct of the embedded Circumstance predicate, is being produced; proposition 2 is active while proposition 3, the nucleus of the embedded predicate, is being produced. Proposition 1 introduces the NP *Deng Xiaoping* in subject position, which is mentioned via a pronominal in the subject position of proposition 2. This pronominal then serves as the antecedent for the ZA in the subject position of proposition 3. Notice that the instances of ZA and PA here all have their antecedents mentioned in the active proposition, i.e. the immediately preceding proposition; in other words, it is in direct relation to the active antecedents that they are produced and interpreted.

If we now look at (1) and (2) in terms of the internal structural relations between the propositions of an active pattern, we can identify three structural patterns. The first structural pattern occurs when the adjunct precedes the nucleus, as demonstrated in (2), where the adjunct of the embedded Circumstance predicate (proposition 2) comes before its nucleus (proposition 3). The following is another example of this type, where the adjunct proposition of the Reason predicate containing the antecedent comes before the nucleus proposition containing the anaphor.

- (3) 1. Youyu Gao Lao zai xinlixue shang zaoyi jingshen,
because in psychology attainment excellent
"Because Gao Lao had high attainments in Psychology"
2. ta canjiale "Zhongguo Dabaike Quanshu - Xinlixue" juan de
he join-in China encyclopedias book - psychology volume
bianxie gongzuo.
compilatory work
"he was involved in compiling *The Encyclopedia of China*
-- *Psychology*" [D10]

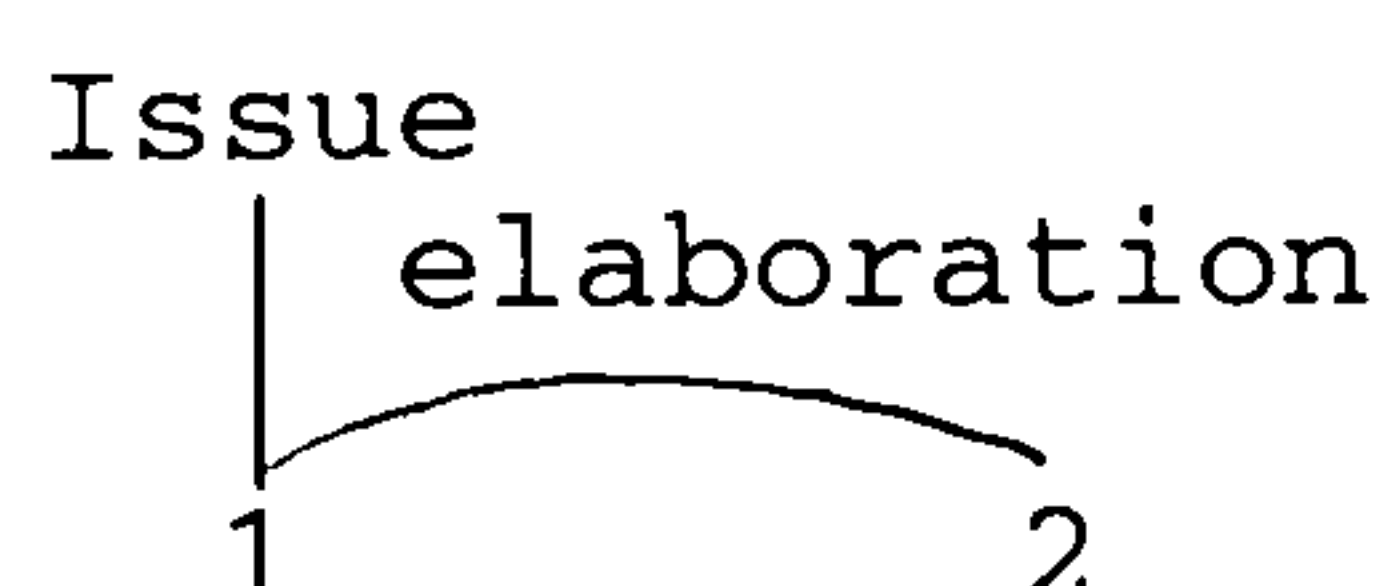


The second structural pattern is where the order of the two parts is reversed and the nucleus precedes the adjunct, as also shown in (2), in which the nucleus of the Issue predicate (proposition 1) precedes its adjunct (propositions 2 and 3). For further illustration consider the following passage.

- (4) 1. Zhou Enlai tongzhi shi yiwei ji you geming danlue
Comrade Zhou Enlai is a both have revolution courage

you you qiushi jingshen de gongchanzhuyizhe.
and have pragmatic spirit Communist
"Comrade Zhou Enlai was a Communist with both revolutionary
courage and a pragmatic attitude"
2. Ta zai meiyi zhongda douzheng zhong shanyu
he in every major struggle skilfully

ba liangzhe jiehe-qilai.
BA both combined
"He was skilful at combining these two in every major
struggle" [D12]



In this passage the nucleus (proposition 1) which contains the antecedent appears before the adjunct (proposition 2) which contains the anaphor.

The third structural pattern involves conjoining predicates, as exemplified in (1) in which propositions 1 and 2 are equal-status members of the Joint predicate. Let us look at a further example of this type.

- (5) 1. Ta xiangxin rende lilian neng zhengfu yiqie.
he believe human strength can conquer everything
"He believed that human strength can conquer everything"
2. Ta renwei rensheng zhi shi yishunjian, yao bushi-shiji
he think life only is very short must waste no time

zai ge-fangmian chongfen shixian zijide jiazhi.
at all respects fully realise self value

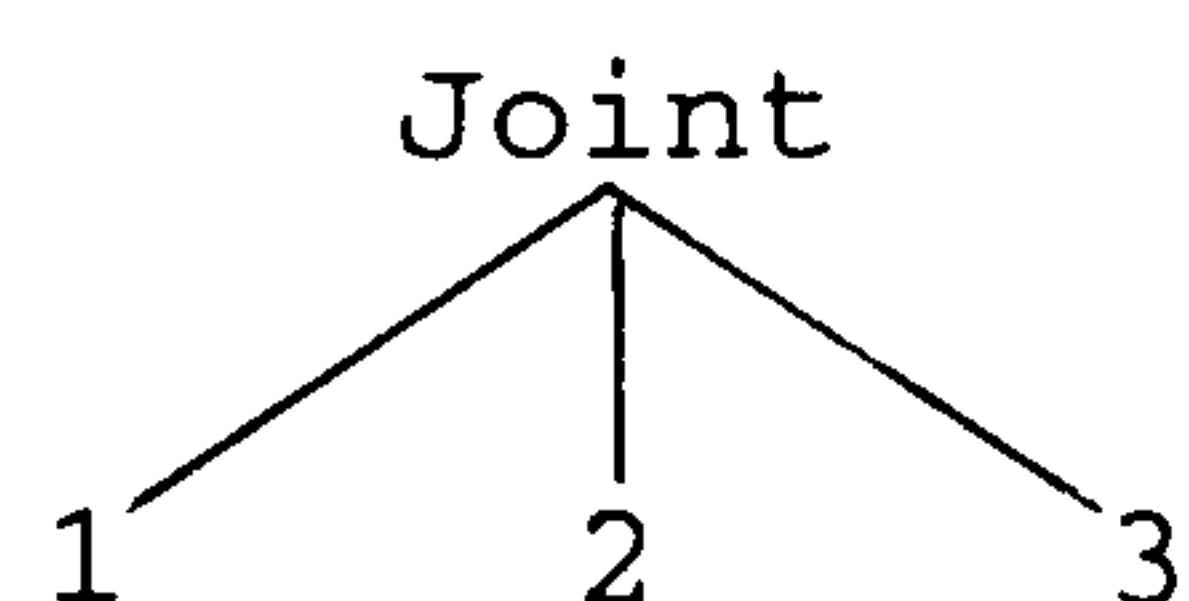
"He thought that life was too short and one should waste no time in proving one's own value in all respects"

3. Ta bu manzu dang qiuxing, da jigushou
he not satisfy being footballer being percussionist

shenme dou yao shiyishi.
everything all want to try

"He was no longer content only to be a footballer or a percussionist and would try anything worthwhile"

[D11]



In this text the propositions are arranged in a coordinate fashion. In terms of anaphora, the pronoun in proposition 1 serves as an antecedent for the pronominal anaphor in proposition 2, which in turn serves as an antecedent for the pronominal anaphor in proposition 3.

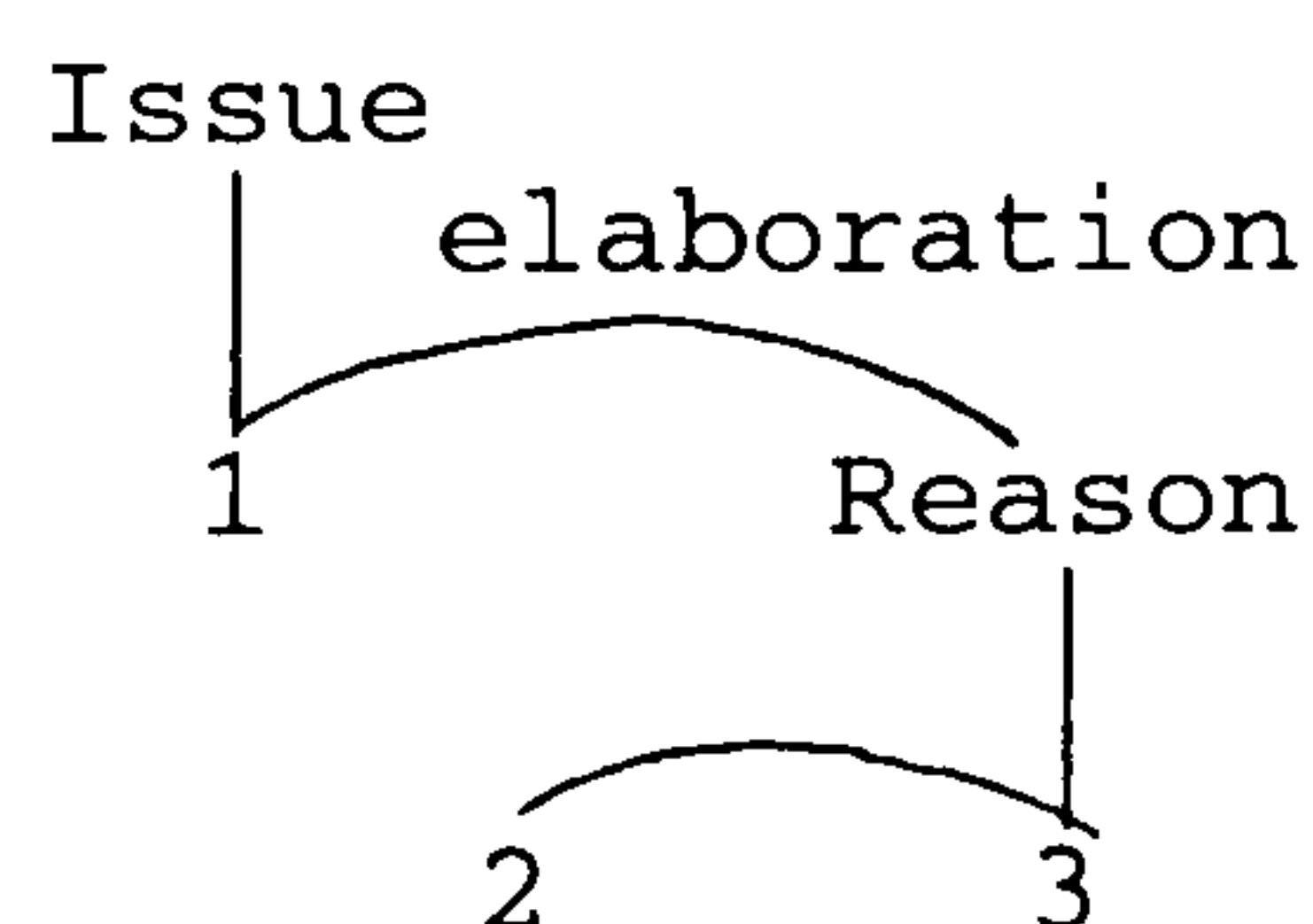
The division of the active patterns into these three structural types has been motivated primarily by the traditional notions of subordination and coordination in sentence grammar. Since an active pattern typically involves two propositions/clauses, which, to a large extent, overlap what are traditionally called subordinate and coordinate sentences, it seems profitable to introduce into the framework a mechanism that captures this structural phenomenon. The adjunct preceding nucleus structure and the nucleus preceding adjunct structure are related to subordinate sentences while the nucleus-nucleus structure is related to coordinate sentences. It is however important to point out that while the notions of subordinate and coordinate sentences mainly deal with inter-clausal relationships, the structural patterns identified in this study deal with inter-sentential relationships as well as inter-clausal relationships. For instance, the nucleus-nucleus pattern in (1) and the adjunct-nucleus pattern in (3) involve two clauses within a sentence; in other words, (1) is a subordinate sentence and (3) a coordinate sentence. The nucleus-adjunct pattern in (2) and (4) and the nucleus-nucleus pattern in (5), on the other hand, involve independent sentences separated by periods. We can thus see that the structural sub-division of the active patterns, while originally motivated by the traditional notions of subordination and coordination in sentence grammar, go beyond the scope of these traditional notions and capture not only the inter-clausal relationships but inter-sentential relationships as well (I will discuss the issue of intra/inter-sentential anaphora in a following section). These three types of active patterns, in conjunction

with various rhetorical predicates realising active patterns, will be used in the discussion of anaphora in the following sections.¹

4.2.2 Coreference patterns between an antecedent and an anaphor

Next, we consider the coreferential possibilities between an antecedent and an anaphor. In terms of syntactic positions, an antecedent and an anaphor may occur in any of the slots in which an NP may occur. That is to say, an antecedent and an anaphor may occur in the subject position, the indirect/direct object position of a clause, or as the object of a preposition.² In addition, they may occur inside a subject/object NP. Examples 1 through 5 above all show a pattern of coreferential subjects. The following example illustrates other types of coreferential possibilities.

- (6) 1. Yijiuyiliu-nian, Li Guangqian³ jing Zhuang Xiquan de
 in 1916 through Zhuang Xiquan's
 tuijian, wei Chen Jiageng pinyong.
 recommendation by engage
 "In 1916, Li Guangqian, recommended by Zhuang Xiquan, was engaged by Chen Jiageng"
2. Chen Jiageng powei xinshang Li Guangqian de
 very appreciate Li Guangqian's
 nengli he caihua,
 ability and talent
 "As Chen Jiageng very much appreciated Li Guangqian's ability and talent"
3. 0 bujiu jiu tisheng ta wei jingli.
 soon then promote him as manager
 "he promoted him manager before long" [D7]



¹The structural patterns are different notions from the rhetorical predicates in that the structural patterns are concerned with the "staging" of the propositions/arguments of rhetorical predicates that realise active patterns. In other words, the structural patterns being discussed here represent "surface structure" while the rhetorical predicates represent "deep structure" (i.e. the underlying relationships between discourse propositions). However these different notions are both necessary for an account of the distribution of anaphora in active patterns.

²Sentence syntax requires that the NP after a preposition must be lexically filled (see Henry (1988) for a possible explanation). While syntax prohibits the occurrence of ZA after a preposition, it leaves open the alternation of PA and NA.

³When we are discussing two NPs in an example, one of them, if necessary, will be both underlined and italicised for easy contrast.

In this example the antecedent NP *Li Guanqian* occurs as subject in proposition 1 and is mentioned via NA inside an object NP in proposition 2. There is another NP, *Chen Jiageng*, which is first mentioned as an object of the preposition *wei* "by" in proposition 1 and mentioned again via NA in the subject position of proposition 2. The two NPs in the subject and object positions of proposition 2 then serve as the antecedents for the zero subject and pronominal object respectively in proposition 3.

Although it may be desirable to maintain a finer-grained system of classification, to achieve the purposes of theoretical generalisation and methodological simplicity, it seems to be possible to reduce these coreference relations simply to subject and object antecedent and anaphor. Thus, a subject antecedent or anaphor may refer to either the subject NP or an NP within a subject. Similarly, an object antecedent or anaphor may refer to an object NP or an NP within an object. According to the generalised coreference relations, an antecedent and its anaphor may be in one of the following patterns:

- (7)
1. subject antecedent - subject anaphor (S-S)
 2. subject antecedent - object anaphor (S-O)
 3. object antecedent - subject anaphor (O-S)
 4. object antecedent - object anaphor (O-O)

These four coreference patterns will be used, together with the three structural patterns, in the investigation of the distribution of anaphors in the active patterns.

Before leaving this section we will briefly consider the order of the antecedent and its anaphor. Within the context of a discourse, normally an individual is first introduced into the discourse as a full NP, then referred to with less explicit forms later in the discourse. For instance, in the examples given in (1) through (6) the anaphors all occurred after their antecedents, in other words they followed a left-right order of antecedent-anaphor. It is, however, not inconceivable that an anaphor may come before its antecedent and thus follow a left-right order of anaphor-antecedent. This is often the case with a subordinate sentence in which the anaphor appears in the preceding adjunct clause, anteceded by an NP in the following main clause. In English, a pronoun can occur before the antecedent in a subordinate sentence, as in *Before he went to America, Zhangsan hardly knew any English*. In Chinese, the occurrence of a pronoun anaphor

in the same position is not allowed (I will discuss this in the section on the syntactic account of anaphora), but the occurrence of an empty pronoun in the subordinate clause is perfectly all right. Consider the Chinese equivalent of the above English sentence:

- (8) 1. 0 qu Meiguo yiqian,
 go America before
 "Before (he) went to American"
2. Zhangsan jihu bu dong Yingyu.
 almost not know English
 "Zhangsan hardly knew any English"

The ZA in the subject position of proposition 1 is coreferential with the NP *Zhangsan* in the subject position of proposition 2. It should be pointed out that although a subject zero anaphor in an adjunct clause can be anteceded by a subject NP in the immediately following main clause, its distribution is extremely restricted. There are only 36 such instances out of a total of 777 instances of anaphors in my corpus. The overwhelming majority of cases follow the left-right order of antecedent-anaphor.

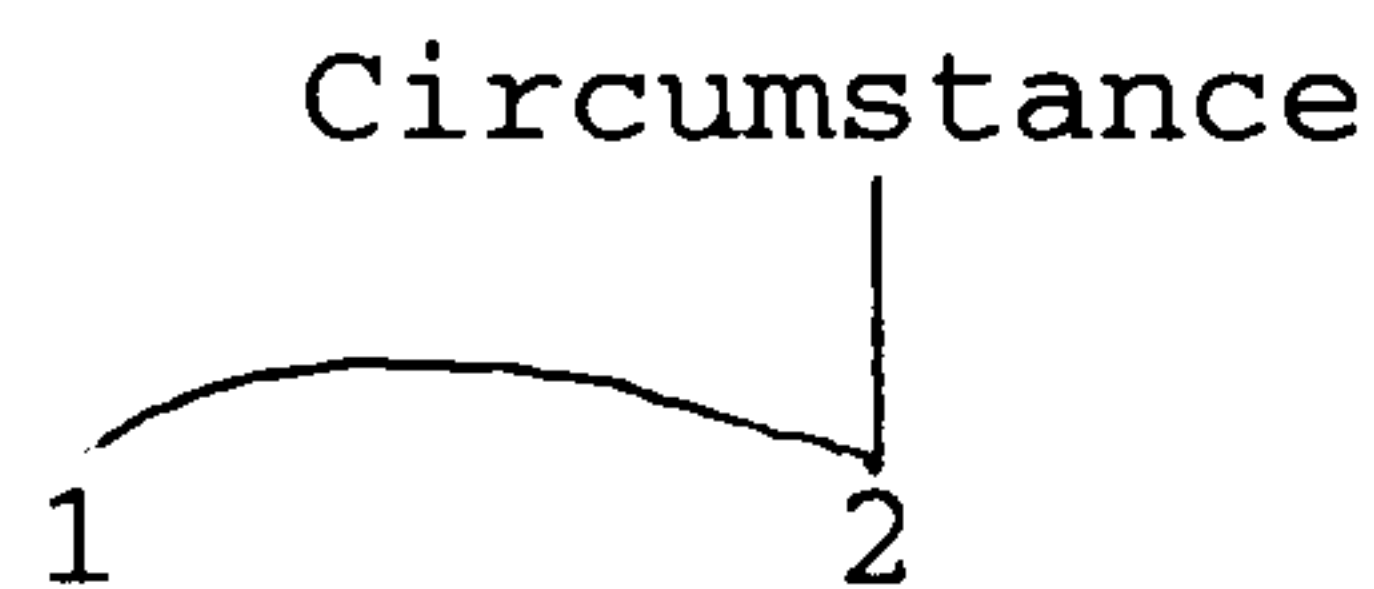
4.2.3 Intra-sentential and inter-sentential anaphora

In section 4.2.1 I have noted that an active pattern can occur within and across a sentence boundary. As an active pattern is realised by a rhetorical predicate with two or more propositions as arguments, whether we are dealing with intra-sentential structure or inter-sentential structure depends on whether the arguments belong to the same sentence or form separate sentences.⁴ Now from the point of view of anaphora, whether we are dealing with intra-sentential anaphora or inter-sentential anaphora depends on whether the antecedent and its anaphora occur in separate clauses within the same sentence or in separate sentences. If the former is the case we have an instance of intra-sentential anaphora (as shown in (9) below); if the latter is the case we then have an instance of inter-sentential anaphora (as shown in (10) below).

⁴What a "sentence" is in Chinese is difficult to define syntactically, and some linguists like Tsao (1979, 1980) argue for a semantic based definition of a sentence in Chinese. It would be desirable, for various reasons, both theoretical and practical, to have a generally accepted definition of a Chinese sentence, but that is not the concern of this study. In this study I take a period as a mark of a sentence boundary as I deal with written texts.

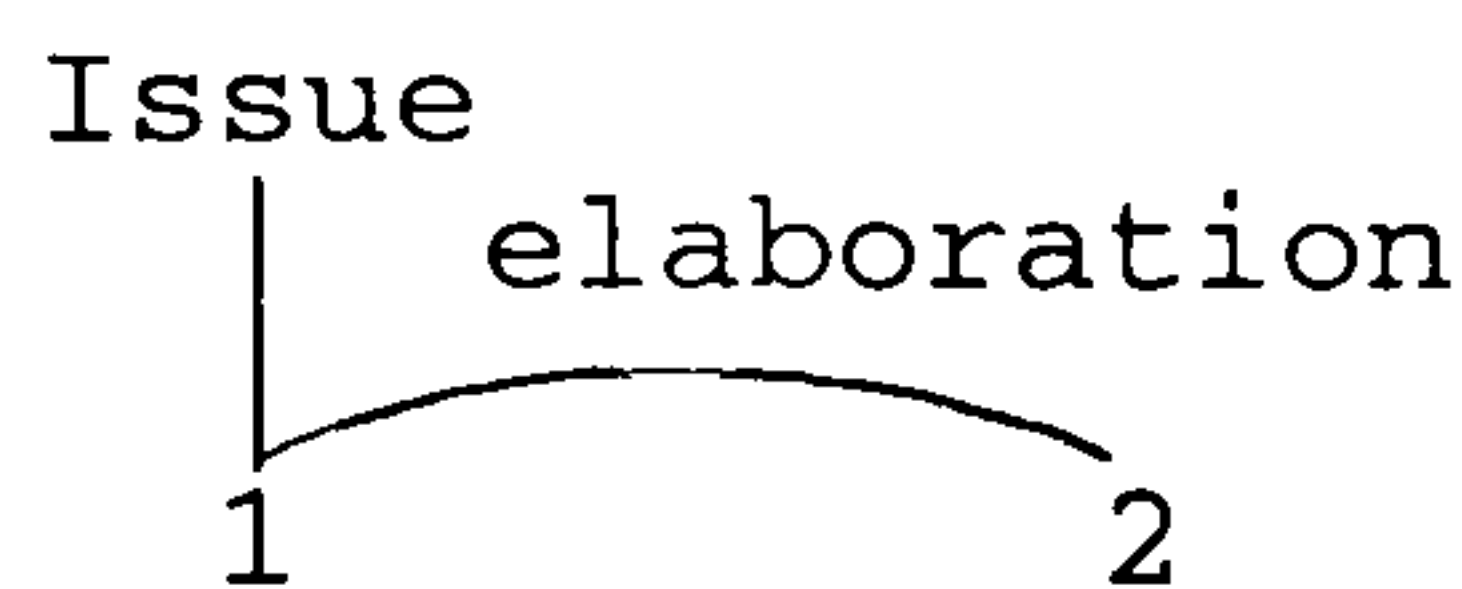
(9) 1. Wu Tianming faxian Huang Jianxin juyou butong-yiband
 find have unusual
 chuangxin yishi hou,
 creative ideas after
 "When Wu Tianming found Huang Jianxin with unusual creative ideas"

3. 0 que rang ta ... duli zhidao Hei-pao Shijian.
 then let him independently direct black-gun incident
 "(he) appointed him to be director for the film *Black Gun Incident*" [D31]



(10) 1. Li Guangqian zui rexinde shi xingban jiaoyu shiye.
 most enthusiastic is develop educational cause
 "Li Guangqian was most enthusiastic in developing education"

2. Xinjiapo de Malaiya Daxue, Nanyang Daxue dou
 Singapore's Malay University Nanyang University both
 dedao tade jukuan juanzhu.
 receive his heavy-fund donation
 "The University of Malay and Nanyang University in Singapore both received substantial donations from him" [D7]



(9) offers an example of a sentence in which the subordinate clause containing the antecedents *Wu Tianming* and *Huang Jianxin* appears before the main clause containing their anaphors. Since the antecedents and their anaphors occur within the same sentence, we are dealing with intra-sentential anaphora. In (10), on the other hand, we have an instance of inter-sentential anaphora since the two mentions of the NP *Li Guangqian* appear in separate sentences, with the antecedent occurring in the subject position of the first sentence and the anaphor occurring as part of the object in the second sentence.

Examples 9 and 10 show that active patterns involve structures within as well as across sentence boundaries and consequently involve intra-sentential as well as inter-sentential anaphora. Since a subset of active patterns is concerned with intra-sentential anaphora (or inter-clausal anaphora within sentences), presumably relevant syntactic factors will play a role in constraining the occurrence of anaphora here. It is for this reason that relevant syntactic factors on the use of anaphora in active patterns will be considered in the following discussion of the distribution of anaphora in active patterns.

4.3 The distribution and nature of anaphora in the active patterns

4.3.1 The distribution of anaphora in the active patterns

In this section (4.3.1), I am not going to discuss the distribution of anaphora in detail, but will present, in a tabular form, the distribution of anaphors in the texts used as data for this study, followed by a general discussion.

In the preceding section, I have presented a number of features that characterise active patterns. First of all, active patterns are concerned with the currently relevant discourse context: it is in direct relation to the active proposition containing the antecedent that the following proposition(s) containing the anaphor is produced and interpreted. Secondly, active patterns exhibit different internal structures as a result of the staging of the propositions involved. That is, the constituent propositions in active patterns may follow an order of adjunct-nucleus, nucleus-adjunct or nucleus-nucleus. Thirdly, active patterns cut across intra-sentential and inter-sentential structures and therefore the antecedent and its anaphor may occur in the same sentence or in different sentences. And finally, the antecedent and the anaphor may occur in a pattern of maintained reference, i.e. subject-subject and object-object, or in a pattern of switched reference, i.e. subject-object and object-subject. In the following I present the results of data analysis showing the distribution of anaphors in the active patterns in terms of the structural patterns, the coreferential patterns and in intra-sentential structure vs inter-sentential structure, to see if these factors have any effect on the distribution of anaphors. I will not here make detailed discussion of the distributional findings; I will instead attempt to make some preliminary observations about how these environments influence the distribution of anaphors and how anaphors behave in these environments as a whole. A detailed discussion of the distribution of anaphors and the conditions on the use of anaphors will come in the subsequent sections.

Table 1 below presents the distribution of anaphors in the three structural patterns.⁵

⁵The three tables in (11), (12) and (13) will be merged into one table, when we discuss the conditions on the use of anaphora in the active patterns in Section 4.3.3, so that we can have in one place the information about the distribution of anaphora in the three environments: structural patterns, coreferential patterns and intra/inter sentences.

(11) Table 1: Distribution of Anaphora in Three Structural Patterns

Type	Adjunct-nucleus		Nucleus-adjunct		Nucleus-nucleus		Total
ZA	95	20%	15	3%	365	77%	475
	65.5%		7%		88.5%		61%
PA	43	16.5%	171	66%	46	17.5%	260
	29.5%		78%		11%		34%
NA	7	16.5%	33	78.5%	2	5%	42
	5%		15%		0.5%		5%
Total	145	19%	219	28%	413	53%	777

If we look at the structure-type we find that 65.5% (95/145) of the adjunct-nucleus pattern take the form of ZA, 29.5% (43/145) of PA and only 5% (7/145) of NA. Of the nucleus-adjunct pattern, 7% (15/219) show ZA, 78% (171/219) show PA and 15% (33/219) show NA. Finally, of the nucleus-nucleus pattern 88.5% (365/413) show ZA, 11% (46/413) show PA and only 0.5% (2/413) show NA. These figures suggest that the adjunct-nucleus pattern and especially the nucleus-nucleus pattern tend to be associated with ZA, and the nucleus-adjunct pattern tends to be associated with PA while all of these show very few instances of NA.

In terms of anaphor-type, we see that 20% (95/475) of ZA occur in the adjunct-nucleus pattern, 3% (15/475) in the nucleus-adjunct pattern and 77% (365/475) in the nucleus-nucleus pattern.⁶ The percentage of PA occurrences in these patterns is 16.5/66/17.5% respectively (43/171/46 out of 260). The occurrence of NA in the three patterns is only marginal, with 16.5% (7/42) in the adjunct-nucleus pattern, 78.5% (33/42) in the nucleus-adjunct pattern and 5% (2/42) in the nucleus-nucleus pattern. These figures indicate that ZA tends to be associated with the nucleus-nucleus pattern and to a lesser degree with the adjunct-nucleus pattern, while PA tends to be associated with the nucleus-adjunct pattern. This seems to point to a more or less complementary

⁶In the table, ZA shows more occurrences in the nucleus-nucleus pattern than in the adjunct-nucleus pattern. This is because a nucleus-nucleus pattern is realised by a conjoining predicate consisting of two or more propositions and thus tends to show more occurrences of ZA, whereas an adjunct-nucleus pattern is realised by a non-*Issue* adjoining predicate consisting of only two propositions and thus only have one occurrence of ZA.

distribution between ZA and PA in these structural patterns. The occurrence of NA in these patterns is extremely marginal. The figures suggest that the structural patterns have consequences for the use of anaphora.

Let us now consider the distribution of anaphors from a different perspective, that of coreference patterns between the antecedent and the anaphor, presented in (12).

(12) Table 2: Distribution of Anaphora in the Coreference Patterns

Type	S-S Pattern	S-O Pattern	O-S Pattern	O-O Pattern	Total
ZA	475 100% 72%	0	0	0	475 61%
PA	179 69% 27%	36 14% 77%	16 6% 50%	29 11% 83%	260 34%
NA	9 21.5% 1%	11 26% 23%	16 38% 50%	6 14.5% 17%	42 5%
Total	663 85%	47 6%	32 5%	35 4%	777

From the table we see that the S-S pattern shows 85% (663/777) of the total anaphors, the S-O pattern 6% (47/777), the O-S pattern 5% (32/777) and the O-O pattern 4% (35/777). These figures suggest that the S-S pattern is the major coreferential pattern whereas the others are relatively marginal ones. Specifically, the S-S pattern is correlated 72% (475/663) of the time with ZA, 27% (179/663) of the time with PA and only 1% (9/663) of the time with NA. The S-O pattern is correlated 77% (36/47) of the time with PA and 23% (11/47) of the time with NA while ZA exhibits no occurrence here at all. The O-S pattern is correlated with PA and NA by even proportions (16 vs. 16), with no occurrence of ZA. Finally, the O-O pattern, like the previous two patterns, is only correlated with PA and NA, that is, 83% (29/35) of the time with PA and 17% (6/35) of the time with NA. These figures show that the S-S pattern tends to be associated with ZA and to a lesser degree with PA, the other patterns are restricted to PA and NA. If we now look horizontally by anaphor-type, we find that ZA occurs exclusively in the S-S pattern, PA occurs in all the coreferential patterns, but with a majority of 69% (179/260) occurring in the S-S pattern, while NA also occurs in all the

patterns, with more occurrences in the S-O and the O-S patterns (64%).

The above figures indicate that the S-S pattern is the most important coreferential pattern, claiming 85% (663/777) of the total anaphors, and that both ZA (100%) and PA (69%) tend to occur in the S-S pattern, which thus creates an interesting phenomenon to be looked into.

Having looked at the distribution of anaphora in the active patterns in terms of the structural and coreferential patterns, we now move on to consider the distribution of the anaphors in terms of intra-sentential and inter-sentential structures. The following table gives the figures showing the occurrence of the anaphors in these two types of structures.

(13) Table 3: Distribution of Anaphora in terms of Intra v. Inter-sentences

Type	Intra-sentence		Inter-sentence		Total
ZA	392	82.5%	83	17.5%	475
	77%		31%		61%
PA	105	40%	155	60%	260
	20%		59%		34%
NA	15	36%	27	64%	42
	3%		10%		5%
Total	512	66%	265	34%	777

The table tells us that 82.5% (392/475) of ZA occur intra-sententially and 17.5% (83/475) occur inter-sententially. 40% (105/260) of PA occur within sentences and 60% (155/260) occur across sentences. NA exhibits a similar proportion of distribution to that of PA (36% (15/42) vs. 64% (27/42)). These figures suggest that ZA tends to occur intra-sententially whereas PA and PA tend to occur inter-sententially, though any of the anaphor-types can occur in both environments.

Since the active patterns involve intra-sentential as well as inter-sentential anaphora, and since there are more instances of intra-sentential anaphora than instances of inter-

Jiageng occurs in the subject position of the preceding clause whereas *Li Guangqian* only occurs as part of an NP, *Chen Jiageng* is most likely to antecede the empty subject, which leaves the pronoun coindexed with the object NP *Li Guangqian* in the preceding clause. In (15), again our intuition and the linguistic information dictate that the subject *Wang Yansheng* and the pronominal object *ta* must be disjoint in reference because one cannot meet oneself, and the pronominal refers back to the subject NP *Kou Zhenghai* in the preceding clause.

- (16) 1. Dang Yidali nü jizhe wen ta_i ruhe pingjia ziji shi,
 when Italian woman reporter ask him how judge himself
 "When the Italian woman reporter asked him how he
 judged himself"
2. Deng Xiaoping_i shuo
 said
 "Deng Xiaoping said" [D15]
- (17) 1. O_i Fanhui Jianada hou,
 return Canada after
 "After he returned to Canada"
2. Li Xiansheng_i xiexin ganxie Yang daifu.
 Mr Li write thank Dr Yang
 "Mr Li wrote to Doctor Yang to thank her" [D33]

These two sentences offer instances of backward anaphora in which the anaphor is coreferential with the antecedent in the following clause. In (16) the pronominal object in the preceding clause is coindexed with the subject NP in the following clause. In (17) the empty pronoun appears in the subject position of the preceding clause whose antecedent appears in the subject position of the following clause.

The above examples demonstrate the occurrence of intra-sentential anaphora in the discourse context of active patterns. They show that sentence-level syntactic considerations are relevant here. In order to have a clear picture of the syntactic facets of anaphora (as relevant to my data), and to see how syntactic rules control the coreference of anaphora in certain environments, it is both necessary and useful to have an overview of syntactic approaches to anaphora.

Intra-sentential anaphora has been dealt with by several alternative approaches, which include syntactically-oriented or transformational approaches (e.g. Reinhart 1976, 1983,

context as well as other syntactic and semantic information available usually leaves little or no room for ambiguity of coreferential links between two NPs.

Chomsky 1976, 1980, 1981, 1982), discourse-oriented approaches (e.g. Hinds 1973, Firbas 1975, Bolinger 1979), relational-grammar approaches (e.g. Johnson & Postal 1981) and semantic approaches (e.g. Keenan & Faltz 1978, Bach & Partee 1980). Among these approaches, the syntactic, transformational approaches originally formulated by Chomsky are the most influential and most widely assumed ones in the literature on anaphora. In what follows, I first present a brief discussion of the GB theory, then focus on its application to the Chinese data.

4.3.2.1 Transformational approaches to intra-sentential anaphora

The binding theory, as one of the most important constructs in the GB framework outlined in Chomsky (1981) is concerned primarily with the conditions under which NPs are interpreted as coreferential with other NPs in the same sentence. In the binding theory NPs are assumed to fall into one of the three types (i) anaphors, (ii) pronominals, (iii) R-expressions (R for referential). An anaphor is an NP which can have no independent reference, but rather which takes its reference from some other NP in the sentence, its antecedent. In English reflexive and reciprocal pronouns fall into this category. Pronominals comprise NPs that may be either referentially independent or may take their reference from some other NP. R-expressions are NPs that are neither anaphors nor pronominals, but "ordinary" NPs like *John, the man next door*, etc.

The binding theory contains three conditions or principles, one for each of the three categories of NPs noted above.⁸

- (18) a. An anaphor must be bound in its governing category.
 b. A pronominal must be free in its governing category.
 c. An R-expression must be free everywhere.
 (cf. Chomsky 1980, 1981)

Associated with these conditions is a set of terms described in (19):

⁸Corresponding to the overt NPs, each class of NPs also contains non-overt NPs, e.g. NP-trace, small and big PRO, and wh-trace. These non-overt NPs are also supposed to be constrained by the conditions in (18) in their distribution. But I will postpone their discussion until next section when we examine non-overt NPs in Chinese.

- (19) a. X is bound if X is an argument coindexed with a c-commanding argument; if not bound, it is free.
 b. X c-commands Y if the first branching node dominating X dominates Y, and X does not dominate Y, nor Y, X.
 c. An argument is an NP in a position associated with a θ -role (subject, direct object, indirect object. etc.)
 d. The governing category for X is the smallest NP or S containing X and a governor of X. (cf. Radford, 1981:367)

Thus, restated, an anaphor must be bound by a c-commanding NP such that both items occur within the minimal NP or S that contains the governor of the anaphor. A pronominal on the other hand must not be bound by a c-commanding NP that is coindexed with it within its governing category. An R-expression must not be bound by any c-commanding NP anywhere else within the same sentence. For example,

- (20) a. [John_i likes himself_i]
 b. *[John_i likes him_i]
 c. *[He_i likes John_i]

In (20a) the governing category of *himself* is the whole S because this is the minimal NP or S containing the governor of the anaphor, *likes*. As Condition A specifies, the reflexive anaphor must have a c-commanding coindexed antecedent NP within the minimal governing category. Clearly, the NP *John* c-commands the anaphor, since the first branching node above *John*, S, also dominates the anaphor. The sentence is thus well-formed. The governing category of the pronominal *him* in (20b) is the whole S, as established earlier. Condition B stipulates that there must be no c-commanding argument within this S that is coindexed with *him*. Hence, *John* cannot be coindexed with *him*. In (20c), where we have *he* as the subject of the sentence, the pronominal is clearly free in its governing category since there is no NP which c-commands it at all. However, while the pronoun *he* satisfies Condition B, the lexical NP *John* is subject to Binding Condition C. This specifies that an R-expression must not be coindexed with any other NP that c-commands it; but *John* here is c-commanded by and coindexed with *he*. Thus any interpretation on which *he* and *John* is assigned the same referential index is ruled out by Condition C.

If, however, there is no c-command between two NPs, then there is no binding and hence no constraints on coreference. The following data illustrate such cases.

- (21) a. John's_i brother likes him_i
 b. His_i brother likes John_i
 c. That John_i won surprised him_i
 d. That he_i won surprised John_i

In (21a) the governing category for *him* is the whole S, which is the minimal S or NP containing the governor of the pronoun, *likes*. The coreference between *John* and *him* is not blocked because although *John* lies in the governing category of *him*, it does not c-command the pronoun. The antecedent NP *John's* (suppose it is NP1) occurs inside the NP *John's brother* (suppose it is NP2), which is the first branching node above NP1, and quite clearly since the first branching node above NP1 is NP2 and since NP2 does not dominate *him*, *John's* does not c-command *him*, hence the pronoun is free in its governing category and the coreference between *John* and *him* is possible. The same applies to (21b): the sentence is allowed because *John* is not bound by any c-commanding NP within the whole S, and since *his* is not in a c-commanding relationship with *John*, the possible coreference between them is correctly allowed. The sentences in (21a) and (21b) show that if there is no c-command, there is no binding and consequently coreference can go both ways. This is further shown by the sentences in (21c) and (21d), where the antecedent occurs in an embedded S rather than in NP as in (21a) and (21b) above. The NP in the embedded S serving as the subject does not bind the NP in the matrix object position since the former does not c-command the latter and the reverse is also the case since the VP is the maximal projection (i.e. the first branching node), hence coreference can go either way, i.e. both backward and forward pronominalisations are possible. The same applies to sentences with pre-posed sentential PPs in (22), where due to the absence of c-commanding, coreference can go either way.

- (22) a. [Before he_i left], John_i ate the meal.
 b. [Before John_i left], he_i ate the meal.

Our discussion has shown that the binding theory makes correct predictions about possible and impossible coreference links between two NPs in the data presented, and thus it gives us a possible approach to intra-sentential anaphora. In the following section we will see how this approach is applied to the Chinese data.

4.3.2.2 How the GB theory works for Chinese

We will start by looking at the following data in Chinese.

- (23) a. Zhangsan_i xihuan ziji_i/taziji_i⁹
 like himself
 "Zhangsan likes himself"
- b. *Zhangsan_i xihuan ta_i
 likes him
 "Zhangsan likes him"
- c. *Ta_i xihuan Zhangsan_i
 he like
 "He likes Zhangsan"
- (24) a. Zhangsan_i shuo [ta_i qu]
 say he go
 "Zhangsan said he would go"
- b. *Ta_i shuo [Zhangsan_i qu]
 he say go
 "He said Zhangsan would go"
- c. Zhangsan_i shuo [Lisi xihuan ta_i]
 say like
 "Zhangsan said Lisi liked him"
- d. *Ta_i shuo [Lisi xihuan Zhangsan_i]
 he say like
 "He said Lisi liked Zhangsan"
- (25) a. Zhangsan_i xihuan [ta_i de gege]
 like his brother
 "Zhangsan likes his brother"
- b. *Ta_i xihuan [Zhangsan_i de gege]
 he like brother
 "He likes Zhangsan's brother"
- (26) a. [Dui ta_i de gege], Zhangsan_i feichang zunzhong
 to his brother very respect
 "To his brother, Zhangsan is very respectful"
- b. * [Dui Zhangsan_i de gege], ta_i feichang zunzhong
 to brother he very respect
 "To Zhangsan's brother, he is very respectful"

These sentences work exactly like their English counterparts, as predicted by the binding theory. The binding theory thus correctly blocks sentences that violate any of the binding conditions and makes correct predictions about possible and impossible coreference between two NPs in these sentences. The theory, however, runs into trouble with the following sentences.

⁹Chinese has two reflexive forms: the bare reflexive having the invariant form *ziji*, "self" and the compound reflexive having the form of a *pronoun+ziji* sequence, as in *taziji*, "himself/herself", *niziji*, "yourself", etc. They are not my concern in this study.

(29) A pronoun may not cyclic-c-command its antecedent. (p. 395)¹¹

Viewed from the cyclic-c-command, the pronoun *ta* in (27b) does not c-command *Zhangsan*, but the NP *ta de gege* "his brother" dominating the pronoun does. Since *Zhangsan* is cyclic-c-commanded by the pronoun *ta*, the sentence is blocked.

The constraint of cyclic-c-command on non-coreference appears to work as well when the pronoun occurs in a sentential NP or an adverbial clause (or sentential PP), as exemplified below. ((30) and (31) correspond to their English counterparts in (21c), (21d) and (22) respectively.)

- (30) a. [Zhangsan_i zheci huosheng] shi ta_i gandao yiwai
 this-time win make him feel surprised
 "That Zhangsan won surprised him"
- b. * [Ta_i zheci huosheng] shi Zhangsan_i gandao yiwai
 he this-time win make fell surprised
 "That he won surprised Zhangsan"
- (31) a. [Zicong Zhangsan_i qu-le Meiguo], ta_i yizhi hen shangxin
 since go America he always very sad
 "Since Zhangsan went to America, he has been very sad"
- b. * [Zicong ta_i qu-le Meiguo], Zhangsan_i yizhi hen shangxin
 since he go America always very sad
 "Since he went to America, Zhangsan has been very sad"

(30a) and (31a) work exactly like their English counterparts in (21c) and (22b) as predicted by the standard definition of c-command. (30b) and (31b) on the other hand are blocked because the lexical NP is cyclic-c-commanded by the pronoun. That is, although the pronoun *ta* does not c-command *Zhangsan*, the S node that dominates the pronoun, i.e. the bracketed sentential subject in (30b) and the bracketed adverbial clause in (31b), does c-command *Zhangsan* and hence the pronoun cyclic-c-commands

¹¹Huang points out that this is a language specific condition on pronoun anaphora and cannot be generalised into a general condition on all anaphoric relations in Chinese. For instance, both PRO and pro must be allowed to cyclic-c-command their antecedents as shown in the following sentences (Huang's own examples (184) and (185)).

a. [[PRO_i xiyan] hai-le Zhangsan_i
 smoking harmed

"Smoking harmed Zhangsan"

b. [pro_i deng-le sange zhongtou yihou], Zhangsan_i shuizhao-le
 wait three hours after fell-asleep

"After (he) had waited for three hours, Zhangsan fell asleep"

Thus, Huang's proposal is intended as a special requirement solely on the position of lexical pronouns with respect to their antecedents in Chinese.

Zhangsan. As a consequence, these sentences are blocked.¹²

For each group of overt NPs (i.e. anaphors, pronominals and R-expressions in terms of "Binding") there is a corresponding group of non-overt NPs. A non-overt anaphor is the empty element coindexed with an NP, namely, NP-trace. A non-overt pronominal is for instance *pro*, the phonetically unrealised counterpart of pronoun. A non-overt R-expression is the empty element coindexed with a *wh*-element, namely, *wh*-trace or variable. Like overt NPs, empty categories are constrained by the Binding Conditions which determine the domain in which they may or may not be coreferential with another constituent.

It should be noted that the binding theory refers to A-binding only, that is, binding by an element in an A (=argument) -position such as subject or object position. It does not cover A'-binding, that is, the relation between an element and its antecedent in an A' (=non-argument) -position, such as the complementizer position. Thus, although variables must be A-free everywhere, they may nevertheless be A'-bound, i.e. bound by an element in A'-position, as is the case with variables in *wh*-questions in English. Furthermore, a subset of these empty categories is constrained by the Empty Category Principle (ECP), which requires NP-traces and variables to be properly governed. In order to be properly governed, these non-overt NPs must have a local antecedent or appear as the complement of a lexical category such as N, V, or P.

The characterisation of empty categories in Chinese is the subject of some controversy. Although the majority of linguists agree on the existence of the four types of empty categories (i.e. NP-traces, variable, *pro* and *PRO*), they appear to disagree on the nature and distribution of these categories. For example, Huang (1982, 1984, 1987)

¹²The condition on pronominal anaphors in Chinese proposed by Huang that a pronoun may not cyclic-c-command its antecedent successfully blocks the type of data in the (b)-sentences in (27), (30) and (31). However it seems to be somewhat problematic with (31a), where the pronoun occurs as subject in the main clause. As the notion of cyclic-c-command is presently formulated, the subject pronoun in the main clause also cyclic-c-commands its antecedent NP in the adverbial clause since it is dominated by S', a minimal cyclic node that is not immediately dominated by another cyclic node. Since the adverbial/embedded subject and the matrix subject are both dominated by S', I can see no reason why they are treated differently in terms of cyclic-c-command. If this view is correct, then the type of data in (31a) should be blocked by cyclic-c-command. If however there is a stipulation that cyclic-c-command only applies rightwards, this problem will then disappear, but this may well have other consequences.

suggests that all empty objects are variables while empty subjects may be pro or variables. Henry (1988) posits that all null subjects are PRO and all null objects are pro. An alternative proposal is made in Xu (1986), where empty categories in Chinese are claimed to be a wholly different type of category called a "Free Empty Category".

Here I focus on a discussion of "based-generated" empty categories only, namely, those empty categories which are not traces left by movement rules but which are themselves either the sole member of or the head of a chain. For illustrations, consider the following sentences.

- (32) a. e renshi Lisi
 know
 "(any NP) knows Lisi"
- b. Zhangsan renshi e
 know
 "Zhangsan knows (any NP)"
- (33) a. Zhangsan shuo e bu renshi Lisi
 say not know
 "Zhangsan said that (he) does not know Lisi"
- b. Zhangsan shuo Lisi bu renshi e
 say not know
 "Zhangsan said that Lisi does not know (any NP)"

In (32a) the empty category appears in (matrix) subject position and the empty category in (32b) appears in object position. The empty category in (33a) occurs as an embedded subject and in (33b) it occurs as an embedded object. These sentences indicate that in Chinese empty categories occur freely in subject and object positions.

As noted above, within the GB framework, two types of base-generated empty categories are recognised, namely PRO and pro. The former is a pronominal anaphor and must under standard assumptions be ungoverned. It therefore occurs only in positions such as the subject of infinitives. The latter occurs only in subject position in languages with rich subject-verb agreement such as Spanish and Italian, and in object position in languages with rich verb-object agreement such as Pashto. In Chinese, there is no verbal agreement system whatever, so it appears that the empty categories in subject and object positions under standard assumptions cannot be pro. And, since PRO must be ungoverned, it would also appear that we cannot identify the empty categories in these syntactic positions as PRO.

These apparent contradictions have seen several different proposals, among which, as mentioned earlier, are Huang (1982, 1984, 1987), Henry (1988) and Xu (1986), and Battistella (1985) and Yan Huang (1992). Since Huang's work is the most influential of these my discussion will be mainly devoted to the analysis by Huang.

As noted above, Huang (1982, 1984) suggests that the empty subject may be PRO, pro or variable, but that the empty object is invariably a variable.¹³ The empty subject in root sentences is also analyzed as a variable, coindexed like the empty object with an empty operator representing the discourse topic; the embedded subject is analysed as a pro if coindexed with the matrix subject or as a variable if coindexed with an empty discourse topic.

It is assumed in this analysis that the subject of a finite clause is governed by INFL, and the object is governed by V; given the standard assumptions about PRO, neither can be PRO. On the other hand, pro is normally assumed to occur in languages with a rich agreement system and we have noted that Chinese has no agreement whatever. Huang however proposes a modification of the condition under which pro may occur. It is that pro must be identified by its closest nominal element (1982:365). The closest nominal element will be AGR in a pro-drop language like Spanish, but in Chinese will be the subject of the next higher clause. Such a formulation enables Huang to identify the subjects of embedded clauses as pro. We may look at (33a) repeated as (34).

(34) Zhangsan_i shuo e_i bu renshi Lisi
 say not know
 "Zhangsan said that (he) does not know Lisi"

The pro, the empty subject, is identified by or coindexed with the matrix subject, its closest SUBJECT. The empty subject of adverbial clauses also follows under this formulation, as exemplified in (35).

(35) e_i suiran meiyou kong, Zhangsan_i haishi lai-le.
 though no time still come
 "Though (he) had no time, Zhangsan came nevertheless"

In (35) the pro, which is free in its governing category as required by Principle B, is

¹³This position is vigorously challenged by Xu (1986) and Yan Huang (1992). They argued that the empty object can be coindexed with the matrix subject and thus can have a pro reading.

bound by the subject of the matrix clause. The matrix subject is the closest nominal element above the *pro*, though it does not c-command it.¹⁴

However, an embedded subject need not necessarily be bound to a matrix argument; it may take its reference from outside the sentence, thus (34) may be represented as (36), where the embedded subject is interpreted as referring to something outside of its root sentence.

(36) Zhangsan shuo e bu renshi Lisi
 say not know
 "Zhangsan said that (he) does not know Lisi"

What kind of empty category is this? If it is a *pro*, it should be able to refer to a c-commanding NP in the root sentence. The *pro*-drop principle proposed by Huang cannot obviously ensure the co-indexing of the subject in a root sentence, since it will have no suitable element to identify it. The same is true of objects (matrix or embedded) since they of course cannot be coindexed with the closest nominal element, the subject, as this would violate Principle B. Thus, according to Huang, some matrix subjects and all objects cannot be *pro*. If these empty categories cannot be *pro* or *PRO*, they must either be NP-trace or variables. Since NP traces must be bound by an element in an A-position and there is no such element available in Chinese sentences containing base-generated empty categories, it appears that variable is the only choice. And this is precisely the position taken by Huang. He suggests that these empty categories are variables bound to an empty operator representing the discourse topic. Thus, (33b) may be described as (37)

(37) [OP_i [Zhangsan shuo [Lisi bu renshi e_i]]]
 say not know

As Huang argues, if *e* in sentences like (37) is a *pro*, then it is not clear why it cannot be A-bound by the matrix subject. If, on the other hand, *e* is a variable, then this fact readily falls under Principle C. The problem that such a variable would be A'-free

¹⁴According to Huang, *pro*, like a lexical pronoun or *PRO*, does not have to be strictly c-commanded by its antecedent or identifier, though unlike a lexical pronoun, it does search for an identifier. Therefore, he suggests that the identifier of a *pro* need only "weakly c-command" the *pro*, where A "weakly c-commands" B if the node immediately dominating A c-commands B. The notion of "weakly c-command", in a sense, is like the notion of "cyclic-c-command" in that while a pronoun must not cyclic-c-command its antecedent, an empty pronoun must be allowed to cyclic-c-command its antecedent, in other words, its antecedent weakly c-commands it from the opposite direction.

in violation of the general LF principle of variable binding is solved by the establishment of a phonetically null operator that A'-binds the variable.

However, the empty object in sentences like (38), (39) and (40) can take its reference from the matrix subject or object, which is apparently against Huang's variable proposal.

(38) Zhangsan_i yi zoujin fangjian, Lisi jiu renchu-le e_i
 once enter room then recognise
 "As soon as Zhangsan entered the room, Lisi recognised him"

(39) Youyu Lisi_i xue de bu hao, laoshi changchang piping e_i.
 because learn not good teacher often criticise
 "As Lisi didn't learn it well his teacher often criticised him"

(40) Wo yi kan-le Zhangsan_i jiu renchu-le e_i
 I as-soon-as see then recognise
 "As soon as I saw Zhangsan I recognised him"

In these sentences the empty objects are all free in their governing category, which is the S. In (38) and (39) the empty objects are coreferential with their c-commanding matrix subjects and in (40) the empty object is coreferential with the matrix object.¹⁵ Here the empty objects behave, not like a variable co-indexing with an empty discourse topic, but like a pro co-indexing with a c-commanding antecedent in the sentence. Examples like these have prompted Henry (1988) to propose pro-like status for empty objects in Chinese. On balance, though, it seems reasonable to say that empty objects, like empty subjects, can be pro as well as variable in Chinese.

Let us now go back to the sentences in (14-17) presented at the beginning of this section (4.3.2) to see how they may be accounted for syntactically by the binding theory discussed above. These examples are repeated as (41) through (44).

(41) 1. Chen Jiageng_i powei xinshang Li Guangqian_j de nengli he caihua
 very appreciate Li Guangqian's ability and talent
 "As Chen Jiageng very much appreciated Li Guangqian's
 ability and talent"

2. 0_i bujiu jiu tisheng ta_j wei jingli.
 soon then promote him as manager
 "(he) promoted him manager before long" [D7]

According to Principle B of the binding theory, the empty subject and the pronominal object cannot be coindexed with each other because being a pronominal, each of these

¹⁵This example is taken from Henry (1988) who used it as a piece of evidence for her claim that while an empty object may not be assigned a referential index with the matrix subject in the sentence it may with the matrix object.

The empty subject in the preceding adverbial clause may take its reference from the matrix subject *Li Xiansheng* because being a *pro*, it must be identified by its closest SUBJECT, i.e. the subject of the main clause.

Our discussion has shown that the Binding Theory, with modifications, works well for Chinese and it makes correct predictions about possible and impossible coreference between two NPs in the above sentences.

4.3.2.3 Summary

In this section (4.3.2) I have presented the standard GB theory on anaphora and its application to Chinese. The GB theory is concerned primarily with the conditions on anaphora in a sentence, and it determines when coreference is possible and when it is impossible. It has been shown that the Binding Theory, with modifications, makes correct predictions about possible and impossible patterns of coreference in a sentence in Chinese, and thus it gives us a possible approach to intra-sentential anaphora in Chinese. However, since syntactic rules like the Binding Conditions only determine when coreference is impossible, in all the cases not blocked by these principles coreference is free; in other words the binding principles or conditions do not distinguish between "possible antecedent" and "actual antecedent". It is this task of accounting for the "actual" patterns of coreference between two NPs that has inspired this study in the first place. As far as our purposes in this chapter are concerned, since the active patterns involve intra-sentential anaphora as well as inter-sentential anaphora, we will aim to account for the "actual coreference" between two NPs not only in the sentence but also across the sentence. It must be pointed out, however, that discourse factors must respect syntactic rules (e.g. the Binding Conditions) in certain environments where coreference between two NPs is dictated by syntactic rules. For instance, the condition that a pronominal anaphor may not cyclic-c-command its antecedent in Chinese and the condition that a *pro* is to be identified by its closest SUBJECT, the subject of the matrix sentence, as exemplified in (31b), (35) and (44), may not be overruled by discourse factors. In other words syntactic rules take precedence over discourse factors in these environments.

In the following discussion of anaphora, therefore, syntactic factors will be brought up where they are relevant. I will, in the rest of the chapter, present an account of anaphora in terms of discourse structure and attempt to show that it works not only for inter-sentential anaphora but also for intra-sentential anaphora related to active patterns.

4.3.3 The nature of anaphora in active patterns

It will be recalled that active patterns fall into three structural patterns according to the internal relationships between the propositions concerned. The first structural pattern (adjunct-nucleus) occurs when the adjunct comes before the nucleus, as exemplified in (3). The second structural pattern (nucleus-adjunct) occurs when the nucleus comes before the adjunct, as exemplified in (4). The third structural pattern (nucleus-nucleus) occurs if the constituent propositions have an equal status, as exemplified in (5). Another important parameter that we have discussed above concerns coreferential possibilities between the antecedent and its anaphor in terms of their syntactic positions in a sentence. We have identified four types of coreferential patterns (or chains), i.e. subject antecedent-subject anaphor, subject antecedent-object anaphor, object antecedent-subject anaphor and object antecedent-object anaphor, as exemplified in (6). A third parameter that is relevant to the active patterns is that they occur within sentence boundaries as well as across sentence boundaries. We have seen, in section 4.3.1, that the structural patterns, the coreferential chains and the intra/inter-sentence structures are important variables and have a bearing on the use of anaphora in the active patterns. Before we embark on a discussion of anaphora in the active patterns, it would be helpful to present, in one table, the figures showing the distribution of anaphora in the three environments (which were originally given separately in Tables 1, 2, and 3 in (11-13) above), so that we can have a clear view of the occurrence of anaphora across different environments.¹⁶

¹⁶In the table, under "Structure", A-N refers to the adjunct-nucleus pattern, N-A refers to the nucleus-adjunct pattern and N-N refers to the nucleus-nucleus pattern. Under the conference patterns, e.g. "S-S Pattern", the number before the slash within the parenthesis indicates the instances of intra-sentential anaphora, the number after the slash indicates the instances of inter-sentential anaphora and the number before the parenthesis indicates the combined figure of these two types.

(45) Table 4: Distribution of Anaphora in the Active Patterns in Terms of Structure, Coreference and Intra/inter Sentence

Type	Structure	S-S Pattern	S-O Pattern	O-S Pattern	O-O Pattern	Total
ZA	A-N	95 (95/0) 20%	0	0	0	95 20%
	N-A	15 (13/2) 3%	0	0	0	15 3%
	N-N	365 (284/81) 77%	0	0	0	365 77%
Total		475 100% 72%	0	0	0	475 61%
PA	A-N	21 (17/4) 12%	9 (9/0) 25%	6 (6/0) 37.5%	7 (5/2) 24%	43 17%
	N-A	125 (38/87) 70%	27 (10/17) 75%	10 (3/7) 62.5%	9 (4/5) 31%	171 66%
	N-N	33 (4/29) 18%	0	0	13 (9/4) 45%	46 17%
Total		179 69% 27%	36 14% 77%	16 6% 50%	29 11% 93.5%	260 34%
NA	A-N	0	2 (2/0) 18%	3 (3/0) 19%	2 (2/0) 33.3%	7 16.5%
	N-A	9 (1/8) 100%	9 (0/9) 82%	13 (4/9) 81%	2 (2/0) 33.3%	33 78.5%
	N-N	0	0	0	2 (2/0) 33.3%	2 5%
Total		9 21.5% 1%	11 26% 23%	16 38% 50%	6 14.5% 6.5%	42 5%
Total		663 85%	47 6%	32 4%	35 5%	777

The table shows that 61% (475/777) of the total anaphors are ZAs, 34% (260/777) being PAs and 5% (42/777) being NAs. All the ZAs occur in the S-S chain, of which 20% (95/475) are associated with the adjunct-nucleus pattern, 77% (365/475) with the nucleus-nucleus pattern and only 3% (15/475) with the nucleus-adjunct pattern. The S-S chain in the nucleus-nucleus pattern and, for a lesser degree, in the adjunct-nucleus pattern is the major discourse environment in which ZA is found to occur.

Of the PAs, 69% (179/260) occur in the S-S coreference chain, 12% of which (21/179) are associated with the adjunct-nucleus pattern, 70% (125/179) with the nucleus-adjunct pattern and 18% (33/179) with the nucleus-nucleus pattern. 14%

(36/260) of the PAs occur in the S-O chain, 25% (9/36) of which are associated with the adjunct-nucleus pattern while the rest (27/36) with the nucleus-adjunct pattern. 6% (16/260) of the PAs occur in the O-S chain and of these, 37.5% (6/16) are associated with the adjunct-nucleus pattern while the rest (10/16) with the nucleus-adjunct pattern. 11% (29/260) of the PAs occur in the O-O chain, of which 24% (7/29) are associated with the adjunct-nucleus pattern, 31% (9/29) with the nucleus-adjunct pattern and 45% (13/29) with the nucleus-nucleus pattern. The S-S coreference chain in the nucleus-adjunct pattern is shown to be the major discourse environment for PA which exhibits 48% (125/260) of the total PAs.

Finally the distribution of NA which makes up only 5% (42/777) of the total anaphors. 21.5% (9/42) of the NAs occur in the S-S chain which are all associated with the nucleus-adjunct pattern; 26% (11/42) occur in the S-O chain, of which 18% (2/11) are associated with the adjunct-nucleus pattern, 82% (9/11) with the nucleus-adjunct pattern; 38% (16/42) occur in the O-S chain, of which 19% (3/16) are associated with the adjunct-nucleus pattern and the rest with the nucleus-adjunct pattern (13/16); 14.5% (6/42) occur in the O-O chain, evenly distributed among the three structural patterns. These figures indicate that the nucleus-adjunct pattern with the S-S, S-O and O-S coreference chains is the major environment that gives rise to the use of NA, the figure being 74% (31/42).

Next, in sections 4.3.3.1 through 4.3.3.4, we will discuss these anaphoric distributions under the heading of various coreference chains or patterns in an attempt to explore the conditions on anaphora in the active patterns.

4.3.3.1 The S-S pattern

As noted above, the S-S pattern is one in which both the antecedent and the anaphor are in preverbal/subject position, as illustrated in (46) where the antecedent *Yu Liyun* and its anaphor *ta* are both subjects of their clauses.

- (46) 1. Yu Liyun zai Meiguo jingjijie he zhengtan shang dou you
 in USA business and politics all have
 yidingde yingxiang,
 much influence
 "Yu Liyun has a fairly amount of influence both in business
 and politics in the United States"

2. dan ta ren you yike Zhongguo-xin.
 but she still have a Chinese-heart
 "but she is still very much a Chinese in her heart" [D8]

The following table presents the distribution of anaphora in the S-S pattern in my corpus.¹⁷

(47) Table 5: Distribution of Anaphora in the S-S Coreference Pattern

Type	Adjunct-nucleus	Nucleus-adjunct	Nucleus-nucleus	Total
ZA	95 (95/0) 20% 82%	15 (13/2) 3% 10%	365 (284/81) 77% 92%	475 (392/83) 71.5%
PA	21 (17/4) 12% 18%	125 (38/87) 70% 84%	33 (4/29) 18% 8%	179 (59/120) 27%
NA	0	9 (1/8) 100% 6%	0	9 (1/8) 1.5%
Total	116 (112/4) 18%	149 (52/97) 23%	398 (288/110) 60%	663 (452/211)

The S-S coreference pattern is correlated 71.5% of the time with ZA, 27% of the time with PA and only 1.5% of the time with NA. These figures indicate that this coreference pattern is mainly associated with ZA and, to a lesser degree, with PA. Specifically, 20% (95/475) of the ZAs occur in the adjunct-nucleus pattern, 77% (365/475) occur in the nucleus-nucleus pattern and 3% (15/475) occur in the nucleus-adjunct pattern. Of the PAs 70% (125/179) occur in the nucleus-adjunct pattern, 18% (33/179) occur in the nucleus-nucleus pattern and 12% (21/179) occur in the adjunct-nucleus pattern. NAs (9 instances) are only found in the nucleus-adjunct pattern. These

¹⁷As in the previous table, the number before the slash within the parenthesis indicates the instances of intra-sentential anaphora, the number after the slash indicates the instances of inter-sentential anaphora and the number before the parenthesis indicates the combined figure of these two types. As mentioned in Chapter 3, in Chinese the adjunct or subordinate clause usually occurs before the main clause, and thus fall into the adjunct-nucleus pattern. There are occasions when the adjunct clause occurs after the main clause as well. These sentences tend to be associated with conjunctions such as "because" or "in order that"; they fall here into the nucleus-adjunct pattern. With regard to anaphora, within a sentence the antecedent usually occurs in the preceding adjunct clause and the anaphor occurs in the following main clause since this is the unmarked order of adjunct and main clauses. Anaphora may appear in the subject position of the preceding adjunct in the form of ZA coindexed with the following matrix subject, but this is extremely restricted.

figures suggest that the structural relationships between the propositions containing the antecedent and its anaphor play a significant role in constraining the use of different forms of anaphora.

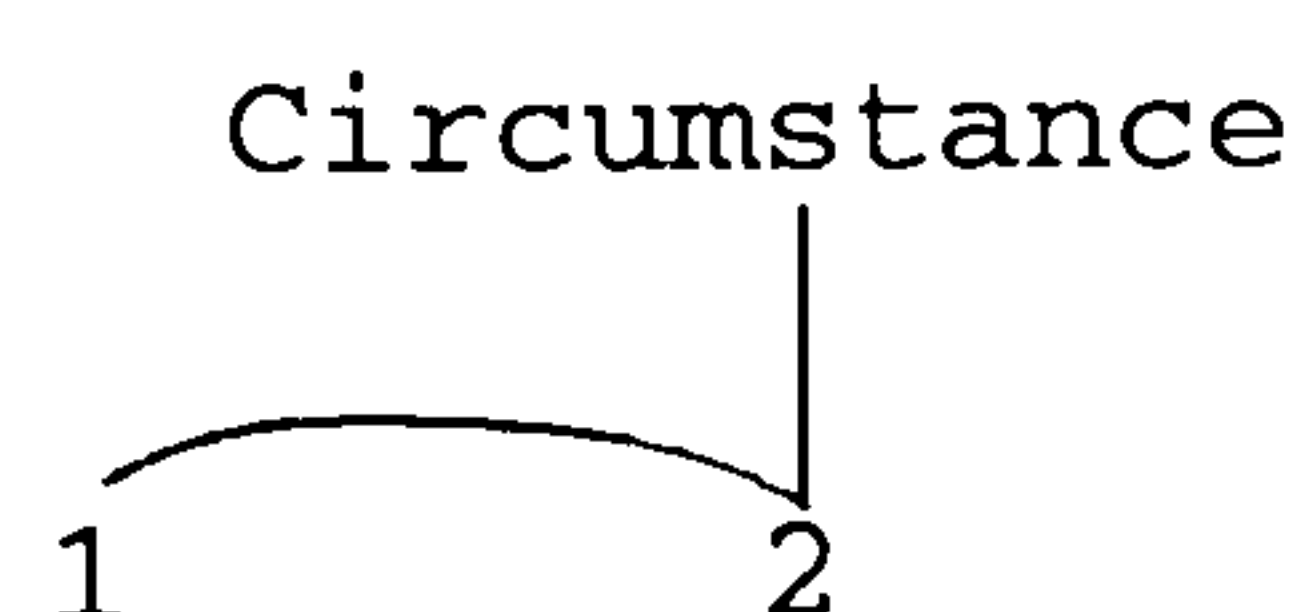
If we look from the perspective of intra/inter-sentence structure, we find that 83% (392/475) of the ZAs occur within sentence boundaries and 17% (83/475) occur across sentence boundaries. PA and NA on the other hand show a picture of the opposite direction. That is, 33% (59/179) of the PAs and 11% (1/9) of the NAs occur sentence-internally while 67% (120/179) of the PAs and 89% (8/9) of the NAs occur sentence-externally. This shows that sentence boundaries also affect the distribution of anaphora in the present context.

Since 85% (663/777) of the total anaphors occur in the S-S pattern, the other patterns (S-O, O-S, O-O) together only making up 15% (114/777), we will devote more space to the discussion of this pattern. In what follows, we attempt to examine the factors that influence the use of different types of anaphora in this pattern. Let us first look at a passage in (48).

- (48) 1. He Long yuanshuai kanguo Xie Jin de chengmingzuo
He Long marshal watch Xie Jin's fame-winning

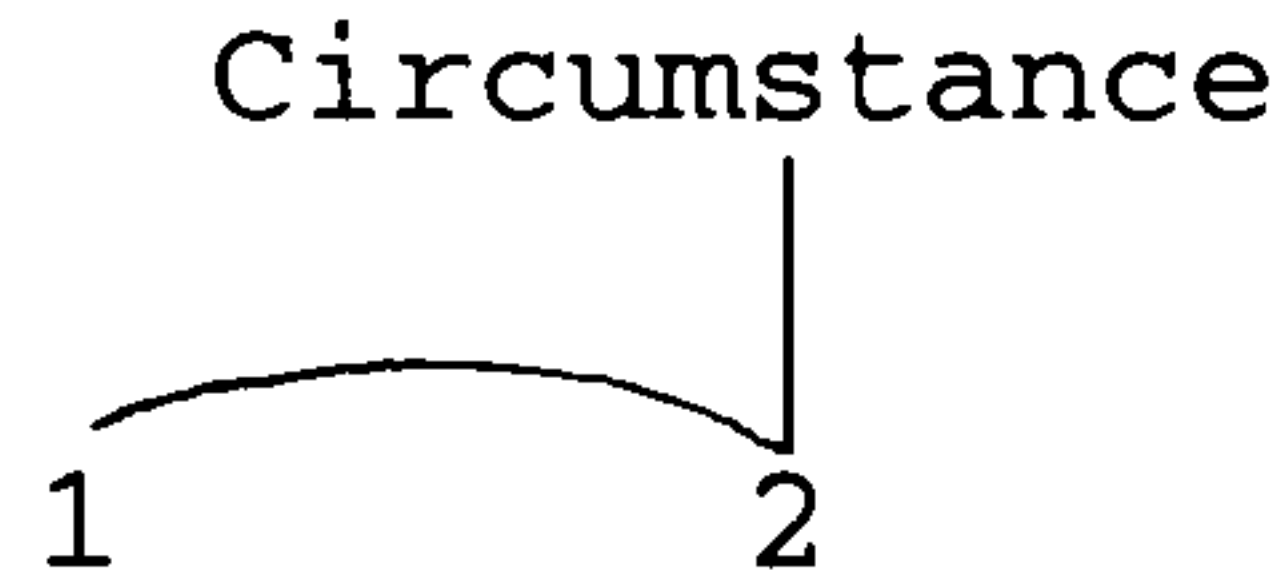
Nülan Wuhao yihou,
woman basketball No.5 after
"After Marshal He Long watched *No.5 Woman Basketball Player*,
a fame-winning film directed by Xie Jin"

2. 0 ceng jianyi ta zai gao yibu zuqiu de yingpian.
once suggest he again produce a football film
"(he) suggested to him that he should also direct a film
about football" [D39]



This passage is realised by the Circumstance predicate, in which the subject anaphor in the nucleus (proposition 2) is coreferential with the subject antecedent in the adjunct (proposition 1) and is realised as ZA. The following passage shows a similar pattern in which the subject anaphor takes the form of ZA in the nucleus of the predicate, coreferential with the subject antecedent in the preceding adjunct.

- (49) 1. Ta/Deng Xiaoping yi chulai gongzuo,
 he as-soon-as come-out work
 "As soon as he/Deng Xiaoping assumed a responsible position"
2. 0 like biao xian chule zuo wei zhan lue ji de dan lue he zhi hui.
 at-once show as strategist courage and wisdom
 "(he) displayed a strategist's courage, resourcefulness
 and wisdom" [D15]

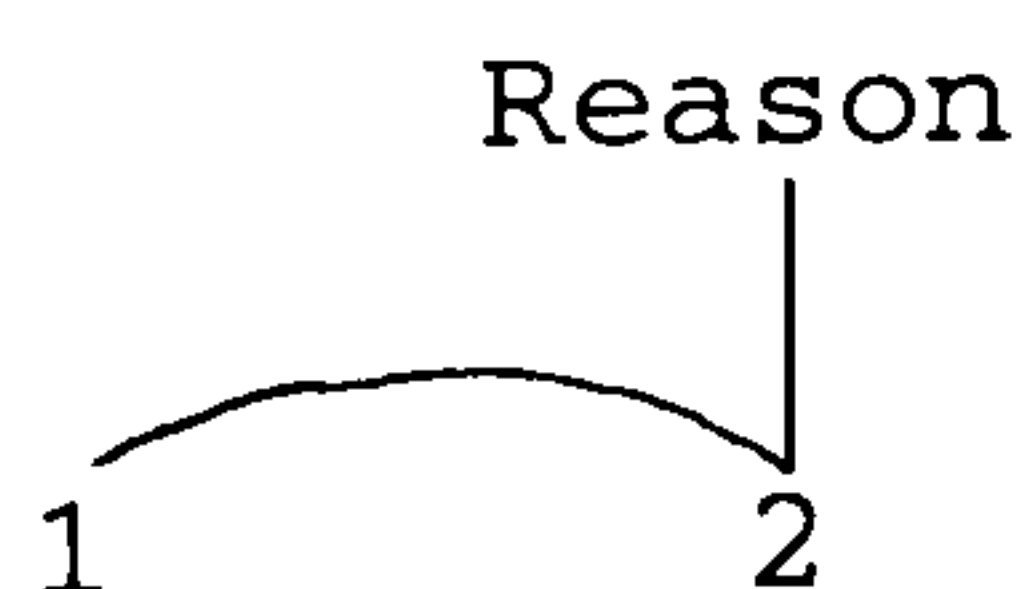


Examples (48) and (49) demonstrate that ZA is used in an active pattern realised by an adjunct-nucleus structure with coreferential subjects. Based on the discussion thus far, it seems possible for us to make a tentative proposal for the use of ZA, which is given in (50).

- (50) In an active pattern associated with an adjoining predicate ZA is used for a subject NP if there is a previous mention of the NP in the subject position of a preceding proposition.

There are 60 instances of ZA that accord with the proposal in (50) in which ZA is used for coreferential subjects in an active pattern realised by an adjoining predicate such as Reason or Circumstance, as shown by (48) and (49). However, although the proposal (50) covers a large proportion of data, it leaves a non-negligible proportion of data unaccounted for. In the corpus there are 21 instances in which PA, as against ZA, was used in the same environment as (48) and (49). This is illustrated in (51), where the subject anaphor in the nucleus takes its reference from the subject antecedent in the preceding adjunct and is encoded in PA.

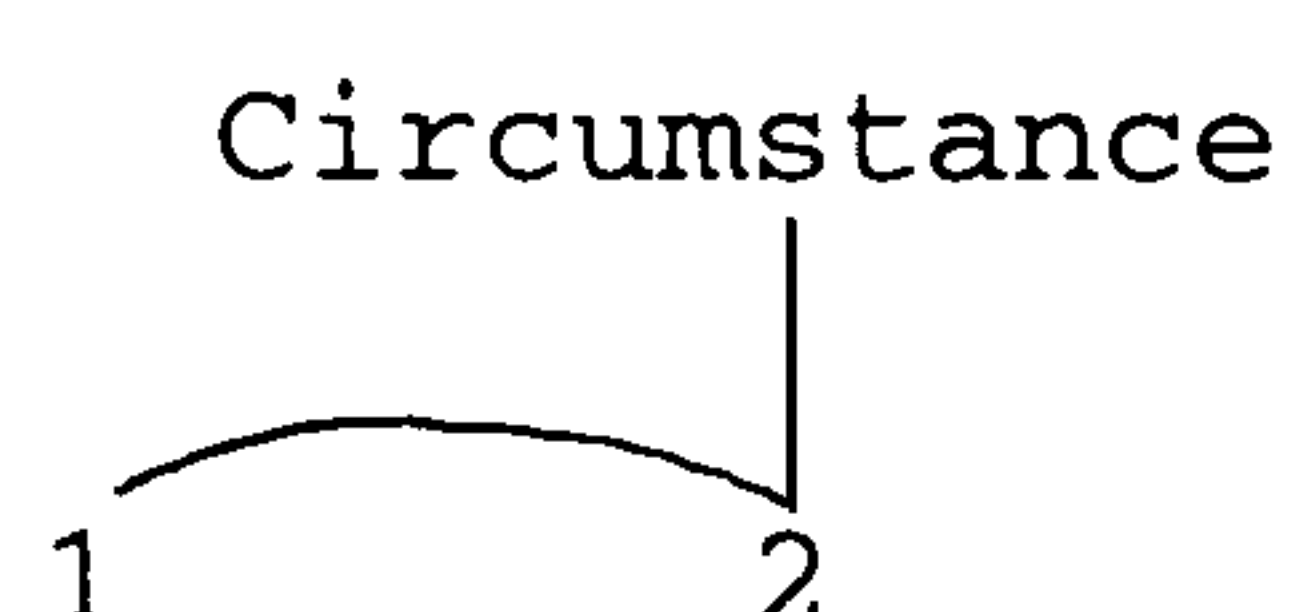
- (51) 1. ' Youyu Gao Lao zai xinlixue shang zaoyi jingshen,
 because Mr Gao in psychology attainments high
 "As Mr Gao had great attainments in psychology"
2. ta canjiale "Zhongguo Dabaike Quanshu - Xinlixue" juan de
 he join-in China encyclopedias book - psychology volume
 bianxie gongzuo, zhubian "Xinlixue Shi" yi shu.
 compilatory work chief-edit history of psychology a book
 "he was involved in compiling *The Encyclopedia of China*
 - *Psychology* and was chief editor of the book *A History*
of Psychology" [D10]



(51) is similar to (48) and (49) in that they are all characterised by the adjunct-nucleus

structure with the antecedent and the anaphor being subjects of their clauses, i.e. the referent is the topic of the relevant discourse, yet while in (48) and (49) the anaphor is realised by ZA, the anaphor in (51) is realised by PA. The passage in (52) gives another example in which PA instead of ZA is used for coreferential subjects.

- (52) 1. *Jing* *Xiong Zaiding* *yizai* *yaoqiu*,
 after repeated request
 "After repeated requests from Xiong Zaiding"
2. *ta* *yu* *siyue* *chuyuan*.
 she in April leave-hospital
 "she was discharged from the hospital in April" [D2]



The antecedent is subject of the preceding adjunct of the Circumstance predicate and the anaphor is subject of the following nucleus and takes the form of PA.

We may consider the occurrence of these two types of anaphora from the perspective of syntactic factors (e.g. the Binding Conditions discussed earlier). In the (48) type of sentences the empty subject in the succeeding main clause, being a *pro*, is allowed since it is free in its governing category (the S). However, a pronominal anaphor in the place of the zero anaphor (*pro*), as in (51) and (52), is also allowed since it respects Condition B of the binding theory which requires that the pronoun be free in its governing category. The pronoun may take its reference from a coindexed c-commanding NP in the sentence or outside the sentence. The use of ZA in sentences like (48) and the use of PA in sentences like (51) are both allowed by syntactic rules such as the binding principles, though the syntactic rules do not tell us what it is that gives rise to the alternation of ZA and PA in the present environment. This means that we need to explore, from a discourse point of view, the factors that contribute to this alternation.

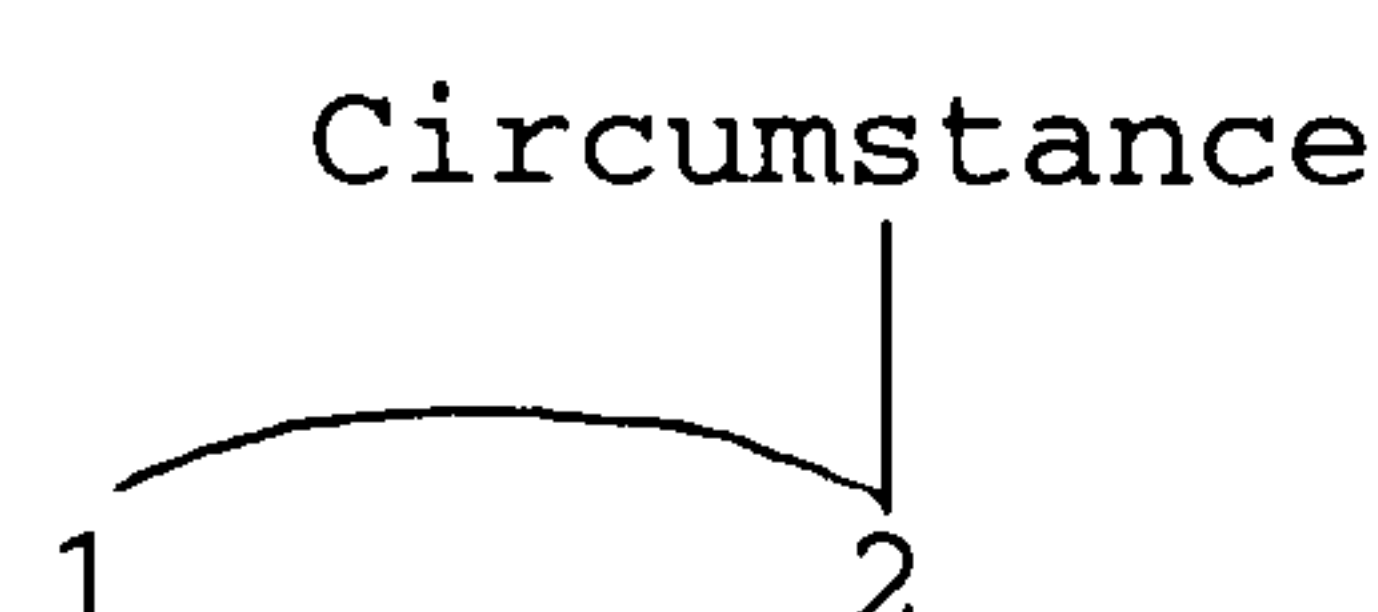
A close study of the 60 instances of ZA and the 21 instances of PA shows that ZA occurs where the antecedent and/or the anaphor occur clause/proposition-initially, and PA usually occurs where the antecedent and/or the anaphor is preceded by a conjunction. In (48) and (49) above the antecedent and the anaphor both occur proposition-initially, and the anaphor takes the form of ZA. In (51) and (52), on the other hand, the antecedent is preceded by the conjunction *youyu* "because" in (51) and *jing* "after" in

(52), and its anaphor takes the form of PA in the following proposition (example 46 above also falls into this category in which the pronominal anaphor is preceded by the conjunction *dan* "but"). (53) is another passage in which PA occurs where its antecedent is preceded by the conjunction *dang... (shi)*.

(53) 1. *Dang Gu Xiansheng* *dezhi Zhongguo ... jihua zai 2000-nian qian*
 when learn China plan by the year 2000

peiyangchu 300000 ming zhuce kuaijishi shi,
 train 300000 chartered accountants time
 "When Mr Gu was told that China had a plan to train 300000
 chartered accountants by the year 2000"

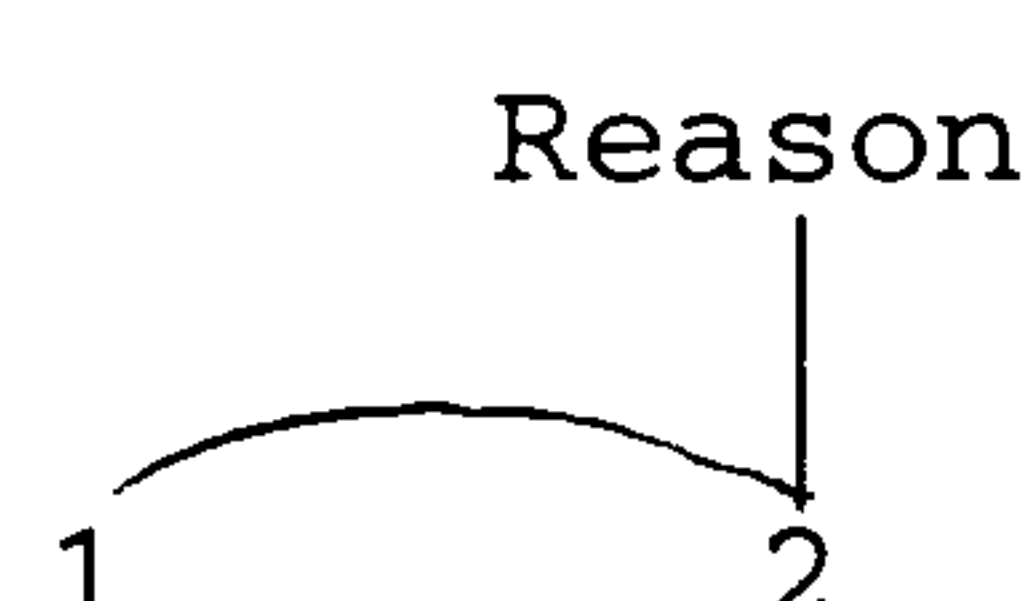
2. *ta xingweide xiao le.*
 he with relief smile
 "he smiled with both delight and relief" [D41]



In (51), (52) and (53) we saw that PA is used instead of ZA where the subject antecedent is preceded by a conjunction. However, ZA is also found in such contexts, as shown in (54).

(54) 1. *Suiran Yan Xiansheng yi nianjie-gusi,*
 though Mr Yan already age-very-old
 "Although Mr Yan was already in his sixties"

2. *0 que buchi-laoku, lianxu benbole wu-tian.*
 but not-fear-hardship continually rush about five days
 "(he) didn't care about hardships and rushed about
 for five days" [D5]



The subject anaphor takes the form of ZA though the subject antecedent occurs after the conjunction *suiran* "although". There are, in the corpus, 6 instances of ZA (out of a total of 60) and 21 instances of PA that occur in the environment described in (53) and (54). This suggests that although ZA is allowed, PA is the preferred form in the present situation.

We see, thus far, that the alternation of ZA and PA in the S-S coreferential chain in active patterns has to do with the position of the subject in its clause/proposition. If the antecedent and/or the anaphor precede their propositions, ZA is used for the anaphor; if the antecedent and/or the anaphor are preceded by a conjunction, ZA is optional, that

is, either ZA or PA may be used for the anaphor. This is summarised in (55):

(55) In an active pattern ZA is used in the context of coreferential subjects that are proposition-initial, otherwise it is optional and either ZA or PA may be used.

This is a modified version of (50).¹⁸ It not only accounts for the use of ZA covered by (50), but it also accounts for the use of PA which falls out of (50).

The generalisation (55) captures an important correlation between the clause structure and the use of anaphora. Although it is a descriptive generalisation, as shown by the figures given above, it is not necessarily an explanatory one, which needs some theoretical account based on evidence of a correlation. Why does the presence or otherwise of a conjunction make such dramatic differences? Since this type of anaphora occurs within sentences, syntactic factors may hold the key to the answer.¹⁹ In this connection, Harlow & Cullen (1992), which deals with correlative constructions in Chinese, provides a possible account.²⁰ They take the view that correlative constructions in Chinese are in fact coordinate constructions which fall into two types. In the first type, the correlative markers or conjunctions (e.g. *yi...jiu* "as soon as...then", *suiran...que* "though...but") appear as sisters of VP, hence it is a case of VP coordination. This is illustrated in (49) where a variant form of the correlative marker *yi...jiu* is used, i.e. *yi...like*. In the second type, the conjunctions appear as sisters of S, hence it is a case of sentential coordination. This is illustrated in (51) and (54), where the conjunctions are *youyu* "because" in (51) and *suiran* "although" in (54). Based on this distinction, they propose that the choice between ZA and PA for the anaphor in the subject position of the second construct depends crucially on the type of construction involved, namely, ZA is obligatory in VP coordination and optional (both ZA and PA

¹⁸(55) is basically in conformity with Liu's (1981) generalisation with regards to the use of zero anaphora in Chinese based on the notion of parallel structure.

¹⁹Li C-i (1985) suggests that PA occurs here because it starts a new topic chain, with ZA occurring within the topic chain. This proposal does not explain why a new topic chain should start if the preceding clause is preceded by a conjunction and the existing topic chain should continue if the preceding clause starts with the subject NP. Moreover, the proposal says nothing about why a new topic chain should occur in the case of two coreferential subjects in two adjacent clauses.

²⁰Correlative constructions in Chinese are characterised by "the presence of a pair of morphemes marking the constituent halves of the construction" (Harlow & Cullen, 1992:1). These constructions fall into the adjunct-nucleus structural pattern in this thesis, i.e. the first half is the adjunct and the second half is the nucleus.

are possible) in sentential coordination. In this account the reasons for the choice of anaphora are straightforward: we do not get PAs in the second conjunct in coordinated VPs because there is no noun phrase in the second construct at all (in other words, there is no ZA; instead it is VP coordination) and we do get PAs in the other type of structure because they involve sentential coordination (cf. Harlow & Cullen, 1992:14-5).

The proposal of VP coordination thus provides a straightforward and principled solution to the problem under discussion. The proposal is significant in that it is the first in its kind that makes an important contribution to the discussion of a controversial issue. There are however some difficulties with the VP coordination proposal. In sentences involving VP coordination like (49), the antecedent and its anaphor may reverse their order of occurrence, as shown in (56).

- (56) 1. 0 yi chulai gongzuo,
 as-soon-as come-out work
 "As soon as (he) assumed a responsible position"
2. Ta/Deng Xiaoping like biao xian chule zuo wei zhan lue ji de
 at-once show as strategist
 dan lue he zhi hui.
 courage and wisdom
 "he/Deng Xiaoping displayed a strategist's courage,
 resourcefulness and wisdom" [D15]

It seems that VP coordination only works if the anaphor occurs in the succeeding construct but not the other way round though the structure is still the same.

Secondly, the requirement that ZA is obligatory in coordinated VPs categorically rules out the possible occurrence of PA in the second construct. While this may be the case with some speakers of Chinese, it is not with other speakers. I did a small investigation with 12 students from China now studying at York University, using the data in (57):

- (57) a. 1. Zhangsan youyu xuexi yonggong,
 because study hard
2. (a. ta, b. 0) changchang shoudao laoshi biao yang.
 often receive teacher praise
 "Because Zhangsan works hard, he is often praised by
 his teacher"
- b. 1. Youyu Zhangsan xuexi yonggong,
 because study hard
2. (a. ta, b. 0) changchang shoudao laoshi biao yang.
 often receive teacher praise

From (58) we can single out two features which appears to be relevant to the use of ZA for the backward anaphor. The first feature is that both the antecedent and the anaphor are subjects of their own clauses and the second is that it is associated with an adjoining predicate (Circumstance here) with the anaphor occurring in the preceding adjunct. In the corpus, there are 35 instances of backward anaphora that exhibit the same features as (58) and all take the form of ZA. Following are further examples.

- (59) 1. 0 shuoqi zhexie jingli,
speaking-of these experiences
"Speaking of these experiences"
2. Gao Lao gaosu women....
Old Gao tell us
"Mr Gao told us that..." [D10]
- (60) 1. 0 weile shixian zheyi hongwei shexiang,
in-order-to realise this great plan
"To realise this ambitious plan"
2. Wu Tianming kaishi benbo buzhi, shouxian cong
start rush-about first from
daoyanqun de xingcheng zhuoqi.
director-group formation work
"Wu Tianming started rushing about at once in an attempt
to bring together a group of film directors" [D31]

(59) is an instance of the Circumstance predicate and (60) an instance of the Purpose predicate. In both cases the subject anaphor takes its reference from the subject of the following nucleus proposition and is encoded in ZA.

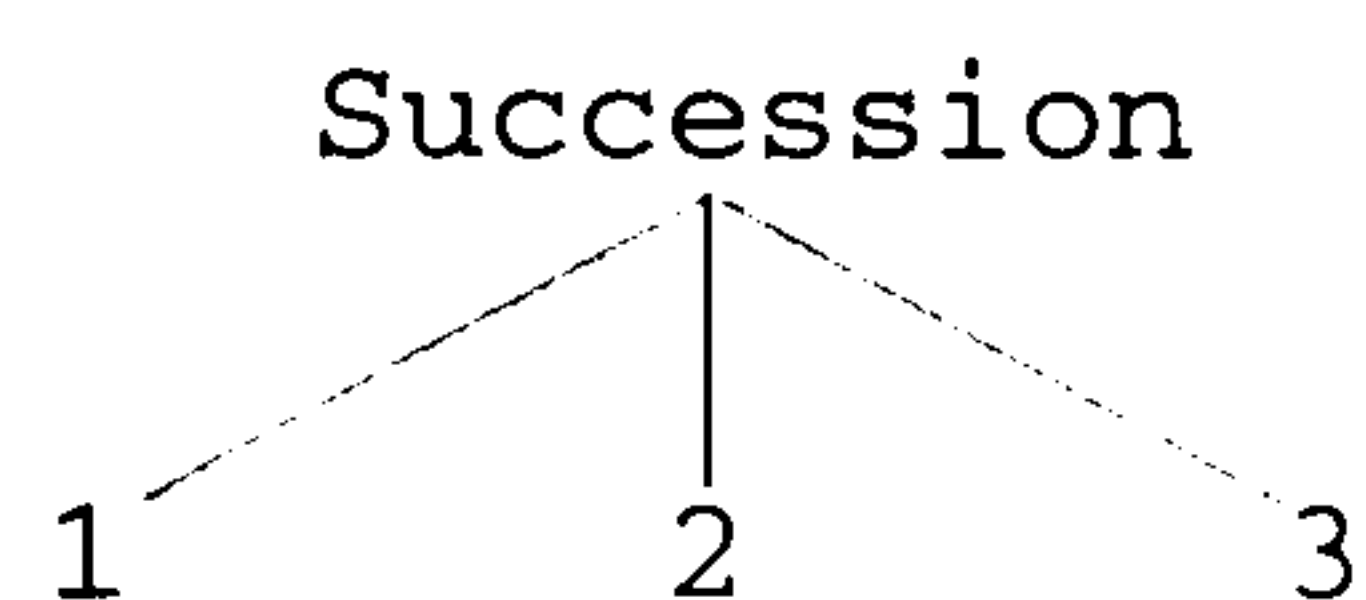
Examples like (58), (59) and (60) indicate that backward anaphora is constrained by the subjecthood of the NP as well as the relative status of the proposition containing the cataphoric reference to the proposition containing the antecedent, that is, the former must be structurally subordinate to the latter. This type of anaphora occurs within sentences and thus may be accountable for by principles of intra-sentential anaphora (recall that backward anaphora is treated as pro identified by the matrix subject in Huang (1982)). However, from our point of view, this usage falls directly under the generalisation (55). That is, in an adjunct-nucleus structure ZA may take its reference from a following NP if they are both subjects of their propositions.

Let us now move on and consider the distribution of anaphora in the nucleus-nucleus structure realised by conjoining predicates. Consider the example in (61).

major source of ZA.²²

The examples (61) and (62) occur within sentence boundaries. However, ZA is also found in nucleus-nucleus structures occurring across sentence boundaries, as illustrated in (63).

- (63) 1. 1959-nian, Li Guixian zai Zhongguo Keji Daxue xuexi.
 in 1959 at China technology university study
 "In 1959 Li Guixian studied at China University of Technology"
2. 1960-nian hou, 0 zai Sulian Mosike Menshi Daxue gongdu
 after 1960 at USSR Moscow Menshi university study
 dianzhenkong huaxue zhuanye.
 electro-vacuum chemistry faculty
 "After 1960 (he) studied at Moscow Menshi University in USSR
 specialising in electro-vacuum chemistry"
3. 1965-nian huiguo hou, 0 zai Gong'anbu de
 in 1965 return after at public-security-bureau
 yige yanjiusuo gongzuo.
 a research-institute work
 "(He) worked at a research institute affiliated to the Public
 Security Bureau after returning home in 1965" [D28]



This passage gives an example of inter-sentential anaphora in which the antecedent *Li Guixian* occurs as subject in the first proposition/sentence, and its mentions in the subject position of the following two propositions/sentences are realised as ZA. The following passage offers another example in which ZA is used in subject position across a sentence boundary in a Succession predicate.

- (64) 1. Yijiuliusi-nian yihou Zhou Jiahua ren yijibu
 after 1964 was No. 1 Machinery Dept.
 jichuang yanjiusuo suozhang.
 machine-tool research institute director
 "After 1964 Zhou Jiahua worked as director of the Machine-Tool
 Research Institute affiliated to the No. 1 Dept. of Machinery
 Industry"
2. Yijiushi'er-nian hou, 0 ren yijibu jijie
 after 1972 was No 1 Machinery Dept. machinery
 yanjiuyuan fuzhuren....
 research institute deputy director

²²Of the four instances of PA, two occur in possessive position in which ZA is in fact not possible. In the other two instances, the anaphor is preceded by adverbial phrases, such as *ran'er* "nevertheless", *lingrenjingyi-de-shi* "surprisingly enough". Here the presence of adverbial phrases may have retarded the flow of discourse and made PA more appropriate (although ZA is still possible).

"After 1972 (he) was deputy director of the Machinery Research Institute affiliated to the No 1 Dept of Machinery Industry"

3. Yijiuba'er-nian hou, 0 ren guofang kegongwei fuzhuren.
after 1982 was defence industry head
"After 1982 (he) was director of Defence Industry Council"

4. Yijiubawu-nian hou, 0 ren bingqi gongyebu buzhang.
after 1985 was weapon industry minister
"After 1985 (he) was head of the Dept of the Weaponry Industry"

[D27]

(63) and (64) show that active patterns associated with conjoining predicates occur within and across sentence boundaries and that ZA occurs within and across sentence boundaries provided the structures in which it occurs are conjoining predicates such as Succession or Joint.²³ There are a total of 81 instances of ZA in the data that occur across sentence boundaries. It is interesting to note that most of these instances (90%) are associated with the Succession predicate, as exemplified in (63) and (64), only a few (10%) are associated with the Joint predicate and none with the other conjoining predicates such as Contrast or Alternative (where PA was found). This indicates that different rhetorical predicates bear on the choice of anaphors. As noted before, the arguments of the Succession predicate are closely linked by a chronological or logical sequence and usually cannot be reversed without an effect on meaning. In other words its arguments are involved with the same type of description (which is apparently lacking in Contrast, Alternative or Opposition).²⁴ I give an example of the occurrence of ZA in the Joint predicate across the sentence boundary in (65).

- (65) 1. Zhou Enlai nashi dudang yimian, zai Guomindang-tongzhiqu
then in charge of a front in KMT-ruled-area
- tuanjiele gedang-gepai he wudangpai de renshi....
unit cross-party and independent person
"Zhou Enlai was then working in the KMT-ruled areas, he united all sorts of people with different background"
2. Tongshi, 0 zai qingnian xuesheng jiaoshi gongren shangren deng
meanwhile among young student teacher worker businessmen etc
- gege jieceng zhong jinxingle shenrude gongzuo
every stratum in do deep work
tuanjiele daduoshu.
unit majority
"Meanwhile (he) worked among the young people, the teachers, the workers and the businessmen and united a vast majority of people"

[D12]

²³This in fact provides a piece of evidence for the use of rhetorical predicates as an analytic apparatus for this study since the structure of conjoining predicates overrules the distinction between intra and inter-sentence structures.

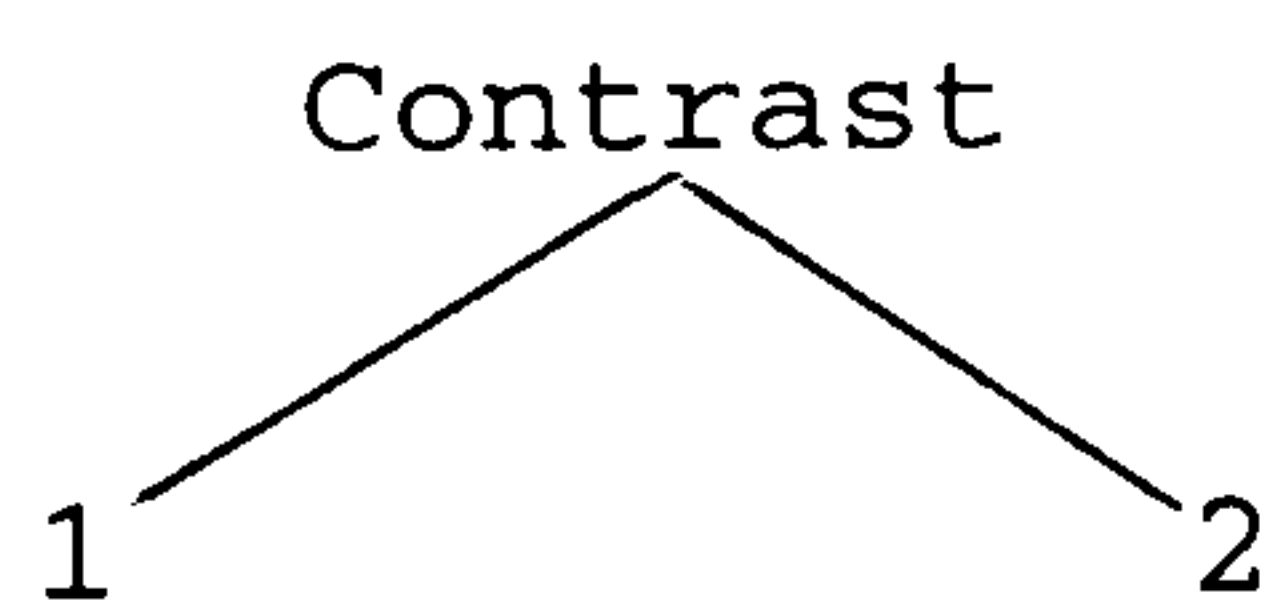
²⁴Tai (1978) also notes that ZA may be used across segment boundaries (similar to sentence boundaries) if these segments involve the same type of description. See the section on Tai in Chapter 2.

This passage is associated with the Joint predicate in which the subject anaphor in the second sentence, which takes the form of ZA, is coreferential with the subject NP in the first sentence. The Joint predicate, like the Succession predicate, has coordinated arguments, but, unlike Succession, the relationship between its arguments is not so tight as that of the Succession arguments, and these arguments can be reversed without much affect on meaning. As such the joint predicate appears to be kind of "mid-roader" and hence PA is also found here. Consider the following example associated with the Joint predicate.

- (66) 1. Zai jiangtai-shang, Gu xiansheng yingdele zhangsheng he hecai.
 at rostrum Mr Gu win applause and cheers
 "Mr Guo won applause and cheers as a teacher"
2. Zai shiye-shang, ta gengshi jiaota-shidi, yongyu-jinqu.
 in business he even-more down-to-earth work-hard
 "He worked even harder as a businessman" [D41]

The antecedent NP is subject of the first sentence and its anaphor is subject of the following sentence and is expressed with PA. Note that the semantic and structural relationships between the two sentences/arguments of the predicate are rather loose and the order of the arguments can be altered without much consequence. The other conjoining predicates such as Contrast or Alternative only see the occurrence of PA where ZA would have been expected. (67) offers an example.

- (67) 1. Gu Yanshi zai Zhongguo shengjian shu-zhi mangde-buyi-lehu.
 in China has several-positions very-busy
 "Gu Yanshi was involved in several undertakings in China
 which kept him busy all the time"
2. Er zai Meiguo, ta ze bimen-xieke qianxin-zhixue.
 but in US he shut-door-to-visitors engrossed-in-research
 "Back in the States, however, he cut down on time spent on
 visitors so as to devote more time to his research" [D41]

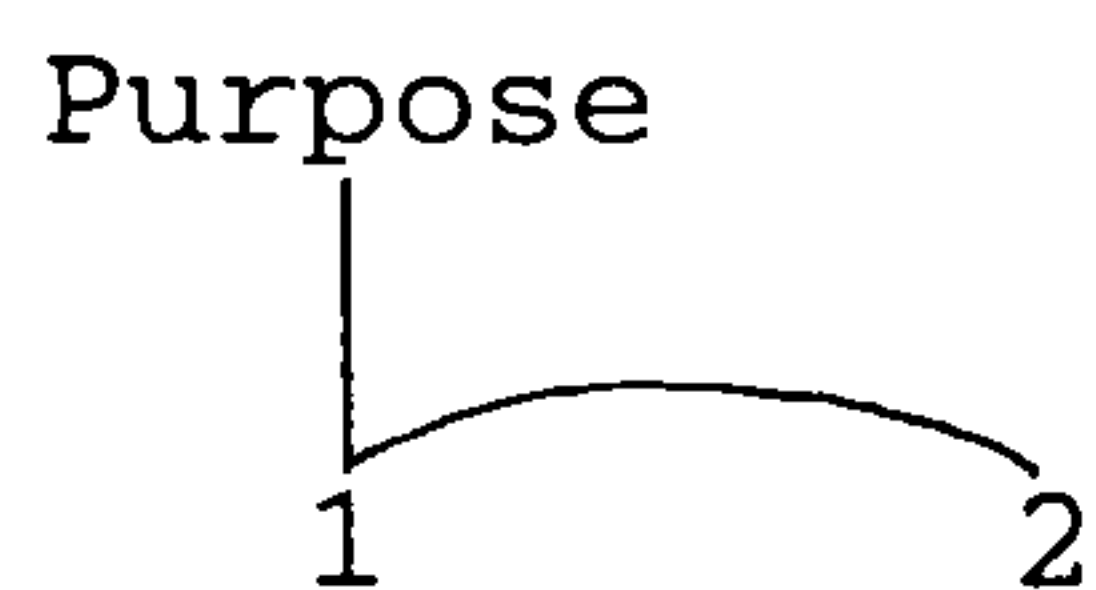


On the basis of the evidence so far, the pattern of anaphoric distribution in the nucleus-nucleus structure is suggested as follows:

- (68) In an active pattern associated with the nucleus-nucleus structure ZA is used for coreferential subjects within sentence boundaries and may also be used for coreferential subjects across sentence boundaries in the Succession and Joint predicates involving the same type of description; otherwise PA is used.

Having examined the occurrence of anaphora in the adjunct-nucleus structure and the nucleus-nucleus structure, we now consider the distribution of anaphora in the nucleus-adjunct structure in which the subject anaphor occurs in the succeeding proposition (clause/sentence) coreferential with the subject NP in the preceding proposition (clause/sentence). As shown in Table 5 in (47), there are 125 instances of PA and 15 instances of ZA respectively. This suggests that the nucleus-adjunct structure is a major source for PA. Now consider the example in (69).

- (69) 1. Yici, Guo Moruo lai zhao Fu Baoshi,
 once come see
 "Once Guo Moruo went to see Fu Baoshi"
2. 0 yao ta xie ge "wengao".
 ask him write a proclamation
 "(he) asked him to draft a proclamation" [D9]



The antecedent NP occurs in the subject position of the preceding nucleus of the Purpose predicate (proposition 1) and its anaphor occurs in the subject position of the succeeding adjunct (proposition 2) and takes the form of ZA.

As noted before, Chinese complex sentences normally assume the order of adjunct clause preceding nucleus clause. The reversed order is extremely restricted and highly marked and the postposed adjunct is normally preceded by a conjunction.²⁵ An exception to this general rule is the sentence containing a "purpose" clause (the Purpose predicate in this study describes this structure). The "purpose" clause may occur before the main clause as in (60), or after the main clause as in (69). Either way, ZA is used for the subject anaphor in the adjunct clause. In the corpus, there are 11 instances of the Purpose predicate with a postposed adjunct in which the subject anaphor takes the form of ZA coreferential with the subject antecedent in the preceding nucleus.

Let us now consider the passage in (70).

- (70) 1. Zhou Enlai tongzhi shi yiwei ji you geming danlue
 Comrade Zhou Enlai is a both have revolution courage

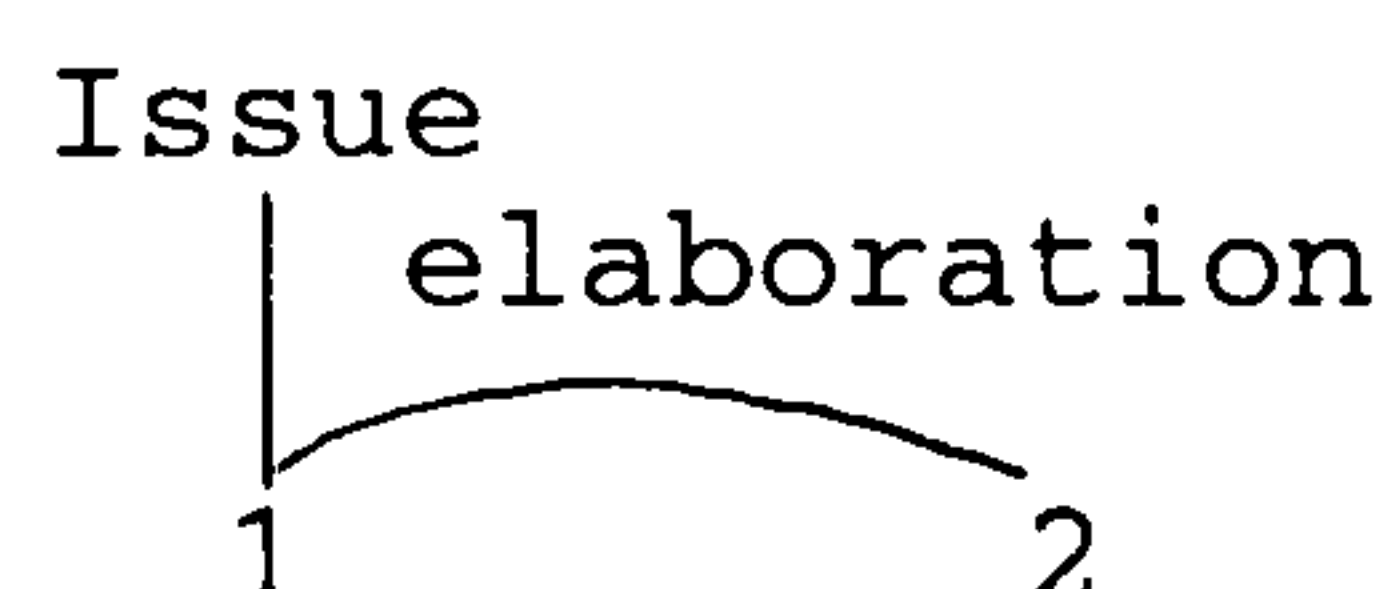
²⁵The adjunct-nucleus order is more vigorously followed in writing than in speech where an "afterthought" may take the form of a postposed adjunct clause.

you you qiushi jingshen de gongchanzhuyizhe.
 and have pragmatic spirit Communist
 "Comrade Zhou Enlai was a Communist with both revolutionary
 courage and a pragmatic attitude"

2. Ta zai meiyi zhongda douzheng zhong shanyu
 he in every major struggle skilfully

ba liangzhe jiehe-qilai.
 BA both combined
 "He was skilful at combining these two in every
 major struggle"

[D12]



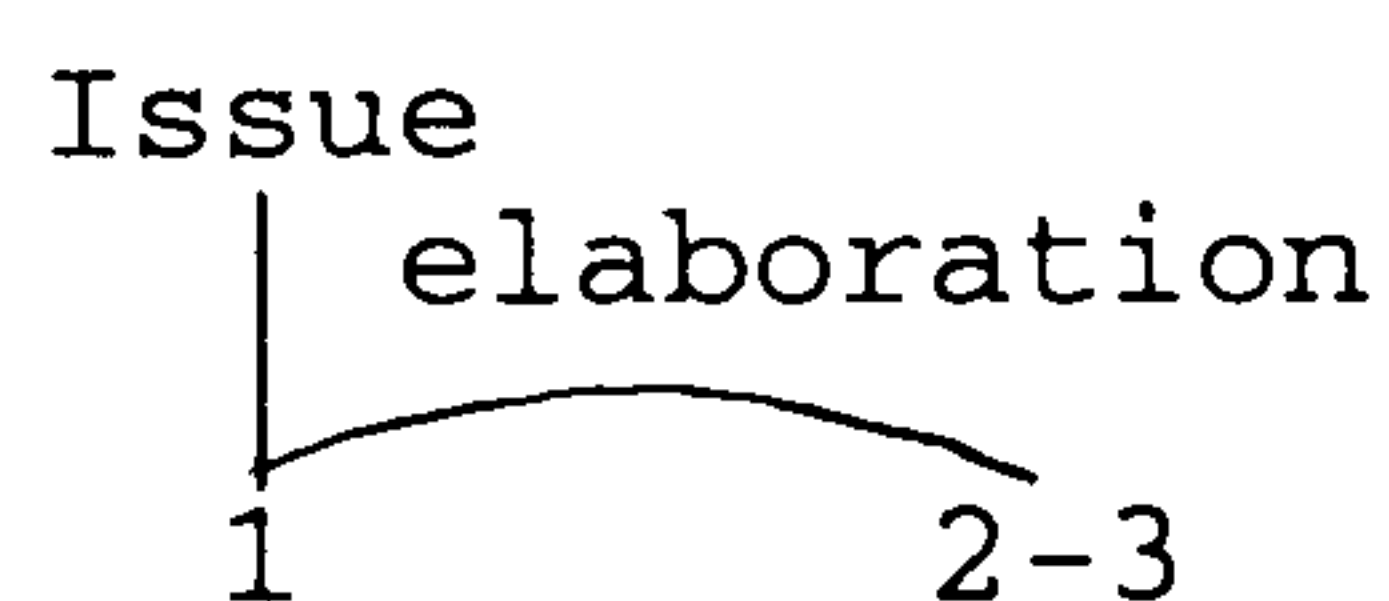
In this passage, the subject of the second proposition is coreferential with the subject of the preceding proposition, and both subjects occur clause-initially. According to Principle (55), ZA should have been possible for the anaphor. However, contrary to the prediction, PA occurs. I give another passage of the same type in which the subject anaphor coreferential with the subject antecedent in the preceding proposition is realised by PA.

- (71) 1. Lin Kexiu hai ku'ai tiyu.
 besides love sport
 "Lin Kexiu is particularly keen on sports"

2. Ta ceng shi sheng juzhongdui de yundongyuan,
 he once is province lift-weight player
 "He used to be a member of the provincial
 weight-lifting team"

3. 0 bing qudeguo hao chengji, ...
 and achieve good records
 "and (he) achieved good records"

[D4]



The examples in (70) and (71) are similar to (69) in that they all have the nucleus-adjunct order. They are different from one another, however, in that while (69) involves the Purpose predicate (70) and (71) involve the Issue predicate. We may note that (70) and (71), unlike (69), occur across sentence boundaries. Does this simply reflect a distinction between intra and inter-sentential anaphora? The answer is no because PA is also found in Issue predicates occurring within sentence boundaries, as in (72).

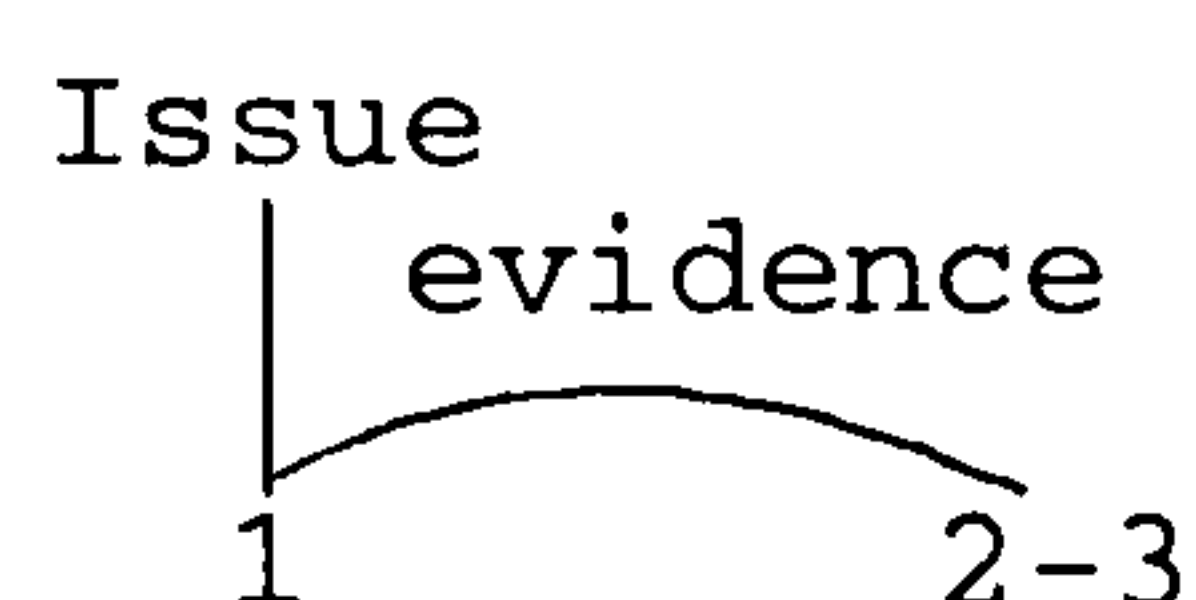
- (72) 1. Zuwei zhouzhang furen de Xilali shi ge
 as state-governor wife Hilary is a
 lili-waiwai de yibashou,
 inside-outside a-good-hand

"As the wife of the state governor Hilary was involved in everything both at home and at work"

2. ta shi'er zai muhou wei Kelindun chumou-huace,
she sometimes from curtain-behind for Clinton give-advice
"sometimes she gave advice to Clinton from behind the scenes"

3. 0 shi'er zoudao qiantai fuze Akense zhou
sometimes walk-to front-stage in charge of Arkansas State

jiaoyu zhidu gaige gongzuo, canyu zhengce zhiding.
education system reform work involved-in policy making
"sometimes (she) emerged from behind the scenes to take
charge of the reform of the state educational system and
actively involve herself in policy making" [D42]



This passage occurs within the sentence boundary. The NP *Hilary* is first mentioned as subject in proposition 1, the nucleus of the Issue predicate, and mentioned again in the subject position of propositions 2 and 3, the adjunct of the Issue predicate. Note that the subject anaphor is encoded in PA though it occurs within the sentence.²⁶ (73) and (74) offer further examples.

(73) 1. Daxue si-nian, Xuke shouhuo shi duofangmian de,
University four-years benefit is many-respects
"Xuke benefited a great deal from his four years at the
university in many respects"

2. ta bujin zhangwole erhu de yanzou jiqiao,
he not only master erhu playing techniques
"he not only mastered the techniques of playing erhu,
a two-stringed bowed instrument"

3. 0 erqie shi ziji youle jiaowei kuanguangde yishu shiye...
but enable self have relatively broad artistic horizon
"but also broadened his artistic horizon..." [D3]

(74) 1. Yu Liyun yingyao chuxile zai Huashengdun juxingde Bushi
at invitation present at Washington held Bush

zongtong jiuzhi dianli,
president inaugural ceremony
"Yu Liyun was invited to Present Bush's inaugural ceremony
at Washington"

2. ta shi dianli zhong shaoshu-jige gongtong-zhuxi zhiyi.
she is at ceremony few co-chair-person one-of
"she was one of the few co-chairpersons of the ceremony" [D8]

In (73), the antecedent is the subject of proposition 1, the nucleus of the Issue predicate,

²⁶It should be pointed out that the analysis pursued here crucially depends upon taking punctuation as a reliable criterion for sentence-hood. Although this is apparently not entirely satisfactory, given what we said about the difficulty of defining a sentence in Chinese in Footnote 4 in this chapter, it seems to be an acceptable and practical approach to adopt.

and its next mention in the subject position of proposition 2, a member of the Joint predicate serving as the adjunct of the Issue predicate takes the form of PA. (74) shows a similar pattern in which the subject anaphor in proposition 2 (the Issue adjunct) is coreferential with the subject NP in the preceding proposition (the Issue nucleus) and is realised by PA.

Based on the examples (70) through (74), we can observe that PA occurs for a subject anaphor coreferential with a subject antecedent in Issue predicates whether it occurs within or across sentence boundaries.

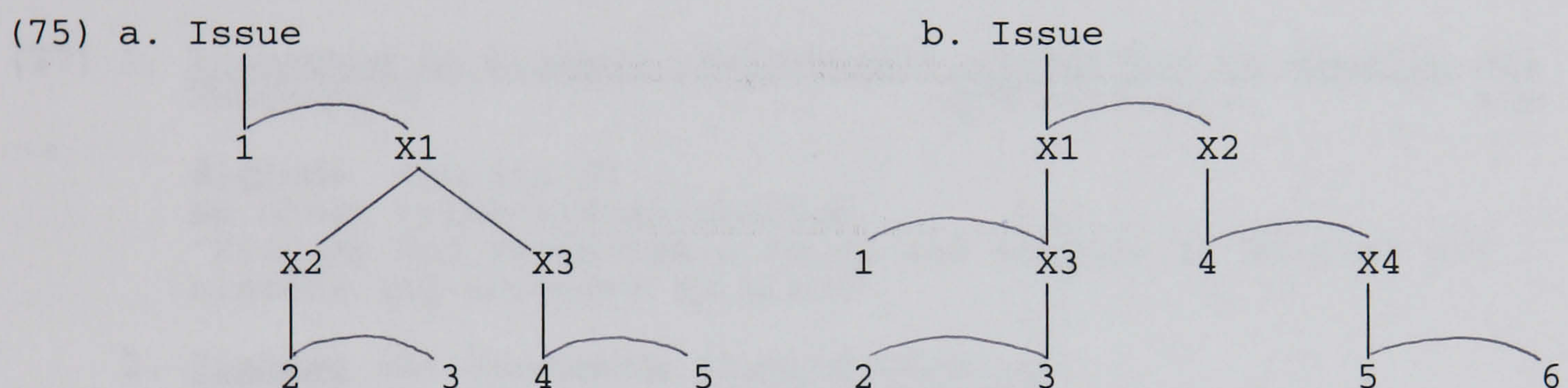
This pattern holds across virtually all examples exemplified by (70) through (74) in my data, where there are 129 instances of anaphora in Issue predicates and 125 of these instances (97%) are associated with the use of PA.²⁷ This figure clearly indicates that the discourse structure of Issue predicates is a trigger for the use of PA. What then is the motivation for the pronominal realisation in Issue predicates since no ambiguity whatever would arise if ZA were used?

A possible explanation for this pronominalisation may lie in a distinguishing property of Issue predicates. The Issue predicate has a nucleus that makes a claim or presents a statement and one or more adjuncts that elaborate on the claim or statement. For instance, in (72) the Issue nucleus makes a claim that *Hilary* was actively involved in her husband's work and the Issue adjunct elaborates on this claim by providing evidence about her involvement. Compared with the adjunct of other predicates such as Reason or Condition, the adjunct(s) of the Issue predicate tends to acquire a relatively independent status in relation to its nucleus and function as a more or less self-contained unit modifying the Issue nucleus. Related to this feature is the order of the arguments in the Issue predicate. As noted above, the normal order of a Chinese sentence is for the

²⁷There are four instances of ZA with Issue predicates, two occur within sentences and two occur across sentences. My explanation is that as we are dealing with a discourse phenomenon, any generalisations or rules made for it cannot be as rigid as syntactic rules in sentence grammar, and one has to allow for exceptions. The exceptions in the present case, in my view, do not invalidate the generalisation but instead they are indications of the language user's freedom or preference in choosing linguistic devices (in the present case, anaphora). Having said this, there appear to be features common to the ZA occurrences in Issue predicates in my data. That is, the nucleus tends to be a short simple clause (and so does its adjunct). But I am not claiming that the simplicity or the shortness of the nucleus and/or its adjunct operates as a trigger for the ZA encoding, since in most of such contexts, PA occurs.

semantically subordinate element (e.g. subordinate clause) to occur before the semantically prominent element (e.g. the main clause), and the breaking of this order is highly marked both in terms of sentence structure and sentence meaning. Since in the Issue predicate the nucleus occurs before its adjunct, one of the consequences of this seems to be the effect on the use of anaphora, i.e. PA occurs in the place of ZA.

Furthermore, Issue predicates tend to be used very commonly in the high-level organisation of discourse. That is to say, the highest-level of discourse organisation usually consists of the nucleus and adjunct(s) of an Issue predicate, each of which may in its turn be realised by a complex system of lower-level predicates (see the section on Issue vs non-Issue predicates in Chapter 3). This may be better illustrated with diagrams in (75).



In (75a) the Issue predicate has an adjunct that is realised by an embedded predicate (X1) which itself is realised by two further subordinate predicates (X2, X3). X2 consists of propositions 2 and 3 and X3 of propositions 4 and 5. In (75b) both the nucleus and the adjunct of the Issue predicate are realised by embedded predicates (X1, X2). The nucleus of X1 develops into X3 consisting of propositions 2 and 3, and the adjunct of X2 develops into X4 consisting propositions of 5 and 6.

It thus appears that the use of PA here is a function of Issue predicates being used in the higher-level organisation of discourse and their adjuncts functioning as a structural unit modifying the nucleus (cf. Chapter 7 on rhetorical units and anaphora), even though the discourse does not have to be very complex in structure, as shown in (70) through (74).

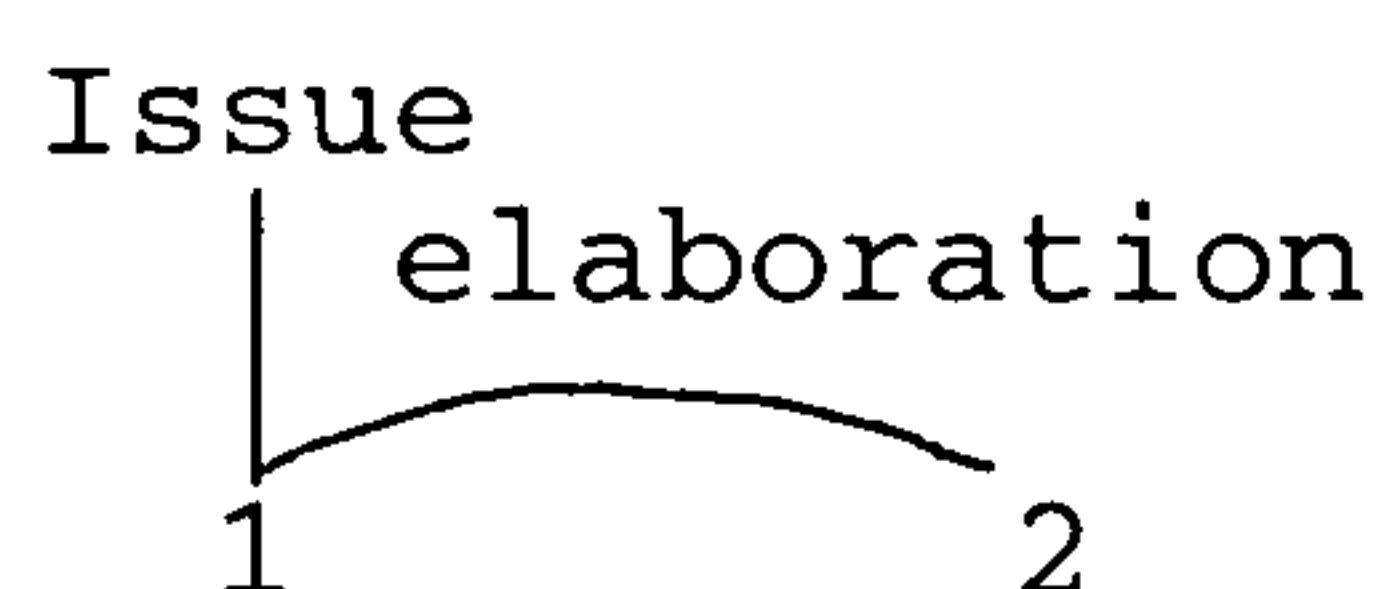
On the basis of the above analysis supported by the figures, the pattern of the occurrence of zero and pronominal anaphora in the S-S coreference associated with the

nucleus-adjunct structure is given in (76).

- (76) In an active pattern associated with the nucleus-adjunct structure PA is used for a subject anaphor coreferential with a subject antecedent in Issue predicates, otherwise ZA is used.²⁸

Finally, we consider the occurrence of NA in S-S coreference. There are only 9 instances of NA, all of which occur in the nucleus-adjunct structural pattern across sentence boundaries. This shows that the use of NA in active patterns is extremely restricted. A close examination of these nine instances reveals two different environments in which NA is found in the corpus. These are exemplified in (77) and (78) below.

- (77) 1. Xianggang de Xiameng, Yangmingxin he Beijing de Yangjie shi
 Hongkong's and Beijing's are
 diqinde san-jie-di
 by blood three-sister-brother.
 "Xiameng and Yangmingxin in HK and Yangjie in Beijing are sisters and brothers by blood"
2. Xiameng shi Xianggang zhuming yingxing,
 is HK famous film-star
 zhuyanguo duobu feisheng-zhongwaide yingpian
 act many popular-at-home-abroad films
 "Xiameng is a well-known actress who acted the leading role in many films popular both at home and abroad"



The antecedent *Xiameng* occurs as part of the subject NP in proposition 1, the nucleus of the Issue predicate, and its anaphor occurs in the subject position of proposition 2, the Issue adjunct, and is realised by a full NP. The use of a pronominal here is impossible because its antecedent is a member of a group denoted by the preceding subject NP. Five out of a total of nine nominal occurrences in the active patterns arise in the same circumstances as (77). This suggests that if the antecedent NP contains more than one individual, reference to any one of these individuals later in the

²⁸The association of Issue predicates with the use of PA irrespective of the presence or otherwise of sentence boundaries provides a clear case for rhetorical predicates. PA is used, as against ZA, when the structural environment is that of Issue predicates no matter whether it is within or across the sentence boundary. In other words the distinction between intra- and inter-sentential anaphora is not significant here.

discourse takes the form of NA so as to avoid ambiguity. Now consider (78).

- (78) 1. Kelindun de dangxuan, ta lixiale hanma-gonglao,
Clinton's election she plays a crucial-role
"She played a crucial role in running Clinton's presidential
campaign"
2. zai Kelindun zu-ge qijian, 0 you zhanxianle tade yingxiangli.
during Clinton select-cabinet again display her influence
"(she) displayed her influence once more during Clinton's
cabinet selection" [D42]

The nominal anaphor occurs in the pre-posed PP of the second proposition coreferential with the antecedent *Clinton* occurring inside a pre-verbal NP in the preceding proposition. Note that the text centres on *ta* "she" (Clinton's wife), which occurs in subject position in both propositions: her role in running Clinton's presidential election and in influencing Clinton's selection of his cabinet members, whereas the NP *Clinton* only occurs as part of an NP and clearly is not the topic of the discourse. This explains why the NP *Clinton* occurs as NA in the second proposition. There are only four instances of NA that occur for a pre-verbal non-topic antecedent in S-S coreference in active patterns. We will see, however, that non-topic NPs are usually expressed with NA in the other coreferential patterns (to which we will be turning now) and thus the topic status of an NP plays a crucial role in determining choice of anaphora.

4.3.3.2 The S-O pattern

We have noted before that in the S-O pattern, the anaphor occurs in object position, its antecedent, as before, being the subject of the immediately preceding proposition. This is illustrated in (79).

- (79) 1. Shang zhongxue hou Xuke sui Sima Lan xiansheng xuexi gangqin,
attend school after with learn piano
"When in middle school, Xuke began to learn piano with
Mr Sima Lan"
2. zhe shi ta diandingle jianshide yinyue jichu
this enable him lay solid music foundation
"this enabled him to lay a solid foundation in music" [D3]

The antecedent NP occurs in the subject position of the first proposition and its anaphor occurs in the object position of the succeeding proposition.

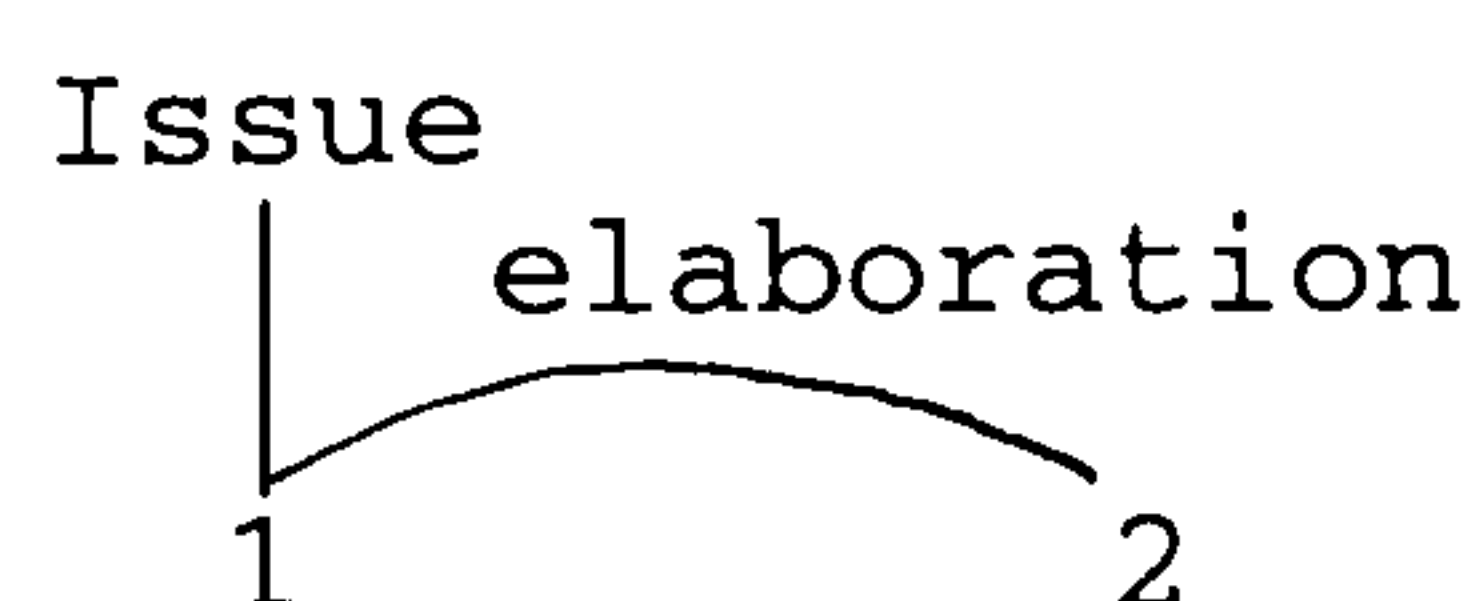
Table 6 gives the distribution of anaphora in this coreferential pattern in the corpus.

(80) Table 6: Distribution of Anaphora in the S-O Coreference Pattern

Type	Adjunct-nucleus	Nucleus-adjunct	Nucleus-nucleus	Total
ZA	0	0	0	0
PA	9 (9/0) 25% 82%	27 (10/17) 75% 75%	0	36 (19/17) 77%
NA	2 (2/0) 18% 18%	9 (0/9) 82% 25%	0	11 (2/9) 33%
Total	11 (11/0) 23%	36 (10/26) 77%	0	47 (21/26)

There are 36 instances of PA in the S-O coreference, with 9 instances occurring in the adjunct-nucleus structure and 27 instances occurring the nucleus-adjunct structure. 11 instances of NA occur here: 2 instances in the adjunct-nucleus structure and 9 instances in the nucleus-adjunct pattern. Note that no zero anaphors occur in the S-O coreference chain²⁹ and that no anaphors occur in the nucleus-nucleus structure at all.³⁰ Since this coreference type is limited to PA and NA in my data, I will, in this section, focus on the occurrence of PA and NA. Consider the passage in (81).

- (81) 1. Yijiugiwu-nian Li Guangqian siyu gan'ai.
in 1975 die-of liver cancer
"Li Guangqian died of liver cancer in 1975"
2. Renmen gaodu pingjia ta.
people highly speak of him
"People spoke highly of him" [D7]



In this example, the antecedent occurs in the subject position of proposition 1 and is

²⁹Although I did not find any instances of ZA in the S-O chain in the data, I do not want to commit myself to this claim. The occurrence of ZA in this type of coreference is, in fact, not impossible under certain circumstances (see Henry, 1988).

³⁰This provides yet another piece of evidence for the effect that different types of rhetorical predicates have on the distribution of anaphora. In the present case, the conjoining predicates such as Succession or Joint have arguments arranged in an coordinated fashion and this way of organising information in discourse seems to have influence on the coreference possibilities such that the succeeding mention(s) of the antecedent tends to occur in the same syntactic role. This may be what is behind the absence of the S-O coreference in the nucleus-nucleus structure.

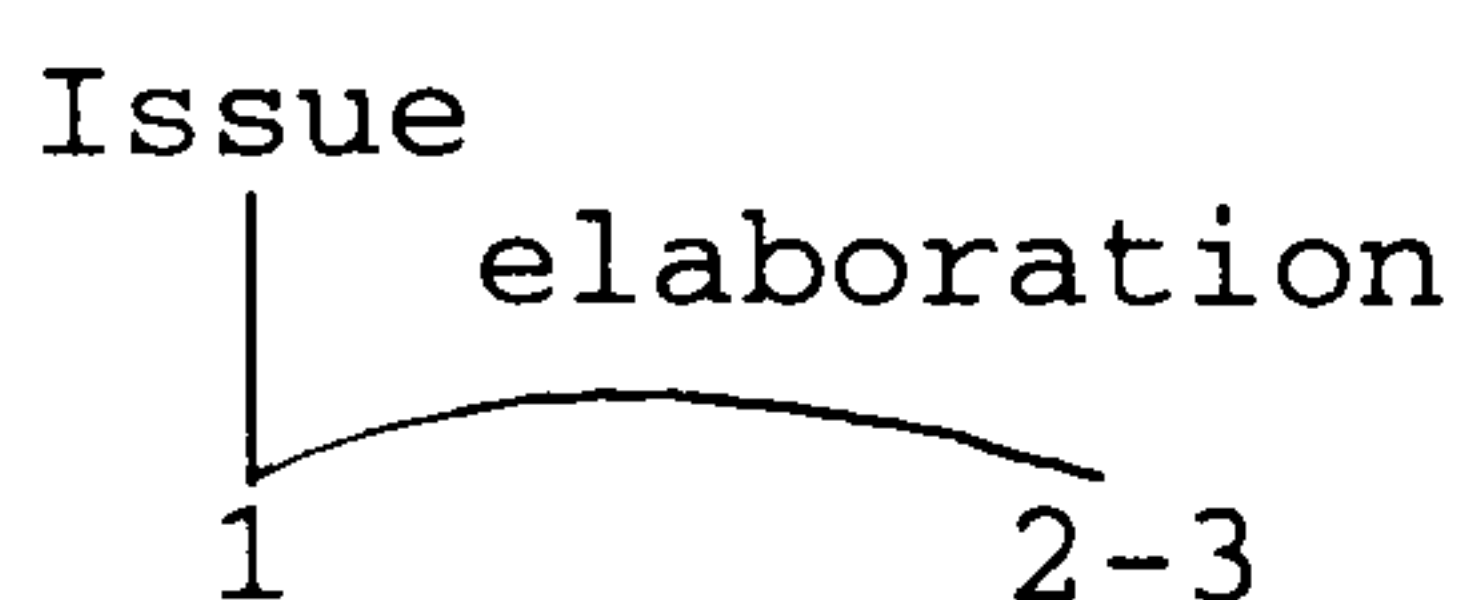
tuijian wei Chen Jiageng pinyong.
 recommendation by engage
 "In 1916, Li Guangqian, recommended by Zhuang Xiquan, was engaged by Chen Jiageng"

2. Chen Jiageng powei xinshang Li Guangqian de
 very appreciate Li Guangqian's

nengli he caihua,
 ability and talent
 "As Chen Jiageng very much appreciated Li Guangqian's ability and talent"

3. 0 bujiu jiu tisheng ta wei jingli.
 soon then promote him as manager
 "(he) promoted him manager before long"

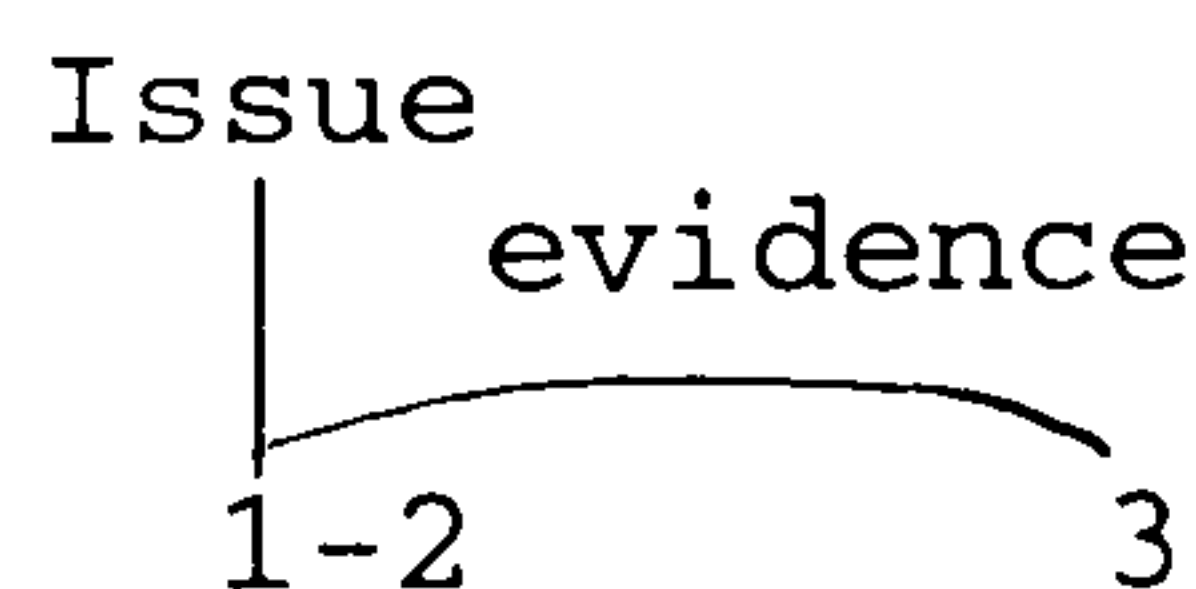
[D7]



The nominal anaphor occurs inside the object NP in the second proposition coreferential with the antecedent *Li Guangqian* in the subject position of the preceding proposition, in the context of an Issue predicate. (83) is similar to (81) and (82) in terms of the coreference chain and the structural environment, but unlike (81) and (82), (83) shows the occurrence of a full NP for the anaphor. (84) gives another example of NA used in the same situation.

- (84) 1. Ma Sicong xihuan yu Huang Yiyun hezuo,
 like with cooperation
 "Ma Sicong enjoyed his cooperation with Huang Yiyun"
2. 0 chang ba zijide zuopin xian jiaogei Huang Yiyun paiyan.
 often BA his work first give perform
 "He often gave his new work to Huang Yiyun to direct first"
3. Zai Huang Yiyun zhuchi he zhihui xia, tuan-nei
 at charge and direct under troupe-in
- duoci paiyanle Ma Sicong de zuopin
 many-times perform work
 "Directed by Huang Yiyun, the troupe staged Ma Sicong's work on many occasions"

[D37]



Ma Sicong is first mentioned via a full NP in the subject position of proposition 1 and then mentioned via ZA in the subject position of proposition 2 (which is accountable for by the principle (68)). Its following mention in the object position of proposition 3 is encoded with NA, which is consistent with the use of NA in (83). The above two examples show that NA also occurs in the S-O chain, though the number of PAs is more

than three times as much as that of NAs in the corpus (36 vs 11).

How do we account for the use of PA in (81), (82) and NA in (83), (84) since both the coreference and the structure involved show a similar pattern in both cases? We see that the antecedent NP *Li Guangqian* in (81) and the antecedent NP *Kou Zhenhai* in (82) are the topic of their propositions/discourses, while in (83) and (84) there is a change of discourse topic. That is, in (83) the writer is talking about *Li Guangqian* in proposition 1 and changes to talk, in proposition 2, about *Chen Jiageng* whose topic role continues in proposition 3 in the form of ZA and in (84) the writer is talking about *Ma Sicong* in propositions 1-2, then switches to talk about *Huang Yijun* in proposition 3.

A discourse topic is defined here as an NP that a particular piece of discourse focuses upon. In terms of surface realisation, subjects or pre-verbal NPs are the likeliest to serve as topics; objects or post-verbal NPs can be topics but they are less often so and thus do not create the same expectation of topicality (cf. Bolinger, 1979). In other words, by virtue of being the subject of a sentence in a discourse, an NP is likely to serve as the topic and this topic role continues until it is explicitly usurped by another NP in the following discourse. Bolinger suggests that the topic may be re-identified easily in the theme (e.g. the preverbal part concerning old/given information), but in the rheme (the part following the preverbal part, concerning new information) only if the theme lacks a normally topical form (subject noun or subject pronoun) (1979:306).

This explains why so many anaphoric expressions appear in S-S coreference in the corpus (663 instances) and why so few anaphoric expressions appear in the other types of coreference (only 47 instances in S-O coreference, for example).

In S-S coreference, the antecedent and the anaphor, by being subjects of their propositions, carry the topic role in the relevant discourse. I did not invoke and discuss the concept of discourse topic in S-S coreference because it does not seem to contribute much to the discussion of the alternation of ZA and PA since both entail the topic role of their antecedent. In the present situation, on the other hand, since the anaphor occurs in the object position of the following proposition, there is likely to be a change of topic, therefore it is both necessary and essential that we bring the notion of discourse

topic into discussion.

Now, if we look at (81) in which the object anaphor is realised by PA coreferential with the subject NP in the preceding proposition, we will find that the antecedent NP *Li Guangqian* is the topic of the discourse. Although another NP referred to as *renmen* "people" occurs in the subject position of the proposition in which the anaphor is contained, that NP does not usurp the topic role from the NP *Li Guangqian* and thus pronominalisation is still possible. In general, if there is an NP already established as the topic (e.g. *Li Guangqian* in (81)), another NP's initial occurrence in subject position (e.g. "people" in (81)) does not necessarily establish it as a new topic, which requires to be confirmed by its re-identification, normally at subject position in the immediately following discourse (cf. Reichman, 1981). Unless that happens the presently established topic NP is likely to continue its topic role and this will have consequences for the way it is referred to (e.g. pronominalisation rather than nominalisation occurs, as in (81)). This explanation is also supported by (82) in which the object anaphor is encoded with a pronoun despite the occurrence of another NP as subject in the same proposition. This NP does not take over the topic role from the NP *Kou Zhenhai*, which is evidenced by its next mention with a full NP in the following discourse, given in (85):

- (85) 3. Zheci jianmian shijian zhi you duanduan shifenzhong,
 this meeting time only have very-short ten-minutes
 "The meeting lasted only for ten minutes"
4. dan Wang tuanzhang dui Xiao Kou de diyi yinxiang powei manyi,
 but Director Wang to first impression very good
 "but Director Wang had a very good impression of Xiao Kou"
5. 0 dangchang tiaoming yao Xiao Kou qu Changyingchang.
 on-spot say want go-to Changying-factory
 "(he) expressed his willingness to invite Xiao Kou to work
 for Changchun Film Studio" [D13]

As *Kou* is the topic in propositions 1-2 in (82), establishing *Wang* as the new topic from proposition 4 takes the form of a full NP in subject position. Thus the occurrence of pronominal anaphors in object position in the S-O coreference is attributable to the topic role of their antecedent NPs.

How then does the factor of topicality account for the occurrence of NA in the S-O coreference? In (83), the NP *Li Guangqian* occurs as subject in proposition 1 in which another NP *Chen Jiageng* occurs in the PP. The NP *Chen Jiageng*, while a non-topic in

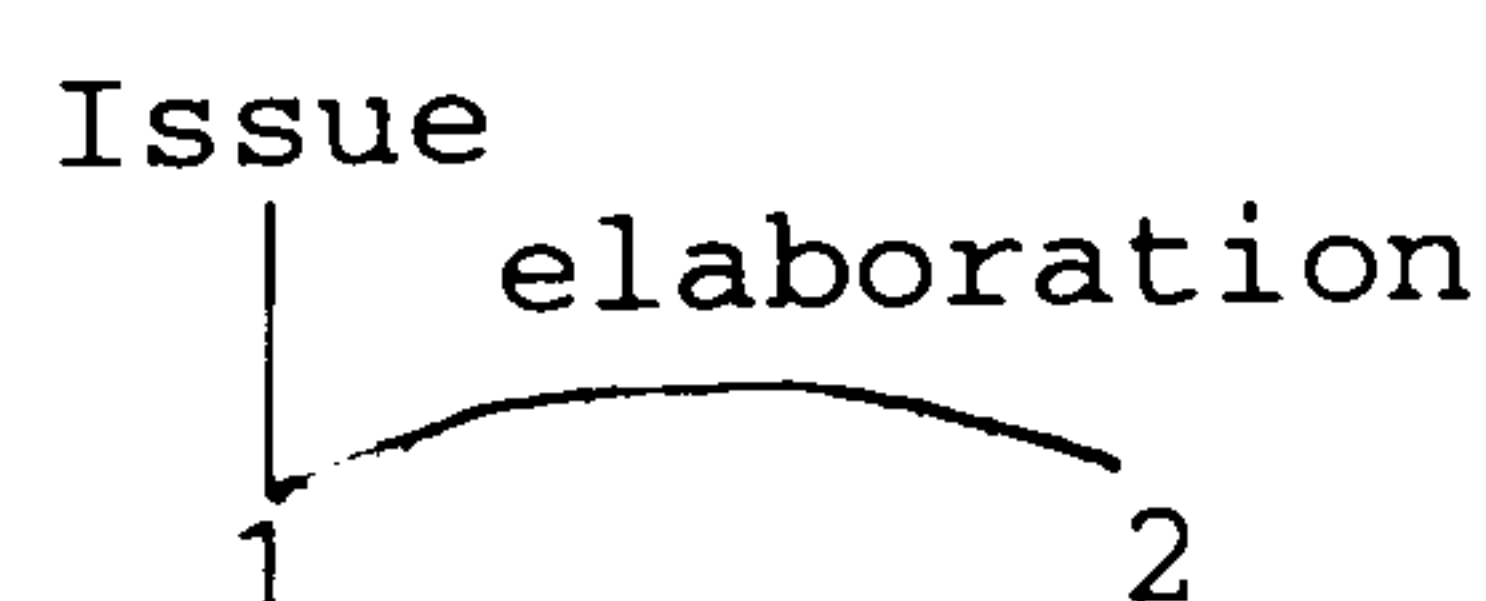
proposition 1, takes over the topic role from the NP *Li Guangqian* by being referred to as subject in proposition 2. This take-over makes the previous topic *Li Guangqian* a non-topic and consequently its mention in the object position of proposition 2 is expressed with a full NP. The occurrence of NA in (84) exhibits the same pattern. That is, the NP *Ma Sicong*, by being the subject, is assigned a topic role in propositions 1 and 2 where a different NP *Huang Yijun* occurs as object. These two NPs assume each other's discourse role by swopping their syntactic positions in proposition 3. *Huang Yijun* now becomes the new discourse topic. Being a non-topic, the mention of *Ma Sicong* in the object position of proposition 3 is realised by a full NP. Thus the distribution of nominal anaphors in object position in the S-O chain is explainable by their antecedents changing from the topic to a non-topic.

On the basis of the analysis of the examples in (81) through (84), it can be said that whether an object anaphor coreferential with the subject antecedent of the preceding proposition takes the form of PA or NA depends on its topic status. That is, if it continues to be the topic the anaphor is pronominal; if it ceases to be the topic, i.e. its topic role being usurped by another NP, the anaphor is nominal. This is restated in (86).

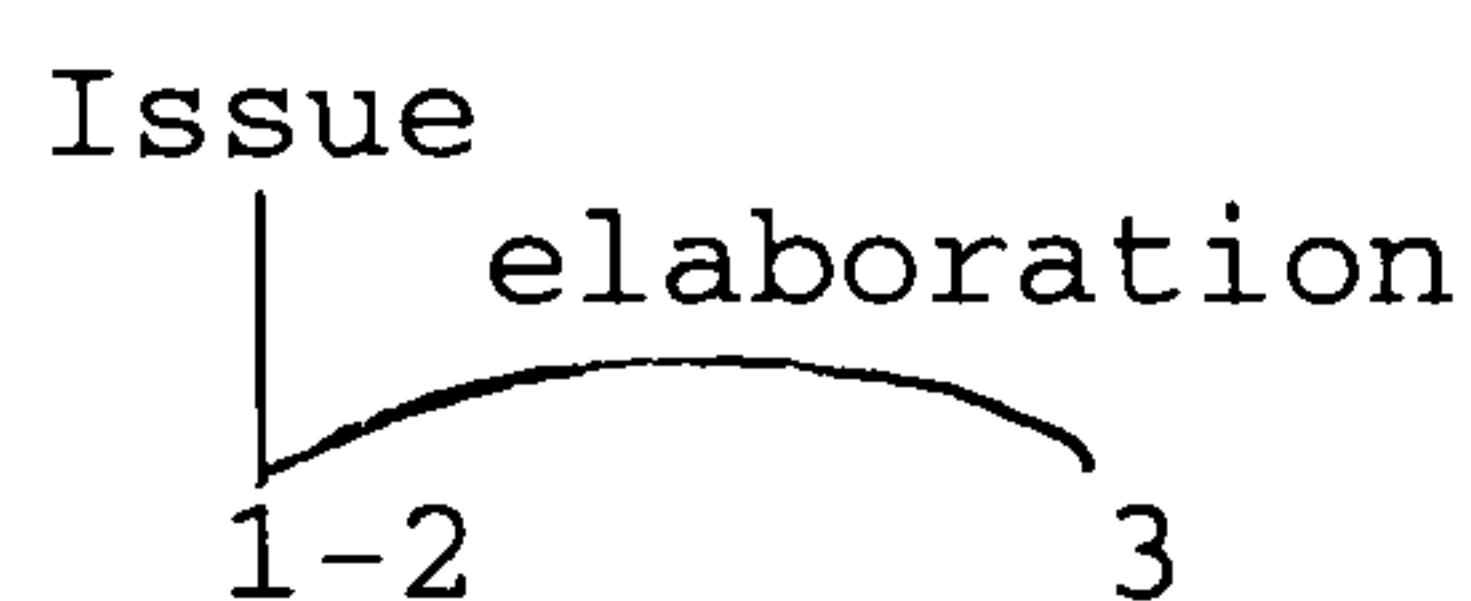
(86) In an active pattern PA is used for an object anaphor coreferential with a subject antecedent if it continues its topic role, otherwise NA is used.

This pattern holds across all 47 instances of anaphora. All 36 instances of PA occur where the referent holds the topic role, as described by (81) and (82) above and all 11 instances of NA occur where the referent discontinues its topic role, as described by (83) and (84). Below I give another two examples to demonstrate this contrast.

- (87) 1. Li Guangqian zui rexinde shi xingban jiaoyu shiye.
 most enthusiastic is develop educational cause
 "Li Guangqian was most enthusiastic in developing education"
2. Xinjiapo de Malaiya Daxue, Nanyang Daxue dou
 Singapore's Malaya University Nanyang University both
 dedao tade jukuan juanzhu.
 receive his heavy-fund donation
 "The University of Malaya and Nanyang University in Singapore
 both received substantial donations from him" [D7]



- (88) 1. Wang tuanzhang dui Xiao Kou de diyi yinxiang powei manyi,
 Director Wang to first impression very satisfactory
 "Director Wang was impressed by Xiao Kou"
2. 0 dangchang tiaoming yao Xiao Kou qu Changyingchang.
 on-spot say want go-to Changying-factory
 "(he) expressed his willingness to invite Xiao Kou
 to work for Changchun Film Studio"
3. Kou Zhenhai shifen yukuaide jieshoule Wang tuanzhangde yaoqing.
 very gladly accept Director Wang's invitation
 "Kou Zhenhai accepted Director Wang's invitation
 with delight" [D13]



In (87) the NP *Li Guangqian* is first mentioned via a full NP in the subject position of proposition 1 and then mentioned via a pronoun inside the object NP of the following proposition. The second mention of *Li Guangqian* takes the form of PA since this NP is the topic of the discourse. In (88) the NP *Director Wang* occurs as subject in propositions 1 and 2 and then occurs as part of the object NP in proposition 3. The object anaphor in proposition 3 is realised by a full NP as a result of its topic role being taken over by the NP *Kou Zhenhai* in the subject position of its proposition which previously appeared in the object position of the preceding two propositions.

It should be emphasised that in the data the 11 instances of NA for the object anaphor all occur in a situation in which its topic role is taken over by the subject NP of its proposition that is coreferential with an NP occurring in the post-verbal position of the preceding proposition as shown in (83), (84) and (88) while the 36 instances of PA for the object anaphor occur in a situation in which the subject NP of its proposition does not have a prior mention in the preceding proposition containing the antecedent of the object anaphor. This suggests that the initial occurrence of an NP as subject in the context of an established topic is not likely to usurp the role of that topic unless it is already mentioned in the preceding proposition (e.g. as object). In other words, to be established as a new topic, an NP is expected to have a second appearance in subject position.

Some accounts of anaphora such as Givon (1983) and Chen (1986) suggest that ambiguity caused by presence of other NPs in the discourse is a major contributing factor to the occurrence of NA. We have observed in examples (83), (84) and (88)

where NA was used for object anaphors that ambiguity may not be a deciding factor, because if all the NAs were replaced by PAs, there would be no ambiguity whatever, as shown in (89) (which is based on (88)).

- (89) 1. Wang tuanzhang dui Xiao Kou de diyi yinxiang powei manyi,
Director Wang to first impression very satisfactory
"Director Wang was impressed by Xiao Kou"
2. 0 dangchang tiaoming yao Xiao Kou qu Changyingchang.
on-spot say want go-to Changying-factory
"(he) expressed his willingness to invite Xiao Kou to work
for Changchun Film Studio"
3. Kou Zhenhai shifen yukuaide jieshoule tade yaoqing
very gladly accept his invitation
"Kou Zhenhai accepted his invitation with delight" [D13]

The use of PA in proposition 3 would not give rise to any ambiguity as to its identity because its possible coreference with the subject *Kou Zhenhai* is ruled out syntactically by Binding Principle B and pragmatically by the fact that one cannot under normal situation invite oneself. Thus, the choice between PA and NA here is made on the basis of the referent's topic role in the discourse, or the speaker/writer's view of the referent's topic role in the discourse: the use of PA here would suggest that the referent is still the discourse topic whereas the use of NA would suggest that the referent has now ceased to be the discourse topic.

4.3.3.3 The O-S pattern

This coreference pattern is the reverse of the previous S-O pattern. Here, the antecedent occurs in object or post-verbal position, its anaphor being subject of the immediately following proposition, as exemplified in (90).

- (90) 1. Zhuguan zhe-liangjia qiye de shi nian-fang-sanshijiusui-de
in-charge-of these two firms is age 39 year old
nongmin Xu Fumin,
farmer Xu Fumin
"The person in charge of these two firms is thirty-nine
year-old farmer Xu Fumin"
2. ta shi Hebang yu gong shang lianhe qiye de zongjingli.
he is Hebang fish industry sales corporation general manager
"He is the general manager of the Hebang Fish Processing
and Sales Corporation" [D34]

The pronominal anaphor occurs in the subject position of proposition 2 coreferential with the antecedent NP in the object position of the preceding proposition. The

occurrence of anaphoric expressions in this pattern in the corpus is presented in the table in (91).

(91) Table 7: Distribution of Anaphora in the O-S Coreference Pattern

Type	Adjunct-nucleus	Nucleus-adjunct	Nucleus-nucleus	Total
ZA	0	0	0	0
PA	6 (6/0) 37.5% 67%	10 (3/7) 62.5% 43%	0	16 (9/7) 50%
NA	3 (3/0) 19% 33%	13 (4/9) 81% 57%	0	16 (7/9) 50%
Total	9 (9/0) 28%	23 (7/16) 72%	0	32 (16/16)

The table shows that there are 16 instances of PA in the O-S pattern, 6 of these occurring in the adjunct-nucleus structure, and the rest occurring in the nucleus-adjunct structure. There are also 16 instances of NA, with 3 instances occurring in the adjunct-nucleus structure and 13 instances in the nucleus-adjunct structure. Like the S-O coreference pattern the nucleus-nucleus structure does not show any instances of anaphora³², and ZA does not occur in any of the structures.³³ In the following, we examine the use of anaphora in this pattern. Consider the example in (92).

³²The reason for the absence of anaphoric expressions here seems to be the same as the one given for the non-occurrence of anaphors in the nucleus-nucleus structure in the S-O coreference chain. That is, the coordinated structures constrain the coreference possibilities such that the anaphor stays in the same syntactic role as its antecedent. This is a clear case in which discourse structures (represented by rhetorical predicates here) dictate the use of anaphora (also see the discussion in relation to Table 6 in (80)).

³³There is a type of structure in which ZA is possible, as shown below:

1. Shanwai laile yiqun zuojia,
mountain-outside come a-group-of writers
"From outside of the mountains came a group of writers"

2. Q fadong sheyuan xie shige.
mobilise commune-members write poems

"(they) mobilised the commune members and taught them to write poems"

This is the so-called presentative or descriptive sentence. Here ZA encodes the subject anaphor coreferential with the antecedent in post-verbal/object position of the preceding proposition. A presentative or descriptive sentence, generally speaking, provides a means for introducing a new NP for further discussion. This creates a high expectation that the NP will get talked about in the succeeding discourse. As a result the following mention(s) of the NP may take the form of ZA. It should be noted however that in my expository texts, I did not find any instances of presentative or descriptive sentences associated with the use of ZA. The reason may be that this type of construction usually occurs in narrative or literary texts rather than the expository texts such as used as data for this study.

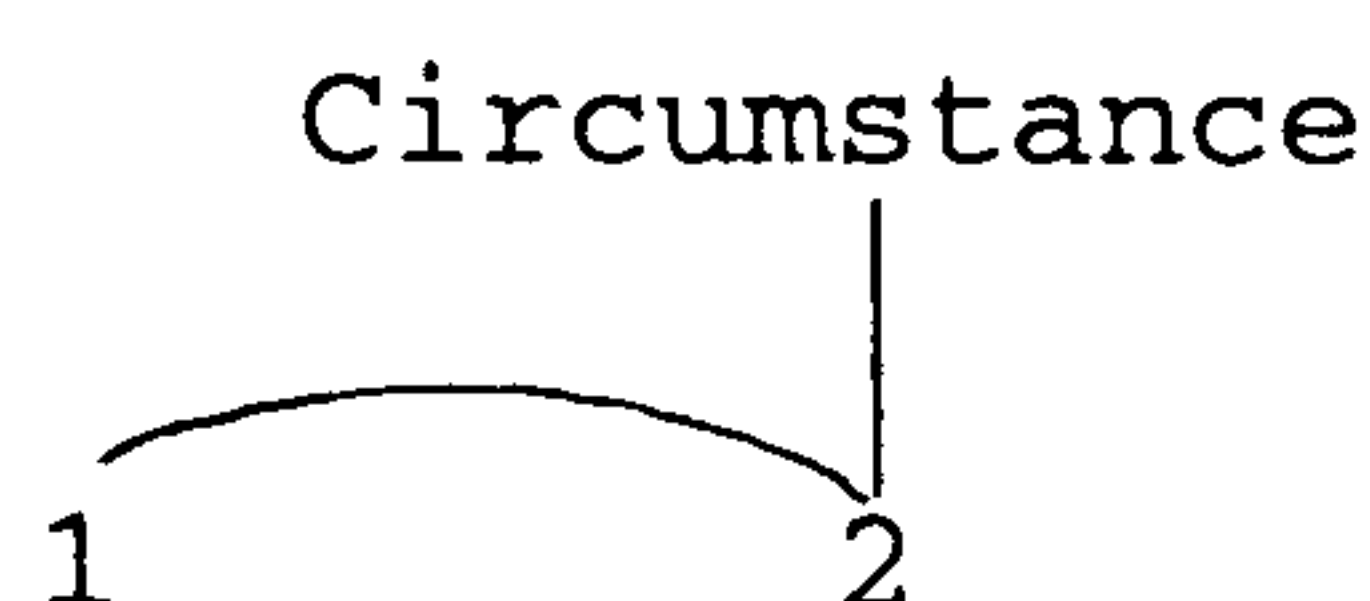
- (92) 1. Dang wendao chenwen, wenjingde Zhou Ting,
when ask gentle quiet

nide laoshi zuida tedian shi shenme,
your teacher biggest feature is what

"When (I) asked Zhou Ting, who was gentle and quiet, what he thought was the main characteristic of his teacher"

2. ta bujia-sisuode tukou-erchu, ...
he without-thinking open-mouth-and-say
"he answered without thinking that ..."

[D40]



Here, the anaphor is in subject position coreferential with the antecedent NP in the object position of the preceding proposition and is realised as PA. The same pattern of coreference takes place in the following example where the object antecedent is mentioned via PA in subject position in the preceding proposition.³⁴

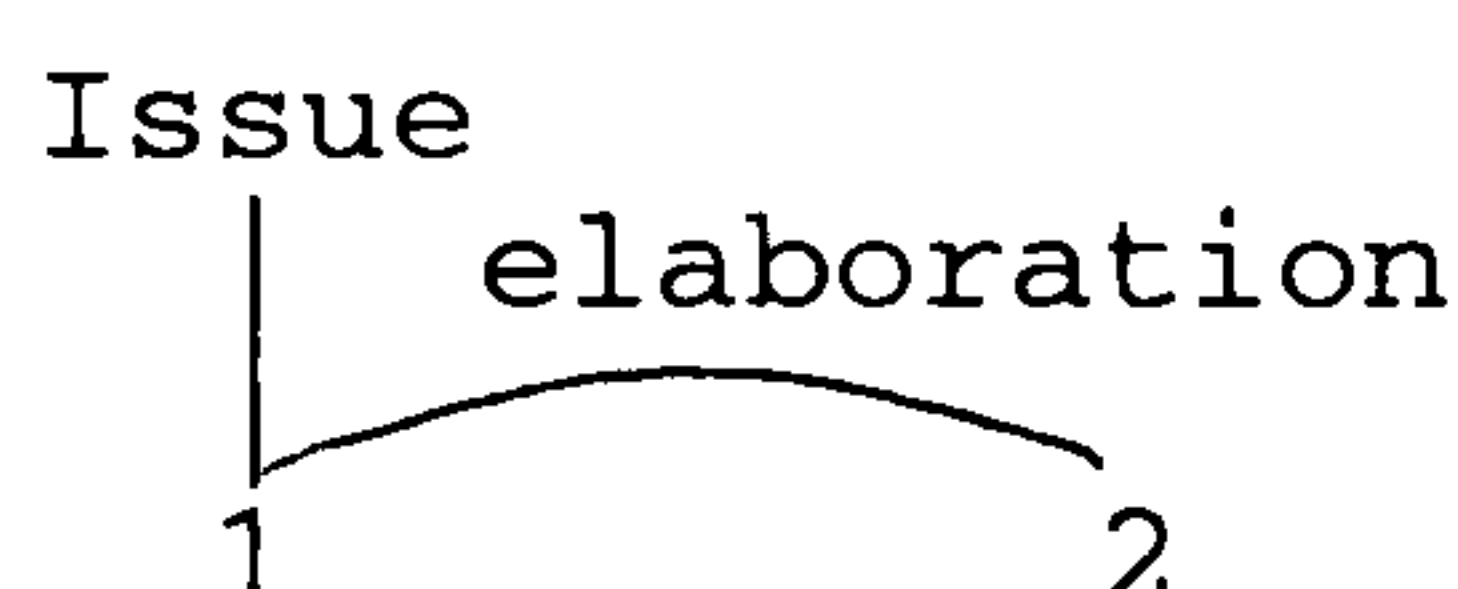
- (93) 1. Mingyun zhongyu jiang Teng Wenji he Wu Tianming ...
fate finally BA Teng Wenji and Wu Tianming

tuishangle daoyan de baozuo.
push-into director's throne

"Fate had at last pushed Teng Wenji and Wu Tianming onto the throne of film director"

2. Zheshi, taliang dou yi jin buhuo-zhinian.
at this time they both already approach their-forties
"They were by then near their forties"

[D31]



The examples in (92) and (93) demonstrate that PA may be used for a subject anaphor coindexed with the object NP in the preceding proposition. The anaphor in this coreference chain can, however, take the form of a full NP, as shown in (94) and (95).³⁵

- (94) 1. Wang tuanzhang dui Xiao Kou de diyi yinxiang powei manyi,
Director Wang to first impression very satisfactory
"Director Wang was impressed by Xiao Kou"

³⁴This is a *ba*-sentence in which the direct object is placed immediately after the preposition *ba* (or its variants, such as the present one, *jiang*) and before the verb. Since, as noted earlier, the object antecedent/anaphor in this study includes both verbal and prepositional objects, the NP after *ba* in a *ba* sentence is treated as such.

³⁵These two examples occurred previously as (88) and (84) in the preceding section on the S-O coreference pattern.

2. 0 dangchang tiaoming yao Xiao Kou qu Changyingchang.
 on-spot say want go-to Changying-factory
 "(he) expressed his willingness to invite Xiao Kou to work
 for Changchun Film Studio"
3. Kou Zhenhai shifen yukuaide jieshoule Wang tuanzhang de
 very gladly accept Director Wang's
 yaoqing.
 invitation
 "Kou Zhenhai accepted Wang's invitation with delight" [D13]

In this passage, the anaphor occurs as subject of proposition 3 and takes the form of a full NP, its antecedent occurring as object of the preceding proposition.

- (95) 1. Ma Sicong xihuan yu Huang Yiyun hezuo,
 like with cooperation
 "Ma Sicong enjoyed his cooperation with Huang Yiyun"
2. 0 chang ba zijide zuopin xian jiaogei Huang Yiyun paiyan
 often BA his work first give perform
 "He often gave his new work to Huang Yiyun to direct first"
3. Zai Huang Yiyun zhuchi he zhihui xia, tuan-nei
 at charge and direct under troupe-in
 duoci paiyanle Ma Sicong de zuopin
 many-times perform work
 "Directed by Huang Yiyun, the troupe staged Ma Sicong's
 work on many occasions" [D37]

This example shows a similar pattern to (94), in which the anaphor in the subject position of proposition 3 is coindexed with the antecedent *Huang Yiyun* in the object position of the preceding proposition and is encoded in NA. Note that in both (94) and (95), a different NP occurs in the subject position of propositions 1 and 2.

Now, with both types of anaphora occurring here, it is legitimate to ask what it is that gives rise to their choice. If we look at (92) we see that the object (the antecedent) occurs in a proposition whose subject is the empty first-person NP. And in (93) the proposition containing the object antecedent has a subject expressed by an abstract noun (i.e. "fate").³⁶ In other words, in these two examples it is not the subject but the object that is the focus or topic of their discourses. In (94) on the other hand, the object NP (the antecedent) appears in a proposition with a subject which is the same type as the object (i.e. third-person human nouns). The same is true of (95). In other words, the object NPs in (94) and (95) are not the topic of their discourses because the subject NPs are more likely to serve as the topic of discourse.

³⁶Since I am in this study dealing with third-person humans, nouns other than this category are not considered as competing for antecedence.

The above analysis suggests that the choice between PA and NA in the O-S pattern depends crucially on the role of the antecedent NP in the discourse. PA occurs if its antecedent is the topic of the discourse and NA occurs if its antecedent is a non-topic. Let us consider another pair of examples for this contrast:

- (96) 1. Ruo wen Li Xiaolong daxue biye hou zuo he dasuan,
 if ask university leave after do what plan
 "If (you) ask Li Xiaolong about his plan after graduating
 from university"
2. ta hui haobu-youyude huida, ...
 he will without-hesitating answer
 "he will answer you without hesitating that ..." [D11]
- (97) 1. Xilali lale Kelindun yiba,
 Hilary pull Clinton a-pull
 "Hilary helped Clinton"
2. Q baozhule Kelindun de zhengzhi shengming.
 save political life
 "(she) saved Clinton's political life"
3. Xianzai Kelindun jiangshan yiding,
 now river-mountain gained
 "Now Clinton has won the White House"
4. Xilali zhewei diyi-furen kaishi hua'an-weiming.
 this first-lady begin from-dark-to-light
 "Hilary, the First Lady, is coming out of shadow and
 beginning to shine" [D42]

In (96) the antecedent is object of the first proposition and its next mention as subject of the second proposition is encoded in PA. Note that the subject of proposition 1 is an empty second person pronoun and thus clearly the object NP serves as the topic, which leads to its next mention being done with PA. In (97) the anaphor in the subject position of proposition 3 co-refers with the object of proposition 2. The subject anaphor takes the form of a full NP since its antecedent is not the topic of the discourse (it is the subject NP of its proposition that is).

As we have seen in the S-O pattern, the antecedent NP, by being subject of its proposition, is most likely to become the topic. If this topic role continues in the following discourse, its subsequent reference takes the form of PA; if not, that is, if its topic role is taken over by another NP that occurs in-between, its next mention takes the form of NA.³⁷ The latter case that involves the use of NA is actually related to our present concern: the O-S pattern. This means that the use of NA for a subject anaphor

³⁷The intervening NP is usually mentioned twice, with the second mention being in subject position, to establish it as a new topic.

coreferential with a preceding object antecedent has the function of establishing it as a new topic. This is clearly shown by the example in (98).

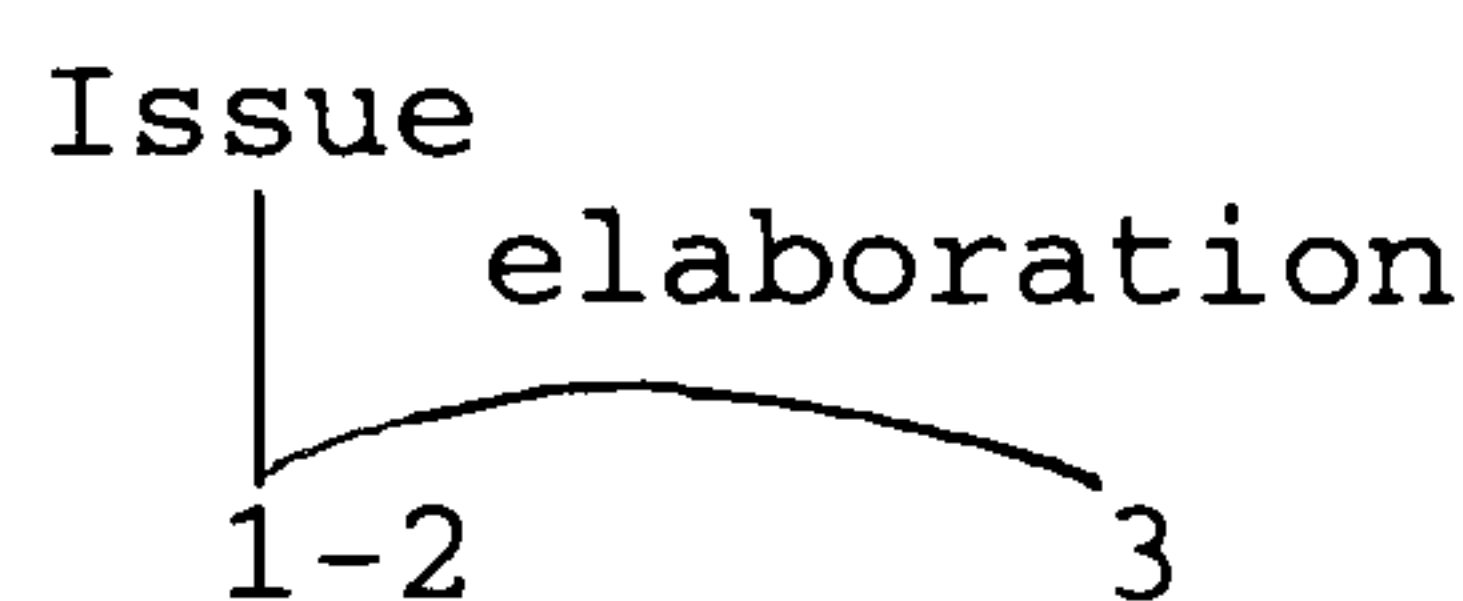
- (98) 1. Yijiuyiliu-nian, Li Guangqian jing Zhuang Xiquan de
 in 1916 through Zhuang Xiquan's
 tuijian wei Chen Jiageng pinyong.
 recommendation by engage
 "In 1916, Li Guangqian, recommended by Zhuang Xiquan, was
 engaged by Chen Jiageng"
2. Chen Jiageng powei xinshang Li Guangqian de
 very appreciate Li Guangqian's
 nengli he caihua,
 ability and talent
 "As Chen Jiageng very much appreciated Li Guangqian's
 ability and talent"
3. 0 bujiu jiu tisheng ta wei jingli.
 soon then promote him as manager
 "(he) promoted him manager before long" [D7]

The NP *Chen Jiageng* occurs as a prepositional object in proposition 1 and its next mention which is expressed with a full NP occurs as subject in the following proposition. The use of NA here is the result of its antecedent being a non-topic but its very occurrence also accomplishes the change of topic role and establishes it as the new topic. This shift of topic role is evidenced by the zero reference to the new topic in the subject position of proposition 3, and the nominal reference to the old topic NP in the object position of proposition 2.

In the corpus, there are 16 instances in which a subject anaphor refers back to an object antecedent in the preceding proposition that does not have a phonetically realised subject (as in (92)) or only has a nonhuman subject (as in (93)). In all these 16 cases PA is used. There are another 16 occurrences in which a subject anaphor co-refers with an object antecedent in the preceding proposition whose subject is the same type as the object (i.e. third-person humans) (as in (94) and (95)). In all these 16 occurrences NA is used. If we consider in terms of the factor of topicality, a possible account for the choice of PA and NA in the O-S pattern takes the form given in (99).

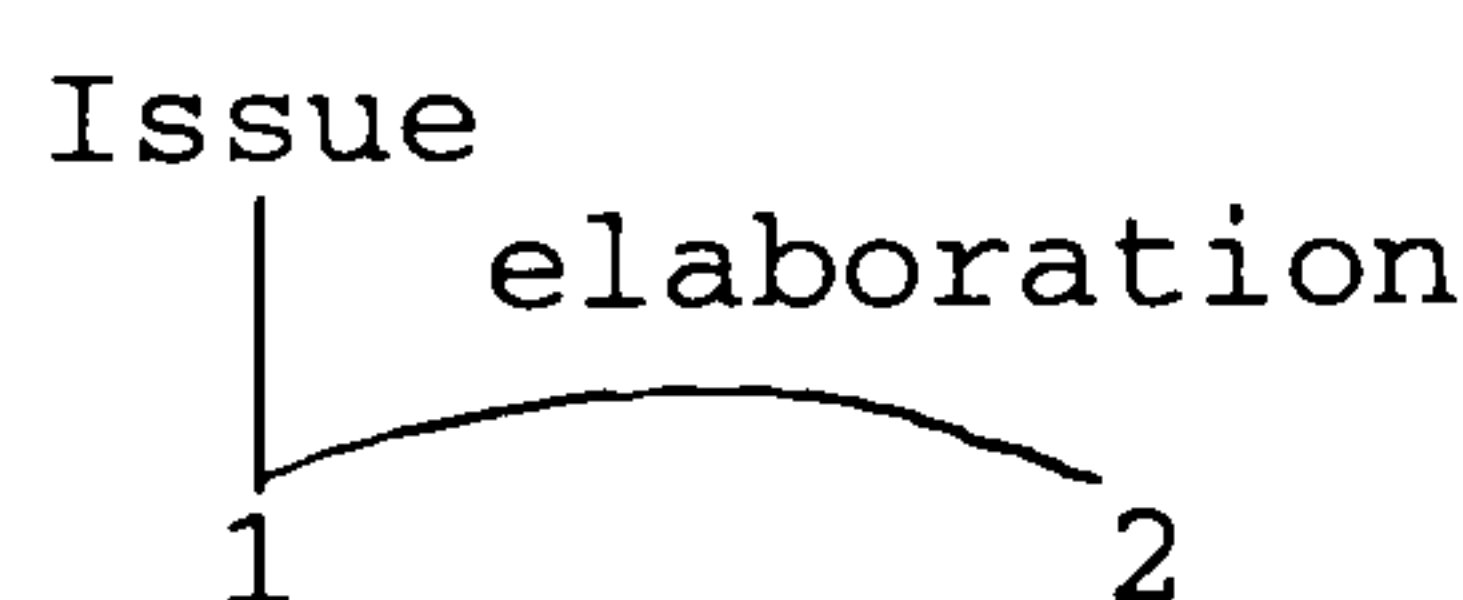
- (99) In an active pattern PA is used for a subject anaphor coreferential with an object antecedent if the antecedent is the topic of the discourse, otherwise NA is used.

- (102) 1. 1978-nian Shanghai Diaying Zhipianchang paishe Aolei-Yilan,
in 1978 Shanghai film studio produce Aolei-Yilan
"When the Shanghai Film Studio was producing the film
'Aolei-Yilan' in 1978"
2. Tang Xiaodan daoyan ba ta diaoqu yan zhujiao.
director BA him transfer play main role
"Tang Xiaodan, director of the film, invited him to play the
leading role in the film"
3. Zhe shi tade yige jiyu.³⁸
this is his one opportunity
"This was an opportunity for him" [D13]



Here the antecedent NP *ta* "he" occurs after the preposition *ba* in proposition 2 and the anaphor occurs inside a post-verbal NP and takes the form of PA. The NP *Director Tang Xiaodan* occurs in the subject position of proposition 2 in which the relevant antecedent occurs in object position. But this subject NP is not the topic of the discourse since there is no previous nor subsequent mention of it in the discourse. The object NP on the other hand continues its role as the topic from the previous discourse (where it was mentioned as subject all along) and is mentioned in the following discourse (proposition 3) as well. Therefore the object NP serves as the topic of the discourse, which is apparently a trigger for the PA in proposition 3.³⁹ In (103) below, the object anaphor also takes the form of PA.

- (103) 1. 1982-nian, ta mianfei zhaoshou sanshiming nannu xueyuan
in 1982 he free-of-charge enrol 30-male-female-trainee
jianli juzhongdui.
set-up weight-lifting team
"He enrolled 30 trainees without charging them fees and set
up a weight-lifting team in 1982"
2. Ta dui tamen jinxing yan'gede xunlian.
he to them give strict training
"He gave them a very strict training" [D4]



The pronominal anaphor occurs in the PP of proposition 2 coreferential with the

³⁸As mentioned in a previous footnote, ZA is impossible before *de*, the possessive marker, so the contrast here is between PA and NA.

³⁹This seems to be consistent with the occurrence of PA in the S-O and O-S coreference chains, where its occurrence is sanctioned by its topic role in the discourse.

This example follows the same pattern as the previous ones in that the object anaphor takes its reference from the preceding object antecedent and is realised as PA. Note that in this example we have an instance of PA in object position as well as an instance of ZA in subject position. We may look at the two instances of anaphora from the syntactic perspective. According to the standard binding theory, the zero subject and the pronominal object cannot be coreferential with each other as each must be free in its governing category. As two NPs are present in the preceding proposition, we must decide which is coreferential with which. If we proceed from the discourse considerations proposed in this study, the zero subject is to be coindexed with the subject antecedent because of the principle (55); if it was coreferential with the object antecedent, then NA would be needed because, according to the principle (99), for a non-topic object to take over the topic role from another NP and to establish it as the topic, NA is required. The principle (99) also rules out the possibility of the object pronominal anaphor being coreferential with the subject antecedent because that would leave the zero anaphor in subject position no other choice but to be coreferential with the non-topic object antecedent, which is clearly rejected by (99). Once we have got the subject anaphor sorted out, the coreference between the object anaphor and the object antecedent and the use of PA for the anaphor is a natural interpretation.

It should be pointed out that in my data most of the PAs in object position whose antecedents were non-topics were accompanied by antecedent-anaphor parallelism in subject position with the subject anaphor in the form of ZA, as illustrated in (104).⁴⁰ The parallelism at subject position may play a role in signalling and facilitating the interpretation of the antecedent-anaphor parallelism at object position, thus contributing indirectly to the pronominalisation of the object NP. Thus, from a discourse point of view, by employing ZA for the subject and PA for the object, the writer/speaker displays to the reader/hearer that their antecedents are to be identified with the NPs with identical grammatical roles in the preceding discourse.

The occurrence of NA in this coreference pattern, however, is not impossible, as

⁴⁰I did not introduce the antecedent-anaphor parallelism in the S-S pattern because the antecedent in subject position is the topic and hence its next mention in subject position takes the form of ZA or PA depending on the structural environment and thus there is no need to invoke an additional parameter that does not really help to account for the alternation of ZA and PA.

shown in (105).

- (105) 1. Xilali lale Kelindun yiba,
 pull a-pull
 "Hilary helped Clinton"
2. 0 baozhule Kelindun de zhengzhi shengming.
 save political life
 "(she) saved Clinton's political life" [D42]

The NP *Clinton* is first mentioned in the object position of proposition 1 and then mentioned in the object position of proposition 2, which takes the form of a full NP. There are 6 instances of NA in the corpus that occur in similar environments to (105). Following are two further examples of this type.

- (106) 1. Ta budan guli Xuke guangfan shelie xiyang yinyue,
 he not only encourage extensive study western music
 "He not only encouraged Xuke to make an extensive study of
 Western music"
2. 0 ergie jiao Xuke xuexi shufa, huihua.
 also teach study calligraphy painting
 "(he) also taught Xuke to study calligraphy and painting" [D3]
- (107) 1. Wang Tuanzhang dui Xiao Kou de diyi yinxiang powei manyi,
 Director Wang to first impression very satisfactory
 "Director Wang was impressed by Xiao Kou"
2. 0 dangchang tiaoming yao Xiao Kou qu Changyingchang.
 on-spot say want go-to Changying-factory
 "(he) expressed his willingness to invite Xiao Kou to work
 for Changchun Film Studio" [D13]

(106) and (107) are exactly like (105) in that they are both characterised by the antecedent-anaphor parallelism in both subject and object position and that the anaphor in object position in them takes the form of a full NP. These examples show that NA is possible here. However, since the use of PA has been shown to be sufficient, how are we to account for the occurrence of NA here? It appears that the NA is used to show explicitly the non-topic status of the NP so as to give more prominence to the NP in subject position. In other words, by using an NA in the context of coreferential objects, the writer/speaker displays to the reader/hearer that the NP is being kept out of the topic role in the relevant discourse.

There may be various reasons for so doing. For example, NA may be used when a new NP is introduced into the discourse in an indefinite form and remains of an indefinite status for the time being, or NA may be used to achieve certain effects such as comparison or contrast, or NA may be used to give more profile to the topic NP in

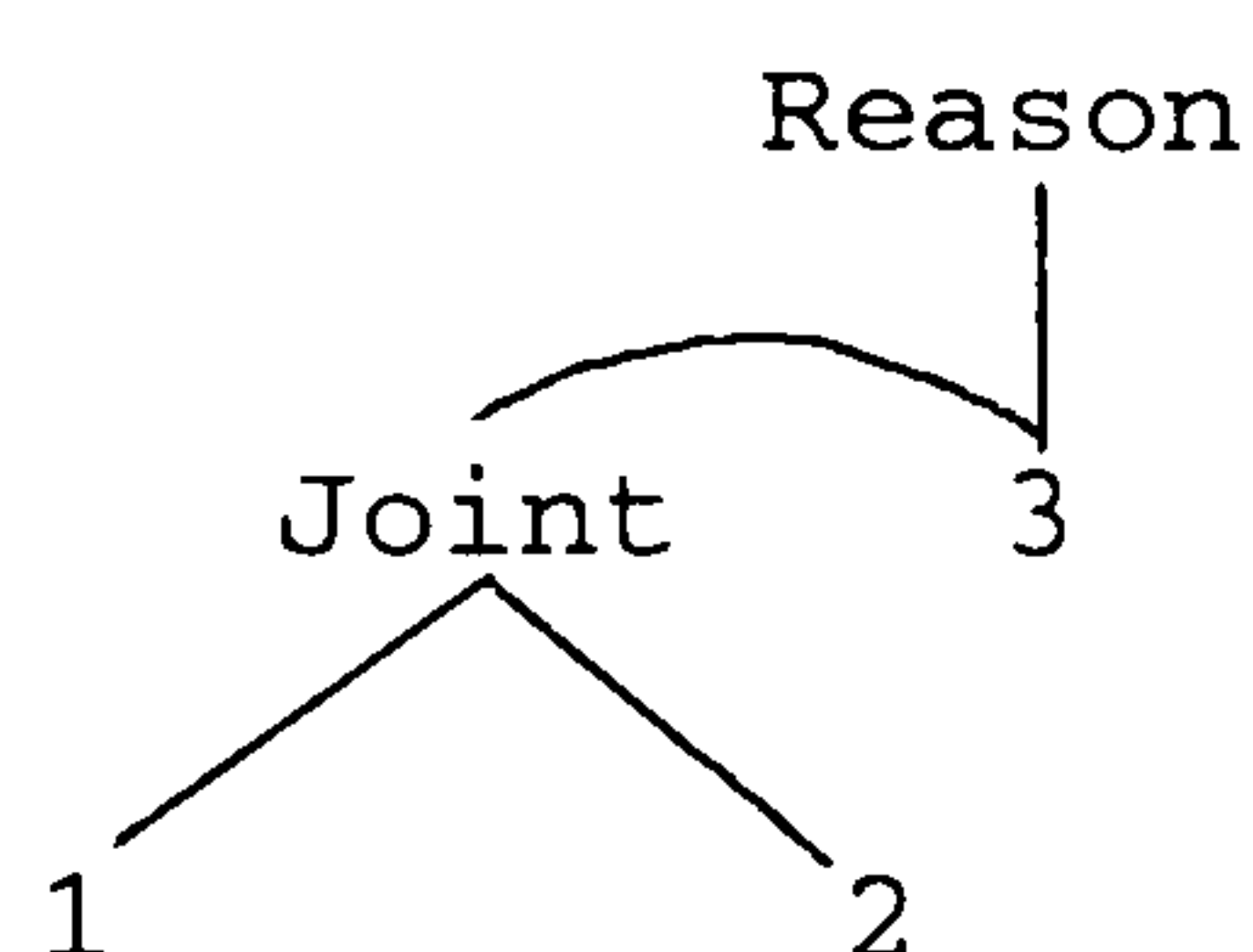
Our discussion has also shown that while the distinction between intra- and inter-sentential structures has some effect on the use of anaphora (for example, ZA tends to occur in sentences whereas PA tends to occur across sentences), rhetorical predicates bear more significantly on anaphora. The fact that PA occurs in Issue predicates irrespective of intra/inter-sentence structures is a clear case for rhetorical predicates. More crucially, rhetorical predicates cover not only intra-sentence structures but also inter-sentence structures.

Furthermore, it has been found that the topical status of the referent in the discourse is another important factor that has a bearing on anaphora. It was demonstrated that in the S-S pattern ZA occurs in non-Issue predicates and PA occurs in Issue predicates if the referent serves as the topic of the discourse, otherwise NA occurs. In the S-O pattern, PA occurs if it continues the topic role, otherwise NA occurs. In the O-S pattern, PA occurs if the referent serves as the topic, otherwise NA occurs. And in the O-O pattern, PA generally occurs as a result of the antecedent-anaphor parallelism unless it is intended to show explicitly a non-topic role of the referent, in which case NA occurs. These findings clearly indicate that the topic status or the level of prominence of the NP in a currently processed rhetorical predicate is a crucial factor in determining anaphoric choice.

Our analysis has thus shown that notions of recency and ambiguity are basically irrelevant to anaphoric patterning in discourse, since, as we have seen, NA occurs even when the distance between two mentions of an NP is zero and ZA or PA occurs even when other NPs are present in the discourse. Thus, the present analysis, which is based on the qualitative analysis supported by quantitative analysis, provides a better account for anaphora in discourse.

ZA occurs in proposition 3 since both the anaphor and its pronominal antecedent are mentioned as subjects in their propositions (2 and 3) in a Joint predicate. We will look at another example which shows a sequence of two active predicates.

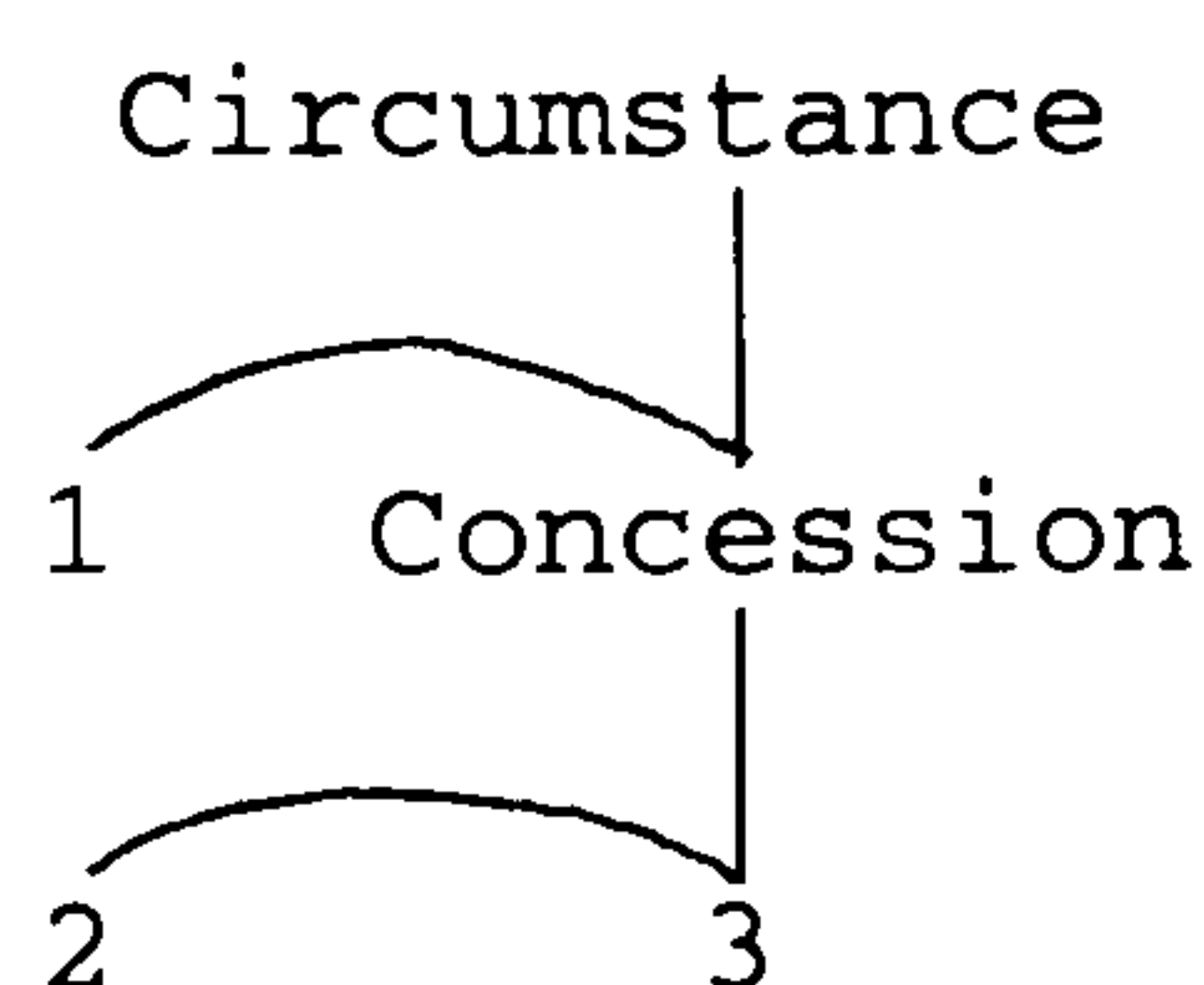
- (2) 1. Kou Zhenhai bujin yanguo huaju pingju geju,
 not only act modern drama, pingju opera
 "Kou Zhenhai has not only played modern drama, pingju and opera"
2. 0 ye yanguo difangju he quyì,
 also play local-opera and quyì
 "but (he) has also played local opera and quyì"
3. 0 keyishuo shi yishushangde yige "zajia".
 can be said is artistically a mixture
 "therefore (he) can be regarded as a versatile actor" [D13]



The first member of the embedded Joint predicate (proposition 1) is active relative to the second member of the predicate (proposition 2), which is active relative to the nucleus of the Reason predicate (proposition 3). The ZA in proposition 2 which takes its reference from the subject NP of the preceding proposition is accountable for by the principle (68) (i.e. both mentions of the NP are subjects of their propositions in a conjoining predicate) and the ZA in proposition 3 which is coreferential with the subject NP of proposition 2 (whose referent has been established by this time) is accountable for by the principle (55) in Chapter 4 which predicts that ZA is used in an adjoining predicate with coreferential subjects that are proposition-initial. Repeated application of the principles determining active patterns thus works well for cases like (1) and (2).

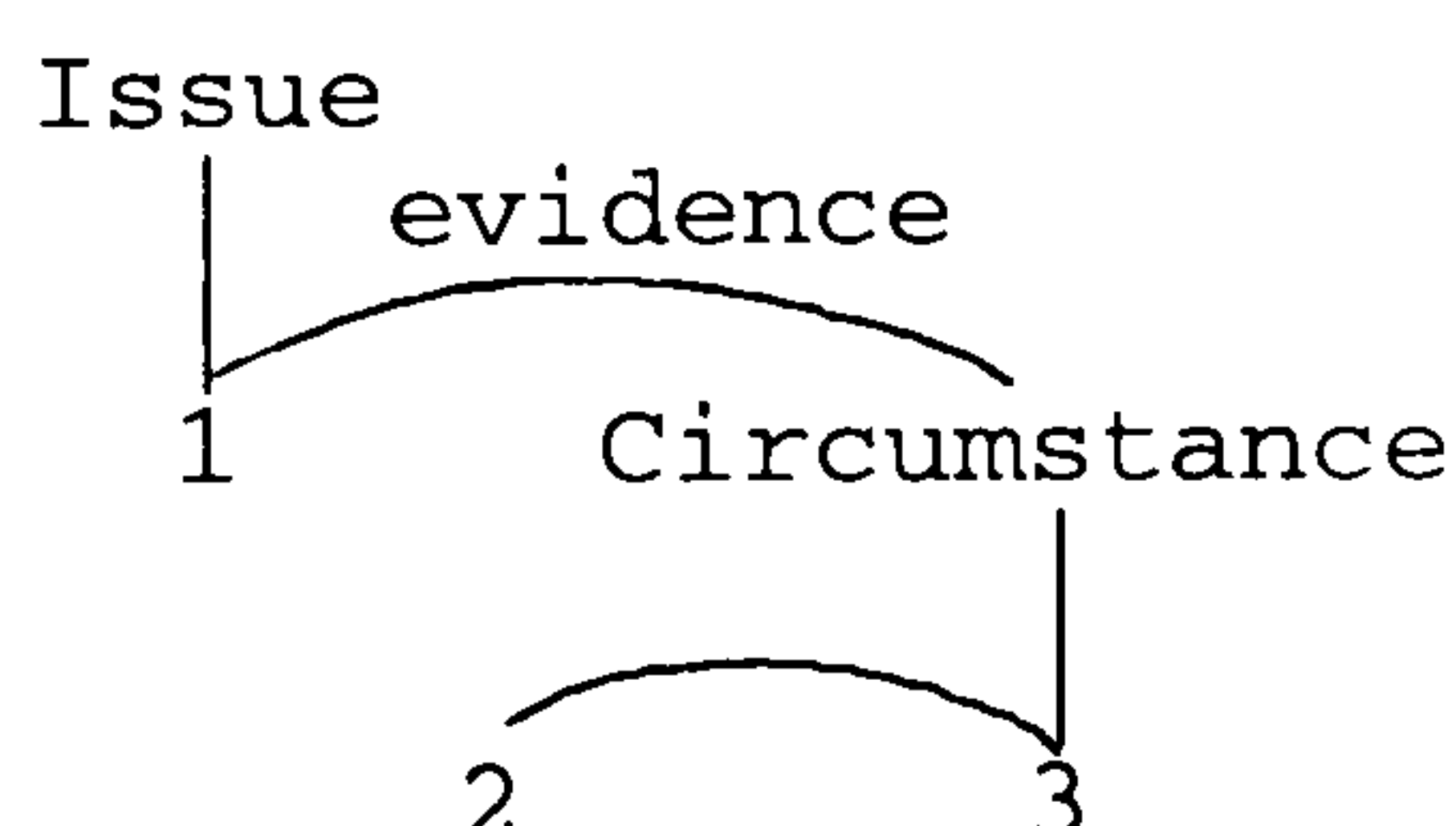
However, we can also find cases which are counter-examples to these principles, as illustrated in (3).

- (3) 1. Ta tingde yu ziji butongde yijian,
 he hear from own different opinion
 "When he heard opinions different from his own"
2. jishi shi putong ganbu huo qunzhong jiang de,
 even-if is ordinary cadre or masses say
 "even if they were from ordinary cadres or the masses"
3. 0 dou neng renzhen kaolü.
 all can seriously consider
 "(he) would take them seriously" [D12]



As in the previous examples, proposition 1, the adjunct of the Circumstance predicate, is active with respect to proposition 2, the adjunct of the embedded Concession predicate, and proposition 2 is active with respect to proposition 3, the embedded nucleus. However, since the antecedent for the ZA in proposition 3 occurs in proposition 1, but not in its active proposition (2), the principles governing active patterns do not work here: the anaphor must look for its antecedent outside of the active domain for coreference. The passage in (4) below demonstrates the same point, where the antecedent for the object anaphor *ta* "he" in proposition 3 is not in its active proposition (2), but rather in proposition 1, outside of the active domain.

- (4) 1. Yan Binsheng Xiansheng degao-wangzhong.
 Mr Yan Binsheng reputation-high-prestige-heavy
 "Mr Yan Binsheng enjoyed high prestige and reputation"
2. Yijiubasi-nian Xianggang Yongchun tongyanghui chengli,
 in 1984 HK Yongchun fellow-countrymen-association set-up
 "When the Hong Kong Association of Yongchun Fellow Countrymen
 was founded in 1984"
3. zongxiangqin tuixuan ta wei lishizhang.
 fellow-countrymen elect him as president
 "he was elected president of the Association" [D5]



Examples like (3) and (4) demonstrate that there are patterns of anaphoric choice which can only be explained if we extend the domain of antecedent/anaphor choice beyond adjacent clauses. This leads us to propose Controlling patterns.

A controlling pattern is a type of structural relation that is derivative of the controlling status of the propositions in a discourse. As noted in Chapter 3, discourse propositions are assigned different statuses according to the different roles they play at different points in the discourse. If they play a foreground role, for example, they are assigned an active or controlling status; if they play a background role, they are assigned

a closed status. These different statuses then form different patterns, e.g. active or controlling patterns. We stated above that in an active pattern a proposition in a rhetorical predicate containing the antecedent is active with respect to the immediately following rhetorical partner containing the anaphor. Now, in a controlling pattern, a proposition (either the adjunct or the nucleus) is controlling, while its rhetorical partner (either the nucleus or the adjunct) is active. This means that while active patterns are typically realised by simple rhetorical predicates (with propositions as their arguments), controlling patterns are typically realised by rhetorical predicates with at least one of their arguments realised by an embedded predicate, as illustrated in (3) in which the nucleus of the Circumstance predicate is realised by an embedded Concession predicate and in (4) in which the Issue adjunct is realised by an embedded Circumstance predicate.¹

As mentioned in Chapter 3, controlling patterns and active patterns are both in the foreground of the discourse and constitute the currently relevant discourse context, but controlling patterns involve a different type of discourse structure and thus account for antecedent/anaphor choice beyond active patterns.

5.2 General characterisation of controlling patterns

5.2.1 Types of controlling pattern

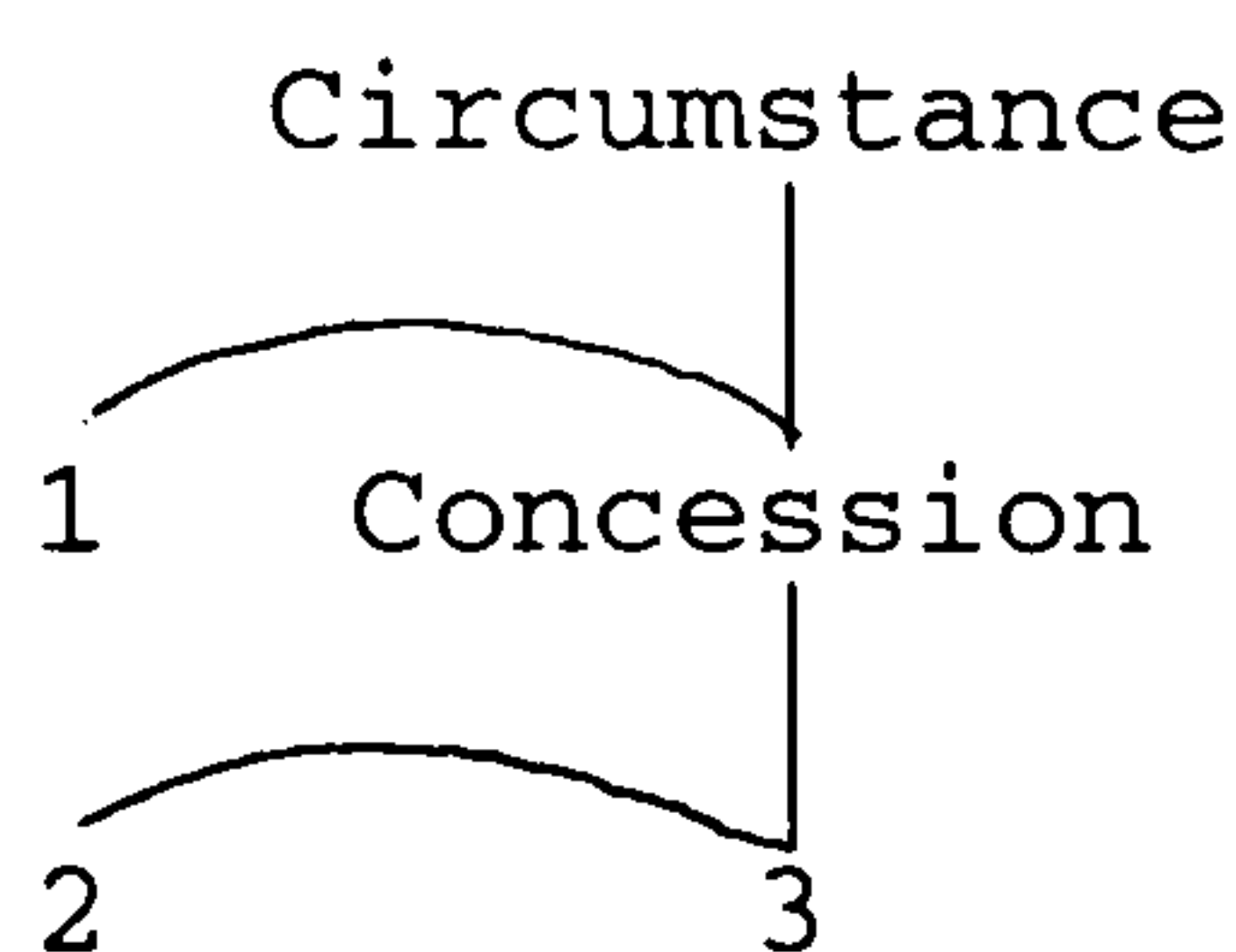
We have seen that in terms of structure a controlling pattern typically involves a rhetorical predicate with either its adjunct or nucleus, or both, realised by an embedded predicate. Thus, if we start from the three types we used for the active patterns in the preceding chapter, we will then have three types of controlling patterns, i.e. the adjunct-nucleus pattern, the nucleus-adjunct pattern and the nucleus-nucleus pattern.

The first type of controlling pattern occurs when the adjunct of a rhetorical predicate

¹Controlling patterns also occur in the case of an Issue predicate with more than one adjunct realised directly by propositions, as illustrated in (28) in Chapter 3, where proposition 1, the nucleus of the Issue predicate is active with respect to proposition 2, the first adjunct of the Issue predicate, and becomes controlling with respect to proposition 3, the second adjunct of the predicate. It should be pointed out, however, that the adjuncts of Issue predicates are usually realised by embedded predicates rather than directly by propositions.

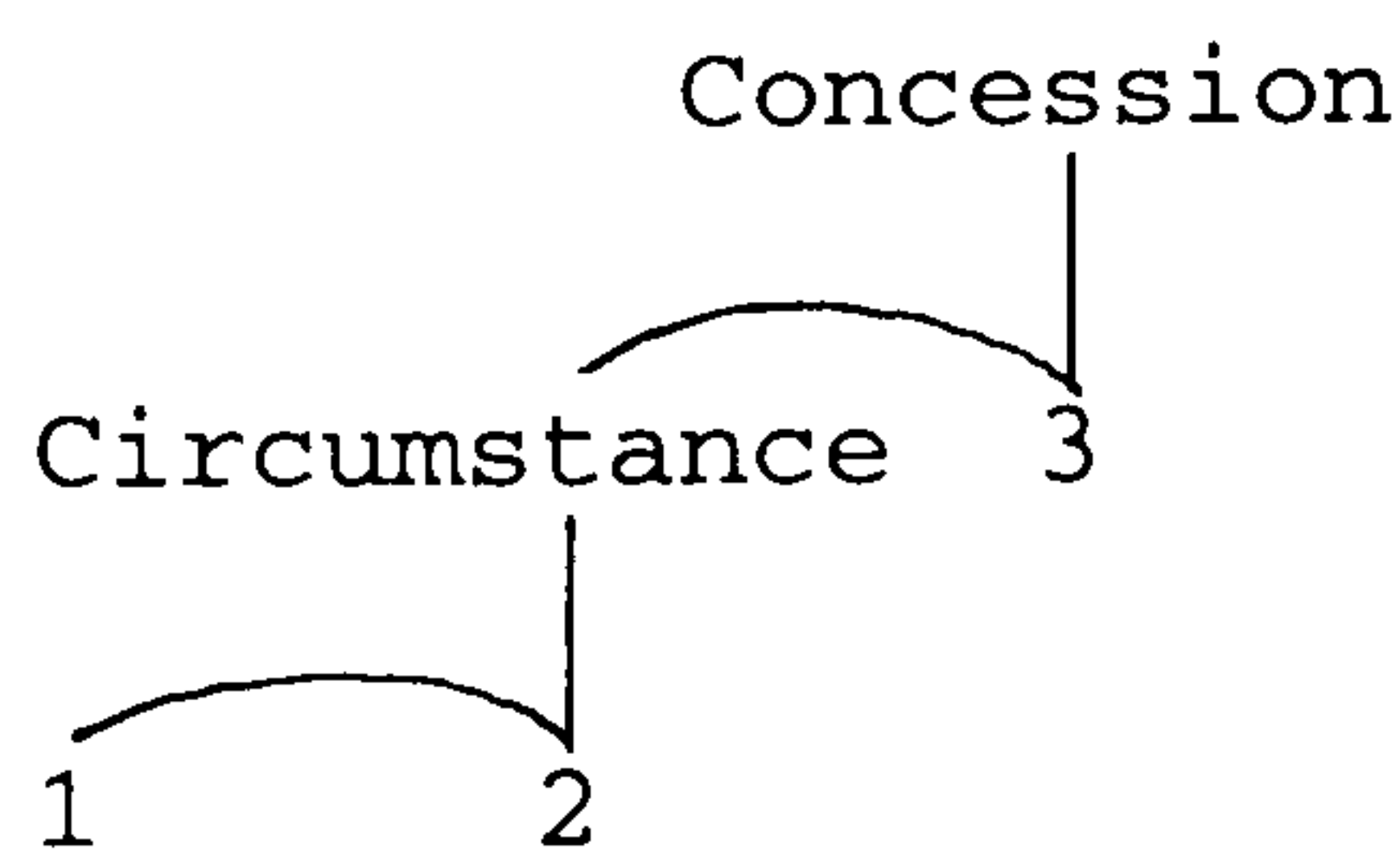
comes before its nucleus partner, with either the adjunct or the nucleus realised by an embedded predicate. I use an earlier example repeated as (5).

- (5) 1. Ta tingle yu ziji butongde yijian,
 he hear from own different opinion
 "When he heard opinions different from his own"
2. jishi shi putong ganbu huo qunzhong jiang de,
 even-if is ordinary cadre or masses say
 "even if they were from ordinary cadres or the masses"
3. Q dou neng renzhen kaolu.
 all can seriously consider
 "(he) would take them seriously" [D12]



This passage involves a Circumstance predicate in which the adjunct comes before the nucleus which is realised by an embedded Concession predicate. Here, proposition 1 which contains the subject antecedent is controlling with respect to proposition 3, the currently processed one, which contains the anaphor in subject position. The following passage gives an example in which the pre-posed adjunct is realised by an embedded predicate.

- (6) 1. Wu Tianming ba juben jiaogei daoyan,
 BA play give director
 "When Wu Tianming gives a script to the film directors"
2. Q ye jiu jiaochule zijide xinren he zhichi.
 also then give his trust and support
 "(he) also gives out his trust and support"
3. Buguo, yifu zhongdan tongshi jiu yazaile tamende shenshang.
 but a heavy-load meanwhile then is-on their shoulders
 "But at the same time a heavy load is left on their shoulders" [D32]

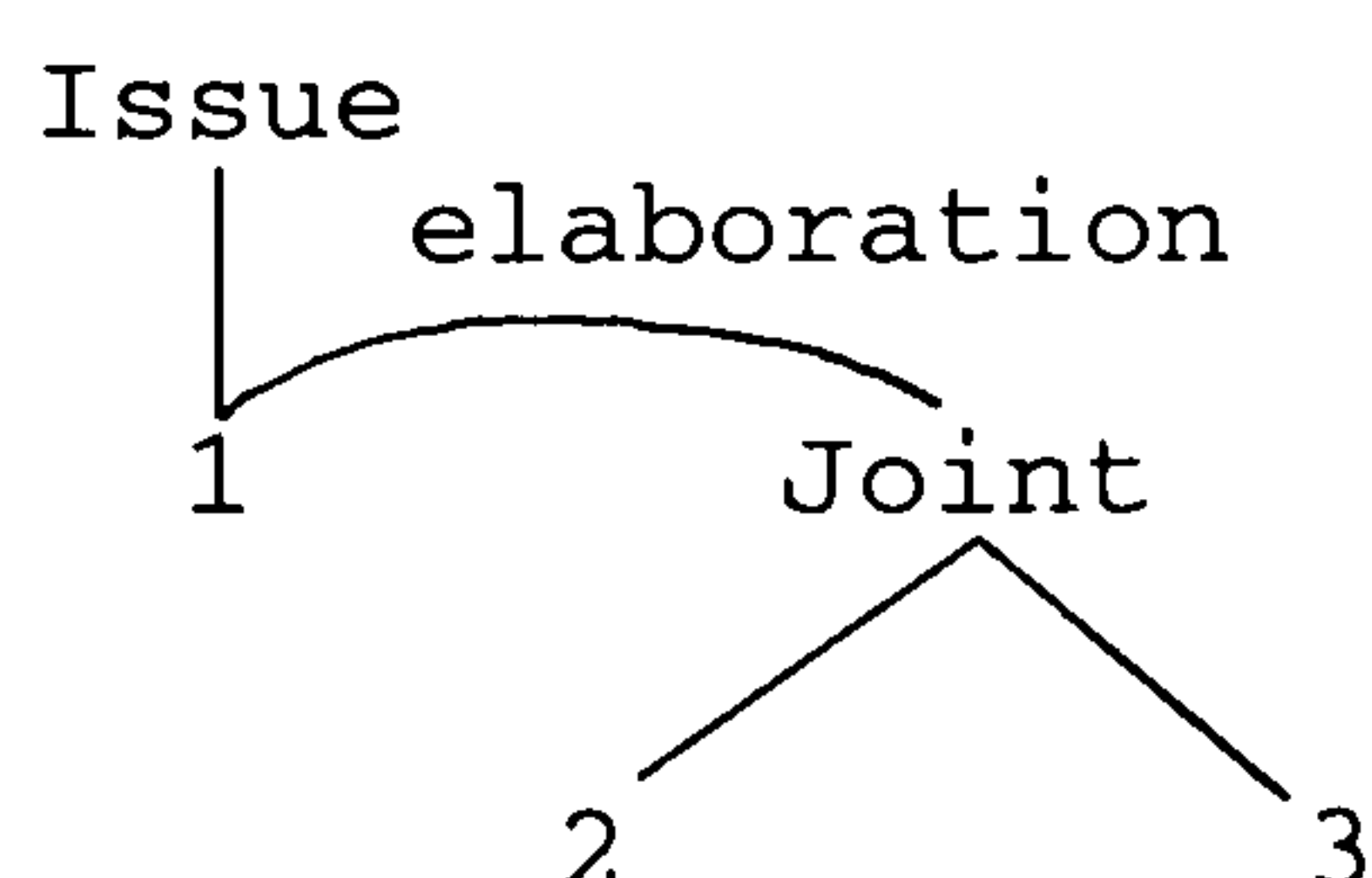


The adjunct of the Concession predicate consisting of propositions 1 and 2 in the form of a subordinate Circumstance predicate occurs before its nucleus directly realised by proposition 3. Note that the antecedent is mentioned in the object position of proposition 1, the controlling proposition, and the anaphor is mentioned in the possessor position

inside the object of proposition 3, the controlled proposition. In (5) and (6), the arguments of the (higher) rhetorical predicate follow an order of adjunct preceding nucleus, with the adjunct or the nucleus developing into an embedded rhetorical predicate. For purposes of simplicity, both structures are classified as adjunct-nucleus structures or patterns, identified by the higher rhetorical predicate.

The second type of controlling pattern occurs when the nucleus of a rhetorical predicate precedes its adjunct, as exemplified in (7).

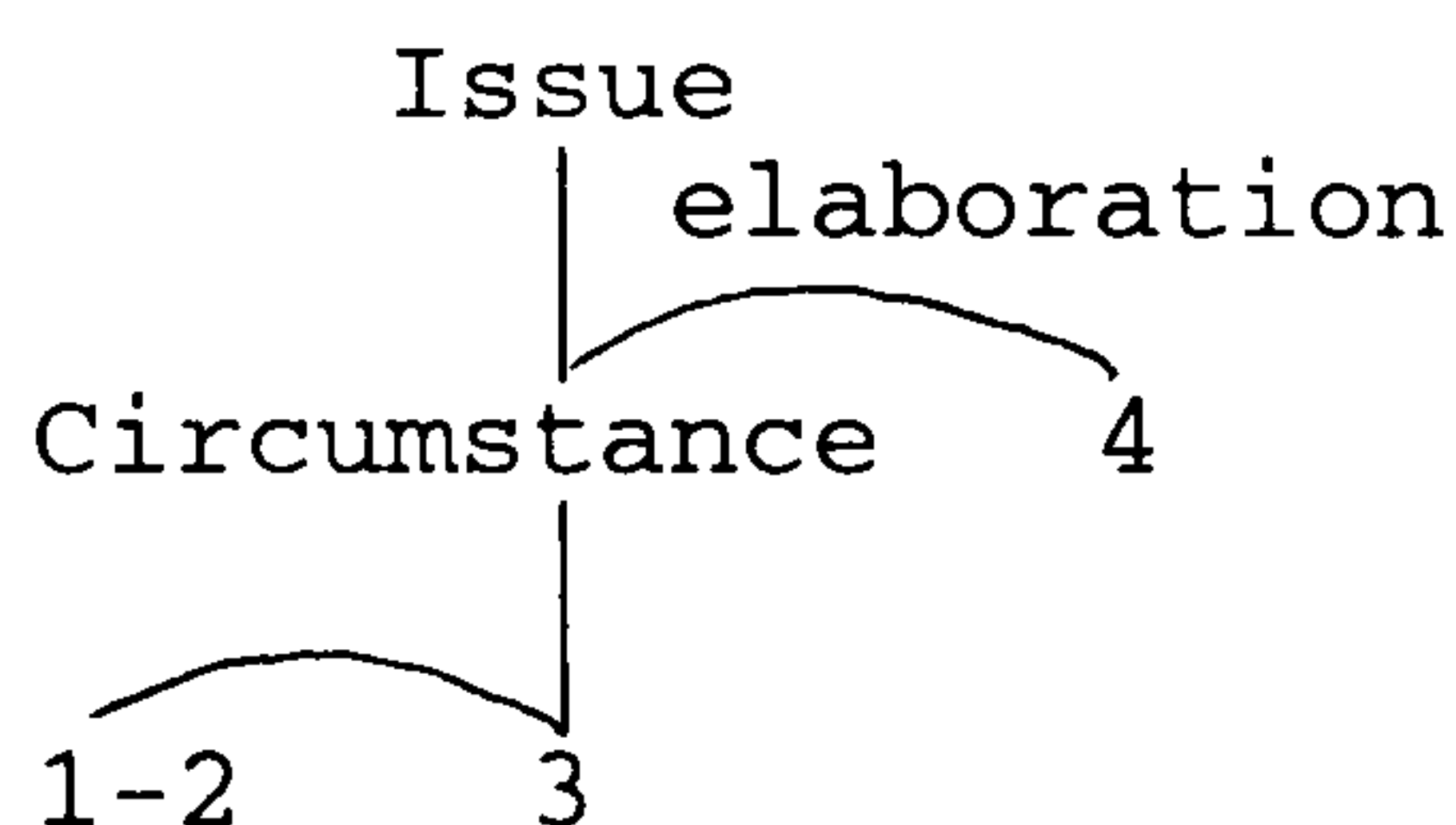
- (7) 1. Li Guangqian zai Chen Jiageng de gongsi li renzhi
 in Chen Jiageng's company work
 da shiyi-nian zhijiu.
 for 11 year long
 "Li Guangqian worked in Chen Jiageng's company for 11 years"
2. Zai zhe shiyi-nian-li Chen Jiageng gongside yewu
 during this 11 year-in Chen Jiageng company's business
 zhengzheng-rishang,
 ever-successful
 "During this period, Chen Jiageng's company was increasingly
 successful"
3. Li Guangqian ye zai gongzuo zhong jileile shangye
 also in work accumulate business
 jingying de zhishi he jingyan.
 management knowledge and experience
 "Li Guangqian also gained the knowledge and experience
 of business management" [D7]



The nucleus of the Issue predicate (proposition 1) which contains the antecedent occurs before the adjunct realised by an embedded Joint predicate (propositions 2 and 3) whose second argument contains the anaphor. Controlling patterns of this type are usually associated with Issue predicates, because, as we noted when dealing with active patterns in the preceding chapter, in Chinese the normal order is for the adjunct clause to occur before the nucleus clause and this is so even when further embedding is involved, while the Issue predicate is characterised by a nucleus-precedes-adjunct order. (8) offers an example in which the nucleus of the Issue predicate is realised by an embedded predicate.

- (8) 1. Zhengdang Mei Guangda shangye jingying rijian fada,
when commercial business daily develop
"When Mei Guangda was gaining success in his business"
2. Qing zhengfu dasuan renming ta wei zhu Ao
Qing government intend appoint him as to Australia
diyiren shijie shi,
first ambassador when
"the government of Qing Dynasty was going to appoint him to
be her first ambassador to Australia"
3. buxing jianglinle.
misfortune fall
"a disaster befell him"
4. Yige qiangjiefan yong tiegun dashangle ta.
a robber use iron-bar injure him
"A robber hit him with an iron bar."

[D35]

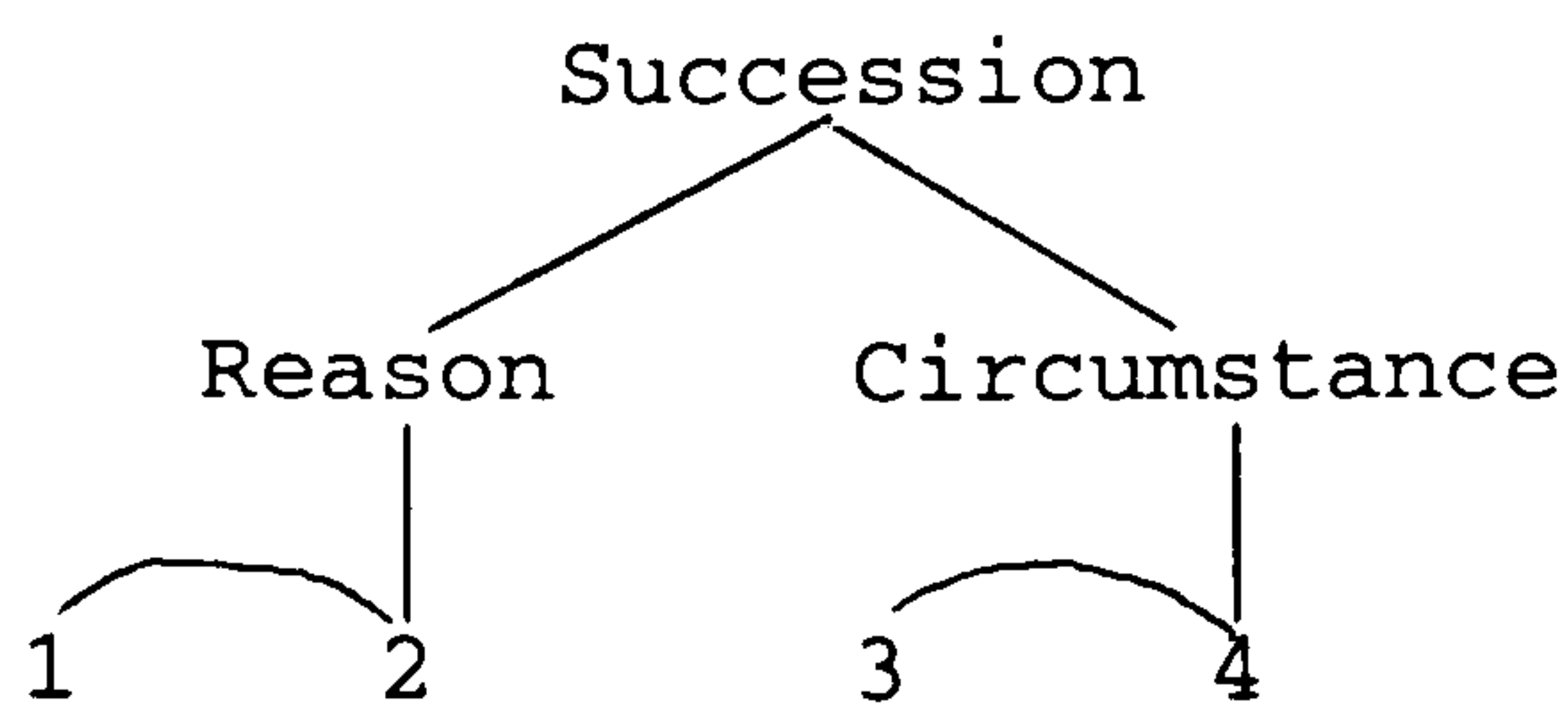


This passage consists of an Issue predicate whose nucleus is developed into a Circumstance predicate (consisting of propositions 1-3). The anaphor is mentioned in the object position of proposition 4, coreferential with the object NP in proposition 2, the currently controlling proposition. For the same reason as that given for the adjunct-nucleus pattern, the two structures in (7) and (8) will be referred to as nucleus-adjunct structures or patterns, identified by the order of the arguments of the higher, namely, Issue, predicate.

The third type of controlling pattern occurs with conjoining predicates in which one or more members of a conjoining predicate is realised by an embedded predicate.

- (9) 1. Youyu Zhou Enlai dali zhichi,
because fully support
"With the strong support from Zhou Enlai"
2. ta yijiugqi'er-nian huifule fuzongli zhiwu.
he in 1972 resume vice-premier position
"he resumed his post of vice-premier in 1972"
3. Zhou Enlai bingzhong zhuyuan hou,
seriously-ill sent-to-hospital after
"After Zhou Enlai was seriously ill and admitted to hospital"
4. yijiugqiwu-nian yiyue, ta danren Zhonggong Zhongyang
in 1975 January, he become CCP central committee
fuzhuxi ... zhuchi Dang he guojia de richang gongzuo.
vice-chairman... be-in-charge Party & state daily work
"he became vice-chairman of the Central Party Committee in
January 1975 and was in charge of the day-to-day running
of the Party and the state"

[D15]



We have in this passage a Succession predicate with both members realised by embedded predicates. Proposition 1 is active with respect to proposition 2 and controlling with respect to proposition 3, and at the same time, proposition 2 is active with respect to proposition 3 and controlling with respect to proposition 4.² In other words we have two instances of the controlling pattern here. In one instance, the antecedent *Zhou Enlai* occurs in proposition 1, the adjunct of the embedded Reason predicate serving as the first argument of the Succession predicate, and its anaphor occurs in proposition 3, the adjunct of the embedded Circumstance predicate serving as the second argument of the Succession predicate. In the other instance, the antecedent *ta* "he" appears in proposition 2, the nucleus of the embedded Reason predicate, and its anaphor appears in proposition 4, the nucleus of the embedded Circumstance predicate. These two occurrences fall under the nucleus-nucleus structure identified by the higher predicate whose arguments are of equal status.

These three types of controlling patterns, i.e. adjunct-nucleus, nucleus-adjunct and nucleus-nucleus, are related to the three types of active patterns discussed in the preceding chapter, the difference being that in the case of active patterns, the constituent arguments (i.e. the adjunct and the nucleus) are directly realised by propositions (thus involving two adjacent propositions) whereas in the case of controlling patterns, at least one of the constituent arguments (either the adjunct or the nucleus) is realised by an embedded rhetorical predicate (thus involving at least three propositions). These three types of controlling patterns characterised by further subordination of structures will

²Reichman (1981, 1985) treats a context space as *pre-controlling* when its controlling status is taken over by the immediately following space becoming controlling. A context space in a pre-controlling status has a weaker influence than a controlling space on the following discourse. If we take propositions as a basic unit for status assignment, proposition 1 in (9) above is controlling relative to proposition 3, and becomes pre-controlling relative to proposition 4, with respect to which proposition 2 is controlling. In this study I do not find it necessary to distinguish between controlling and pre-controlling, as Reichman did, and simply take the proposition, either in a controlling or pre-controlling status, which contains the relevant antecedent as the controlling proposition. Thus, in (9), proposition 1 is controlling relative to proposition 3 and proposition 2 is controlling relative to proposition 4 (and proposition 1 could be controlling if an item in it served as antecedent for an anaphor in proposition 4).

have consequences for anaphora in discourse. Since these controlling patterns play a significant role in the identification of discourse structures and also in the interpretation of anaphors contained therein, they will be used to explore anaphoric patternings in the sections to follow.

5.2.2 Intra-sentential and inter-sentential anaphora and coreference patterns

In Chapter 4 we saw that active patterns occur both within and across sentence boundaries.³ Does this also hold for controlling patterns? If we look at the examples above, we find that (3) offers an instance of intra-sentential anaphora, while the rest of the examples (4, 6, 7, 8, 9) all involve inter-sentential anaphora, in which the antecedent occurs in the preceding sentence (marked by a period), and the anaphor occurs in the following sentence. Thus, like active patterns, controlling patterns do occur both within and across sentence boundaries. However, it should be noted that although both the active patterns and the controlling patterns involve intra-sentential anaphora and inter-sentential anaphora, there is a marked difference in the distribution of these two types of anaphora in these two types of patterns. As we noted before, in the active patterns 66% (512/777) of the total anaphors occur within sentence boundaries and 34% (265/777) of the anaphors occur across sentence boundaries. In the controlling patterns we have a similar percentage but in the opposite direction, that is, 71% (103/146) of the total anaphors occur across sentence boundaries and 29% (43/146) of the anaphors occur within sentence boundaries. These figures suggest that while the active patterns are mainly concerned with intra-sentential or inter-clausal anaphora and thus syntactic factors play a more important role, the controlling patterns are mainly concerned with the inter-sentential anaphora and syntactic factors play a much reduced role.

Next we consider briefly the coreferential possibilities between the antecedent and the anaphor in controlling patterns. When we were dealing with active patterns in the preceding chapter, I proposed four generalised coreference patterns, that is, the subject antecedent-subject anaphor pattern (S-S), the subject antecedent-object anaphor pattern (S-O), the object antecedent-subject anaphor pattern (O-S) and the object antecedent-

³Remember what we said in the preceding chapter about the difficulties in defining a sentence in Chinese. Also recall that I adopt a practical approach to this and take a period as a marker for a sentence.

object anaphor pattern (O-O). It appears that these four coreference patterns work for controlling patterns as well. In the above examples, (3), (5), (7), (9) are instances of the S-S pattern in which the antecedent and its anaphor are subjects of their propositions, (4) is an instance of the S-O pattern in which the anaphor in object position is coreferential with its antecedent in subject position, and (6) and (8) are instances of the O-O pattern in which both the antecedent and the anaphor are objects of their propositions.

As we have seen, in active patterns, although the antecedent and its anaphor normally follow the left-right order, that is, the antecedent occurs before its anaphor, it is possible for the anaphor to occur before its antecedent (e.g. a subject zero anaphor in the preceding adjunct clause may take its reference from the subject of the following nucleus clause). In controlling patterns, however, not a single case was found in my corpus in which an anaphor was mentioned before its antecedent. In controlling patterns, therefore, the antecedent and the anaphor follow a strict left-right order of occurrence.

Having presented a general discussion of the controlling patterns, we will now examine the distribution and nature of anaphora in the controlling patterns.

5.3 The distribution and nature of anaphora in the controlling patterns

5.3.1 The distribution of anaphora in the controlling patterns

In this section we will consider, in general terms, the distribution of anaphors in the controlling patterns in terms of the structural patterns, the coreference patterns and the intra/inter-sentence structures discussed above. We will then devote section 5.3.2 to a discussion of the factors or conditions that influence the distribution of anaphors in various controlling patterns. I present, in the following table, the figures showing the distribution of anaphors in the three environments.

(10) Table 1: Distribution of Anaphora in the Controlling Patterns in Terms of Structure, Coreference and Intra/inter Sentence⁴

Type	Coreference	A-N Pattern	N-A Pattern	N-N Pattern	Total
ZA	S-S	6 (6/0) 55% 100%	2 (0/2) 18% 100%	3 (1/2) 27% 100%	11 (7/4) 100%
	S-O	0	0	0	0
	O-S	0	0	0	0
	O-O	0	0	0	0
Total		6 (6/0) 55% 37.5%	2 (0/2) 18% 2%	3 (1/2) 27% 11.5%	11 (7/4) 7.5%
PA	S-S	0	34 (9/25) 67% 65%	17 (8/9) 33% 85%	51 (17/34) 62%
	S-O	6 (6/0) 40% 60%	9 (1/8) 60% 17%	0	15 (7/8) 18%
	O-S	0	1 (1/0) 100% 2%	0	1 (1/0)
	O-O	4 (4/0) 27% 40%	8 (1/7) 53% 16%	3 (1/2) 20% 15%	15 (6/9) 18%
Total		10 (10/0) 12% 62.5%	52 (12/40) 63% 50%	20 (9/11) 25% 77%	82 (31/51) 56%
NA	S-S	0	21 (1/20) 88% 42%	3 (1/2) 12% 100%	24 (2/22) 45%
	S-O	0	11 (0/11) 100% 22%	0	11 (0/11) 21%
	O-S	0	11 (1/10) 100% 22%	0	11 (1/10) 21%
	O-O	0	7 (2/5) 100% 9%	0	7 (2/5) 13%
Total		0	50 (4/46) 94% 48%	3 (1/2) 6% 11.5%	53 (5/48) 36.5%
Total		16 (16/0) 11%	104(16/88) 71%	26 (11/15)18%	146 (43/103)

The table shows a total of 146 instances of anaphora in controlling patterns, out of

⁴In the table, under "Coreference" S-S, S-O, O-S and O-O refer to the four coreference patterns; A-N refers to the adjunct-nucleus pattern, N-A refers to the nucleus-adjunct pattern and N-N refers to the nucleus-nucleus pattern. Under these patterns, the number before the slash within the parenthesis indicates the instances of intra-sentential anaphora, the number after the slash indicates the instances of inter-sentential anaphora and the number before the parenthesis indicates the combined figure of these two types.

which 11 (7.5%) are ZAs, 82 (56%) are PAs and 53 (36.5%) are NAs. These figures suggest that in contrast to active patterns that show 61% of ZA, controlling patterns are mainly associated with PA and to a lesser degree with NA while the distribution of ZA is extremely marginal. The 11 instances of ZA are all associated with the S-S coreference pattern,⁵ with 6 instances occurring in the adjunct-nucleus structure, 2 instances in the nucleus-adjunct structure and 3 instances in the nucleus-nucleus structure.

Out of the 82 PAs, 51 instances (62%) occur in the S-S pattern with 34 instances in the nucleus-adjunct structure and 17 instances in the nucleus-nucleus structure, 15 instances (18%) occur in the S-O pattern with 6 instances in the adjunct-nucleus structure and 9 instances in the nucleus-adjunct structure, another 15 instances occur in the O-O pattern with 4 instances in the adjunct-nucleus structure, 8 instances in the nucleus-adjunct structure and 3 instances in the nucleus-nucleus structure, and only one instance occurs in the O-S pattern associated with the nucleus-adjunct structure.

NA (53 instances) occurs in all four coreference patterns: 24 instances (45%) in the S-S pattern, of these 21 being in the nucleus-adjunct structure and 3 being in the nucleus-nucleus structure, 11 instances (21%) in the S-O pattern, another 11 instances (21%) in the O-S pattern and 7 instances (13%) in the O-O pattern, all being in the nucleus-adjunct structure.

The S-S coreference pattern attracts most of the anaphors with 59% (86/146) of anaphors occurring here,⁶ of which 13% (11/86) are ZAs, 59% (51/86) are PAs and 28% (24/86) are NAs. The rest are 18% (26/146) in the S-O pattern, 8% (12/146) in the O-S pattern and 15% (22/146) in the O-O pattern.

Now let us look at the table from the angle of the three structural patterns. The adjunct-nucleus pattern exhibits 16 instances of anaphora (11%), the nucleus-adjunct

⁵This distribution of ZA is consistent with its distribution in the active patterns where all the 475 ZAs occur in the S-S pattern.

⁶Again this is echoed by the distribution of anaphors in the S-S coreference in the active patterns which shows 85% (663/777) of the total anaphors.

pattern 104 instances of anaphora (71%) and the nucleus-nucleus pattern 26 instances of anaphora (18%). These figures indicate that the nucleus-adjunct pattern is the major pattern whereas the other two patterns are comparatively minor ones.

Out of the 16 anaphors associated with the adjunct-nucleus pattern, 6 are ZAs, and the rest are PAs. Of the 104 anaphors associated with the nucleus-adjunct pattern, 52 are PAs, 50 are NAs and 2 are ZAs. And of the 26 anaphors associated with the nucleus-nucleus pattern 3 are ZAs, 20 are PAs and 3 are NAs. These figures suggest that the adjunct-nucleus pattern and nucleus-nucleus pattern tend to be associated with the use of PA (62.5% and 77% respectively) while the nucleus-adjunct pattern shows a similar distribution in both PA and NA (50% and 48% respectively).

Next, let us consider the table in terms of intra- vs. inter-sentential anaphora. We see from the table that 64% (7/11) of the ZAs occur in sentences and the remaining 36% (4/11) occur across sentences. 38% (31/82) of the PAs occur sentence-internally and 62% (51/82) of the PAs occur sentence-externally. Of the NAs 9.5% (5/53) occur within sentence boundaries and 90.5% (48/53) occur across sentence boundaries. These figures suggest that PA and particularly NA tend to be associated with sentence boundaries though ZA can occur sentence externally, but with an extremely restricted distribution.

If we now proceed from the structural patterns, we find that 15% (16/104) of the anaphors in the nucleus-adjunct pattern occur within sentences and 85% (88/104) of these anaphors occur across sentences, and 42% (11/26) of the anaphors in the nucleus-nucleus pattern occur within sentences and 58% (15/26) of these anaphors occur across sentences while the anaphors in the adjunct-nucleus pattern (16 instances) all occur within sentence boundaries. These figures show that compared to the other two structures, the adjunct-nucleus structure is a minor one in the controlling patterns and that it usually occurs within sentence boundaries. The figures also indicate that although the distinction between intra- and inter-sentential is still a relevant factor that bears on the distribution of anaphora in the controlling patterns (where 29% (43/146) of the anaphors occur within sentence boundaries), it is certainly not so crucial as it is in the active patterns where 66% of the anaphors occur within sentence boundaries.

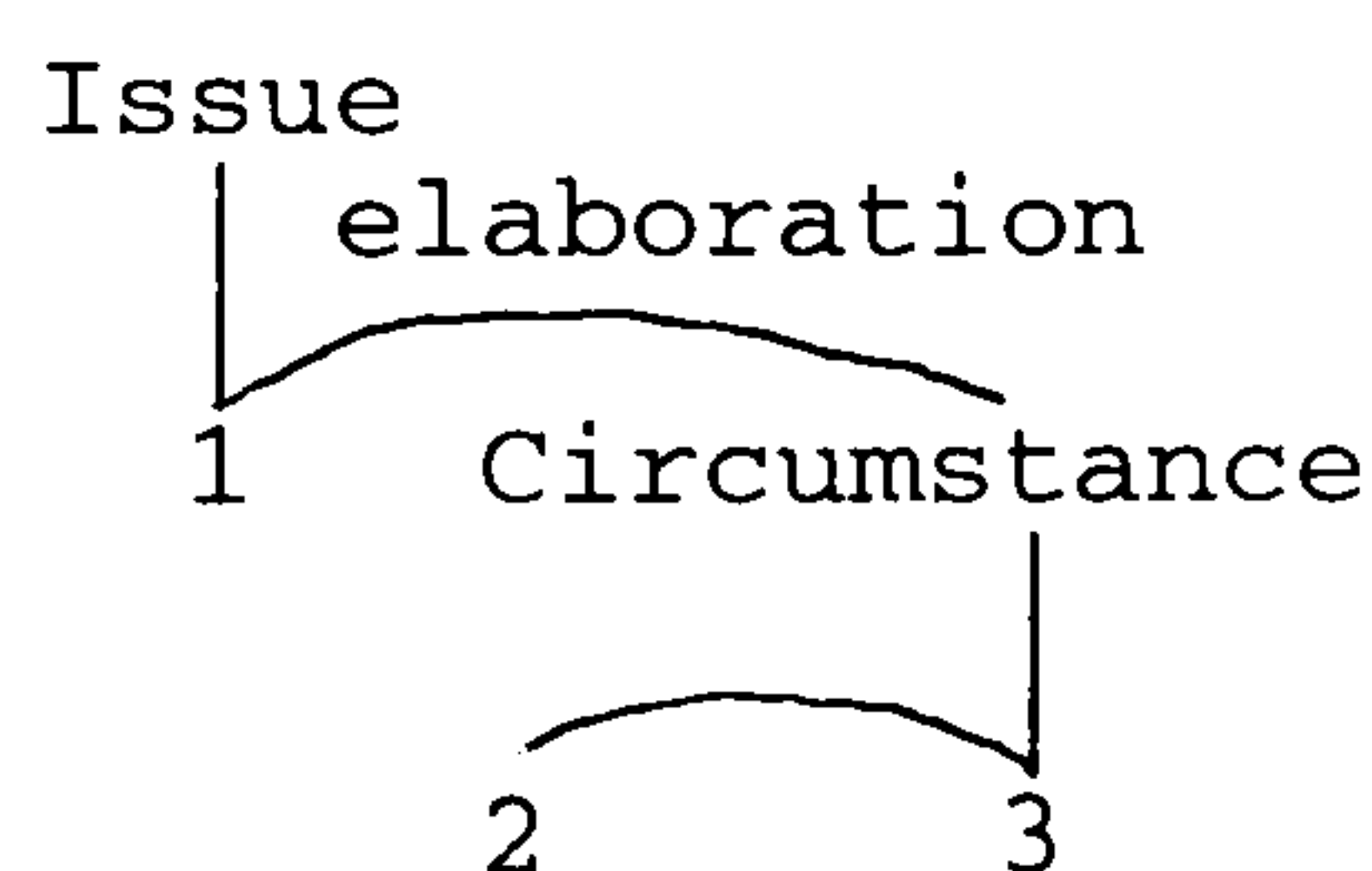
In the sections to follow, I will examine the distributions of anaphora in the three types of controlling patterns under the headings of the four coreference patterns in an attempt to discover the constraints on anaphoric patternings.

5.3.2 The nature of anaphora in the controlling patterns

5.3.2.1 The S-S pattern

The S-S coreference pattern, as noted above, is one in which the anaphor occurs in the subject position of the currently processed proposition, its antecedent being the subject of the proposition that is controlling. This is exemplified in (11).

- (11) 1. Xilali hun hou bu guan fu-xing ... yi xianshi
 Hilary after marriage not use husband's name to show
 ziji shi ge dulide xiandai nuxing.
 herself is an independent modern woman
 "Hilary did not after marriage adopt her husband's surname in order to show that she was an independent modern woman"
2. Zhidao Kelindun 1980-nian jingxuan lianren Akense Zhou
 until Clinton in 1980 run-for successive Arkense State
 zhouzhang luoxuan shi,
 governor defeated when
 "Not until Clinton failed to be re-elected governor of the State of Arkense in 1980"
3. 0 cai gaiwei Xilali Kelindun.
 then change-as Hilary Clinton
 "did (she) changed her name to Hilary Clinton" [D42]



Proposition 1, the nucleus of the Issue predicate, is controlling with respect to proposition 3, the nucleus of the embedded Circumstance predicate, with respect to which proposition 2, the embedded adjunct, is active. The zero anaphor in the subject position of proposition 3 takes its reference not from the subject of proposition 2 but from the subject of proposition 1, currently in a controlling status.

In the following table I present the distribution of anaphora in the S-S coreference chain in the controlling patterns.

(12) Table 2: Distribution of Anaphora in the S-S Coreference Pattern⁷

Type	Adjunct-nucleus	Nucleus-adjunct	Nucleus-nucleus	Total
ZA	6 (6/0) 55% 100%	2 (0/2) 18% 3.5%	3 (1/2) 27% 13%	11 (7/4) 13%
PA	0	34 (9/25) 67% 59.5%	17 (8/10) 33% 74%	51 (17/34) 59%
NA	0	21 (1/20) 87.5% 37%	3 (1/2) 12.5% 13%	24 (2/22) 28%
Total	6 (6/0) 7%	57 (10/47) 66%	23 (10/13) 27%	86 (26/60)

The table shows that PA makes up 59% (51/86), ZA makes up 13% (11/86) and NA makes up 28% (24/86) of the total anaphors in the S-S pattern. This suggests that PA is a major anaphor type whereas ZA is a minor one in the S-S coreference chain in the controlling patterns. Of these instances of anaphora, 66% (57/86) occur in the nucleus-adjunct pattern, 27% (23/86) occur in the nucleus-nucleus pattern, and only 7% (6/86) occur in the adjunct-nucleus pattern. This clearly indicates that the nucleus-adjunct pattern is a major structural pattern while the adjunct-nucleus pattern is a minor one for controlling patterns.

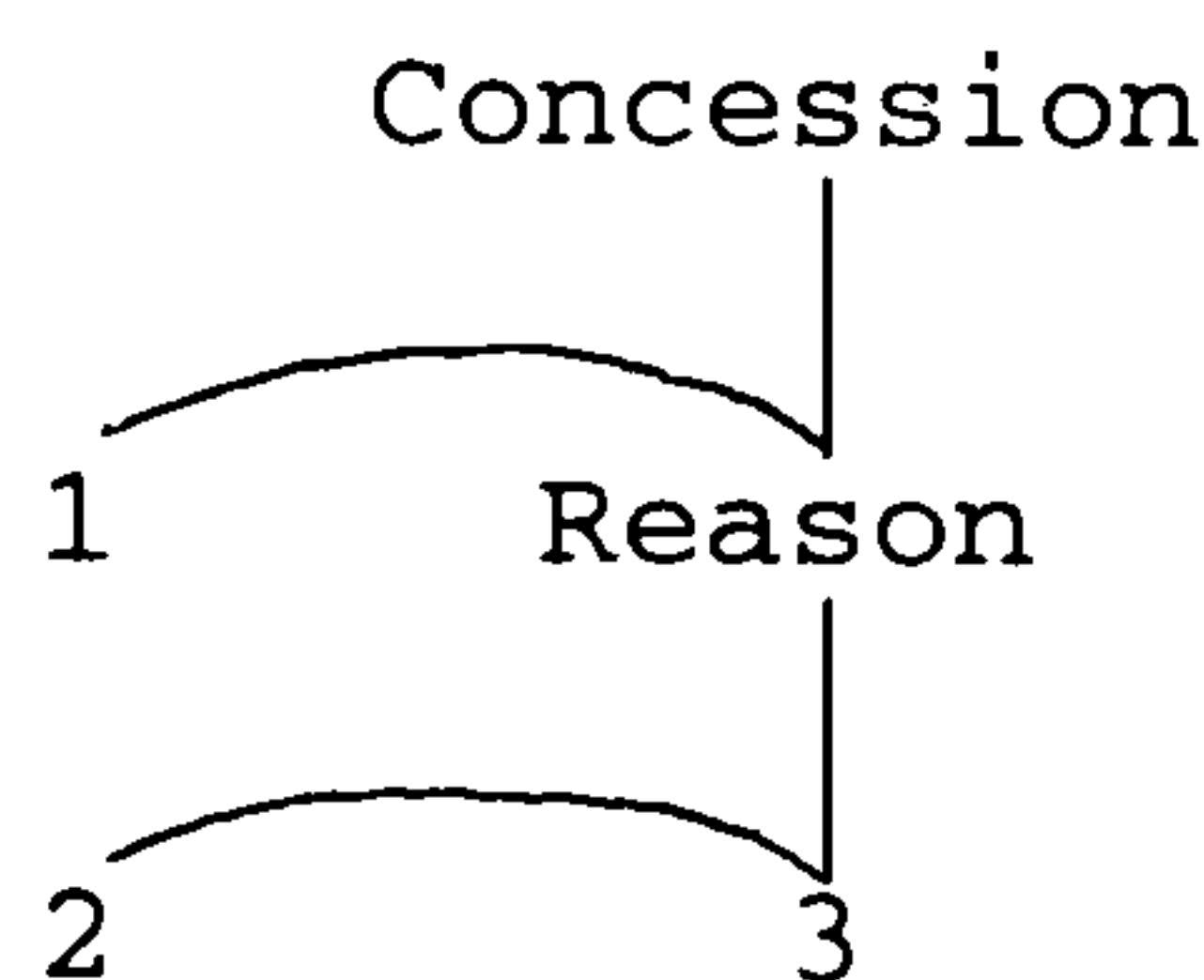
To see what is behind these figures let us start with the following passage in which ZA is found.

- (13) 1. Qian-ji-nian Lin Kexiu shi shengchan duizhang,
 a few years ago was production team leader
 "Although Lin Kexiu was the head of the production team a
 few years ago"

⁷As in the previous table, the number before the slash within the parenthesis indicates the instances of intra-sentential anaphora, the number after the slash indicates the instances of inter-sentential anaphora and the number before the parenthesis indicates the combined figure of these two types. As mentioned in Chapter 4, in Chinese the adjunct/subordinate clause usually occurs before the main clause, and thus falls into the adjunct-nucleus pattern. There are occasions when the adjunct clause occurs after the main clause as well. These sentences tend to be associated with the conjunctions such as "because" or "in order that"; they fall here into the nucleus-adjunct pattern. With regard to anaphora, within a sentence, the antecedent usually occurs in the preceding adjunct clause and the anaphor occurs in the following main clause since this is the unmarked order of adjunct and main clauses. Anaphora may appear in the subject position of the preceding adjunct in the form of ZA coindexed with the following matrix subject, but this is extremely restricted.

2. yinwei jiti bu fuyu,
because collective not rich
"because the production team was poor"
3. 0 meiyou shixian tade yuanwang.
did not realise his wish
"(he) failed to get his wishes fulfilled"

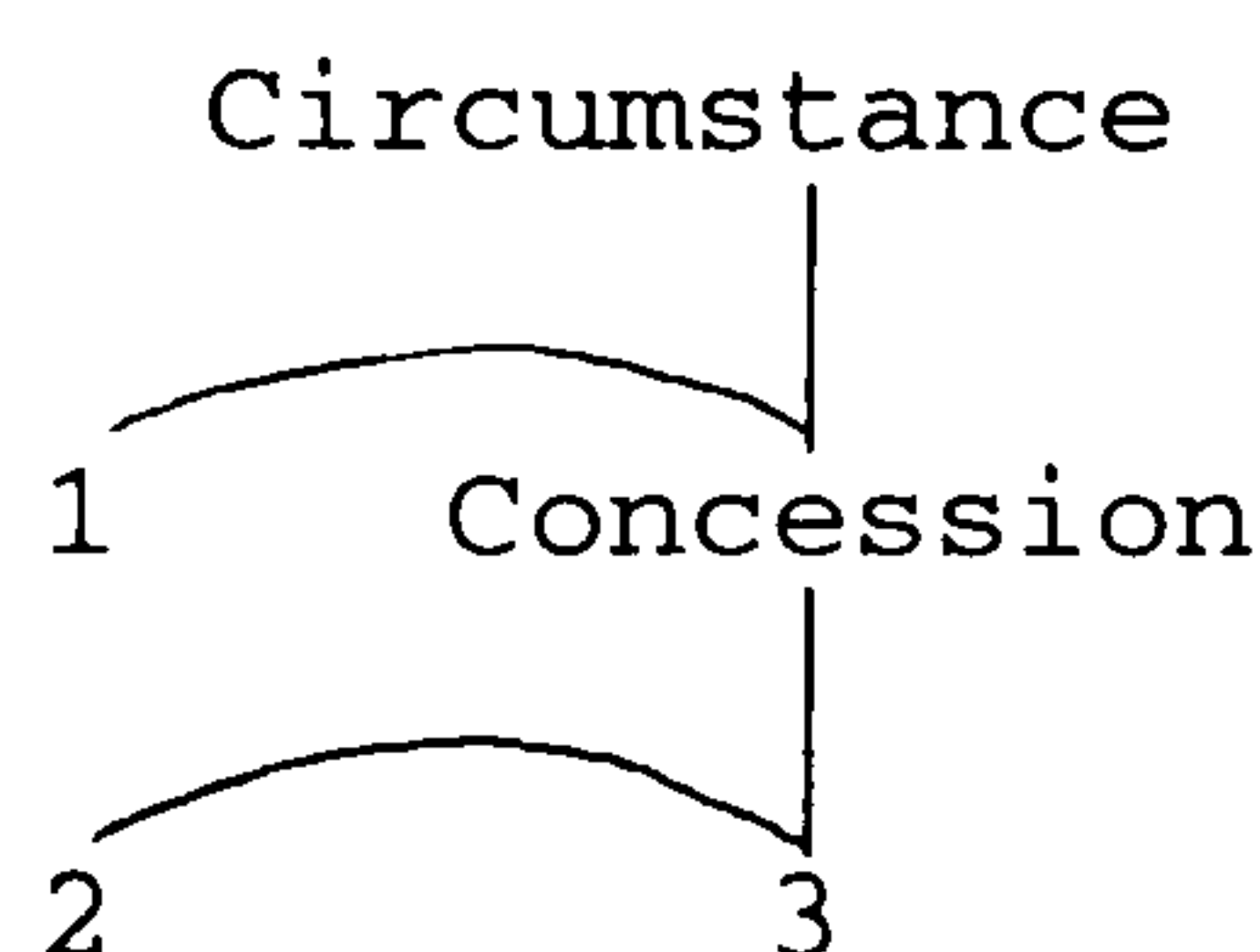
[D4]



The antecedent NP *Lin Kexiu* occurs in the subject position of proposition 1, the adjunct of the Concession predicate, and its anaphor occurs in the subject position of proposition 3, the nucleus of the embedded Reason predicate. Note that although a different NP occurs as subject in proposition 2, which is active with respect to proposition 3, the subject anaphor in proposition 3 which takes its reference from the subject NP in proposition 1 is expressed with ZA. We now look at another passage which also shows the occurrence of ZA in the controlled proposition.

- (14) 1. Ta tingde yu ziji butongde yijian,
he hear from own different opinion
"When he heard opinions different from his own"
2. jishi shi putong ganbu huo qunzhong jiang de,
even-if is ordinary cadre or masses say
"even if (they) were from ordinary cadres or the masses"
3. 0 dou neng renzhen kaolü.
all can seriously consider
"(he) would take them seriously"

[D12]

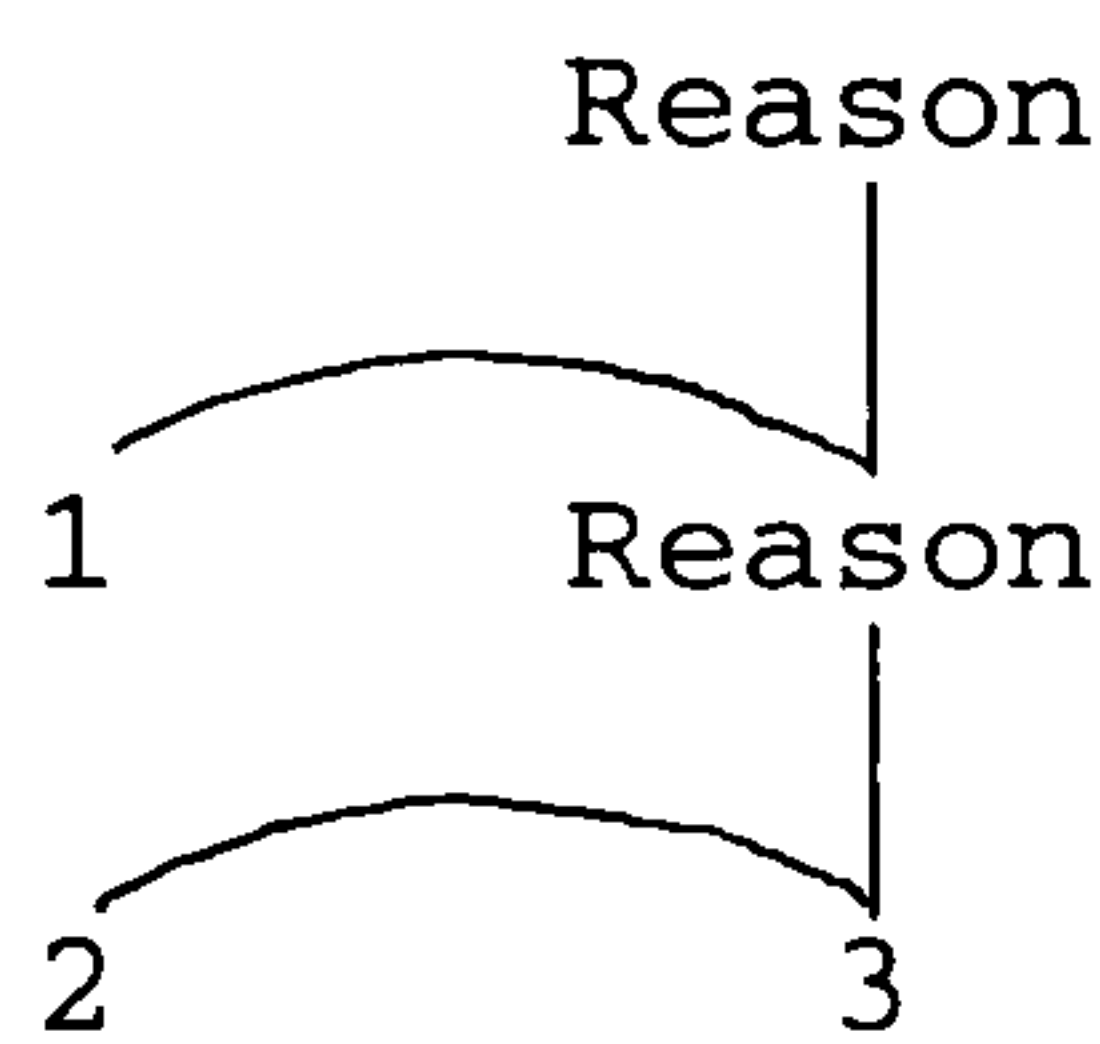


The relevant NP is first mentioned as PA in proposition 1 and then as ZA in proposition 3. (14) is similar to (13) on two accounts: first, both passages exhibit similar structures, i.e. an adjunct-nucleus structure with the nucleus realised by an embedded adjunct-nucleus structure; second, the antecedent and the anaphor in both passages occur as subject of their propositions separated by an adjunct proposition containing a different NP in subject position.

There are, in my corpus, six instances of controlling patterns that show the above

features and all these six instances are associated with the use of ZA. The following is a further example of this usage.

- (15) 1. Xie Jin yuan ni shuai tuan... canjia Taiwan
 originally plan lead delegation take-part-in Taiwan
 dianying "Jinma Jiang" de zhanlan huodong,
 film "jinma prize" show activity
 "Xie Jin had planned to lead a delegation to participate in a
 film show for the Jinma Prize in Taiwan"
2. jieguo zhongyin Taiwan dangju congzhong-zuogeng,
 however because Taiwan authorities create-obstacles
 "however because the Taiwan authorities created obstacles"
3. 0 er budebu tuichi dao "Jinma Jiang" huodong hou
 then have-to put-off till "Jinma prize" activity after
 yu qunian shi'er-yue shiqi-ri fu Tai fangwen.
 in last year December 17th go-to Taiwan visit
 "(he) had to put off his visit to Taiwan until the 17th
 December last year after the film show" [D39]



The ZA in the subject position of proposition 3 does not take its reference from the subject NP in proposition 2 but from the subject NP in proposition 1, the controlling proposition. Note that the proposition (2) that contains a different NP in subject position is an adjunct of the embedded Reason predicate.

Based on the analysis of the examples thus far, it can be observed that

- (16) In a controlling pattern associated with an adjunct-nucleus structure (such as Reason and Circumstance) ZA is used for a subject anaphor coreferential with a subject antecedent in the controlling proposition if the intervening proposition containing a non-coreferential subject NP is the adjunct of an embedded predicate.

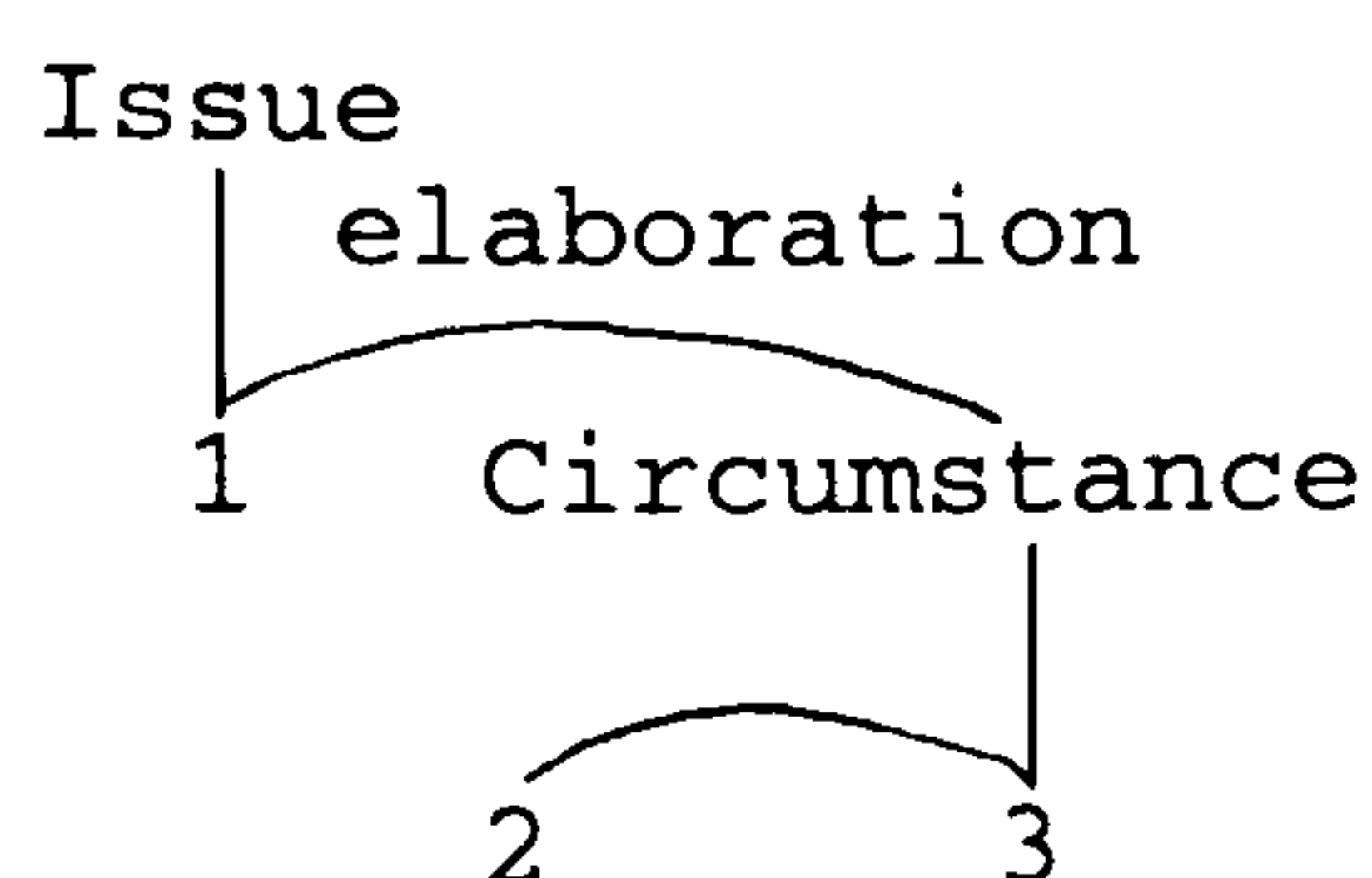
The motivation for the use of ZA here appears to be the same as that for the use of ZA in active patterns discussed in the preceding chapter, namely, the topic status/role of the referent by being subjects of their propositions. There is a difference between the two, however. While in the case of the active pattern the two propositions containing the two mentions of the referent are adjacent to each other, the propositions containing the antecedent and its anaphor in the case of the controlling pattern are separated by a proposition containing a different referent in subject position. Since, as noted in the

preceding chapter, the occurrence of an NP in subject position is likely to serve as the topic, the different subject NP in the intervening proposition at least has the potential to take over the topic role from the previous subject NP, thus serving as the reference point for the succeeding discourse. The effect of this may make the identity of the following subject ZA ambiguous.

This difficulty may be overcome, however, if we take into consideration the rhetorical structure of the discourse involved. That is, although, from a linear point of view, the subject NP in the intervening proposition could be a source of interference for the identity of the ZA in the succeeding proposition with a different antecedent, if we proceed from the perspective of the hierarchical structure of the discourse, we find that the intervening proposition in (13), (14) and (15) is only an adjunct of the embedded structure and thus is not at the same level as the propositions preceding and following it. In other words the higher adjunct (proposition 1) and the embedded nucleus (proposition 3) are adjacent to each other so that the controlling proposition (the higher adjunct) can overrule the intervening proposition and have a direct impact on the controlled proposition (the embedded nucleus). This means that the NP in the controlling proposition maintains its topic role for the discourse in the controlling pattern, thus resulting in its next mention realised by ZA in the controlled proposition. All the instances of ZA in the context of an intervening proposition containing a different subject NP in the corpus fall into the same situation.

Can the pattern (16) be extended for the use of anaphora in similar conditions but with different rhetorical predicates? Consider the passages below.

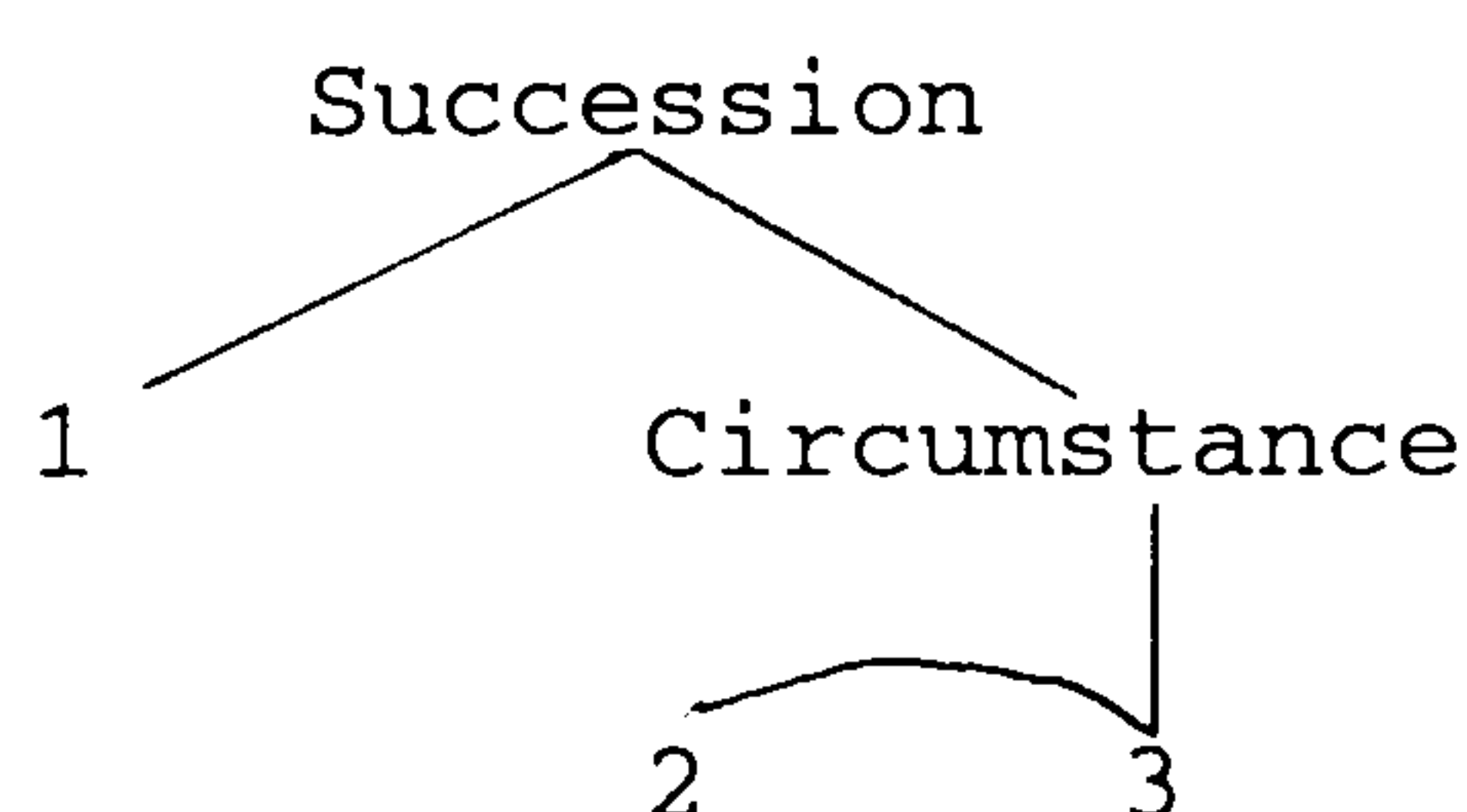
- (17) 1. Xilali hun hou bu guan fu-xing ... yi xianshi
Hilary after marriage not use husband's name to show
- ziji shi ge dulide xiandai nüxing.
herself is an independent modern woman
"Hilary did not after marriage adopt her husband's surname in
order to show that she was an independent modern woman"
2. Zhidao Kelindun 1980-nian jingxuan lianren Akense Zhou
until Clinton in 1980 run-for successive Arkense State
zhouzhang luoxuan shi,
governor defeated when
"Not until Clinton failed to be re-elected governor of the
State of Arkense in 1980"
3. Q cai gaiwei Xilali Kelindun.
then change-as Hilary Clinton
"did (she) changed her name to Hilary Clinton" [D42]



This passage is realised by an Issue predicate whose adjunct is developed into an Circumstance predicate. The antecedent NP *Hilary* occurs in the subject position of proposition 1, the Issue nucleus, and is mentioned as ZA in the subject position of proposition 3, the embedded Circumstance nucleus. Proposition 2, the adjunct of the embedded predicate, contains a different NP in subject position.

- (18) 1. Jiefang zhanzheng shiqi, Wan Li ren Ji-Lu-Yu qu
 Liberation War period is Ji-Lu-Yu region
 dangwei weiyuan, mishuzhang.
 Party committee member, secretary
 "During the Liberation War, Wan Li was a member of the CCP committee in Ji-Lu-Yu region and the secretary of the committee"
2. Zhonggong jieguan Nanjing hou,
 Chinese Communists take-over Nanjing after
 "After the Chinese Communists took over Nanjing,
3. 0 ren Nanjing Shi junguanhui caiwei
 is Nanjing city military-control-commission finance dept.
 fuzhuren, jingji buzhang, jianshe juzhang.
 deputy director, economy director, construction director
 "(he) was deputy director of the Financial Department, director of the Economical Department, and director of the Reconstruction Department of the Nanjing Military Control Commission"

[D17]

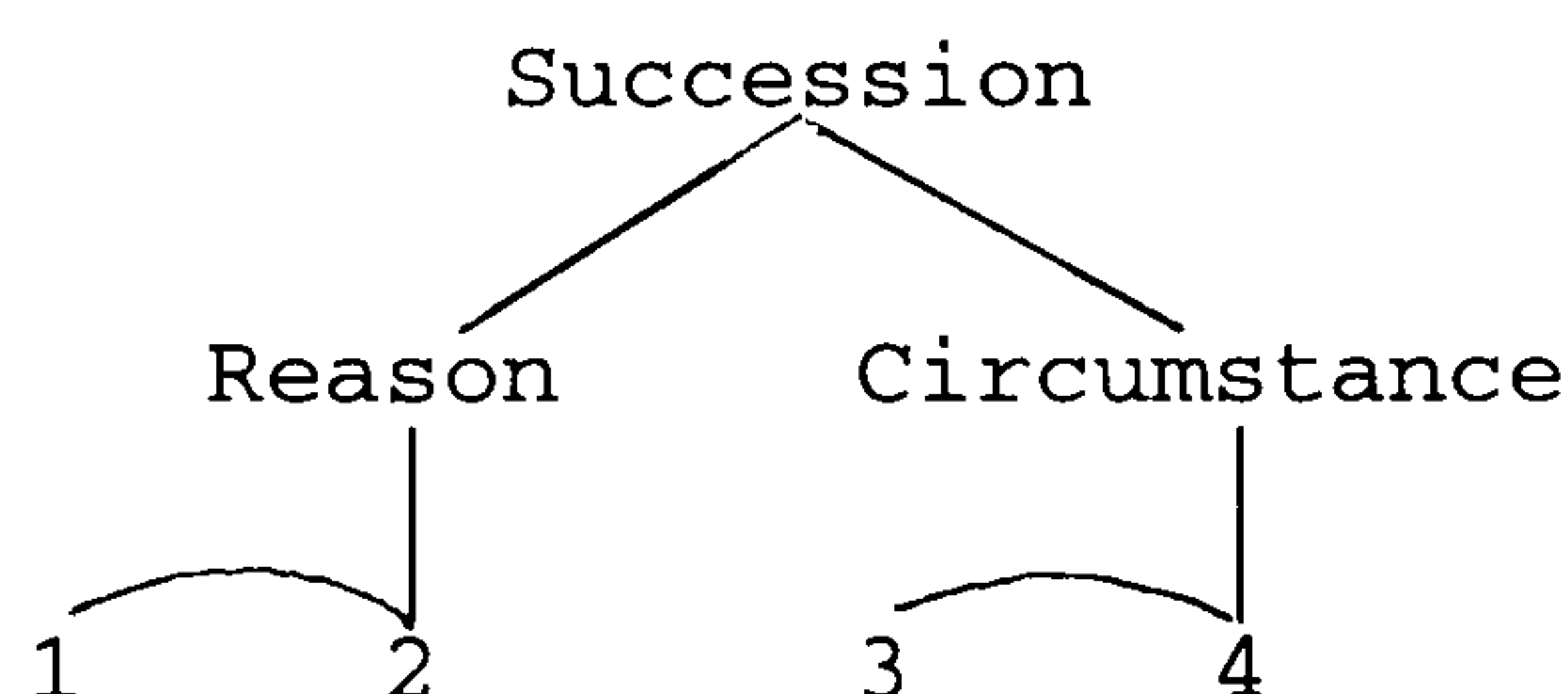


This passage displays the structure of a Succession predicate the second argument of which is an embedded Circumstance predicate. The subject anaphor in proposition 3, which takes the form of ZA, refers to the subject NP in proposition 1 which is controlling. Again, proposition 2 that contains a different subject NP is an adjunct of the Circumstance predicate.

(17) and (18) show that ZA can be used in the context of Issue predicates and conjoining predicates if both mentions of the NP are in subject position and the

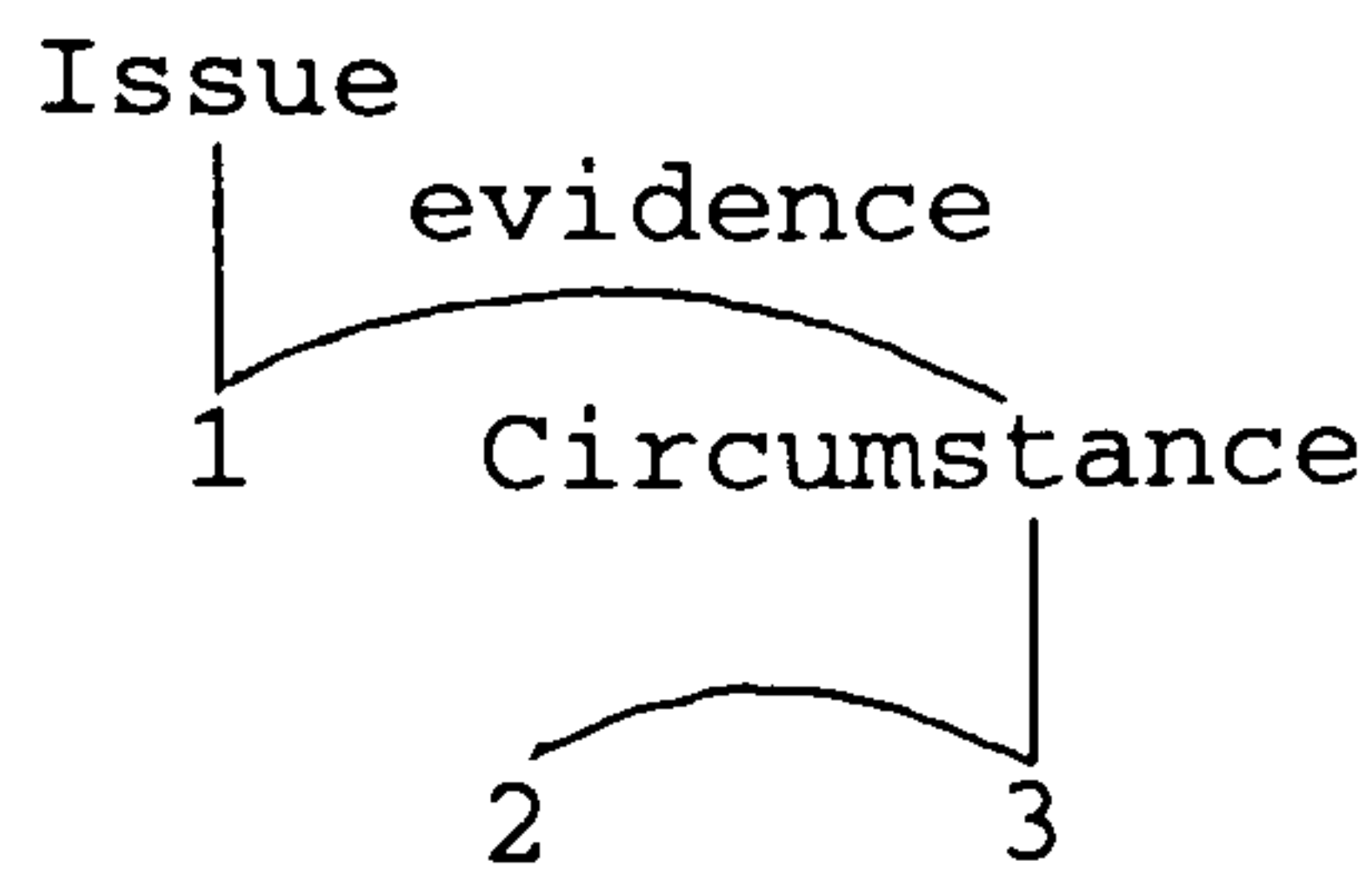
intervening proposition containing a different subject NP is an embedded adjunct. In other words the principle (16) associated with non-Issue adjoining predicates (adjunct-nucleus structures) can be extended to Issue predicates (nucleus-adjunct structures) and conjoining predicates (nucleus-nucleus structures). While this usage is possible, as shown by (17) and (18), it is however not significantly realised in my data: there are only 2 occurrences of ZA in nucleus-adjunct structures (i.e. Issue predicates) and 3 occurrences of ZA in nucleus-nucleus structures (conjoining predicates). In contrast, we find 16 instances of PA in Issue predicates and 7 instances of PA in conjoining predicates.⁸ These figures suggest that PA is a preferred usage to ZA in these two environments. Example passages follow.

- (19) 1. Youyu Zhou Enlai dali zhichi,
because fully support
"With the strong support from Zhou Enlai"
2. ta yijiugqi'er-nian huifule fuzongli zhiwu.
he in 1972 resume vice-premier position
"he resumed his post of vice-premier in 1972"
3. Zhou Enlai bingzhong zhuyuan hou,
seriously-ill sent-to-hospital after
"After Zhou Enlai was seriously ill and admitted to hospital"
4. yijiugqiwu-nian yiyue, ta danren Zhonggong Zhongyang
in 1975 January, he become CCP central-committee
fuzhuxi ... zhuchi Dang he guojia de richang gongzuo.
vice-chairman... be-in-charge Party & state daily work
"he became vice-chairman of the Central Party Committee in
January 1975 and was in charge of the day-to-day running
of the Party and the state" [D15]



- (20) 1. Zai Wenge zhong, Zhou Enlai baohule yidapi laoganbu.
in Culture Revolution protect many veteran cadres
"During the Cultural Revolution Zhou Enlai protected a large
number of veteran cadres"
2. Chen Yi tongzhi zao hongweibing congji shi,
Comrade Chen Yi by Red Guards persecuted when
"When Comrade Chen Yi was persecuted by the Red Guards"
3. ta ceng duoci yuyi baohu.
he ever many-times give protection
"he protected him on a number of occasions"

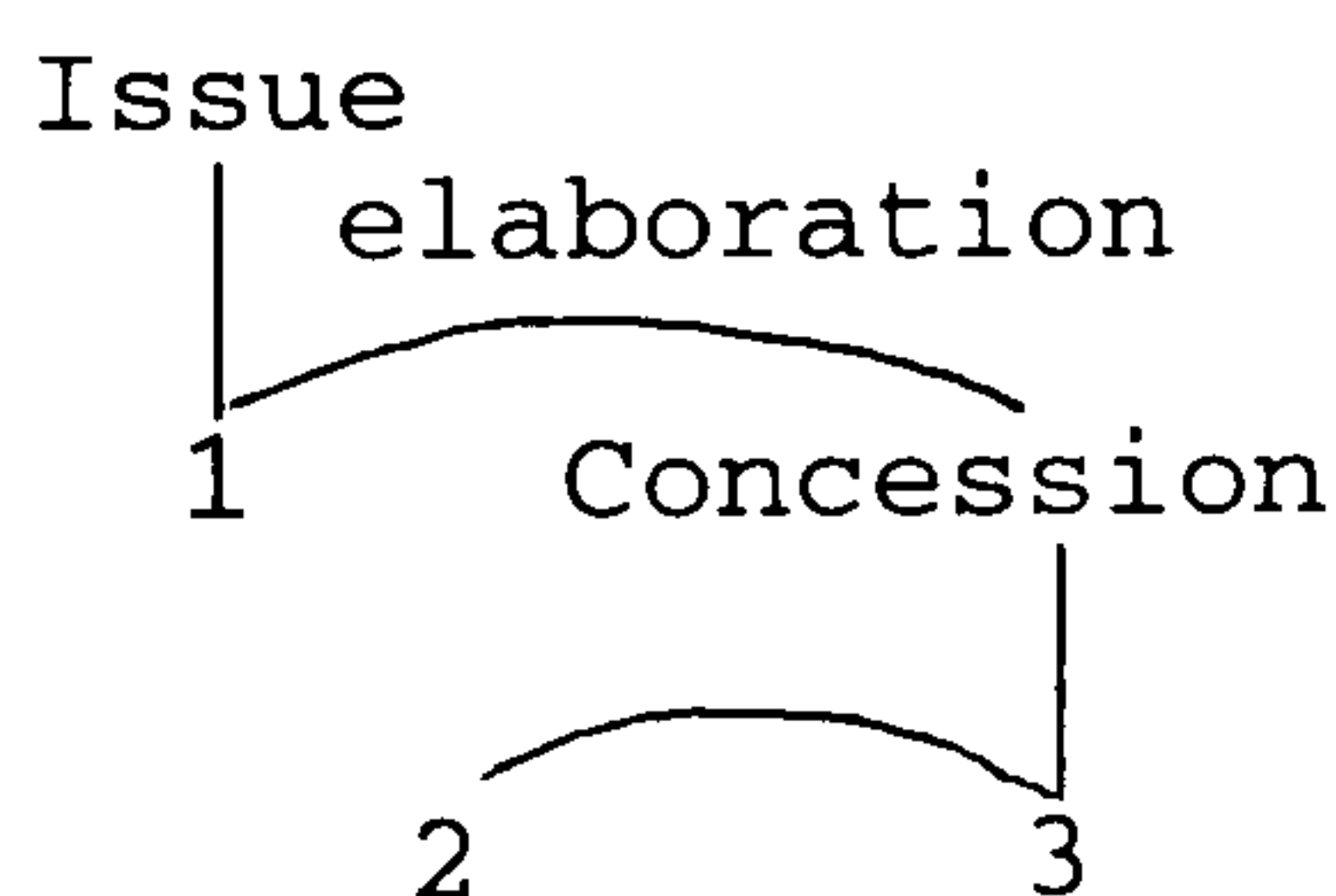
⁸Of the 16 PAs in Issue predicates, 6 occur within sentences and 10 occur across sentences and of the 7 PAs in conjoining predicates 2 occur within sentence boundaries and 5 occur across sentence boundaries. The ZAs in these two structures also occur both in and across sentence boundaries. This indicates that the distinction between intra- and inter-sentential anaphora is not important here.



(19) is associated with a Joint predicate in which the subject anaphor in proposition 4 which takes the form of PA is coreferential with the subject NP in proposition 2, separated by proposition 3 where a different NP occurs in subject position. In (20) we have an instance of the Issue predicate with its adjunct realised by an embedded Circumstance predicate. The NP *Zhou Enlai* is first mentioned in the subject position of proposition 1 and then mentioned in the subject position of proposition 3, separated by proposition 2 containing a non-coreferential subject *Chen Yi*. The subject anaphor in proposition 3 is encoded with PA. Note that in both examples the intervening proposition with a non-coreferential subject NP is the adjunct of the embedded predicate. In other words PA is used in exactly the same situation in which ZA is used previously. This shows that ZA and PA are both allowed in the present context, though as suggested by the numbers of their occurrences, PA is more likely to be used.⁹ I give another example below.

- (21) 1. Huidao Shanghai, Fan Dalei mianlin xiongji-weipude da-shoushu,
return Shanghai face very risky big operation
"Upon return to Shanghai, Fan Dalei was to undergo a major
surgical operation"
2. bieren dou nie-yi-ba-han,
others all hold-a-palmful-of-sweat
"although everyone else was deeply concerned"
3. ta ziji que xiangdang congrong, ...
he self however rather calm
"he himself did not show any sign of anxiety or
worry at all"

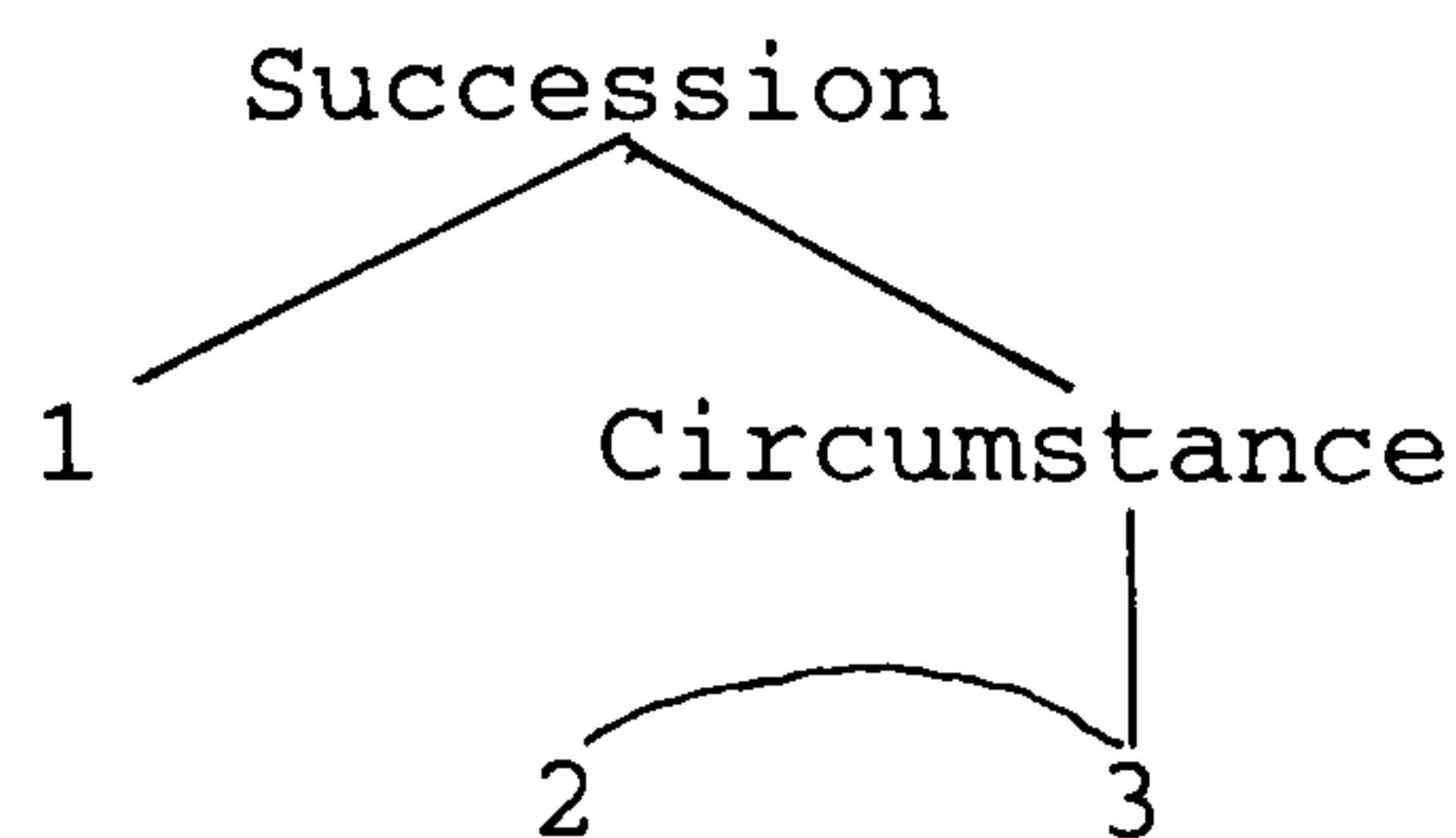
[D40]



The subject antecedent occurs in the nucleus of the Issue predicate (proposition 1) and its subject anaphor occurs in the nucleus of the subordinate Concession predicate

⁹This is apparently in parallel with the use of PA in Issue predicates and some of the conjoining predicates in the active patterns (see the principles (76) and (68)).

guojia de gongzuo ... zuochule zhongyao gongxian.
 state work make important contribution
 "he played an important role in staging the come-back of
 Deng Xiaoping as leader of the Party and the state" [16]



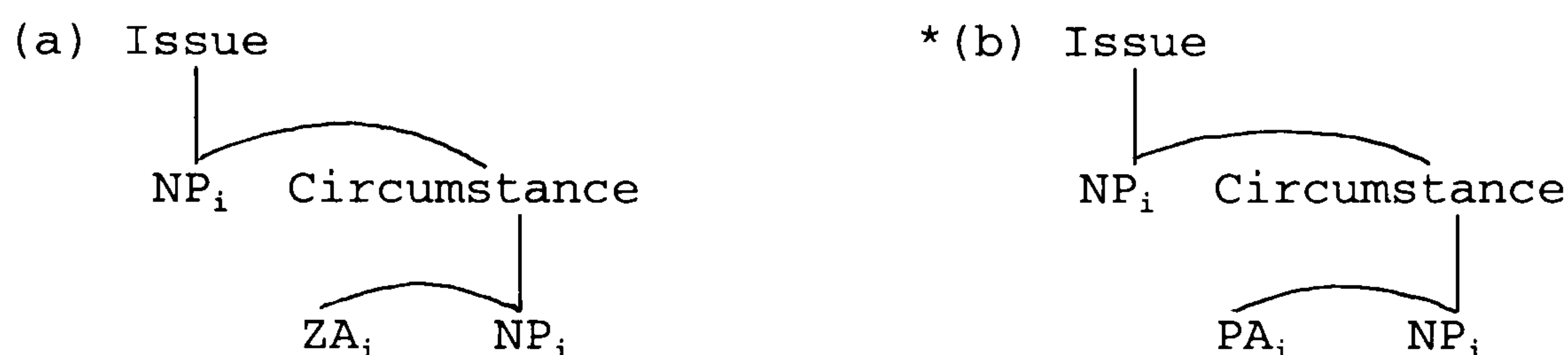
In (23), the NP *Wu Tianming* is mentioned as a full NP in proposition 1, the nucleus of the Issue predicate, and as ZA in proposition 2, the adjunct of the embedded Circumstance predicate realising the adjunct of the Issue predicate, and then as PA in proposition 3, the embedded nucleus. (24) shows a similar picture except that the higher predicate is not an Issue predicate but a conjoining predicate (i.e. Succession). The issue here is how we treat the empty subject in proposition 2: does it take its reference from the preceding subject or from the following one? In the former case, we would have two active patterns (like (1) and (2) discussed at the beginning of this chapter); in the latter case, we would have a controlling pattern, namely, the PA in proposition 3 takes its reference directly from the subject NP in proposition 1.

In dealing with active patterns in the preceding chapter, we saw that ZA coreferential with the lexical subject NP of the following nucleus may occur in the subject position of a preceding adjunct whereas PA may not occur here. The reason for this complementary distribution of ZA and PA was shown to be a syntactic one: ZA is allowed here because it is in the domain of the matrix subject, the subject of the main clause; PA is not allowed because it cyclic-c-commands the matrix subject. This is illustrated in (25).

- (25a) 1. 0 jiandao bieren you kunnan,
 see others have trouble
 "When (he) saw others in trouble"
2. Zhangsan zongshi kangkai xiangzhu,
 always generously help
 "Zhangsan was always ready to help"
- (25b) 1. *Ta jiandao bieren you kunnan,
 he see others have trouble
 "When he saw others in trouble"
2. Zhangsan zongshi kangkai xiangzhu.
 always generously help
 "Zhangsan was always ready to help"

Now, if we put (25a,b) in the context of (26), the same coreference restrictions still apply.

- (26) 1. Zhangsan shi ge dahaoren.
 is a big good man
 "Zhangsan was a good man"
2. 0/*Ta jiandao bieren you kunnan,
 see others have trouble
 "When (he) saw others in trouble"
3. Zhangsan zongshi kangkai xiangzhu.
 always generously help
 "Zhangsan was always ready to help"



Why is the use of PA in the (b) diagram not allowed, given the principle (76) for active patterns in Chapter 4 which says that PA is used for a subject anaphor coreferential with a subject antecedent in an Issue predicate?

The puzzle is solved if we proceed from the position that the subject anaphor of a preceding adjunct clause/proposition must take its reference from its immediate matrix subject if they are coreferential (e.g. proposition 3 in (26)) but not from the subject NP outside of that immediate domain (e.g. proposition 1 in (26)). Since the occurrence of PA in this position cyclic-c-commands the matrix lexical subject, it is not allowed.¹⁰ For the same reason, ZA is allowed since it is to be identified by the immediate matrix subject (proposition 3 in (26)). This provides justification for the treatment of cases like (23) and (24) as controlling patterns: since the ZA in proposition 2 is dependent on the subject NP of proposition 3 (its matrix subject) for antecedence, the subject NP of proposition 3 then takes its reference directly from the subject NP of proposition 1 (which is its immediate matrix subject).

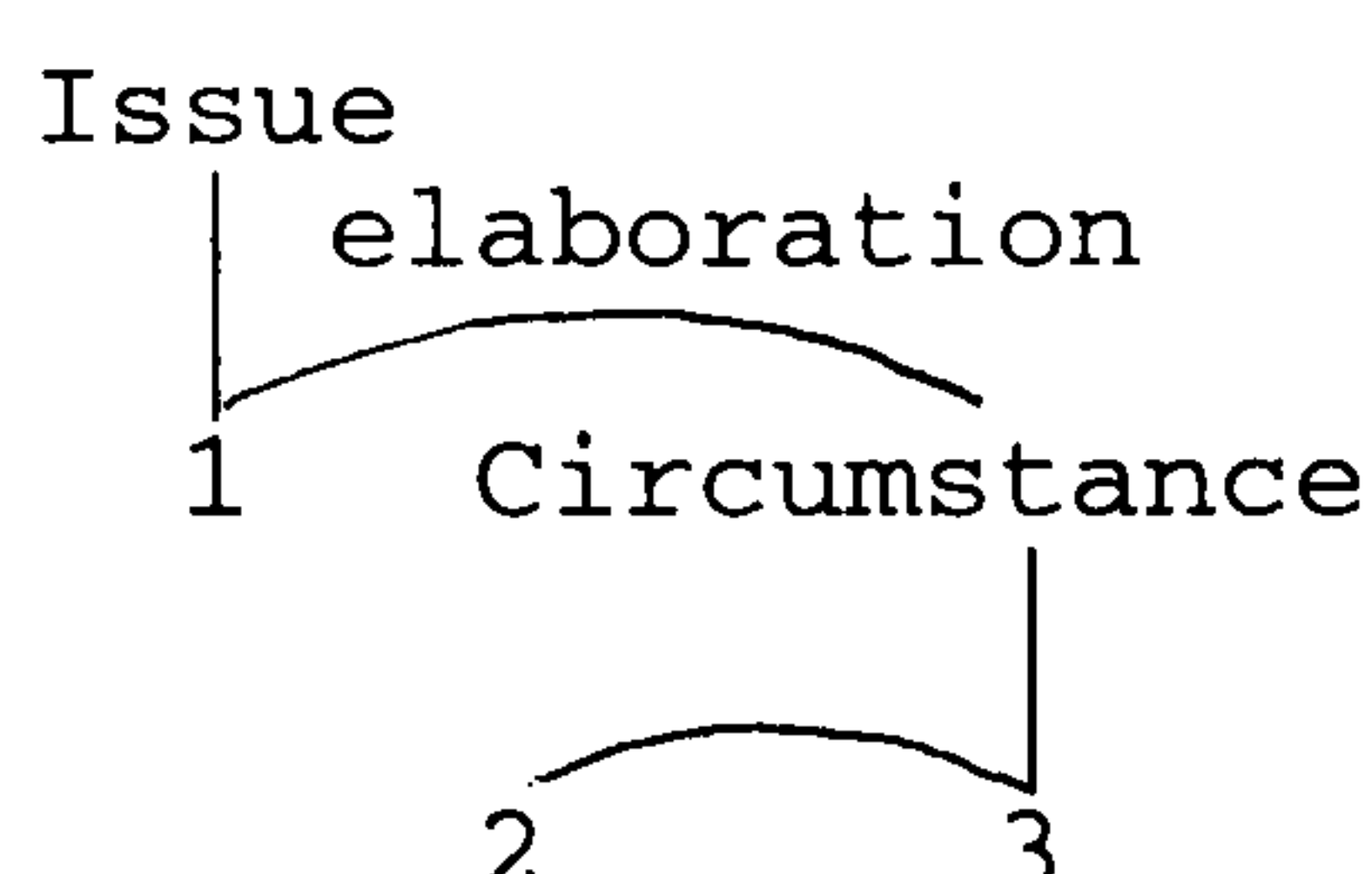
As mentioned earlier, there are 28 instances in the corpus in which the antecedent occurs in the nucleus of an Issue predicate (or the first argument of an conjoining predicate) and the anaphor, in the form of PA, occurs in the nucleus of an embedded

¹⁰This provides an instance in which the principle of "precede and command" does not work (cf. Langacker, 1966).

non-Issue adjoining predicate realising the Issue adjunct, with a zero mention of it in the subject position of the pre-posed adjunct of the embedded predicate. If we return to the principle (22), we see that the use of PA here is accountable for.

(22) specifies that in a controlling pattern PA usually occurs if the intervening proposition that contains a different NP in subject position is an adjunct of an subordinate predicate. However, I have found four cases in which NP is used instead of the expected PA in the structural environment as described by (22). Consider (27).

- (27) 1. Zai qu'nian daxuan qijian, Xilali mabutingtide wei Kelindun
 in last year general election continuously for Clinton
 jingxuan dongben-xizou he painan-jiefan.
 election east-run-west-run and tackle-problem
 "In last year's presidential election, Hilary worked
 extremely hard for Clinton's election campaign and
 tackled many difficult problems for him"
2. Zai Kelindun feiwen mantian-fei-de shihou,
 at Clinton rosy-rumours all-sky-flying time
 "When rumours about Clinton's former love affairs were
 spreading far and wide"
3. Xilali tingshen-erchu shuole yiju shipo-tianjing de hua. ...
 Hilary come-out-boldly say an astonishing word
 "Hilary came to his rescue and made an astonishing
 remark" [D42]

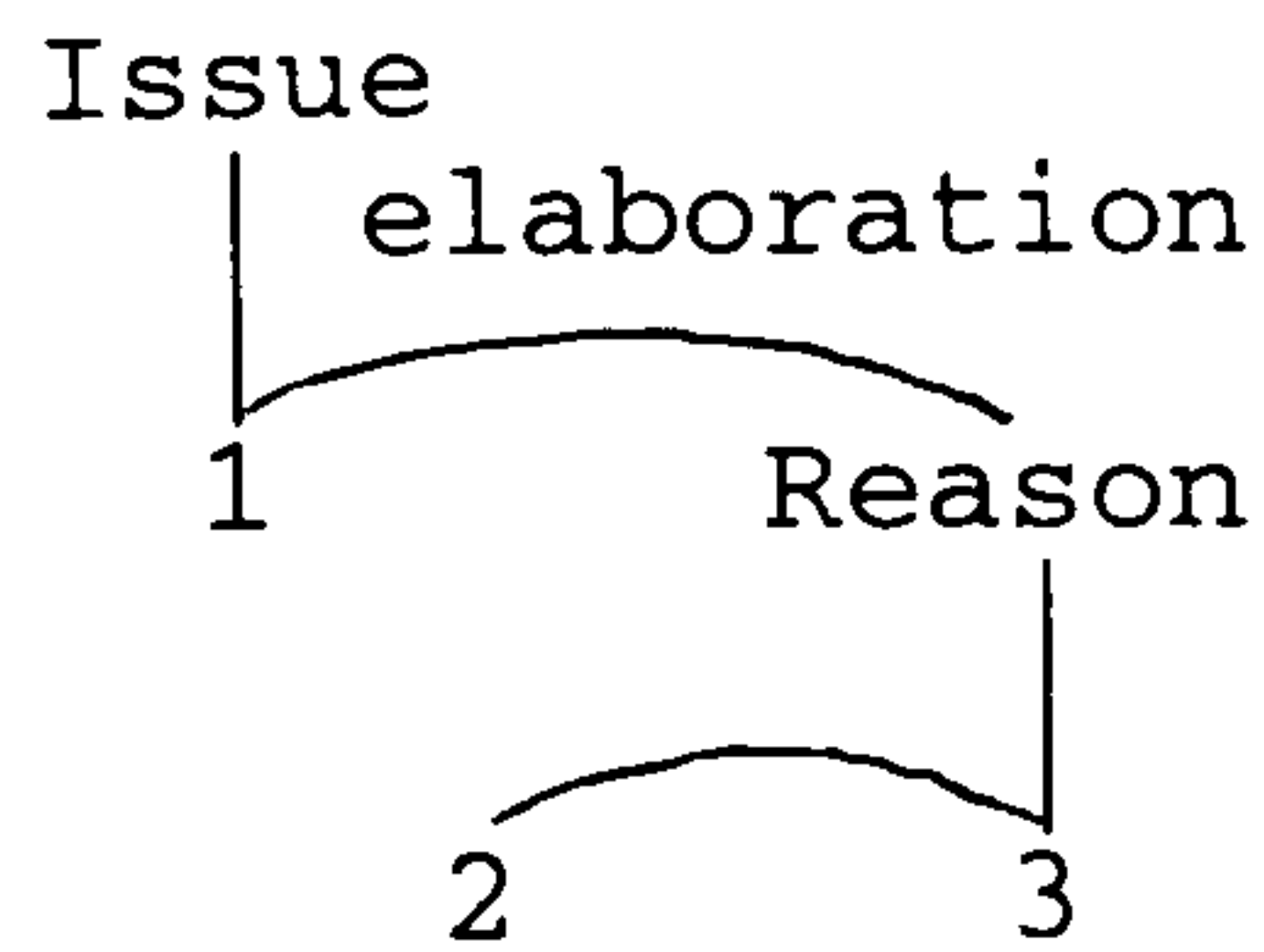


In this passage, the NP *Hilary* first occurs as subject in proposition 1, the nucleus of the Issue predicate, and then as subject in proposition 3, the nucleus of the embedded Circumstance predicate realising the Issue nucleus. The second mention of the NP takes the form of a full NP although both the coreference chain and the structural pattern fall under (22) which calls for the use of PA. We will look at another passage in which NA is used.

- (28) 1. Xilali lale Kelindun yiba, baozhule Kelindun de
 Hilary pull Clinton a-pull save Clinton's
 zhengzhi shengming.
 political life
 "Hilary helped Clinton and saved Clinton's political life"
2. Xianzai Kelindun jiangshan yiding,
 now river-mountain gained
 "Now Clinton has won the White House"

3. Xilali zhewei diyi-furen kaishi hua'an-weiming.
 this first-lady begin from-dark-to-light
 "Hilary, the First Lady, is coming out of shadow and
 beginning to shine"

[D42]

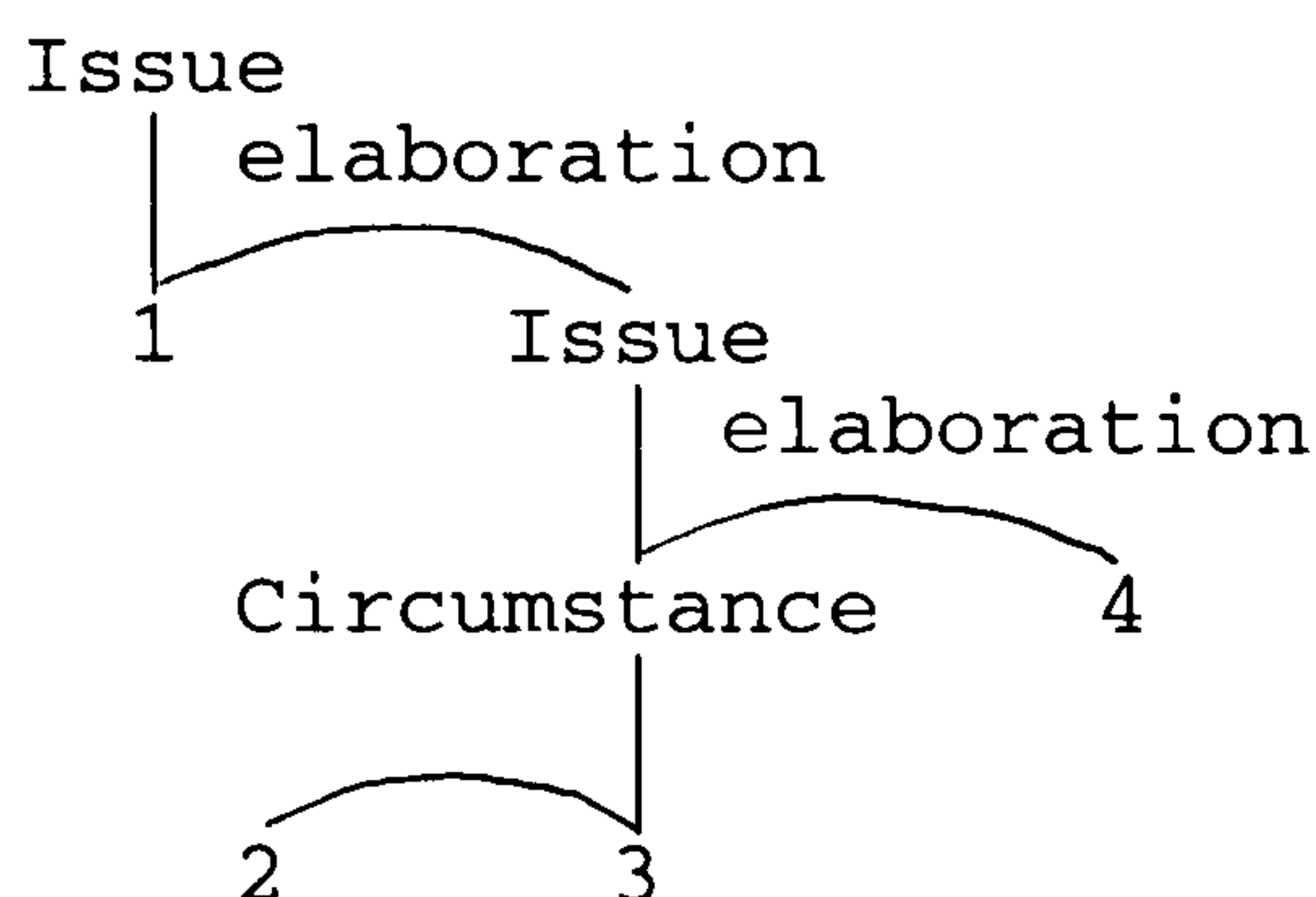


This passage exhibits the same features as (27). That is, both the antecedent and the anaphor are subjects of their propositions, and the intervening proposition containing a different NP in subject position is the adjunct of an embedded predicate. Why is NA used where PA would be adequate in terms of anaphor resolution? I suggest that this may have to do with the topical status of the intervening NP. That is, the NPs occurring as subjects of the intervening propositions in (27) and (28) both had their antecedents mentioned in the object position of the immediately preceding proposition, whereas in all the previous passages in this chapter, the NPs occurring in the intervening propositions did not have such a prior appearance. As discussed in the preceding chapter on Active patterns, a subject anaphor with an object antecedent in the active proposition takes the form of a full NP if its antecedent is a non-topic. We also noted that the second mention of the NP in subject position as a full NP has the potential to establish it as the new topic for the following discourse. This seems to have contributed to the occurrence of NA in the controlled proposition in (27) and (28). Since the second mention of the different NP in the subject position of the intervening proposition establishes it as the new topic, and thus renders the old topic (i.e. the subject of proposition 1) a non-topic, the next mention of the now non-topic NP in the controlled proposition takes the form of a full NP.

From the above analysis, we see that the subject anaphor coreferential with the subject antecedent in the controlling proposition is realised by a full NP if the non-coreferential subject NP in the intervening proposition has its antecedent mentioned in the immediately preceding proposition. The effect of this nominal realisation is to regain its topic role and serve as the reference point for the succeeding discourse.

Let us now look at some other passages which also show the use of NA.

- (29) 1. Zhihou, ta (Tian Jiyun) bei diaodao Sichuansheng gongzuo,
later he is posted-to Sichuan Province work
xianhou danrenguo zhege Zhongguo renkou zuiduode shengfen de
first-then become this China population most Province
caizhengju (ting) fu-juzhang, juzhang.
Treasury Dept. deputy director, director
"he then worked in Sichuan Province first as Deputy Director
of the Treasury Department of this China's most heavily
populated province, then as the Director of the Department"
2. Zhao Ziyang ren Zhonggong Sichuan Shengwei Diyishuji shi,
is CCP Sichuan Committee First-Secretary when
"When Mr Zhao Ziyang was the First Party Secretary of Sicuan
Province"
3. Q zai nali zhaoshou jingxing jingji tizhi gaige de shiyan.
at there start carry out economic system reform experiment
"(he) carried out economical reform in the Province"
4. Tian Jiyun duiyu zhexiang kaichuangxingde gongzuo
to this pilot work
geiyule youlide zhichi.
give strong support
"Tian Jiyun gave his strong support for this pilot work" [D20]

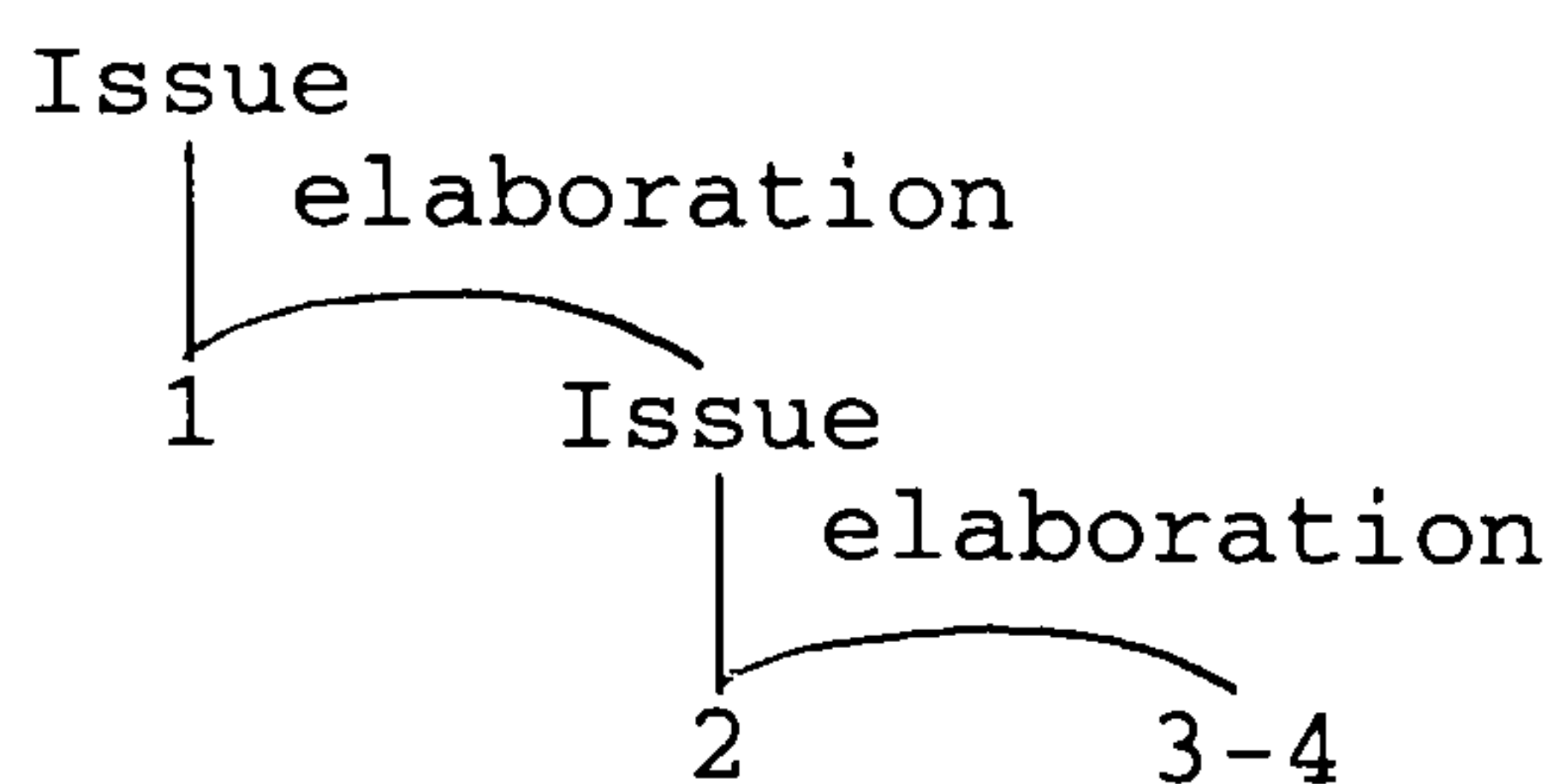


The NP *Tian Jiyun* is first mentioned in proposition 1, the nucleus of the higher Issue predicate, and then in proposition 4, the adjunct of the lower Issue predicate. The second mention of *Tian Jiyun* is realised by a full NP. Between the two mentions of *Tian Jiyun*, another NP *Zhao Ziyang* occurs as subject in the nucleus of the embedded Issue predicate composed of propositions 2 and 3. The following passage shows the same features as (29).

- (30) 1. Zhou Enlai tongzhi likai women yijing shi'erge niantoule ...
Comrade Zhou Enlai leave us already twelve years
"It has been twelve years since Comrade Zhou Enlai left us"
2. Zhonggong-zhongyang wenxianshide tongzhi yao wo
Party central committee document-office comrade ask me
wei zheban jizi xie pian duanwen, zuowei xuyan.
for this collection write a short-article as foreword
"The comrade from the Office of Documents of the Party
Central Committee asked me to write a short article in
commemoration"
3. Enlai tongzhi shi wode laozhanyou, laolingdao, shulai
Comrade Enlai is my old-comrade-arms, old leader always

wei-wo-suo-jingzhong,
 respected-by-me
 "Comrade Enlai was my old comrade-in-arms and old
 leader, and was always respected by myself"

4. wo ziran leyu jieshou zheyi renwu.
 I surely willing accept this task
 "I naturally accepted the task with pleasure" [D12]



In this passage, the antecedent *Comrade Zhou Enlai* occurs in the subject position of proposition 1 (the nucleus of the higher Issue predicate), a different NP occurs as subject in proposition 2 (the nucleus of the embedded Issue predicate) and the next of mention of *Comrade Zhou Enlai* in the subject position of proposition 3 (the adjunct of the embedded Issue predicate) takes the form of NP.

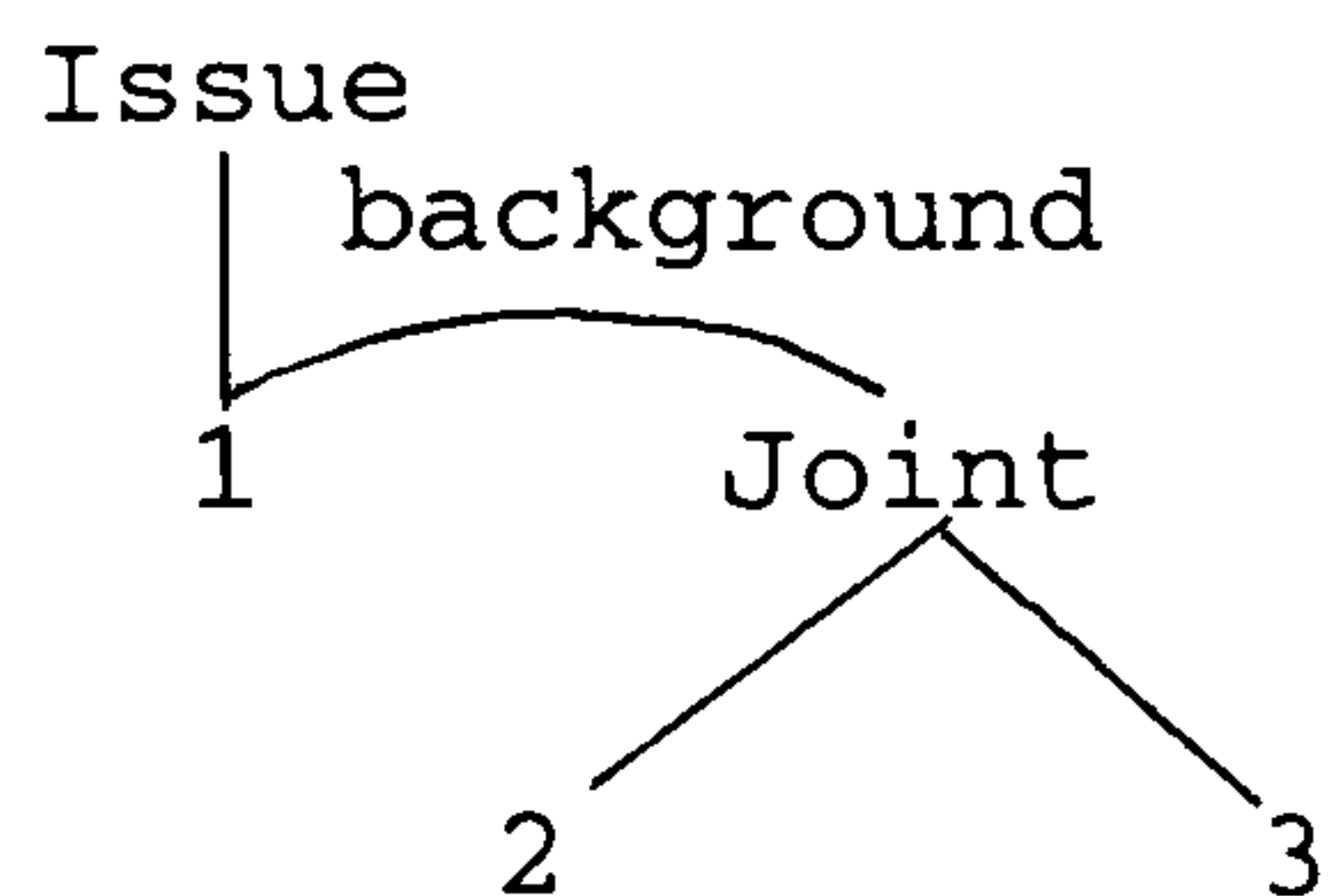
(29) and (30) demonstrate that NA occurs if the intervening proposition(s) which contains a different subject NP is the nucleus of an embedded Issue predicate. They differ from (19)-(21) in which PA occurs in that while in those passages the intervening propositions containing the non-coreferential subject NPs are the *adjuncts* of embedded predicates, in (29) and (30) the intervening propositions containing the non-coreferential subject NPs are the *nuclei* of embedded (Issue) predicates. This difference in the rhetorical structure of the intervening proposition(s) appears to have consequences for anaphora. As discussed before, the subject NPs in the intervening propositions in (19) through (21) might compete for antecedence of the PAs in the following propositions since the propositions they occur in are in an active state. However, if we take a hierarchical point of view, we find that, while separated by the intervening propositions linearly, the controlling propositions containing the antecedent and the controlled propositions containing the anaphor are actually adjacent to each other at a higher level because the intervening propositions are only embedded adjuncts. In (29) and (30), however, since the intervening propositions are the nuclei of embedded Issue predicates and thus exert greater influence on the following discourse, the use of PA in their adjunct partners (the immediately following propositions) would be interpreted as referring to the NPs in the (active) intervening propositions. Thus, if the anaphor refers back to the NP in the controlling proposition, NA is required.

3. Li Guangqian ye zai gongzuozhong jileile shangye
 also in work accumulate business

jingying de zhishi he jingyan.
 management knowledge and experience

"Li Guangqian also gained the knowledge and experience of
 business management"

[D7]



In (32) the antecedent NP *Li Guangqian* is subject of proposition 1, the nucleus of the Issue predicate, and the anaphor occurs also as subject in proposition 3, the second argument of the embedded Joint predicate, and takes the form of NA. Note that a different NP occurs inside the subject in proposition 2, the first member of the embedded Joint predicate. Since the arguments of a conjoining predicate are in fact all nuclei, the subject NP in such an argument is likely to have a similar effect as the subject NP in the nucleus of an Issue predicate. This accounts for the occurrence of NA for the subject of proposition 3 coreferential with the subject NP in the controlling proposition (1).¹¹ I found five examples like (32) where the embedded rhetorical predicate is a conjoining predicate whose first argument contains a different subject NP. In all these five cases, the subject anaphor takes the form of NA coreferential with the subject NP in the controlling proposition.

In the data there are two examples of NA which occur in the adjunct of an Issue predicate whose *nucleus* is realised by an embedded predicate (note that in the majority of the examples discussed above the embedded predicate occurs in the Issue *adjunct*). This is exemplified in (33):

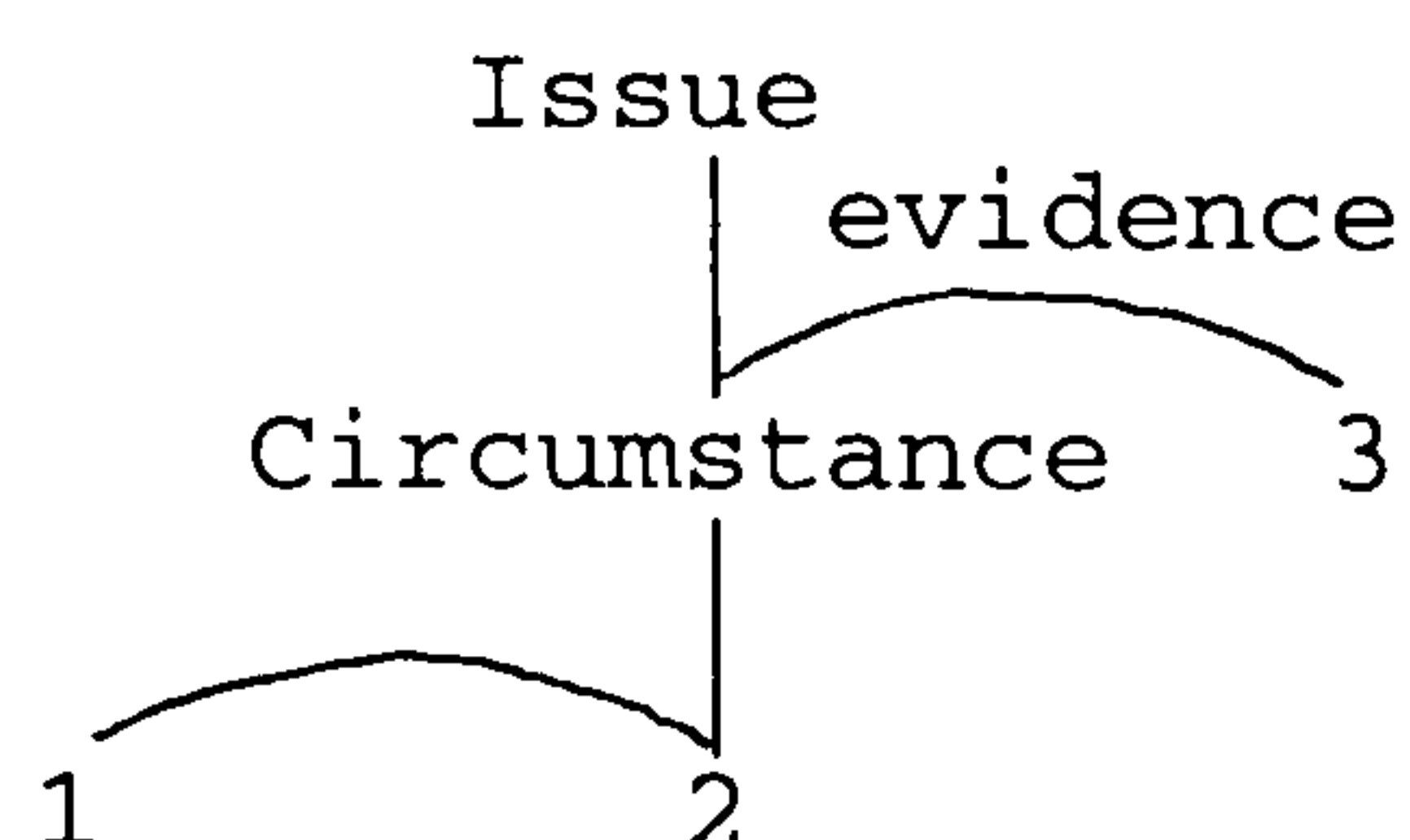
(33) 1. Zhang Zi'en ... yidan renwei zijide caihua buzhi shi
 once think own ability is-not-just

xianyu meigong shi,
 limited-to art-design when

"When Zhang Zi'en realised that he could do better than an
 art designer"

¹¹The NP *Chen Jiageng* in proposition 2 had its antecedent mentioned as part of the PP in proposition 1. Its mention as a full NP in proposition 2 is a result of its antecedent being a non-topic but at the same time this nominalisation establishes it as a new topic, which also contributes to the occurrence of NA in proposition 3.

2. Wu Tianming bian haobu-youyude paiban
 then without-hesitation decide
 yuyi kua-hang tiba.
 offer cross-specialty promote
 "Wu Tianming promoted (him) to be director without hesitation"
3. Guoran, Zhang Zi'en bufu-zhongwang, shouci zhidao
 as-expected not-fail-others-trust first-time direct
 jiu nachule poyou-tesede 'Momode Xiaoli He'.
 then give-out very-characteristic 'Silent Xiaoli River'
 "Just as expected, Zhang Zi'en did not fail to live up to
 the trust and successfully directed his first film
 'Silent Xiaoli River'" [D31]



The NP *Zhang Zi'en* is subject of proposition 1, the adjunct of the embedded Circumstance predicate realising the nucleus of the Issue predicate and a different NP *Wu Tianming* occurs as subject in proposition 2, the nucleus of the embedded predicate. The next reference to *Zhang Zi'en* as subject in proposition 3 (the adjunct of the Issue predicate) is realised by a full NP. The occurrence of NA in (33) can be accounted for by the principle (31). That is, the anaphor in the controlled proposition is expressed with a full NP since the intervening proposition which contains a non-coreferential subject NP is the nucleus of an embedded predicate.¹²

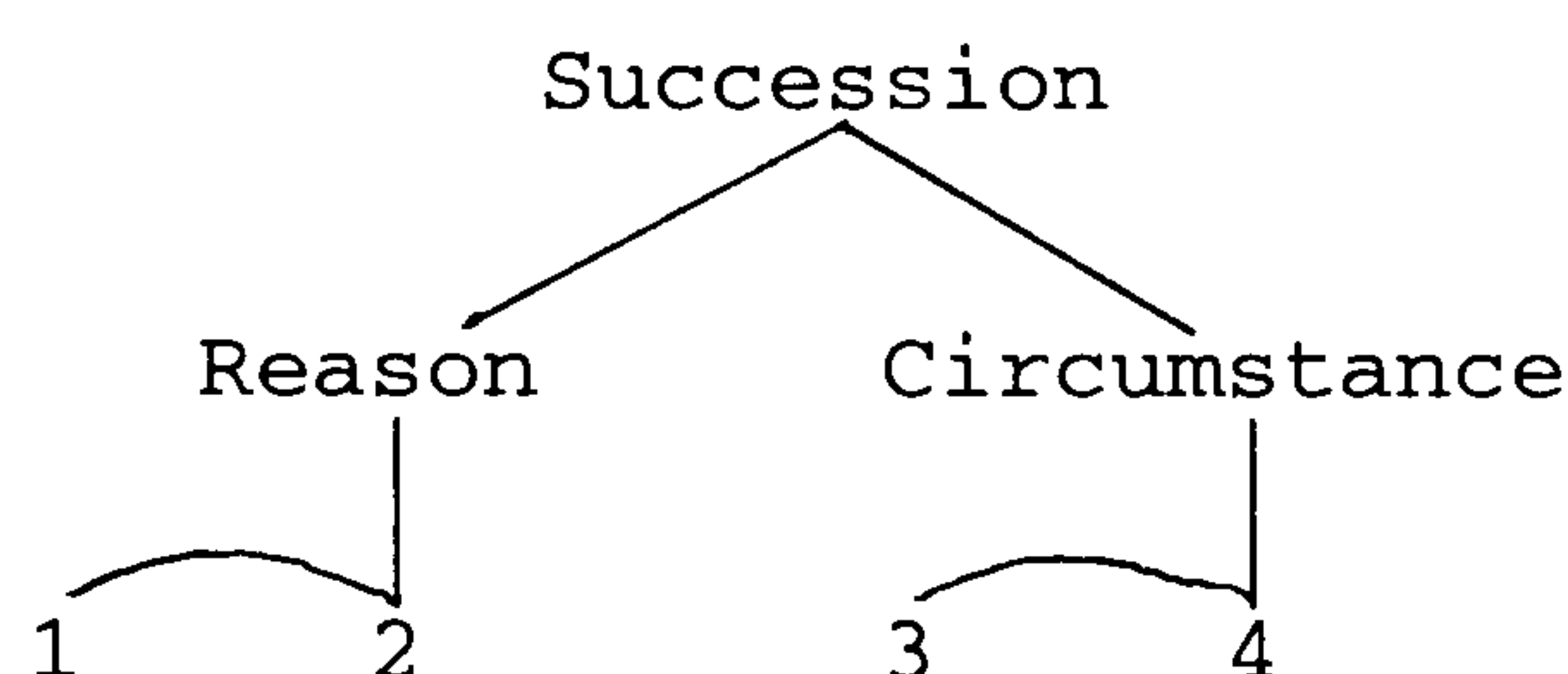
I have shown, thus far, that in controlling patterns associated with the Issue predicate whether the anaphor in the controlled proposition is realised by NA or PA depends crucially on the rhetorical structure of the intervening proposition(s). NA is used if such an intervening proposition is the nucleus of an embedded rhetorical predicate and PA is used if it is the adjunct of an embedded predicate.

In examining the occurrence of anaphora in nucleus-nucleus structures (i.e. conjoining predicates), we found that PA is used if the intervening proposition containing a different subject NP is the *adjunct* of an embedded rhetorical predicate.

¹²It should be noted that there are only 2 instances of NA in the structural pattern like (33) in which the Issue nucleus is realised by an embedded predicate while there are 15 instances of NA in the structural pattern like (29), (30) and (32) in which the Issue adjuncts are realised by embedded predicates. This suggests that the structural pattern like (33) is a relatively minor one.

What is the situation if such an intervening proposition is the *nucleus* of an embedded predicate? Let us look at an earlier example repeated as (34).

- (34) 1. Youyu Zhou Enlai dali zhichi,
because Zhou Enlai fully support
"With the strong support of Zhou Enlai"
2. Ta/Deng Xiaoping yijiugqi'er-nian huifule fuzongli zhiwu.
in 1972 resume vice-premier position
"Deng Xiaoping resumed his post of vice-premier in 1972"
3. Zhou Enlai bingzhong zhuyuan hou,
seriously-ill sent-to-hospital after
"After Zhou Enlai was seriously ill and admitted to hospital"
4. yijiugqiwu-nian yi-yue, ta danren Zhonggong Zhongyang
in 1975 January, he become CCP central-committee
fuzhuxi ... zhuchi Dang he guojia de richang gongzuo.
vice-chairman... be-in-charge Party & state daily work
"he became vice-chairman of the Central Party Committee in
January 1975 and was in charge of the day-to-day running
of the Party and the state" [D15]



This passage is particularly interesting in that it shows not only an instance of NA but also an instance of PA (which we have considered earlier). As previously discussed, the pronominal anaphor *ta* "he" in proposition 4 has for its antecedent the subject NP *Deng Xiaoping* in proposition 2 (the controlling proposition) and is realised as PA, although in the intervening proposition (3) there is a different NP in subject position. Now if we look at the case of NA in proposition 3, we see an apparently similar situation. That is, the antecedent *Zhou Enlai* occurs in the controlling proposition (1), separated by a proposition (2) which contains a different NP in subject position. What has contributed to the difference in the mode of reference in these two cases? The rhetorical structure of the intervening propositions that contain different subject NPs is responsible for the alternation between PA and NA. In the case of PA in proposition 4, the preceding proposition (3) is the *adjunct* of the embedded Circumstance predicate, while in the case of NA in proposition 3, the preceding proposition (2) is the *nucleus* of the embedded Reason predicate. As noted before, an adjunct is a lower level structure than its nucleus partner and can be treated as less intrusive for the purposes of anaphora. That is to say, if the adjunct contains a subject NP, that NP is less likely to serve as the topic or the

reference point for the following discourse than if it is the nucleus that contains a subject NP. This explains the occurrence of NA in proposition 3 and the occurrence of PA in proposition 4. In other words, the occurrence of anaphora in the nucleus-nucleus structure (conjoining predicates) shows a similar pattern to that of nucleus-adjunct structure (Issue predicates) discussed before. It should be pointed, however, that there are only 3 instances of NA in conjoining predicates as against 17 instances of NA in Issue predicates.¹³ This low frequency of occurrence may be because with conjoining predicates, it is less likely for a non-coreferential NP to occur in subject position, which may impede the smooth flow of the information conveyed through the parallel structure of conjoining predicates. Having said this, I want to point out that when a different NP does occur in subject position, the anaphor in the following proposition coindexed with the subject NP in the controlling proposition follows the general pattern presented above.

Thus far, we have considered the patterns of anaphors with coreferential subjects in controlling patterns. The crucial finding from data analysis has shown to be the rhetorical structure of the intervening proposition(s), coupled with the different rhetorical predicates involved. This is summarised in (35) below:

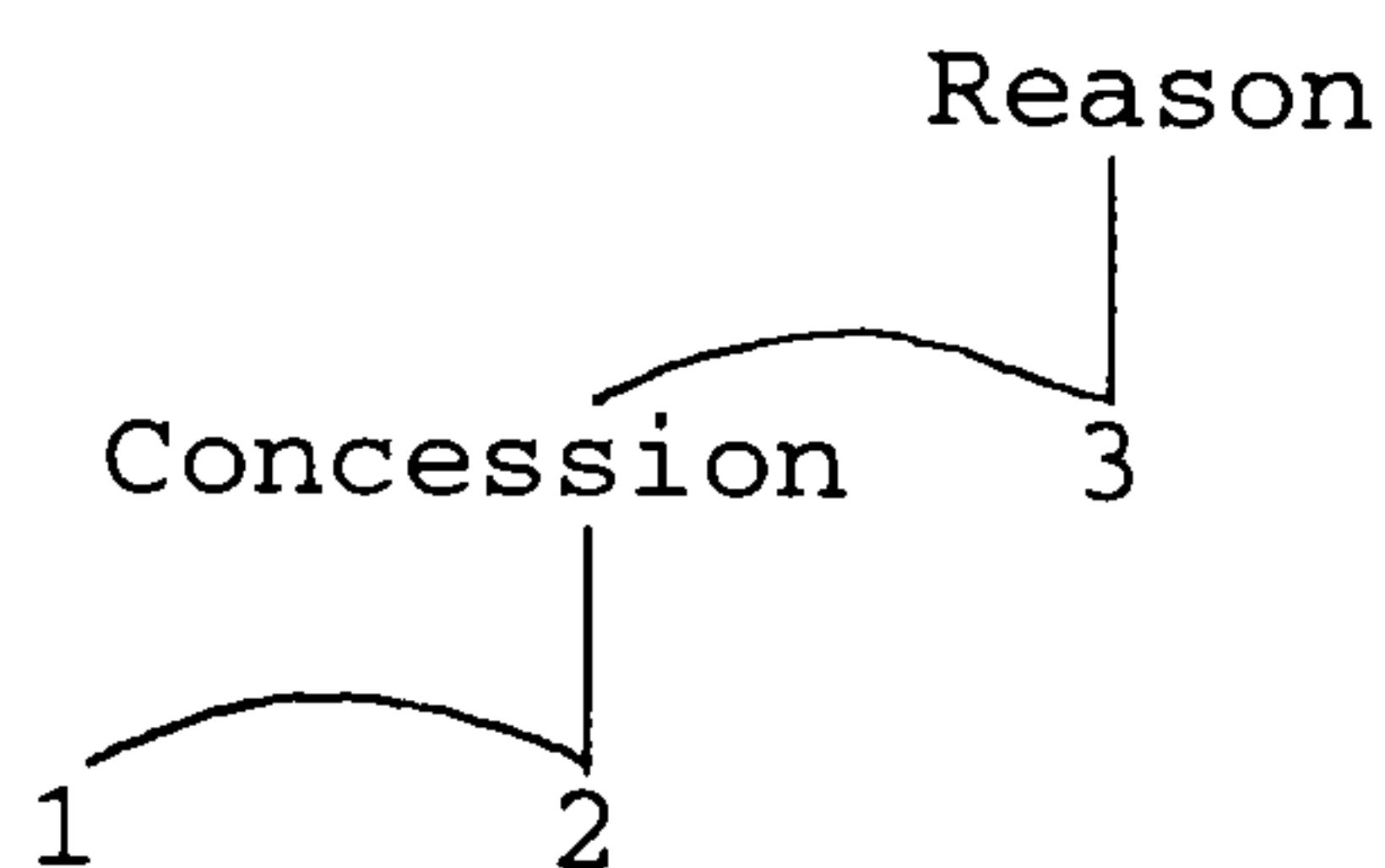
(35) In a controlling pattern ZA is used for a subject anaphor coreferential with a subject NP in the controlling proposition if the intervening proposition(s) containing a different subject NP is the adjunct of an embedded predicate in the adjunct-nucleus structure (i.e. non-Issue adjoining predicates) but optional in the nucleus-adjunct structure (i.e. Issue predicates) and in the nucleus-nucleus structure (conjoining predicates) and PA is preferred in these structures; NA is used if the intervening proposition(s) containing a different subject NP is the nucleus of an embedded predicate or if the different NP in the intervening proposition has been mentioned in the immediately preceding proposition, otherwise PA is used.

5.3.2.2 The S-O pattern

Let us now turn to the S-O pattern in which the anaphor occurs in object position, its antecedent, as before, being the subject of the controlling proposition, as exemplified in (36) below.

¹³Another 4 instances of NA occurred where the intervening propositions are the adjuncts of embedded predicates whose subjects had been mentioned in the immediately preceding propositions, as in (27) and (28).

- (36) 1. Mei Guangda meici huilai douyao you-zhenduxing-de xiang
 each time return all relevantly to
 Qing zhengfu tichu jianyi,
 Qing government make proposal
 "Each time Mei Guangda returned to his home country he
 would make relevant suggestions to the Qing government"
2. dan bing-meiyou bei Qing zhengfu renzhen caina.
 but do not BEI Qing government seriously adopt
 "But those suggestions were not taken seriously by the
 Qing government"
3. Zhe shi ta shifen aosang.
 This make him very disappointed
 "This made him very disappointed" [D35]



The antecedent NP *Mei Guangda* is subject of proposition 1 (the adjunct of the embedded Concession predicate) and its next mention is as a pronominal in the object position of proposition 3 (the nucleus of the Reason predicate). Note that the proposition containing the antecedent is controlling when the proposition containing the anaphor is reached.

The occurrences of anaphora in S-O coreference chains in the controlling patterns in my corpus are presented in Table 3.

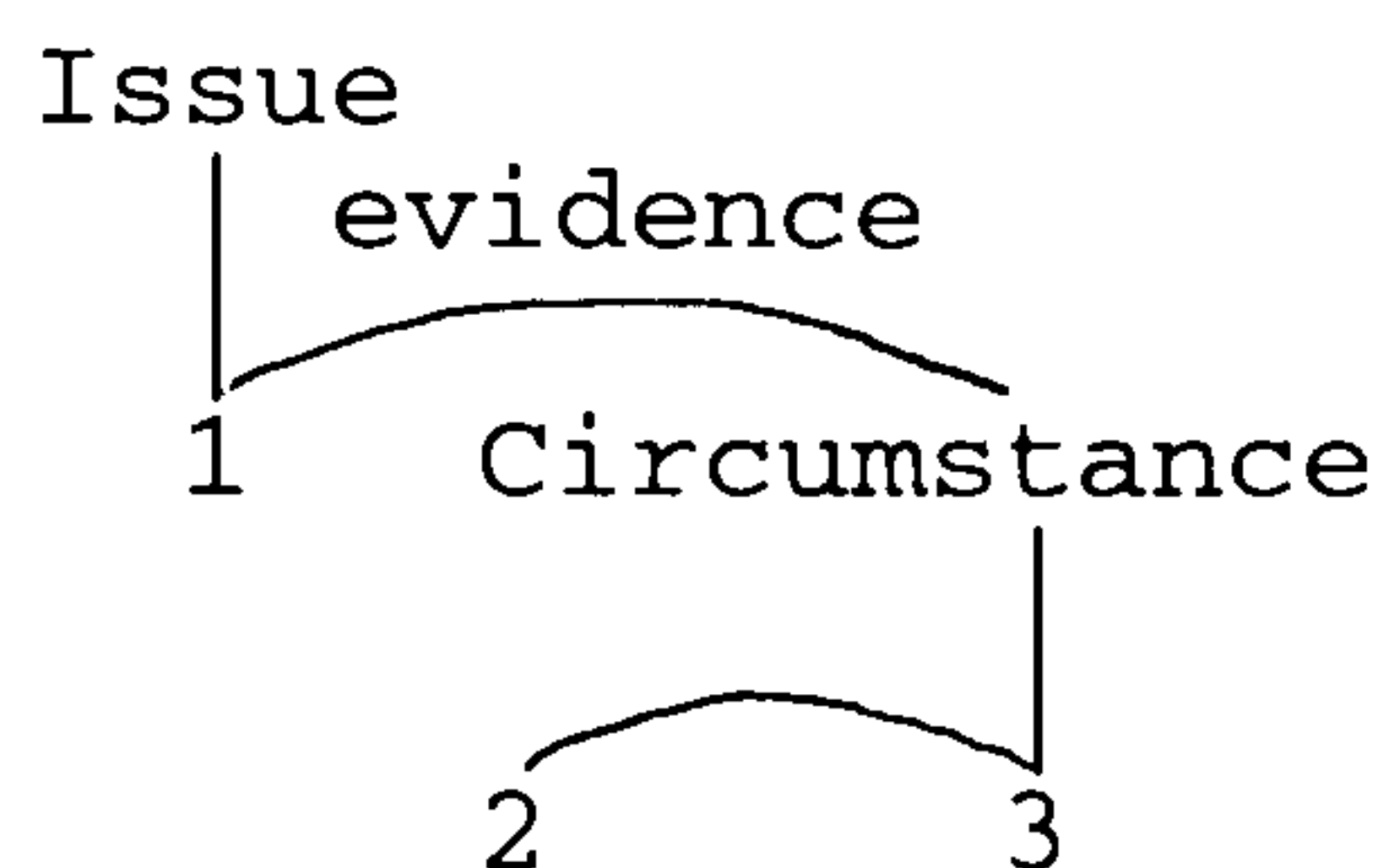
(37) Table 3: Distribution of Anaphora in the S-O Coreference Pattern

Type	Adjunct-nucleus	Nucleus-adjunct	Nucleus-nucleus	Total
ZA	0	0	0	0
PA	6 (6/0) 40% 100%	9 (1/8) 60% 45%	0	15 (7/8) 58%
NA	0	11 (0/11) 100% 55%	0	11 (0/11) 42%
Total	6 (6/0) 23%	20 (1/19) 77%	0	26 (7/19)

The most striking thing about this table is that none of the structural patterns shows

any zero anaphors and that none of the anaphor types occurs in the nucleus-nucleus pattern.¹⁴ Our discussion therefore will focus on PA/NA alternations in adjunct-nucleus and nucleus-adjunct structures. There are only 15 instances of PA and 11 instances of NA in the S-O coreference chain in the controlling patterns. 40% (6/15) of the PAs occur in the adjunct-nucleus structure, 60% occur in the nucleus-adjunct structure. All of the NAs (11 instances) occur in the nucleus-adjunct structure. These figures indicate that compared with the S-S pattern which shows 86 instances of the anaphors, the S-O pattern is a minor one and mainly restricted to the nucleus-adjunct structure (77%, 20/26). Since the nucleus-adjunct structure shows most of the anaphors, we will begin with it. Consider the passage in (38).

- (38) 1. Yan Binsheng xiansheng degao-wangzhong.
 Mr Yan Binsheng reputation-high-prestige-heavy
 "Mr Yan Binsheng enjoyed high prestige and reputation"
2. Yijiubasi-nian Xianggang Yongchun tongyanghui chengli,
 in 1984 HK Yongchun fellow-countrymen-association set-up
 "When the Hong Kong Association of Yongchun Fellow Countrymen
 was founded in 1984"
3. zongxiangqin tuixuan ta wei lishizhang.
 fellow-countrymen elect him as president
 "he was elected president of the Association" [D5]



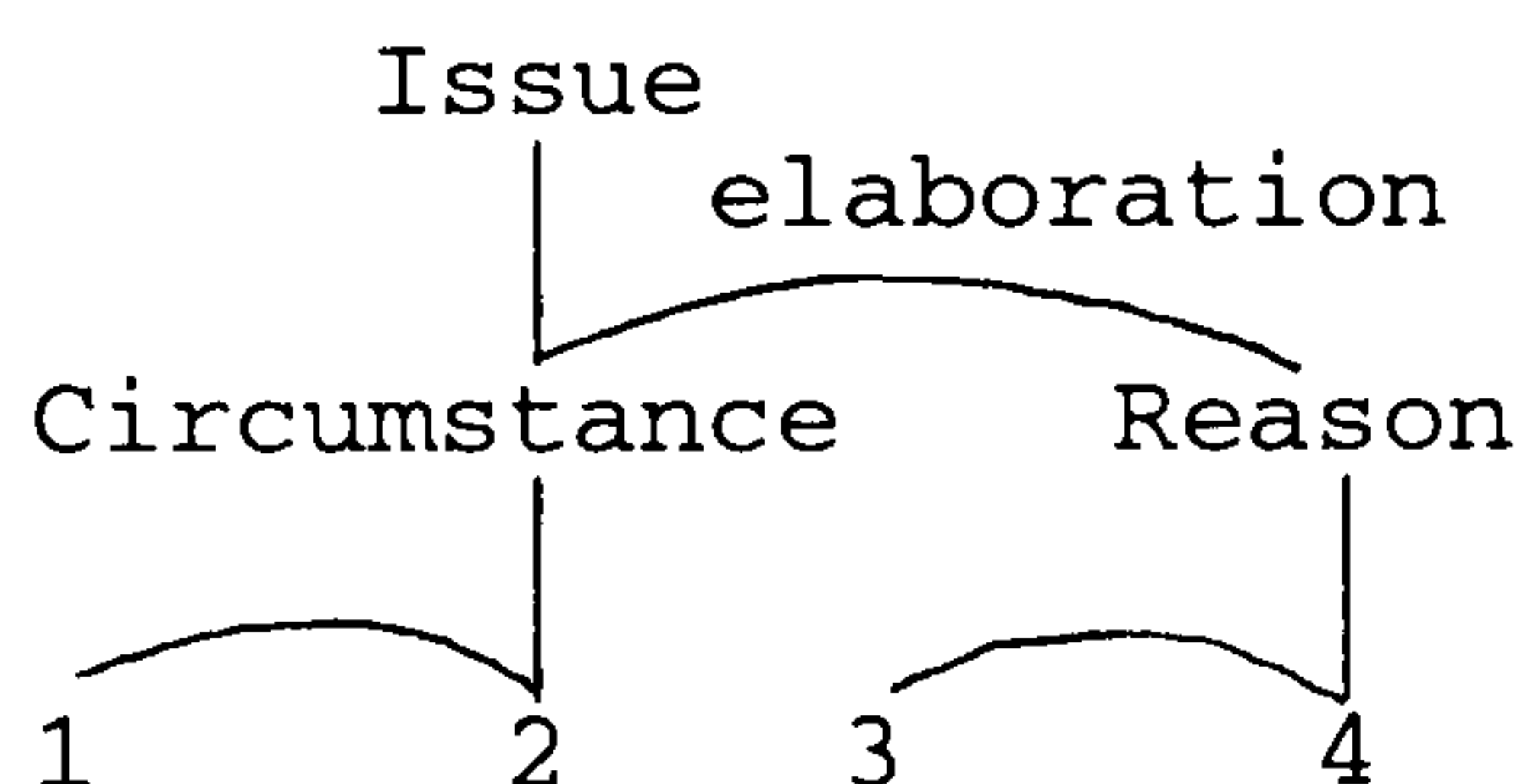
The antecedent NP *Mr Yan Binsheng* occurs in the subject position of proposition 1 (the nucleus of the Issue predicate) and the anaphor occurs in the object position of proposition 3 (the nucleus of the embedded Circumstance predicate) and takes the form of PA. Note that the intervening proposition, the adjunct of the Circumstance predicate, contains a different subject NP. In discussing the use of anaphors in the S-S pattern in the preceding section, we saw that the presence of a different subject NP in the intervening proposition of an embedded adjunct does not necessarily give rise to the use of a full NP for the subject anaphor in the immediately following proposition. The

¹⁴The pattern of anaphora distribution here is in parallel with that of the active patterns discussed in the preceding chapter. This is understandable: in the case of a controlling pattern where the two mentions of an NP are separated by an intervening proposition with no mention of the NP, it would be even more difficult for a switch of reference to take the form of ZA and for a switch of reference to take place in nucleus-nucleus structure (I will return to this point later in this section).

reason that was given is that being an embedded adjunct, such an intervening proposition is at a lower level in the hierarchical organisation of the discourse and thus is less disruptive in terms of anaphora than a proposition of the nucleus status. The occurrence of PA in (38) seems to be accountable for on the same lines. That is, the intervening proposition in which a different subject NP occurs is again the adjunct of the embedded Circumstance predicate. The passage in (39) below exhibits the same pattern.

- (39) 1. You-ren wen ta, shui shi Zhongguo muqian zuihaode
 someone ask him who is China current best

 gangqin laoshi shi,
 piano teacher when
 "When asked who at present was the best piano teacher
 in China"
2. ta diqi-shizude shuo: 'Wo!'
 he loudly say me
 "he said with a loud voice, 'It's me!'"
3. Zhe bu shi yiju xiyan,
 this not is a joke
 "This was not a joke"
4. gangqinjie tonghang dou dui ta chongmanle qinpei-zhiqing.
 piano-circle colleague all for him filled-with admiration
 "his colleagues in piano circle all had high regards
 for him" [D40]



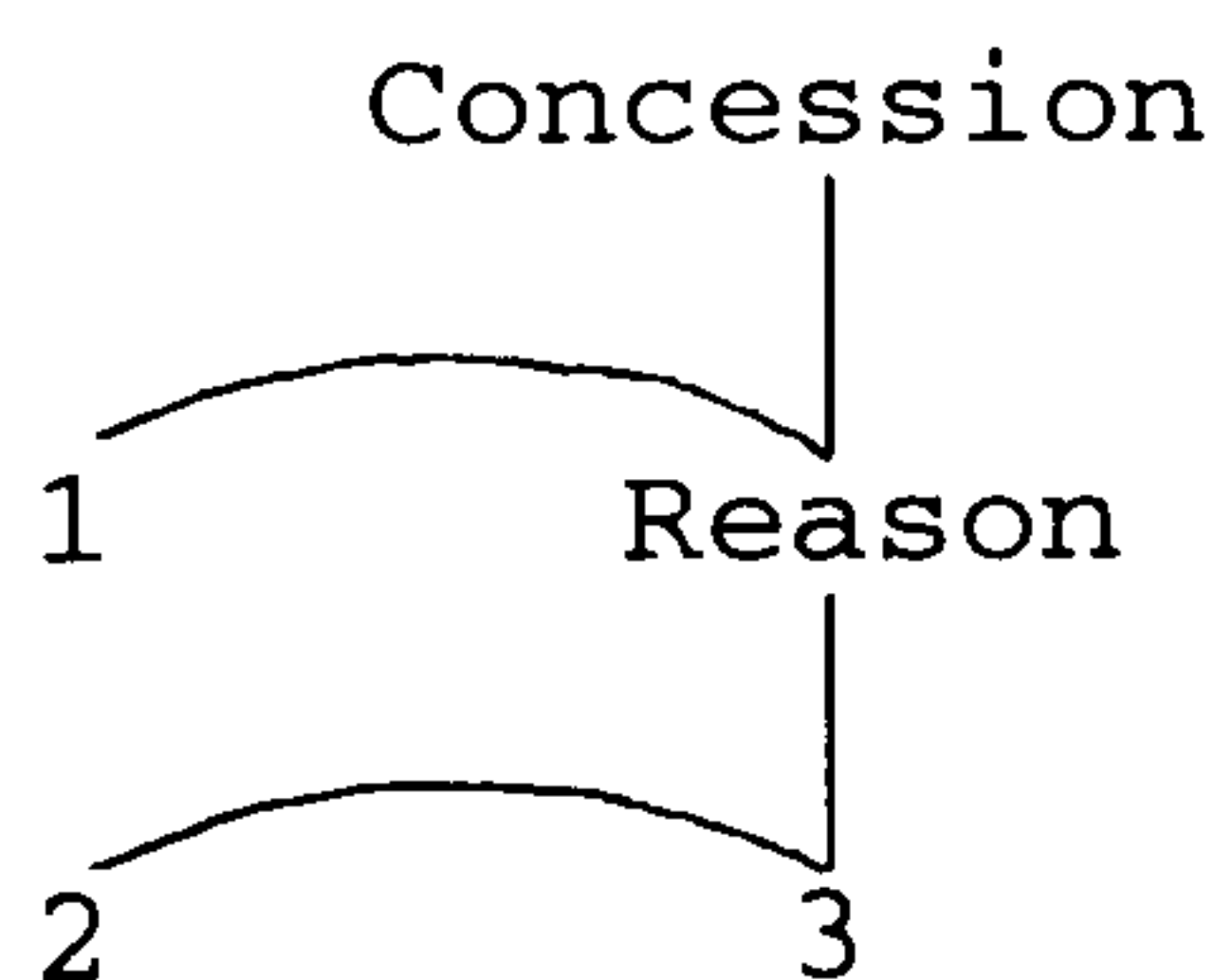
The pronominal anaphor occurs as the object of a preposition in proposition 4, the nucleus of the embedded Reason predicate, coreferential with the subject NP in proposition 2, the nucleus of the embedded Circumstance predicate. The intervening proposition, like the one in (38), is the adjunct of an embedded Reason predicate.

While highlighting the effect of discourse structure on the use of anaphors, it is also necessary to take into account the role of the individual NPs in the discourse. As we have discussed before, in the S-S pattern the subject NP of an intervening adjunct proposition is not likely to take over the topic role from the subject NP of the preceding proposition unless it is also mentioned there, say, as an object (the essence of this is that the second mention as subject of this intervening NP establishes it as the new topic). In (38) and (39) the intervening NPs do not appear in the preceding proposition and thus

of the controlled proposition, as discussed above, is only a potential topic and thus does not usurp the topic role from the subject NP in the controlling proposition.¹⁵

From the discussion thus far, we see that in a controlling pattern associated with the nucleus-adjunct structure the object anaphor is encoded with PA if its subject antecedent continues its topic role (i.e. if the intervening proposition is an embedded adjunct and/or it contains no possible antecedent in subject position if it is the nucleus). This pattern of anaphora seems to apply to the adjunct-nucleus structure as well. Consider the passages in (41) and (42).

- (41) 1. Lin Kexiu cengshi sheng juzhongdui de yundongyuan,
 used-to-be province lift-weight-team's player
 bing qudeguo hao chengji,
 and achieve good records
 "Lin Kexiu used to be a member of the provincial
 weight-lifting team and achieved good records"
2. keshi "Wenge" haojie, juzhongdui jiesan,
 but cultural-revolution catastrophe lift-weight-team disband
 "But the team was disbanded during the Cultural Revolution"
3. dapole tade "guanjun meng".
 shatter his champion dream
 "(this) shattered his dream of becoming a champion" [D4]



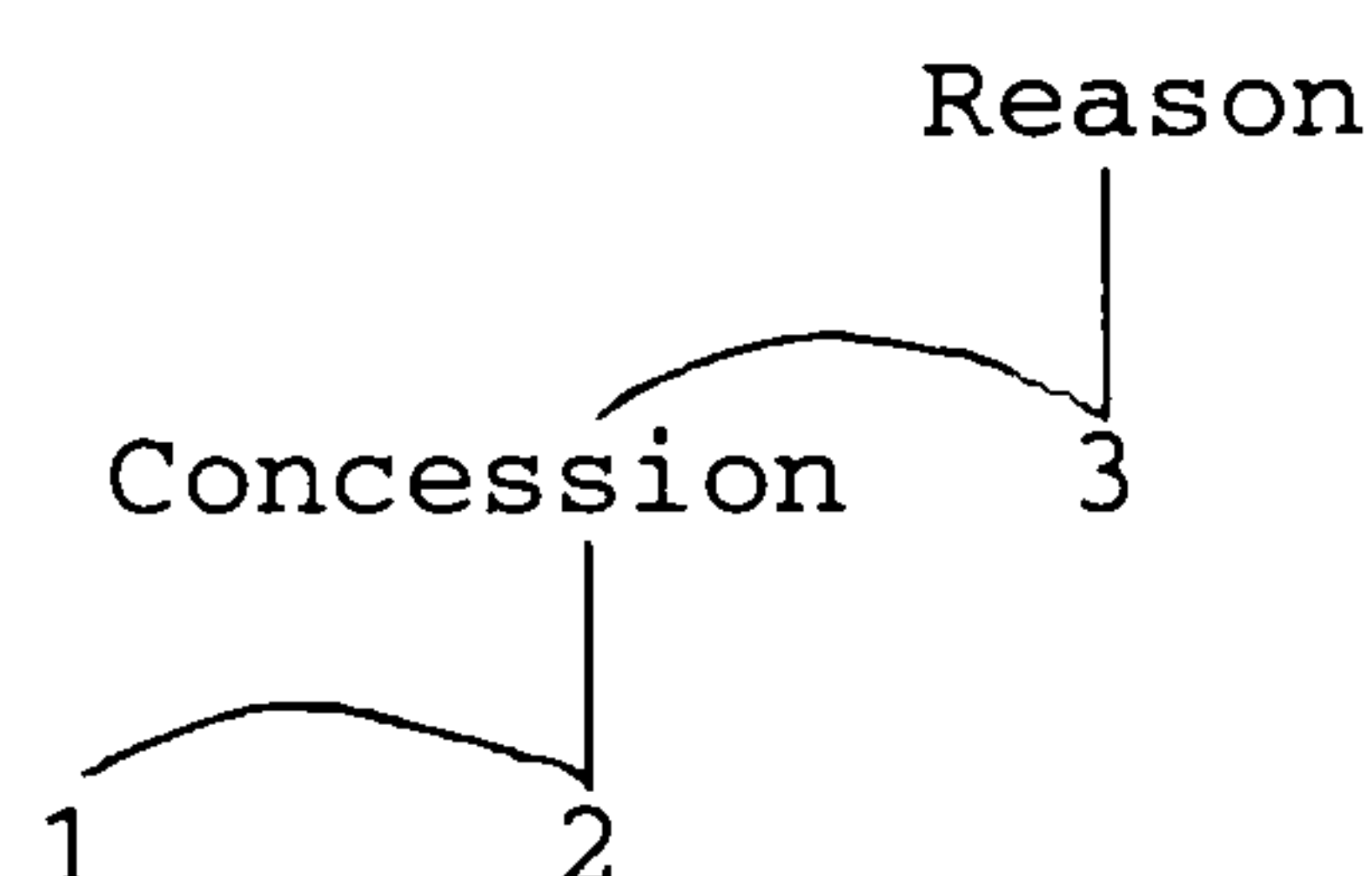
(41) is a Concession predicate whose nucleus consists of an embedded Reason predicate. Proposition 1 has the NP *Lin Kexiu* as subject which is subsequently mentioned via a pronominal inside an object NP in proposition 3. The subject of the intervening proposition is a non-human noun and the empty subject of proposition 3 refers to the preceding proposition as a whole. Therefore, the NP *Lin Kexiu* serves as the topic throughout the passage and hence its second mention in proposition 3 is pronominal.

- (42) 1. Mei Guangda meici huilai douyao you-zhenduixing-de xiang
 each time return all relevantly to
 Qing zhengfu tichu jianyi.
 Qing government make proposal
 "Each time Mei Guangda returned to his home country he
 would make relevant suggestions to the Qing government"

¹⁵The subject and object in the controlled proposition in (40), and also in (38) and (39), cannot be coreferential because this would be in violation of Binding Principle B.

2. dan bing-meiyou bei Qing zhengfu renzhen caina.
but is-not BEI Qing government seriously adopt
"But those suggestions were not taken seriously by the
Qing government"
3. Zhe shi ta shifen aosang.
This make him very disappointed
"This made him very disappointed"

[D35]



The pronominal anaphor in the object position of proposition 3 (the nucleus of the Reason predicate) takes its reference from *Mei Guangda*, the subject of proposition 1 (the adjunct of the embedded Concession predicate) that is controlling. Between the two mentions of the NP there is a zero subject NP in proposition 2 that is coreferential with the non-topic (abstract) NP *proposals* in proposition 1.¹⁶ Since this NP does not usurp the topic role of *Mei Guangda* in proposition 1, the following mention of *Mei Guangda* as object of proposition 3 takes the form of PA.

In the data there are another four instances of PA in the same environment as (41) and (42). If we combine the numbers of anaphors in both the nucleus-adjunct and the adjunct-nucleus structures, we then get 15 instances of PA, which make up 58% (15/26) of the total anaphors in S-O coreference chains in controlling patterns.

Having examined the occurrence of PA in S-O coreference, let us now turn to the use of NA in this context. Consider the following passage.

- (43) 1. Yijiuyisi-nian, Zhuang Xiquan yu pengyou hezi
in 1914 with friend joint-fund
- jingying Zhonghua guohuo gongsi,
run China Chinese-goods company
"Zhuang Xiquan started the Chinese Goods Company on a
joint capital with his friends in 1914"
2. Li Guangqian shoupin fuze gai gongsi de Yingwen
was-engaged in-charge the company's English
wenshu he duiwai jiaoshe shiwu.
paperwork and foreign negotiation affairs

¹⁶It may be interesting to note that non-human NPs in Chinese as a rule are not mentioned via pronouns; they either take the form of full NPs or take the form of empty pronouns at subsequent mentions. As in this thesis I only consider (third-person) human nouns, the interested reader is referred to Chen 1984, 1986, and Li C-i, 1985).

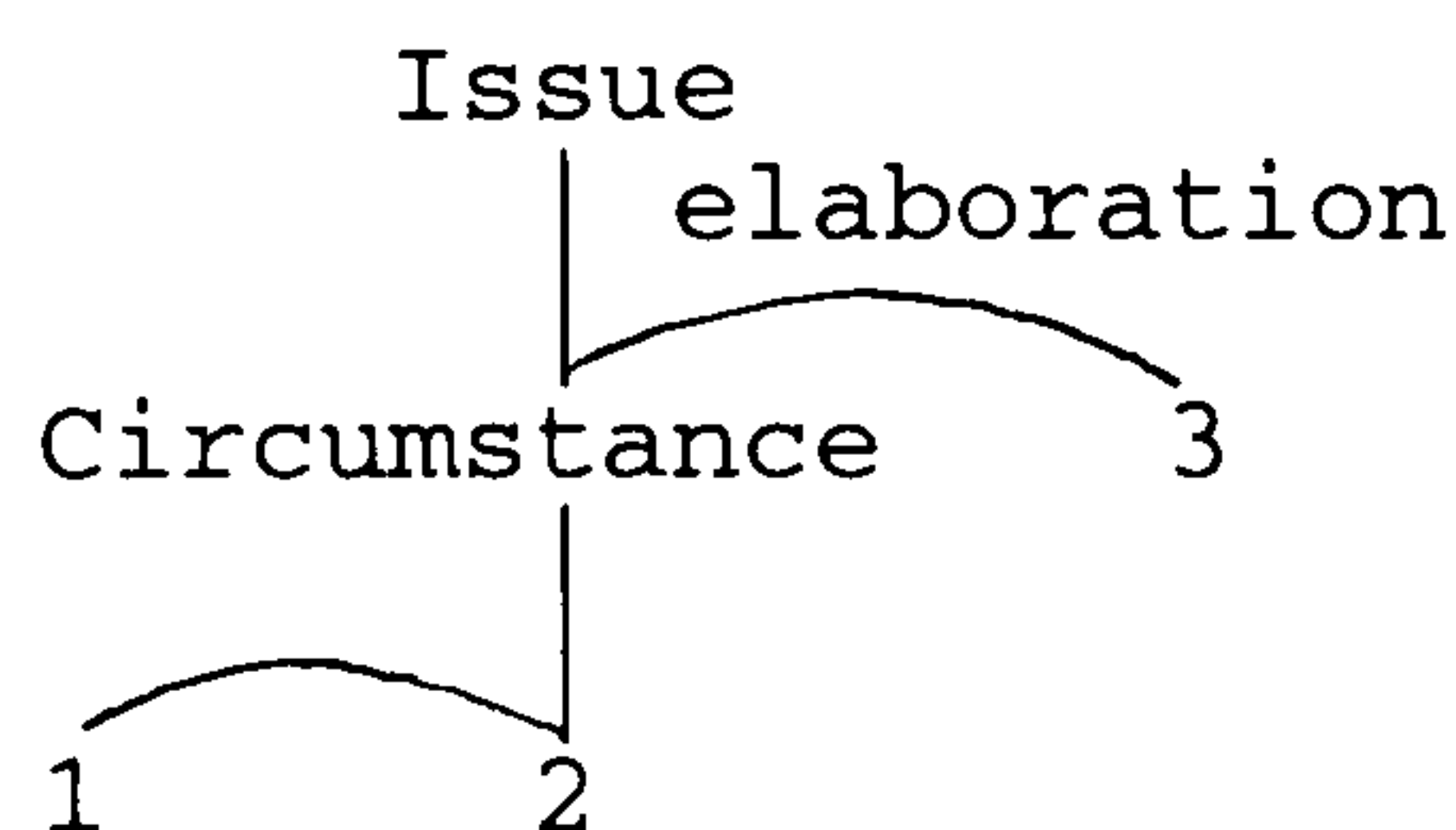
"Li Guangqian was engaged to take charge of the secretarial work involving English language and foreign negotiations"

3. Yijiuyiliu-nian Li Guangqian jing Zhuang Xiquan de
in 1916 through Zhuang Xiquan's

tuijian wei Chen Jiageng pinyong.
recommendation by engaged

"In 1916, Li Guangqian, recommended by Zhuang Xiquan, was engaged by Chen Jiageng"

[D7]

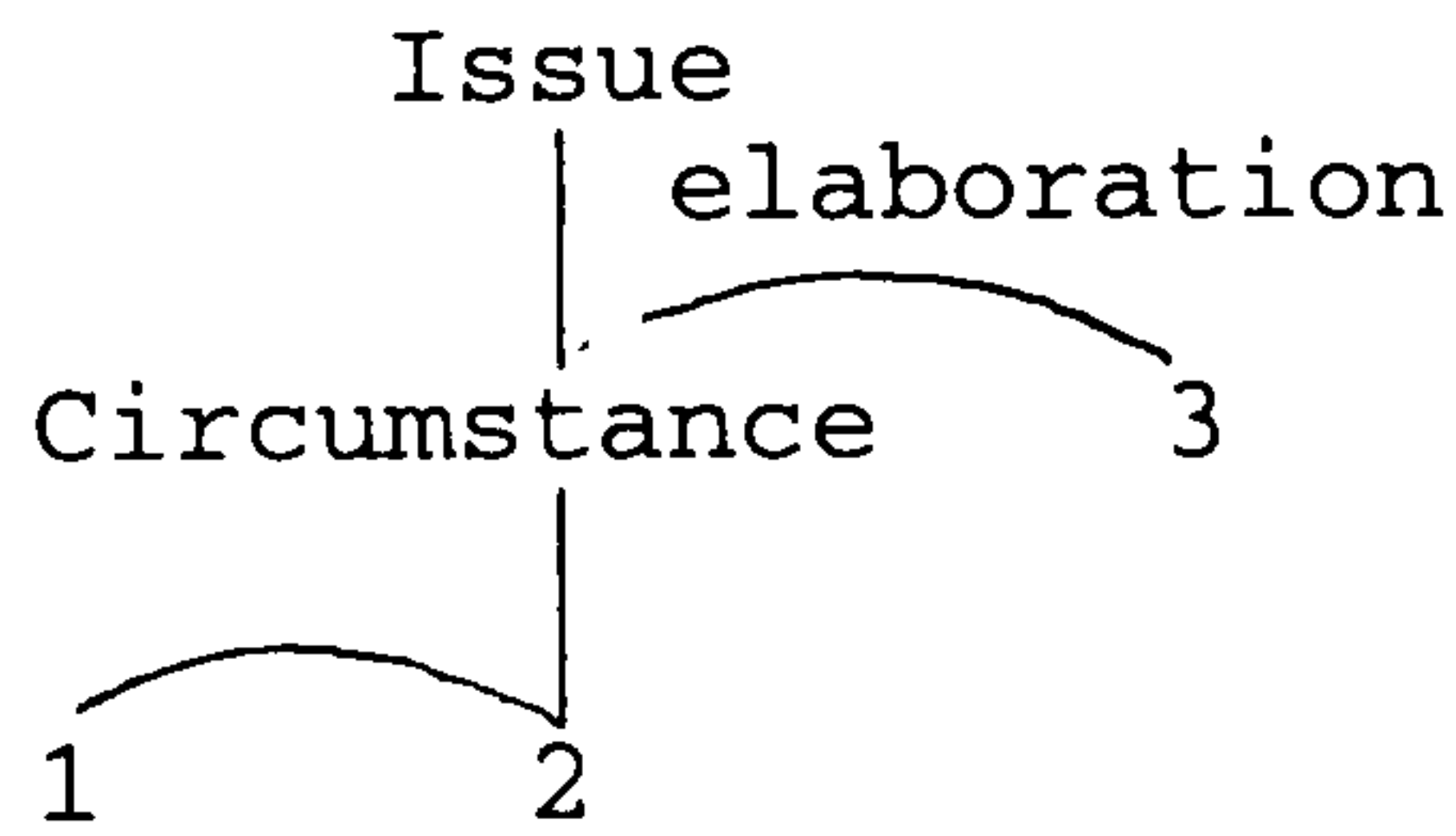


The NP *Zhuang Xiquan* is subject of proposition 1, the adjunct of the embedded Circumstance predicate, and then occurs in the possessor position in a PP in proposition 3, the adjunct of the Issue predicate.¹⁷ The second reference to *Zhuang Xiquan* takes the form of a full NP. Another NP *Li Guangqian* is mentioned in the subject position of proposition 2, the nucleus of the embedded predicate, and mentioned again in the subject position of proposition 3. As discussed above, the use of PA in this coreference chain entails the continuation of the topic status of the antecedent, thus the occurrence of NA here would suggest that its antecedent no longer serves as the topic of the discourse. Is this the case then? We see that the intervening proposition encodes a different subject NP which is mentioned again as subject in the following proposition in which the anaphor in question is contained. The two mentions of the NP as subject in the two adjacent propositions (2, 3) establish the NP as the new topic for the discourse. Consequently, the mention of the NP that is not coreferential with the new topic but with the now non-topic NP occurring in the controlling proposition is realised as NA. Let us now look at the passage in (44).

- (44) 1. Kelindun zhu-zheng hou bujiu,
Clinton in-charge-of-government after not-long
"Not long after Clinton took charge of the White House"
2. Xilali jiu bei-weiyi zhongren,
Hillary then be-appointed important-post,
canyu juece.
involved in making decision
"Hillary was appointed to important posts and involved
in decision-making."

¹⁷Note that the anaphor in proposition 3 here is in the possessor position which does not allow the use of ZA in Chinese. Another position that does not permit the use of ZA is that of the prepositional object, as in (39) above. Obviously, in these positions we only need to account for PA/NA alternations.

3. Zheli yulun pubian renwei, Xilali jiang dui Kelindun zongtong
 here mass media widely think will to Clinton president
 de sizheng qi buke-xiaokande zuoyong.
 administrate play considerable role
 "As is widely agreed by the media here, Hilary would have an
 enormous amount of influence on Clinton administration" [D42]



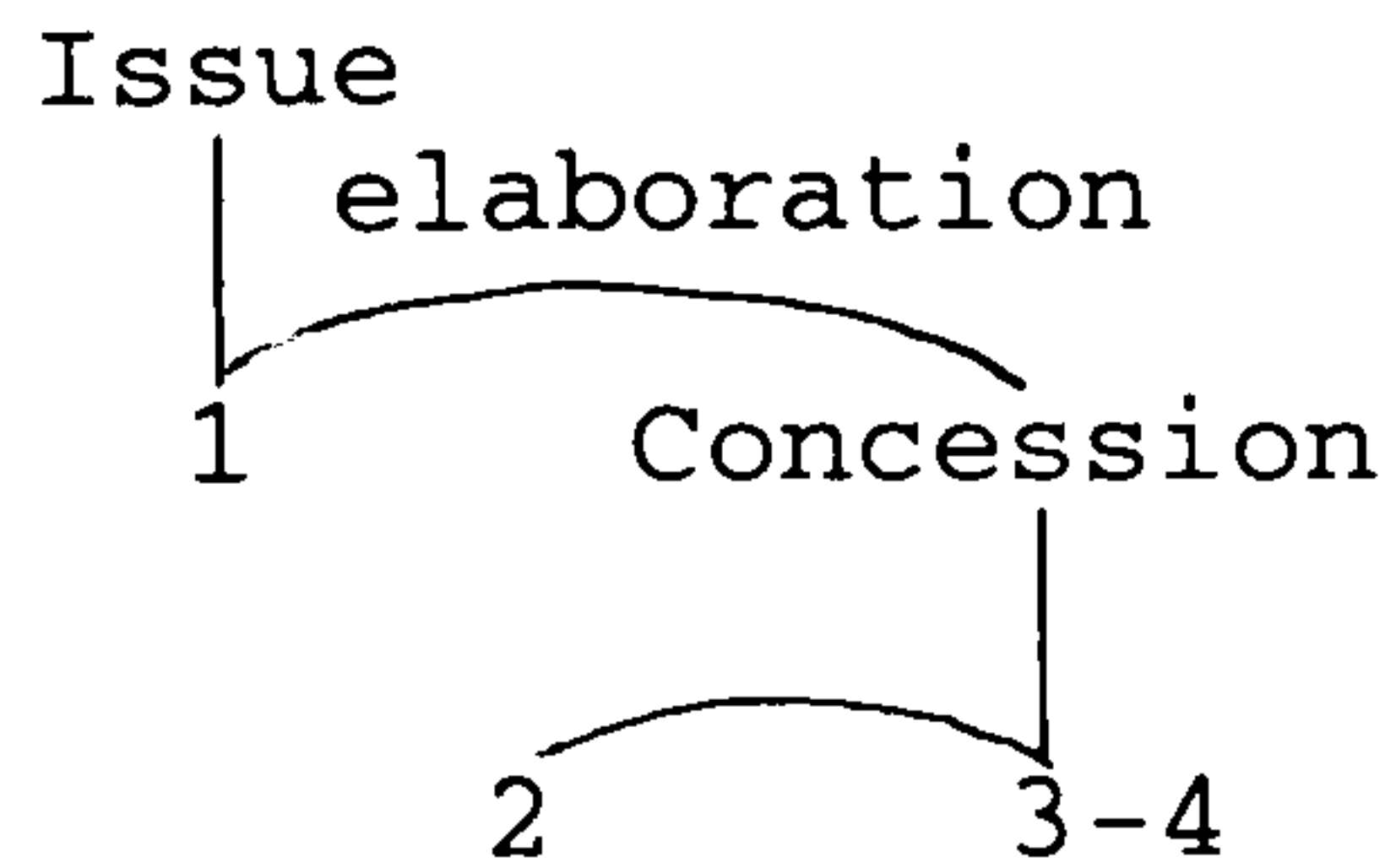
In (44) the NP *Clinton* is subject of proposition 1, adjunct of the embedded Circumstance predicate, and mentioned again as part of the PP in proposition 3, adjunct of the Issue predicate, where the anaphor is expressed with NA. Note that the intervening proposition, the nucleus of the embedded predicate, contains *Hilary* in subject position and this NP is also mentioned via a full NP in the subject position of the following proposition. As discussed before, the subject of a nuclear proposition is likely to take over the topic role from the current topic NP and its next mention as subject in the following proposition invariably establishes it as the new topic. This explains the use of a full NP for the anaphor in the PP in proposition 3 since its antecedent is no longer functioning as the topic. Most of the NAs (9 out of 11) in S-O chains in the data occur in the same situation as (43) and (44) where a different NP is first mentioned as subject in the intervening nuclear proposition and mentioned again as subject of the following proposition which contains the relevant anaphor in object position. This supports the claim that the nucleus status of the proposition does contribute to its subject becoming the new topic.

Data analysis also shows, however, that even if the intervening proposition is an adjunct, its subject NP can be the new topic if it is already mentioned in the preceding proposition or as subject in the following proposition. Consider (45).

- (45) 1. Shi-nian dongluan Ma Sicong bei-po chuzou
 ten-year turbulence is-forced out-go
 yiju Meiguo,
 immigrating into America
 "During the ten-year turbulence Ma Sicong was forced
 to leave China and immigrated into the US"
2. Huang Yijun dangshi ye eyun-lintou,
 then also bad-luck-on-head
 "Huang Yijun was also in big trouble at the time"

3. dan ta ren wei Ma Sicong de beiju tongxin-jishou,
 but he still for Ma Sicong tragedy feel-painful
 "but he felt bitterly about Ma Sicong's tragedy"
4. 0 shenshen huainian zai dayang bi'an de laoyou.
 deeply miss at Pacific other-side old friend
 "and (he) missed his old friend now living at the other
 side of the Pacific"

[D37]



The NP *Ma Sicong* first occurs as subject of proposition 1 and the next mention of it in the PP of proposition 3 takes the form of NA. Another NP *Huang Yijun* occurs as subject of proposition 2 and is repeated via PA in the subject position of the following proposition. The pronominalisation of the NP *Huang Yijun* in proposition 3 clearly indicates that it is now the new topic of the discourse (and this is confirmed by the following reference to it via ZA in the subject position of proposition 4). As a result of this topic change, the reference to the old topic that first appeared in proposition 1 is done with a full NP in proposition 3.

It should be pointed out that there are only 2 occurrences of NA in which the intervening proposition containing a different subject NP is the *adjunct* of an embedded predicate as against 9 occurrences of NA in which such a proposition is the *nucleus* of the embedded predicate (as in (43) and (44)). This indicates that although the occurrence of NA in the former situation is clearly possible, it is not as frequent as in the latter. The explanation for the difference in the distribution of anaphora arising from the difference in discourse structures is this: since the nucleus of a rhetorical predicate is the core of the predicate, the subject of the nucleus is more likely to become the new topic, taking over the topic role from the current topic NP, i.e. the subject of the preceding proposition, whereas the adjunct of a rhetorical predicate is subordinated to the nucleus, and thus its subject is less likely to serve as the reference point for the following discourse. The subject of the intervening proposition re-appears in the subject position of the following proposition, usually in the form of a full NP, to explicitly establish its topic status. This seems to be parallel to the active pattern discussed earlier in which two NPs occur as subject and object in an active proposition and their next mention in each other's position in the following proposition takes the form of a full NP, due to the

change of topic roles. In the case of controlling patterns the antecedent NP occurs as subject of the controlling proposition (1) and the different NP occurs as subject of the intervening proposition (2); the two NPs exchange their discourse roles in proposition 3 by assuming different syntactic positions, with the intervening NP being mentioned in subject position and the controlling NP being mentioned in object position, each taking the form of NA.¹⁸ In my expository texts, all instances of NA in this pattern follow the same lines except (45) in which the next reference to the intervening NP in the subject position of the succeeding proposition is encoded with PA.

The discussion above has demonstrated that the alternation between PA and NA in object position in this controlling pattern is determined by the discourse structure and the topic status of the NPs involved. This is summarised in (46).

- (46) PA is used for an object anaphor coreferential with a subject antecedent in the controlling proposition if the antecedent serves as the topic of the discourse (e.g. if the intervening proposition(s) containing a different subject NP is the adjunct of an embedded predicate or if the intervening proposition is the nucleus but contains no possible antecedent, otherwise NA is used (e.g. if the intervening proposition containing a different subject NP is the nucleus and/or if the intervening subject NP is mentioned as object in the immediately preceding proposition or as subject in the immediately following proposition).

5.3.2.3 The O-S pattern

In this pattern the anaphor occurs as subject of the controlled proposition coreferential with the antecedent NP in the object position of the controlling proposition, as exemplified in (47).

- (47) 1. Yijiubaliu-nian guoji Aowehui zhuxi Shamalanqi ba
 in 1986 international Olympic Committee chairman Samaranch BA
 yimei Aolinpike jinzhi xunzhang shouyu Wan Li, biao Zhang ta
 a Olympic gold medal award Wan Li, commend him
 wei fazhan Zhongguo tiyu-yundong zuochude gongxian.
 for developing China sports make contribution

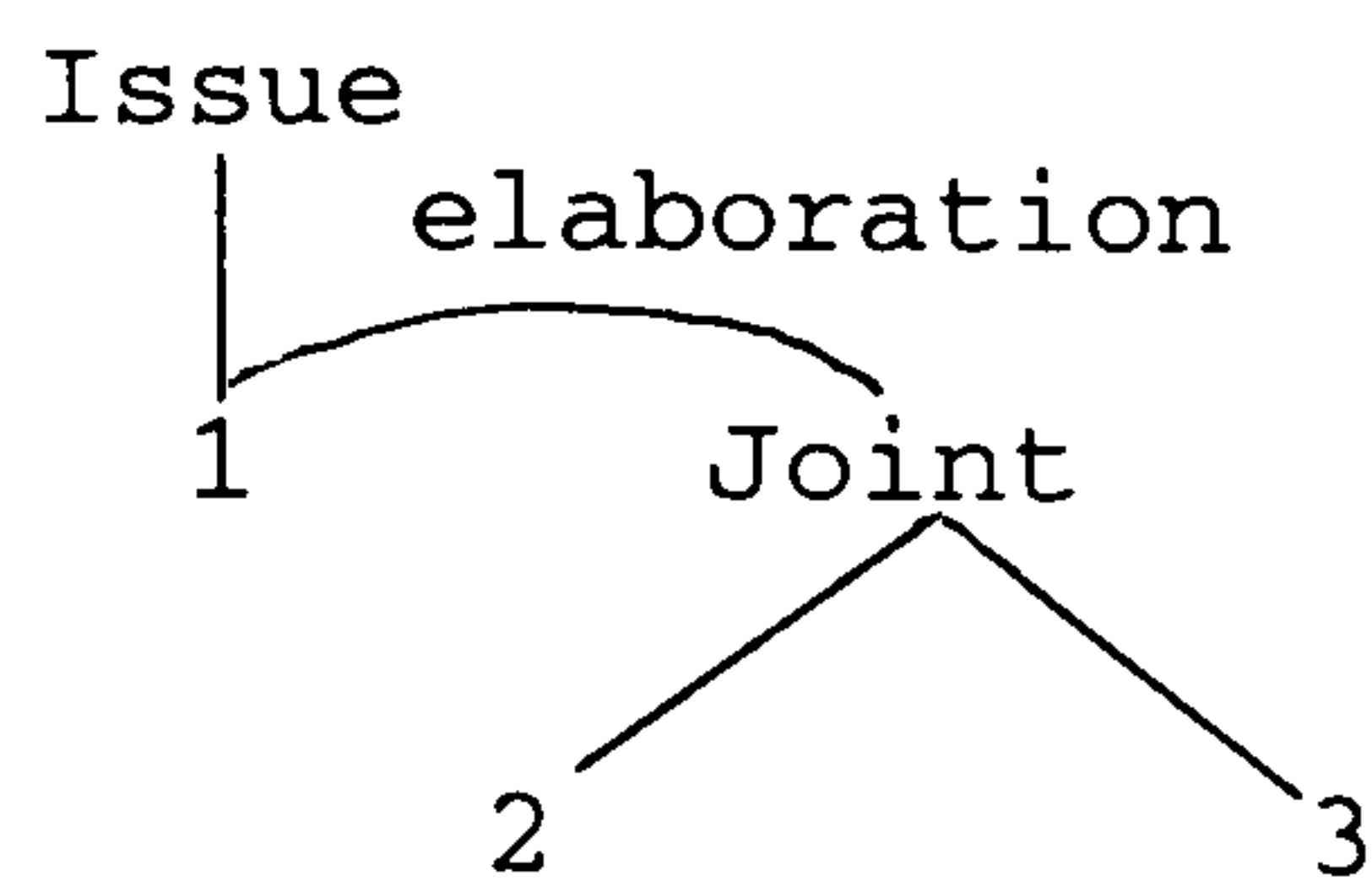
¹⁸It is possible for the intervening NP to take the form of PA (or even ZA) in the subject position of the immediately following proposition as long as the two propositions occur in an embedded rhetorical predicate, as in the case of (45), though this is extremely rare in my data.

"Mr Samaranch, President of the International Olympic Committee, awarded Wan Li an Olympic gold medal in 1986 to commend him for his contributions to the development of sports in China"

2. Shijie-shang huo ci shurong de buguo shiwu ren,
in the world enjoy this honour only 15 people
"There are only 15 people who have ever been awarded this
honourary medal in the world"

3. Wan Li shi weiyide Zhongguoren.
is only Chinese
"Wan Li is the only Chinese person who enjoys
this honour"

[D17]



The antecedent NP *Wan Li* occurs in the object position of proposition 1, the nucleus of the Issue predicate, and its anaphor, which takes the form of a full NP, occurs as subject of proposition 3, the second argument of the embedded Joint predicate. The controlling pattern of a subject anaphor coreferential with an object antecedent occurs very infrequently in my data, as shown by the following table.

(48) Table 4: Distribution of Anaphora in the O-S Coreference Pattern

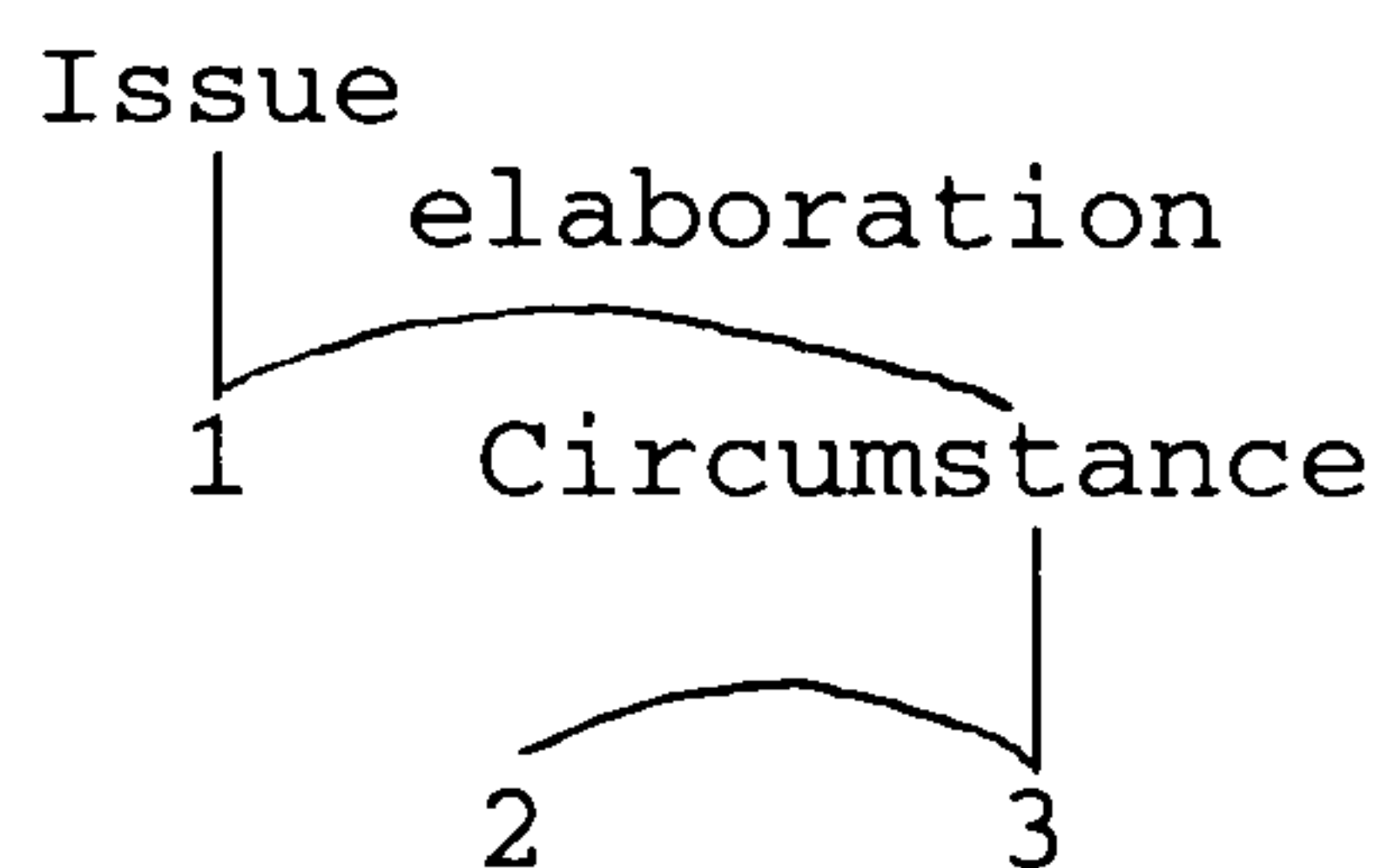
Type	Adjunct-nucleus	Nucleus-adjunct	Nucleus-nucleus	Total	
ZA	0	0	0	0	
PA		1 (1/0) 8%	100%	0	1 (1/0) 8%
NA	0	11 (1/10) 92%	100%	0	11 (1/10) 92%
Total	0	12 (2/10) 100%	0	0	12 (2/10)

As shown by the table, there are only 12 instances of O-S anaphora in controlling patterns. All these 12 instances are associated with the nucleus-adjunct (i.e. Issue) rhetorical predicates and all these 12 are almost exclusively realised by the use of full

original topic NP will maintain its topic status and the following reference to it can be done with PA. The instance of PA in (49) satisfies this general topicality constraint on the use of PA.

However analysis of the data indicates that a topic object NP is not necessarily referenced via a pronoun at its next appearance in the subject position of the controlled proposition, as demonstrated by (50)

- (50) 1. Renmin qunzong dui Wan Li leili-fengxing, ganzuo-ganwei de
 people masses for fast-efficient, responsible
 lingdao zuofeng shenbiao jingpei.
 leading style deeply-show admiration
 "People held high of his fast, efficient and responsible
 working style"
2. Dan yijiugiliu-nian dang Deng Xiaoping zaici shoudao
 but in 1976 when again suffer
 wugude pohai shi,
 unwarranted prosecution when
 "However when Deng Xiaoping was subjected to prosecution
 once again in 1976"
3. Wan Li ye shuizhi bei jiezhi, shoudao piban.
 also together BEI dismissed suffer repudiation
 "Wan Li was also dismissed and later repudiated" [D17]



(50) is exactly the same as (49) in terms of structure and topicality. That is, the antecedent in the object position of proposition 1, *Wan Li*, serves as the topic of the discourse, and the intervening proposition in which a non-coreferential NP *Deng Xiaoping* occurs in subject position is the adjunct of the embedded Circumstance predicate. Yet, unlike (49), (50) shows the use of a full NP for the anaphor in the controlled proposition.²⁰ Why is a full NP chosen where a pronoun would be adequate? It seems to me that this has to do with the fact that objects are not as likely to serve as discourse topics as subjects; if they do, they tend to receive further discussion in the

²⁰There are in my corpus only two instances of NA in this environment and (50) is one of these.

immediately following proposition, which is then an active pattern;²¹ if they are later mentioned as subjects in the controlled proposition, separated by an intervening proposition with a different subject, the writer may feel it necessary to resort to a more explicit form of reference (e.g. a full NP) to strengthen its topic position.

(50) shows that a topic NP in object position can be referred to by a full NP at its next mention in the subject position of the controlled proposition. However, since (50) is only one of the two examples in the data where NA is used for a topic object NP, any conclusions that can be reached must be extremely tentative. Having said this, we can say that both PA and NA are possible here. Let us now consider the passage in (51).

- (51) 1. Yijiusanwu-nian Ma Sicong zai Shanghai yu Huang Yijun
in 1935 in Shanghai with

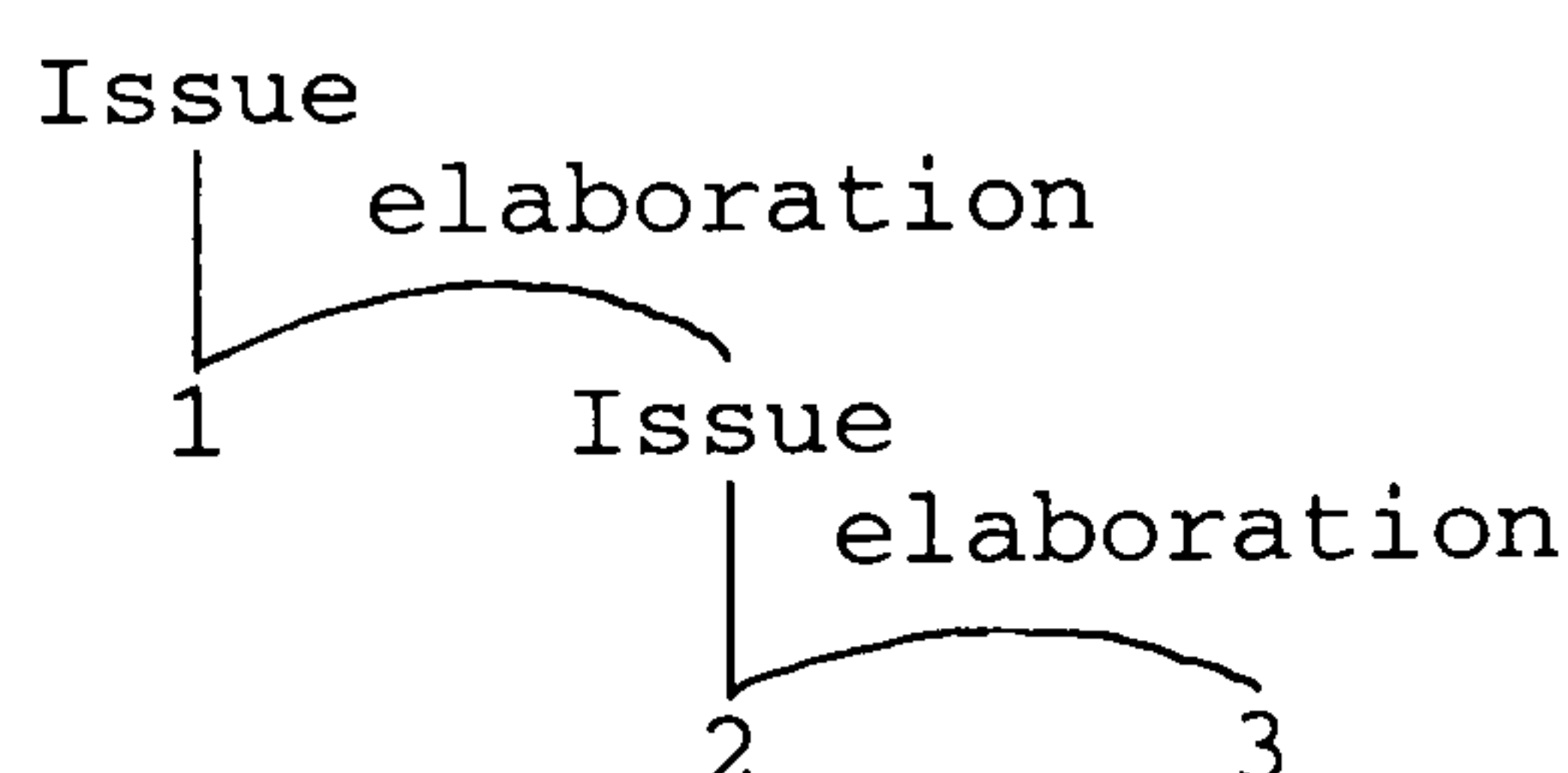
xiangshi, yijian-rugu.
become-acquainted as-soon-as-see-like-old-friend
"Ma Sicong became acquainted with Huang Yijun in Shanghai
in 1935"

2. Kangzhan shengli hou, Ma Sicong laidao Shanghai
Anti-Japanese war victory after come-to Shanghai

yingyao zhihui Shanghai Gongbuju jiaoxiang yuedui,
invited direct Shanghai industry-dept. symphony orchestra
"When the war against the Japanese invasion was over, Ma
Sicong come to Shanghai at the invitation of the Department
of Industry to direct the Shanghai symphony orchestra
affiliated to it"

3. Huang Yijun zai yuedui chui xiaohao he yuanhao.
in orchestra play trumpet and round-trumpet
"Huang Yijun was a trumpet and round trumpet player
in the orchestra"

[D37]



The NP *Huang Yijun* is object of a preposition in proposition 1, the nucleus of the Issue predicate, and then subject in proposition 3, the adjunct of the embedded Issue predicate. This second occurrence is expressed by NA. If we look at (51) in terms of topicality, we find that *Huang Yijun* is not the topic of the discourse, rather it is *Ma Sicong* that

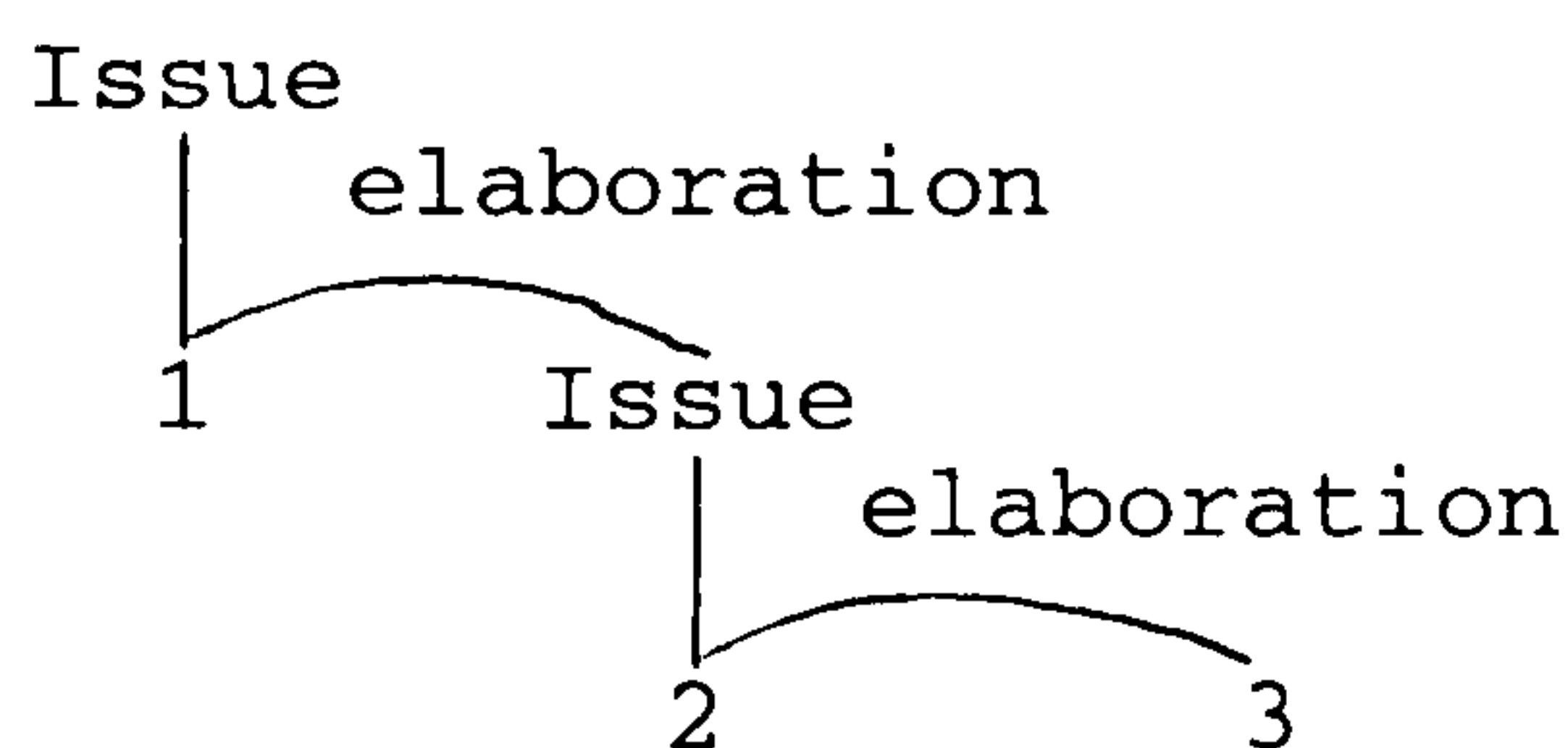
²¹There are eight instances of PA in the nucleus-precedes-adjunct active pattern. The number itself is low, but it is nearly three times as high as the number of PA/NA occurrences in the controlling pattern. This indicates that the topic NP in object position is most likely to be discussed in the immediately succeeding proposition(s).

is the topic. The NP *Ma Sicong* first occurs as subject in the initiating proposition (the higher Issue nucleus) and again as subject in the immediately following proposition (the lower Issue nucleus). The use of a full NP for the second reference to *Huang Yijun* is thus well motivated: both topicality and discourse structure call for the use of NA.

There are in the corpus eight more occurrences of controlling patterns that show the same features as (51), and in all these instances NA is used. I present another example of this type in (52).

- (52) 1. Youren shuo, Hou Yuehua biao yan xiang Hou Baolin,
 someone says performance is-like
 ci-hua youli.
 this-remark have-reason
 "People say that Hou Yuehua's style of performance is like Hou Baolin. This is correct".
2. Xiangsheng biao yan fengge you suowei
 cross-talk perform style have so-called
 "shuai", "mai", "guai", "huai",
 elegance showing-off strangeness badness
 "Cross-talk performance is characterised by the styles of 'elegance', 'showing off', 'strangeness' and 'badness'"
3. Hou Baolin zhan yi 'shuai'.
 Hou Baolin's has the elegance
 "Hou Baolin's performance belongs to the 'elegant' category"

[D38]



The subject anaphor in proposition 3 is coreferential with the object NP *Hou Baolin* in proposition 1, in which a different NP *Hou Yuehua* occurs in subject position serving as the topic. Although this subject NP is not mentioned in proposition 2 (the embedded Issue nucleus) and indeed no other interfering NP occurs in this intervening proposition, the following reference to the object NP in proposition 3 takes the form of a full NP. The motivation for the NA here is that the subject NP in the controlling proposition still carries the topic role and thus is the first-choice antecedent for pronominalisation in the following topic position; consequently any change of topic must be explicitly marked, through the use of a full NP.

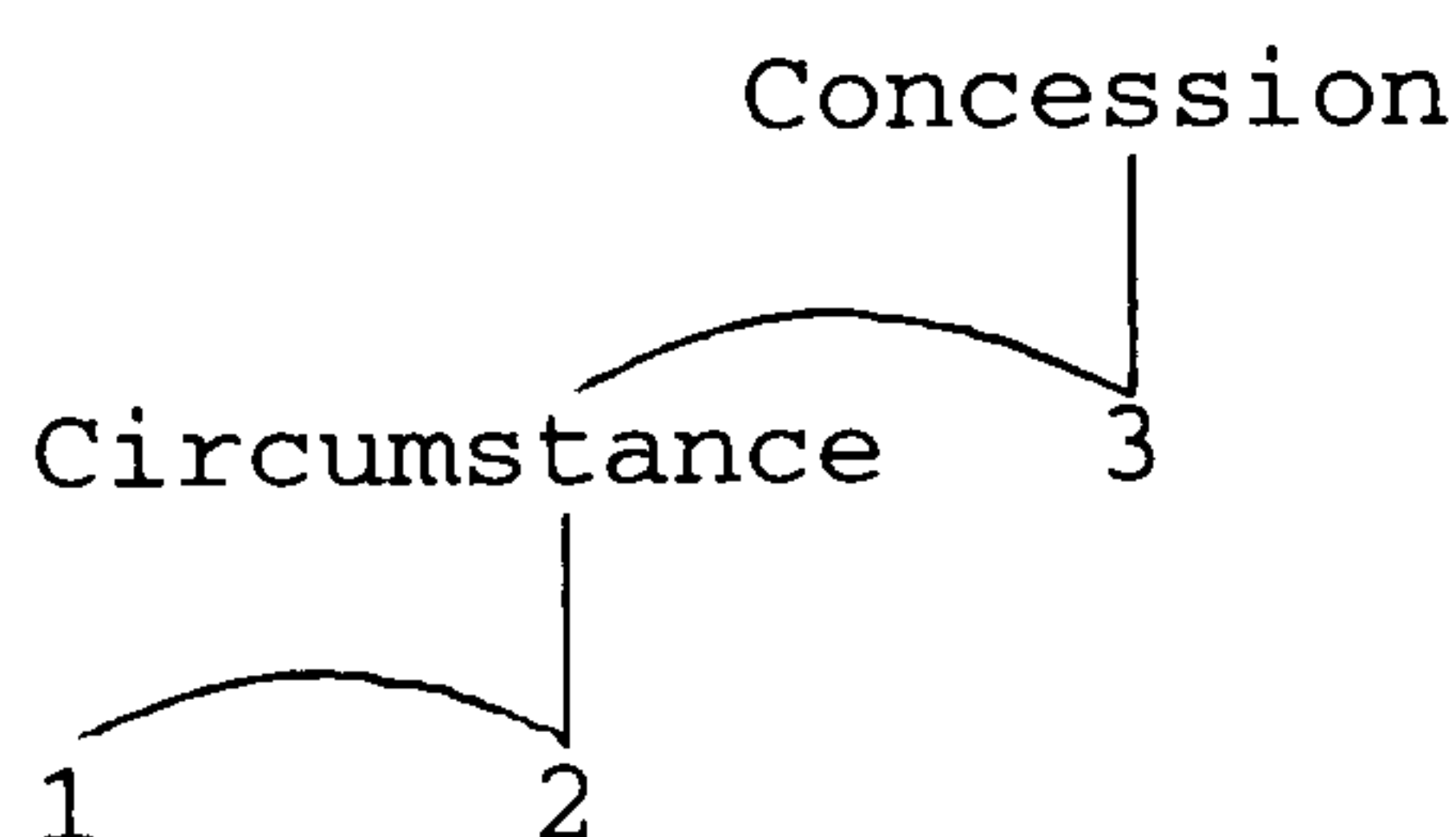
We have seen that in the O-S pattern the type of form that the following mention of an NP takes depends on the topic status of the NP, coupled with the structure of the discourse involved. This is summarised in (53):

- (53) PA is used for a subject anaphor coreferential with an object antecedent in the controlling proposition if the antecedent NP serves as the topic of the discourse and if the intervening proposition containing a different subject NP is the adjunct of an embedded predicate; otherwise NA is used.

5.3.2.4 The O-O pattern

Finally, we come to the O-O pattern in which both the antecedent and its anaphor occur in object position of their propositions. This pattern is exemplified in (54).

- (54) 1. Wu Tianming ba juben jiaogei daoyan,
 BA play give director
 "When Wu Tianming gives a script to the film directors"
2. 0 ye jiu jiaochule zijide xinren he zhichi.
 also then give his trust and support
 "(he) also gives out his trust and support"
3. Buguo, yifu zhongdan tongshi jiu yazaile tamende shenshang.
 but a heavy-load meanwhile then is put their shoulders
 "But at the same time a heavy load is left on their
 shoulders" [D31]



The NP *the directors* occurs in the object position of proposition 1 (the adjunct of the embedded Circumstance predicate) and its following mention occurs as possessive in the object NP of proposition 3 (the nucleus of the higher Concession predicate) and takes the form of PA.²² My expository texts show 15 instances of PA and 7 instances of NA

²²It should be noted that most of the PAs in the examples in this section are either possessives inside object NPs or objects of prepositions. In the former case, the anaphor is in a possessor/possessee or part/whole relationship with the head of the object. For example, in (54) *tamen* "they" and *jian* "shoulder" are in such a relationship. Obviously, in this case the possessor (third person human noun) is more salient than the possessee (non-human noun) for the purposes of anaphoric coreference. These positions (i.e. possessive and prepositional object), as pointed out in an earlier footnote, do not allow the occurrence of ZA, therefore our discussion here will concentrate on the alternation between PA and NA.

with no occurrence of ZA. The details of this distribution are given in (55).

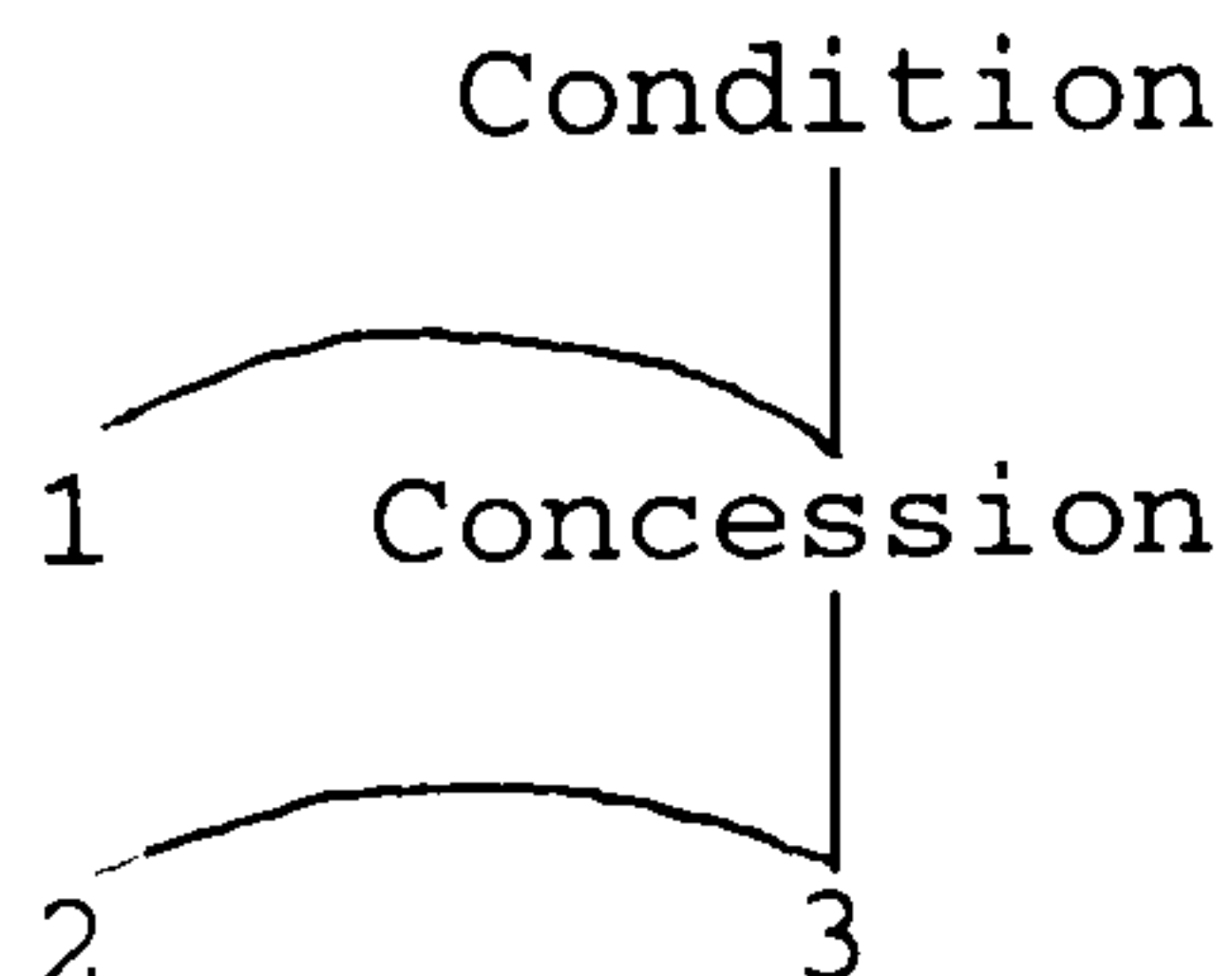
(55) Table 5: Distribution of Anaphora in the O-O Coreference Pattern

Type	Adjunct-nucleus	Nucleus-adjunct	Nucleus-nucleus	Total
ZA	0	0	0	0
PA	4 (4/0) 27% 100%	8 (1/7) 53% 53%%	3 (1/2) 20% 100%	15 (6/9) 68%
NA	0	7 (2/5) 100% 47%	0	7 (2/5) 32%
Total	4 (4/0) 18%	15 (3/12) 68%	3 (1/2) 14%	22 (8/14)

The 15 instances of PA are shared by the three structural patterns: 4 in the adjunct-nucleus pattern, 8 in the nucleus-adjunct pattern and 3 in the nucleus-nucleus pattern. The 7 instances of NA however occur exclusively in the nucleus-adjunct pattern. These figures indicate that the nucleus-adjunct is the major structure for the O-O controlling pattern to occur in: it claims 100% of the NAs and 53% of the PAs.²³

Let us begin by examining the occurrences of PA in the O-O chain.

- (56) 1. Zhe yongzai Zhou Enlai tongzhi shenshang,
this used-to Comrade Zhou Enlai body-on
"If this (poem) is used to describe Comrade Zhou Enlai"
2. 0 sui bu wanquan,
though not complete
"though obviously not complete"
3. dan 0 ke daibiao tade zhuyao tedian.
but may represent his main quality
"(it) may represent his main qualities" [D12]

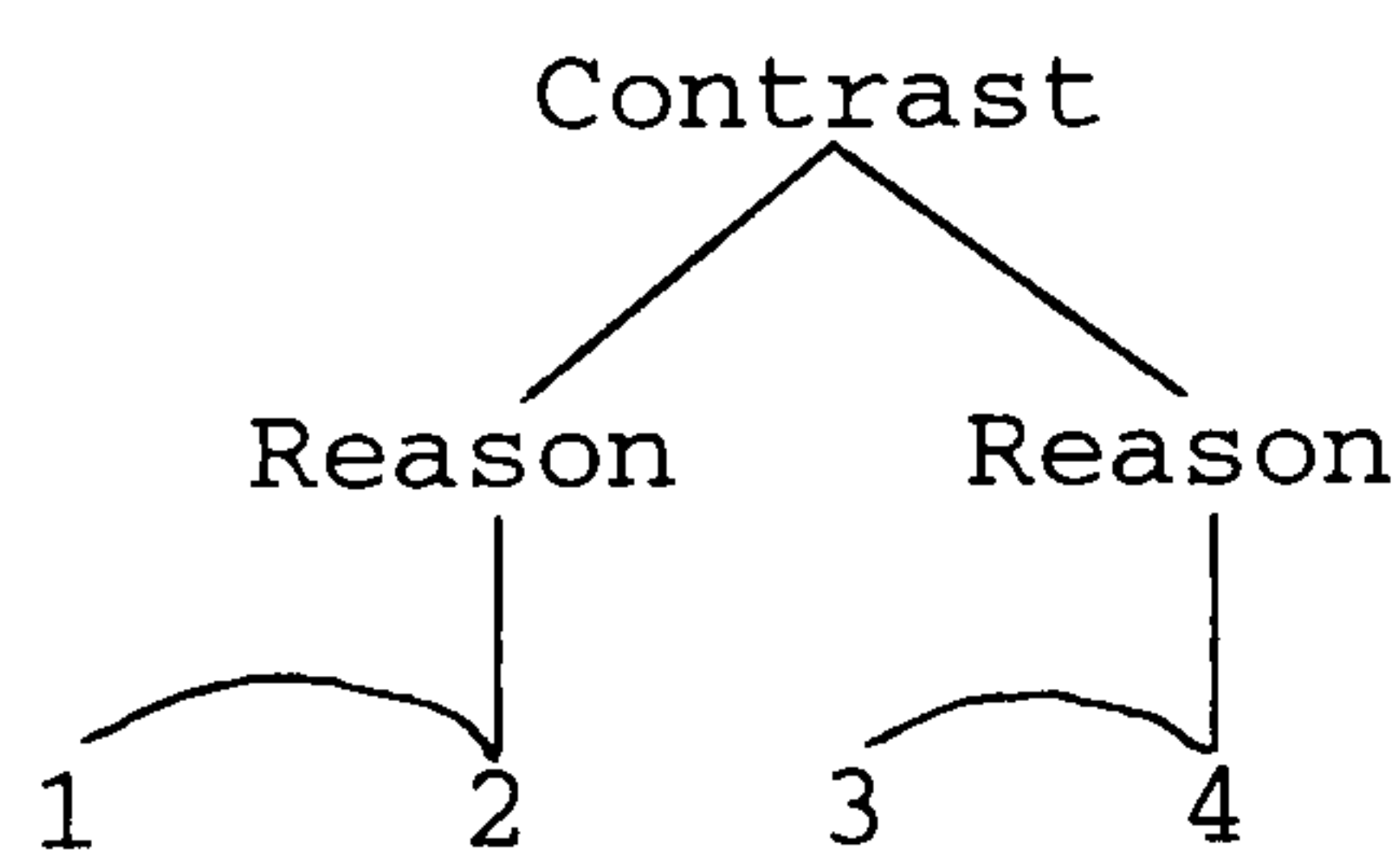


This passage shows the structure of a Condition predicate in which the antecedent NP

²³As consistent with the preceding two coreference patterns, PA and NA both occur within and across sentence boundaries, as shown in the above table.

Comrade Zhou Enlai is mentioned in the post-verbal position of proposition 1 and its anaphor which takes the form of a pronoun is mentioned as possessive inside an object NP in proposition 3. The focus of the passage is on *Zhou Enlai* since the subject is only a demonstrative pronoun referring to a previously mentioned poem. In other words, *Zhou Enlai* is the topic NP for this piece of discourse, and this accounts for the use of the pronoun for the second mention of the NP. (57) provides another example in which the antecedent NP serves as the topic and the next reference to it is realised by PA.

- (57) 1. "Shaoshuai Chuanqi" zhuyao yi qizhongde gushi
 Shaoshuai Romance mainly take its story
 qingjie wei niudai,
 plot as link
 "As 'the Romance of the Young Marshal' runs mainly through the plot of the story"
2. guanzhong dui tade biaoan ziran henshao tiaoti.
 audience to his performance naturally few criticism
 "the audience, naturally, did not find faults with his performance"
3. "Shaoshuai Chunqiu" ze shi yi zhenshi lishi wei niudai,
 however is take true history as link
 quankao sixiang-ganqing lai biaoian renwu,
 all-rely-on thinking-feeling to portray characters
 "'The Spring and Autumn of the Young Marshal' however is based on the true historical event and portrays it characters through their emotions and feelings"
4. guanzhong dui tade biaoan yaoyiu jiu jiao-gao.
 audience to his performance demand then higher
 "therefore the audience have higher expectations for his performance" [D13]

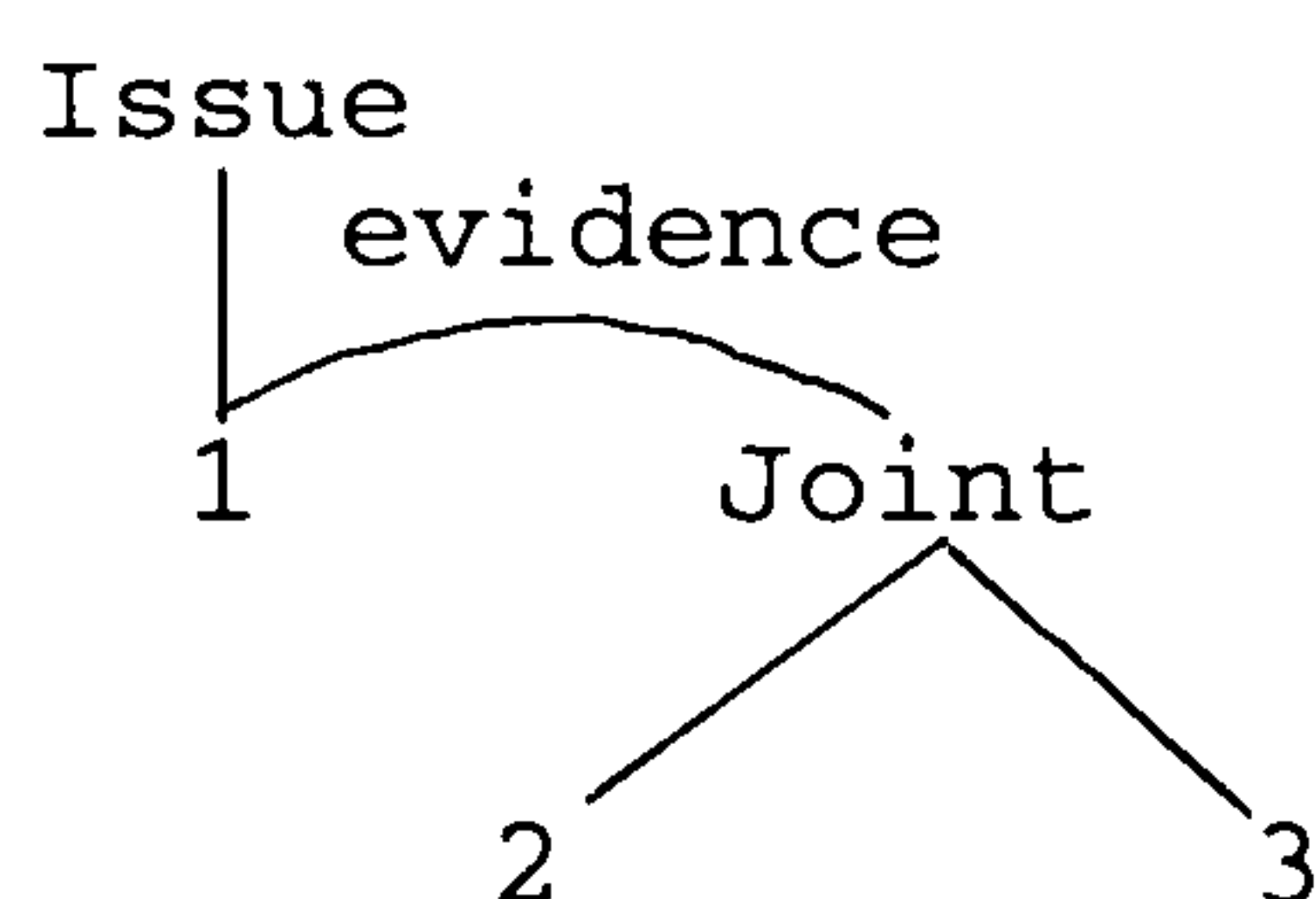


The anaphor occurring as possessive inside the PP in proposition 4 is coreferential with the NP occurring also as possessive inside the PP in proposition 2 and takes the form of PA. This passage focuses not on the subject NP *the audience* but on the NP occurring inside the object, *ta* "he", which serves as the topic for the discourse.

Examples like (56) and (57) demonstrate that an object anaphor (or an anaphor occurring inside an object NP) which is coreferential with the object antecedent (or the antecedent occurring inside an object NP) in the controlling proposition is pronominalisable if the antecedent serves as the topic of the discourse. The occurrence

of PA for an object anaphor however is not restricted to its antecedent carrying the topic role in discourse. In the following passage, for example, the anaphor is realised by PA though its antecedent does not serve as the discourse topic.

- (58) 1. Lin Kexiu rengran guanxinzhe zhezhi niangqing duiwu.
 still concern the young team
 "Lin Kexiu was still concerned about the young team"
2. 0 yi you kong jiu qu dang yiwu jiaolian,
 once have time then go be voluntary coach
 "Whenever (he) found time, he would go and coach them"
3. 0 meinian hai nachu qiqian yuan wei tamen mai xunlian qicai.
 each year also offer 7000 yuan to them buy training facility
 "besides (he) offered 7000 Chinese dollars to purchase
 training facilities for them every year" [D4]

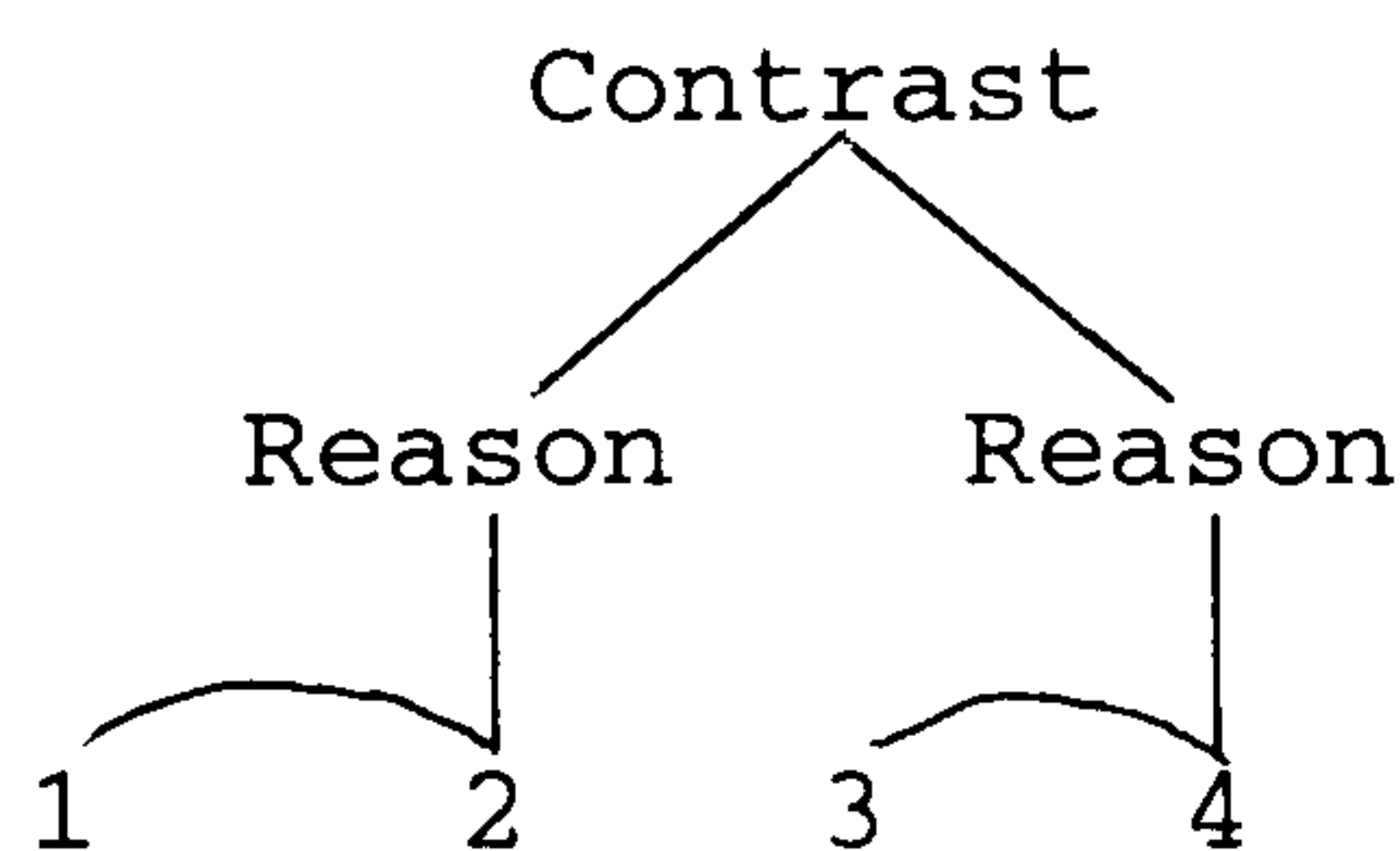


The antecedent *the young team* appears in object position of the controlling proposition (1) and its next reference as a prepositional object in the controlled proposition (3) is realised by PA. In this passage, the writer clearly focuses upon the subject NP *Lin Kexiu* and not upon his trainees, yet the non-topic object NP is done with PA in proposition 3. What has motivated the use of a pronominal whose antecedent does not serve as the discourse topic? I suggest that the reasons are similar to those for the use of PA for co-referential objects in the active pattern. That is, it is the effect of antecedent-anaphor parallelism that contributes to the use of PA here. It is worth noting that in controlling patterns antecedent-anaphor parallelism in object position tends to co-occur with antecedent-anaphor parallelism in subject position in which the anaphor is encoded in ZA or PA. As shown in (58), the empty subject anaphor in the controlled proposition has as its antecedent the subject NP in the controlling proposition. The parallelism in subject position, to my mind, also contributes, though perhaps indirectly, to the pronominalisation of the non-topic NP in object position because it eases the interpreting process when the grammatical roles of the NPs are maintained. Another example follows.

- (59) 1. Han Xin qingnian shiqi, duokui Piao Mu de jieji,
 Han Xin youth time thanks-to support
 "Han Xin was lucky to have Piao Mu's support in his
 earlier years"

2. 0 cai shenghuo-de-xialai,
then live-on
"(he) then survived"
3. 0 shou qi jiaohui,²⁴
take her advice
"(he) followed her advice"
4. 0 zoushang zhenglu.
take right-road
"(he) then took the right road in life"

[D14]



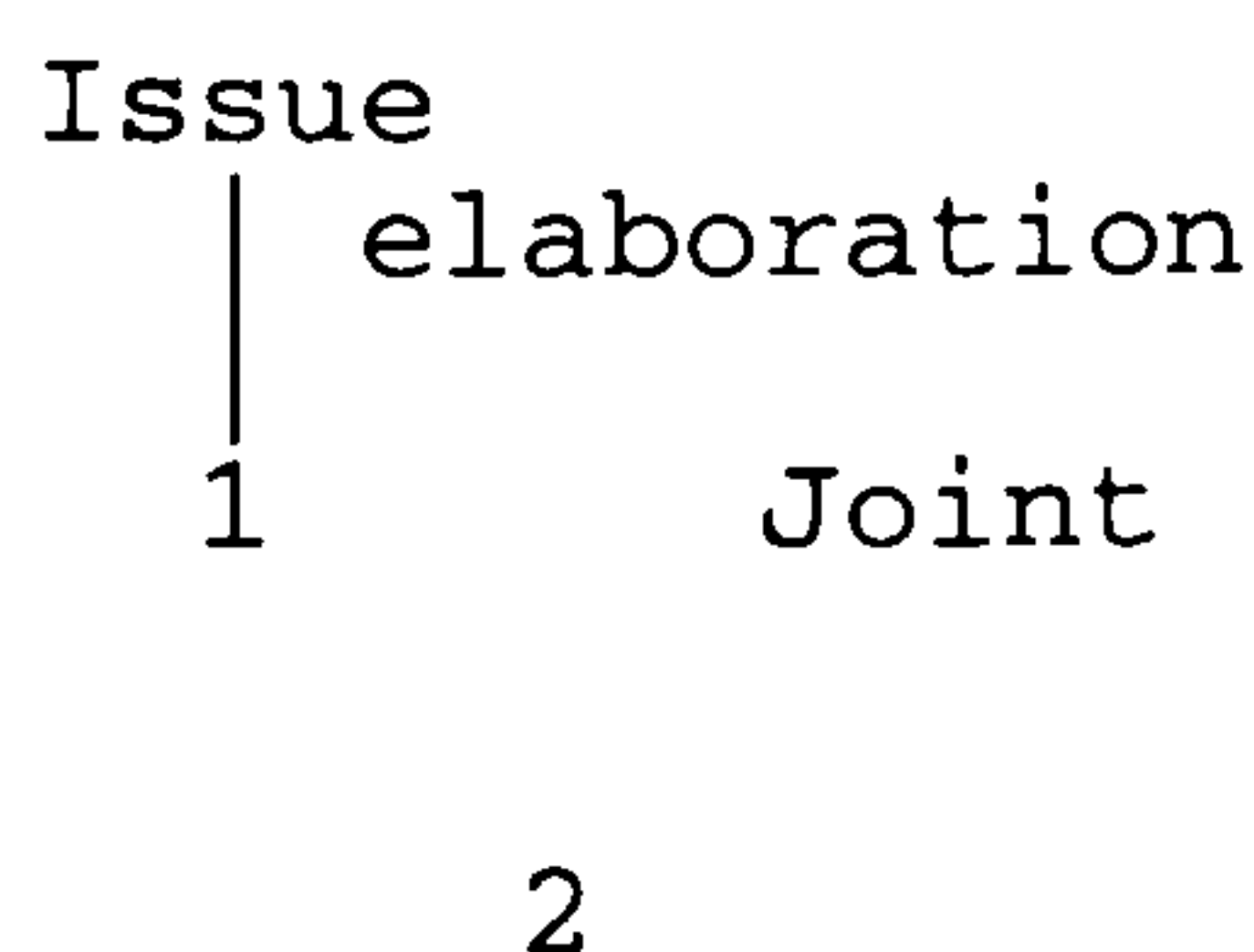
(59) exhibits the same features as (58). There is an antecedent-anaphor parallelism in object position which is accompanied by an antecedent-anaphor parallelism in subject position. It is the subject NP but not the object NP that serves as the discourse topic. In the corpus, out of the 15 instances of PA, only 3 occur where the object NP serves as the topic for the discourse whereas the other 12 occur where the object NP does not serve as the topic but where there is an antecedent-anaphor parallelism in object position accompanied, in almost all cases, by an antecedent-anaphor parallelism in subject position. This suggests that the antecedent-anaphor parallelism is a sufficient trigger for the occurrence of PA for the non-topic NP in object position.

What happens if such parallelism in object position does not exist? Consider the passage in (60).

- (60) 1. Youci xiangdaole xiang Zhang Liang zeng shu de Huang Shigong.
this reminds to present books
"This reminds us of Huang Shigong who offered books to Zhang Liang"
2. Zhewei laoren guyi qi lü qiao-xia,
this old man on-purpose throw shoes under bridge
"The old man threw his shoes under a bridge on purpose"

²⁴In this clause we have a pronoun *qi*, which is one of the pronouns in classical Chinese, corresponding to *ta*, "he/she", *tamen*, "they" or *tade*, "his/her", *tamende*, "their". This pronoun is still found in contemporary Chinese, particularly in some idiomatic expressions such as *ge de qi suo*, "each is in his proper place" or for phonological reasons/effects such as the present one. That is, the verb *shou* is a monosyllabic word and *qi* also a monosyllabic word, the combination of the two makes a dissyllabic one to match the following dissyllabic word *jiao-hui*, resulting in a four-character/syllable compound, which is then parallel to a similar construction in the succeeding proposition. This kind of combination and matching is typical of formal-style writing, as is the case with the article from which the present example is taken.

3. 0 jiao Zhang Liang gei ta shiqi-xielai chuanzai jiaoshang...
 ask for him pick-up shoes put-on his feet
 "(he) then asked Zhang Liang to pick them up for him..." [D14]



The NP *Zhang Liang* first occurs in a PP *xiang Zhang Liang* which is a PP modifier to the VP *zeng shu* and together with it forms a relative clause in proposition 1 and then appears as object in proposition 3. Another NP *Huang Shigong* occurs as head of the object NP in proposition 1 and as a full NP in the subject position of proposition 2, and as ZA in the subject position of proposition 3. This discourse is not focused on *Zhang Liang* but on *Huang Shigong*, which serves as the topic for the discourse. In addition, there is no near antecedent-anaphor parallelism in object position (the antecedent only occurs inside the object NP whose head is the topic for the discourse).²⁵ The absence of a near antecedent-anaphor parallelism and the non-topic status of the NP contribute to its nominal realisation in proposition 3. Now consider the passage in (61).

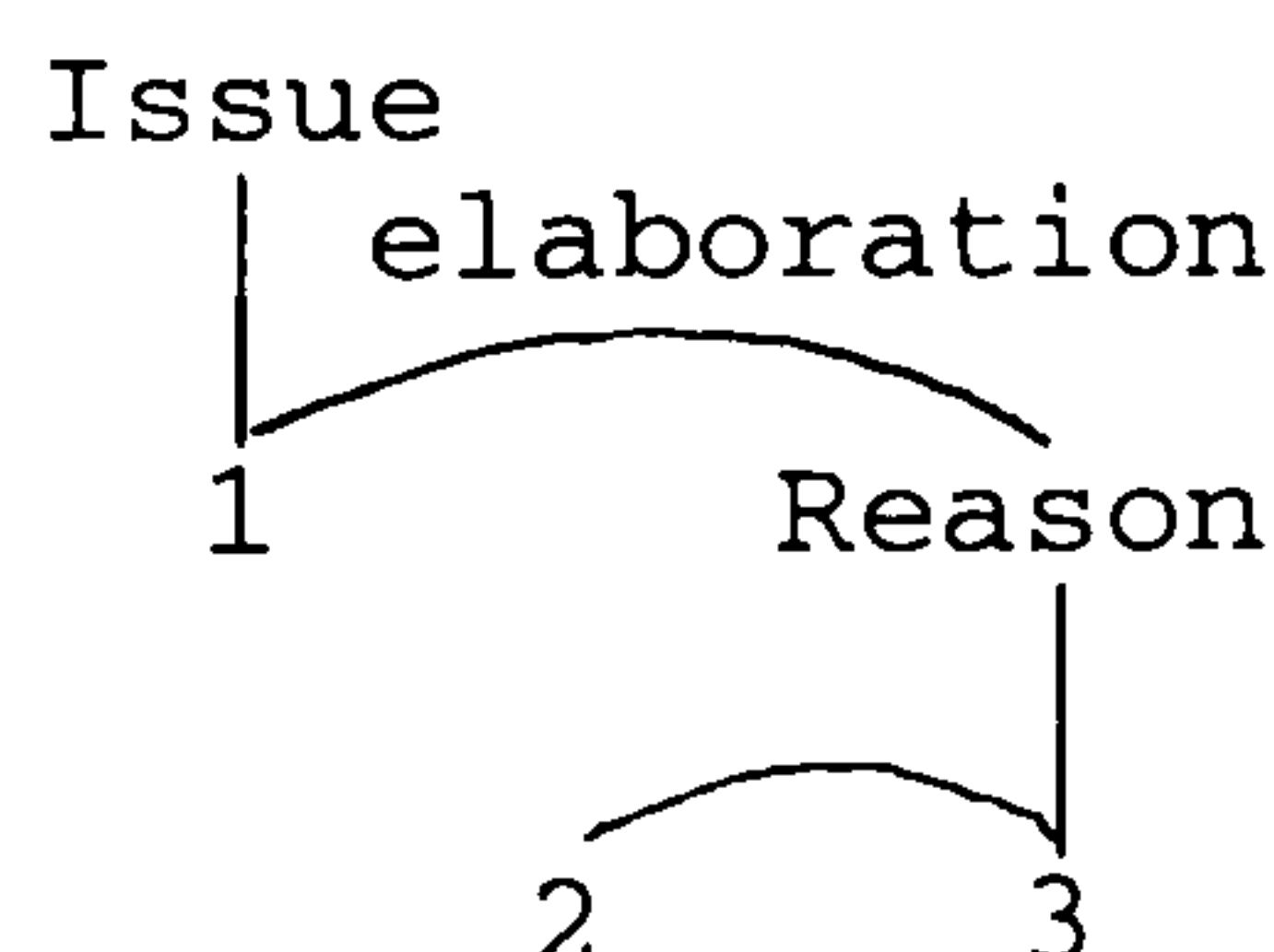
- (61) 1. Sima Wenlan laoshi jieshao Xu Ke bai Ma Youde xiansheng
 Mr Sima Wenlan introduce take Mr Ma Youde

wei laoshi, xuexi erhu.
 as teacher learn erhu

"Sima Wenlan then introduced Xu Ke to Mr Ma Youde to learn to play erhu from him"

2. Zhewei erhu laoshi jiaoxue youfang, zhuzhong jibengong,
 this erhu teacher teaching skilful emphasise basic skill
 "This erhu teacher taught well and attached much importance to the training of the basic skills"

3. 0 shi Xu Ke shouyi feiqian.
 make benefit deep
 "(he) benefited Xu Ke a great deal" [D3]

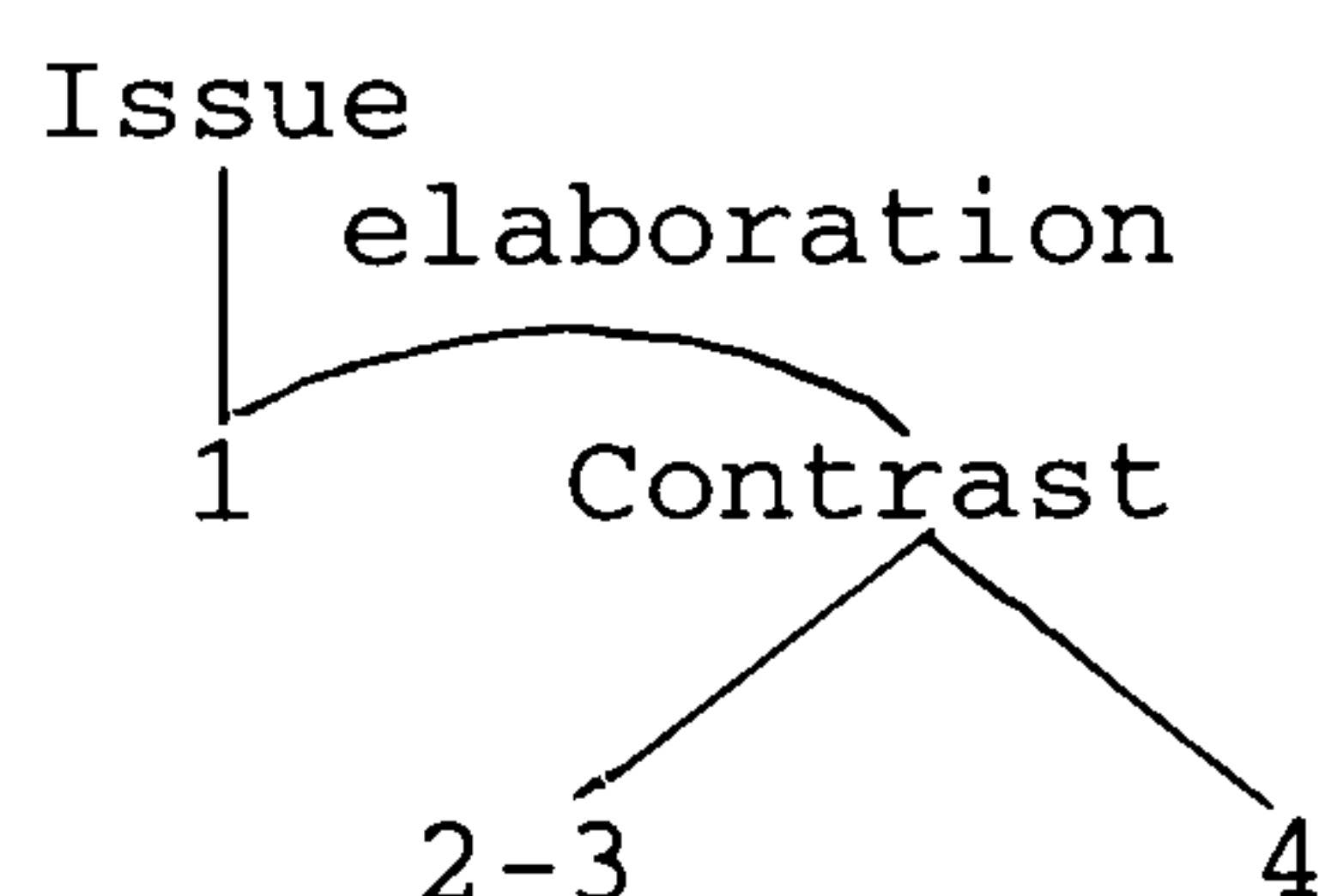


The NP *Xu Ke* is object of proposition 1 and the following mention of it in the object

²⁵By "near" I mean both the antecedent and the anaphor occur as head of the object NP or occur inside the object NPs whose heads are non-human nouns and not possible antecedents. If only one of them occurs as head or their heads are human nouns, then we do not get a near antecedent-anaphor parallelism in object position.

position of proposition 3 is expressed with NA. Strictly speaking, *Xu Ke* is a pivotal object which serves simultaneously as the object to the preceding (matrix) verb (whose subject is *Mr Sima Wenlan*) and as the subject to the following (embedded) verb (which in the present case has its own object *Mr Ma Youde*). Since the "embedded" object *Ma Youde* shifts to the subject position in propositions 2 and 3, the "matrix" object *Xu Ke* does not serve as the topic. And since there are two (human) objects in proposition 1, there is not a near antecedent-anaphor parallelism in object position, and indeed there is not a near antecedent-anaphor parallelism in subject position either (propositions 1 and 2 have different subject NPs). The result of all this is the use of a full NP for the object anaphor in proposition 3. Following is another example in which NA occurs where the antecedent NP does not carry a topic role and there is not a near antecedent-anaphor parallelism in object position.

- (62) 1. Zai peiyu Zhou Ting de liu-nian-li, tade (Fan Dalei)
 in training Zhou Ting's six-year in his
 bing rijian chenzhong.
 illness increasingly serious
 "During the six years of training Zhou Ting, his (Fan Dalei)
 health deteriorated with each passing day"
2. Yiyuan rang ta xiu bingjia,
 hospital allow him take sick-leave
 "The hospital offered him sick leave"
3. xueyuan ye quan ta jingxin yangbing,
 college also urge him rest for recovery
 "his College also urged him to have a good rest"
4. dan ta que "yiyi-guxing", jinxin-jieli wei Zhou Ting shouke.
 but he yet act wilfully do-his-utmost for give-lesson
 "but he clang obstinately to his own course and did his
 utmost to teach Zhou Ting" [D40]



The antecedent *Zhou Ting* occurs inside a PP in proposition 1 (the nucleus of the Issue predicate) and as a prepositional object in proposition 4 (the second argument of the embedded Contrast predicate) and this second occurrence is realised by NA. *Zhou Ting* does not serve as the topic of the discourse (it is the subject NP that does) and there does not exist a near antecedent-anaphor parallelism in object position. These two factors give rise to the nominalisation of the object NP in proposition 4.

In the preceding chapter, we saw that the occurrence of antecedent-anaphor parallelism in object position in active patterns is normally sufficient for the use of PA for the object anaphor no matter whether such a parallelism is neat or not (the figure being 29 instances of PA (83%) and 6 instances of NA (17%)). In the case of controlling patterns where the discourse structure gets more complex and where there is an intervening proposition(s) with no mention of the relevant NP, whether such a parallelism is near or not plays a crucial role. If there is a near antecedent-anaphor parallelism the anaphor stands a good chance of being realised as PA, otherwise it may not take the form of PA and NA is used.

It should be pointed out that the structure of the discourse is also a relevant factor here. While PA is found in all three structural patterns, NA is only found in the nucleus-adjunct pattern realised by Issue predicates. This is by no means accidental. Since the nucleus-nucleus patterns are realised by conjoining predicates, and the adjunct-nucleus patterns are realised by non-Issue adjoining predicates, these patterns usually display relatively simple structures and hardly involve change of topic. Moreover, parallelism in object position usually co-occurs with parallelism in subject position (see (58) and (59) where PA is used for the object anaphor). As for the pattern realised by Issue predicates, since it tends to have more complex structure, with a possibility of topic shift (see (61)), we are likely to get an "untidy" sort of antecedent-anaphor parallelism in object position with or without an antecedent-anaphor parallelism in subject position (for example, (60) and (61) do not have a parallelism in subject position). The fact that out of a total of 15 anaphors in the nucleus-adjunct structure 8 instances are PA and 7 instances are NA is a good indication of what happens here. In the following I present one further passage in which the antecedent NP *Xu Fumin* is mentioned inside the object NP in proposition 1, and the next reference to it as object in proposition 3 is realised by NA.

- (63) 1. Yijiubawu-nian, Aodaliya huaqiao Huang Yaoxun xiansheng
in 1985 Australian Chinese Mr Huang Yaoxun
- qu Xu Fumin de qiye canguan.
go-to Xu Fumin's business visit
"In 1985 Mr Huang Yaoxun, an Australian Overseas Chinese, paid
a visit to Xu Fumin's firm"
2. 0 kan-hou jiwei zanshang,
see-after extremely approve
"(He) spoke highly of it after the visit"

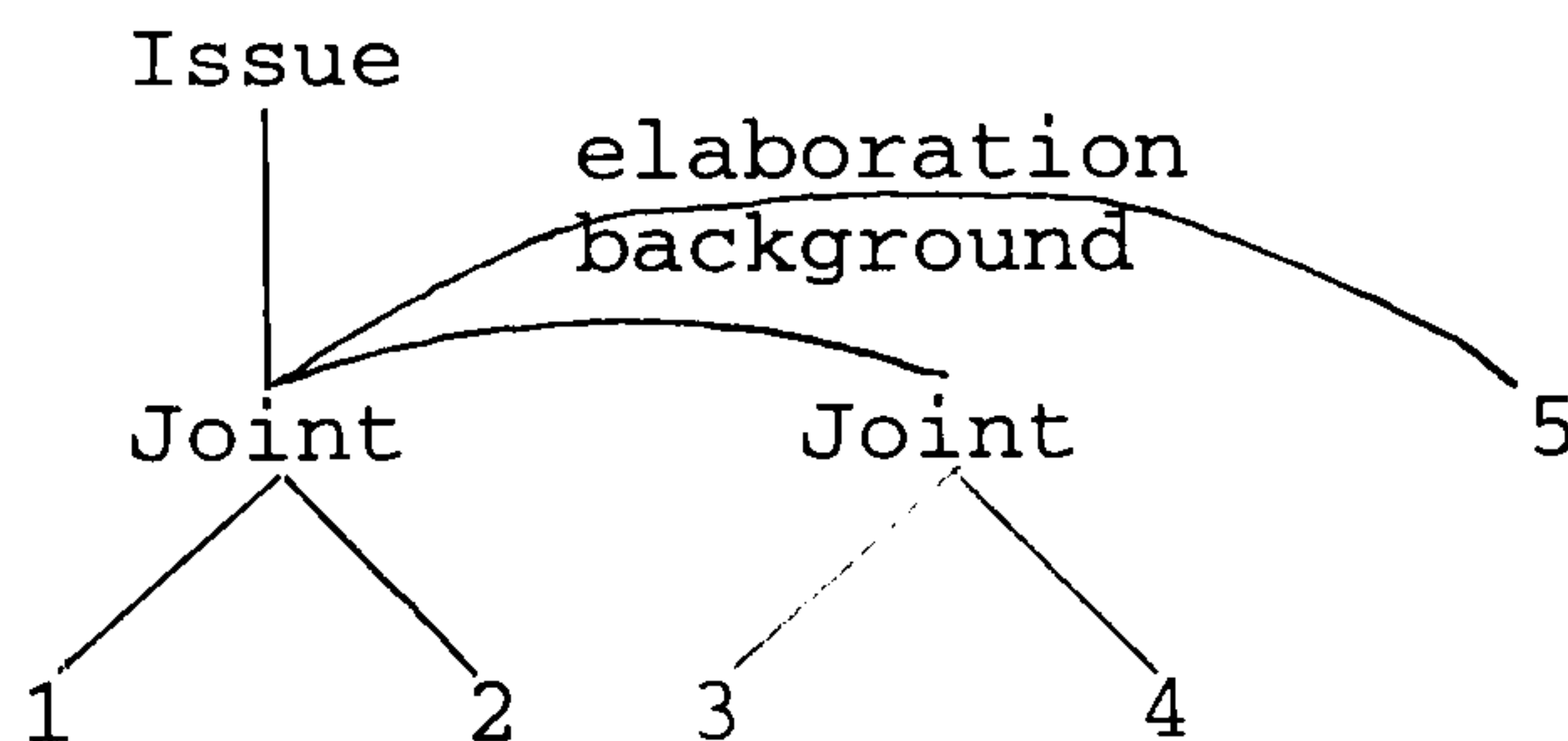
referent is the topic of discourse and NA is used if it is a non-topic. Specifically, in the S-S coreference pattern, PA or ZA is used if the referent is topic (and if the intervening proposition containing a non-coreferential subject NP is an embedded adjunct), otherwise NA is used. In the S-O and O-S coreference patterns, PA is used if the referent serves as the topic (and if the intervening proposition containing a non-coreferential subject NP is an embedded adjunct), otherwise NA is used. In the case of coreferential objects, PA is used if there is antecedent-anaphor parallelism while NA is used if such parallelism is not present. These findings indicate that ZA and PA are mainly used to continue a topic while NA is used to continue a non-topic or to re-establish an interrupted or previous topic.

The above findings, which have highlighted the significant role of rhetorical predicates and the topic-hood of the referent in accounting for anaphora, have pointed to some of the inadequacies of the distance-based theories on anaphora (e.g. Givon 1983). For instance, the occurrence of ZA in some of the adjunct-nucleus patterns where there are other referents seems to be hard to explain in such theories. Furthermore, the fact that the majority of PAs in controlling patterns appear in contexts where other referents are present also poses problems for such theories. One of the major inadequacies of the distance theories is, as noted earlier, that while they may be able to give "roughly correct" quantitative predictions about anaphoric distributions they are not able to give "selectively correct" predictions about anaphoric distributions in discourse -- the choice between ZA/PA and NA in the context of an intervening proposition containing a different subject NP in the controlling pattern is really a testing case for such theories.

2. Taliang jiang lianhe zhuyan.
they will co-operate act
"They will both play leading roles in the film"
3. Muqian gai juben yi you dalu fu Mei de yiwei zuojia xiechu,
now the script already China to America a writer write
"The script has already been written by a writer who came to
the States from China"
4. zhengqu shezhicheng yibu you hengao yishu zhiliang, tongshi
try shoot-into a have high art quality meanwhile

you shen shou guangda guanzhong huanyingde pianzi.
also deeply by most audience welcome film
"And effort will be made to produce a film that is of high
artistic standards and also popular to the audience"
5. Meiguo jiwei yingxing yi xinran jieshou yaoqing,
America several stars already gladly accept invitation

yu taliang gongtong hezuo shezhi gai-pian
with them together co-op shoot the film
"Several American movie stars have readily accepted their
invitation to act in the film" [D8]

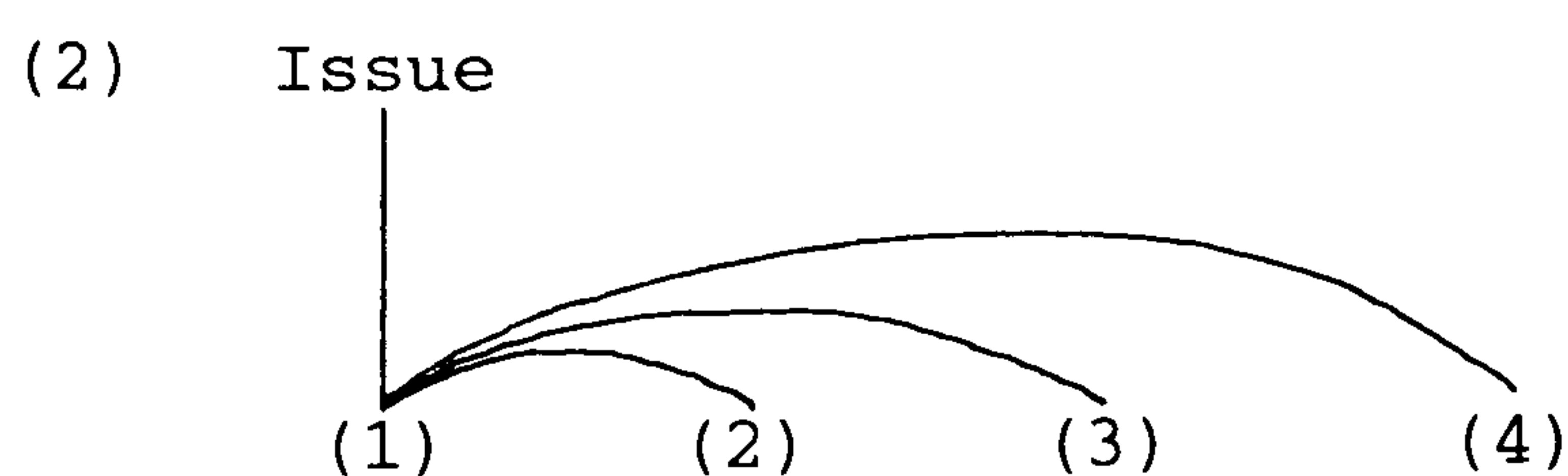


The structure that encompasses this entire chunk of text is an Issue predicate consisting of a nucleus and its two adjuncts. The Issue nucleus is realised by an embedded Joint predicate (propositions 1-2). The first adjunct is also realised by a Joint predicate (propositions 3-4) and the second adjunct is realised by proposition 5. The nucleus presents the claim for the whole discourse, that is, Ms Yu and Ms Pan have agreed to make a film in which they will both act leading roles. The first adjunct elaborates on this claim by providing information on the script. The second adjunct departs from the immediately preceding adjunct by reporting several other film stars' acceptance of their invitation to act in the film, thus returning to the film producers mentioned in the nucleus. The second adjunct hence relates directly to the nucleus rather than to the immediately preceding adjunct. If we look at the anaphoric expressions in the text, the NP *Yu Liyun and Pan Hong* is first mentioned in the nucleus and subsequently mentioned via PA in the second Issue adjunct (proposition 5). The identity of this pronominal anaphor has to be resolved by skipping the intervening material, the first Issue adjunct (propositions 3-4), which contains no mention of its antecedent and returning to the nucleus which contains its antecedent. Structures like (1) are clearly not

captured by either active or controlling patterns discussed in the preceding chapters, and lead us to propose Return Pop patterns.

As discussed in Chapter 3, a return pop pattern is defined as a kind of discourse structure in which a currently processed proposition(s), being not semantically and structurally related to the immediately preceding proposition(s), skips over it and returns to an earlier, superordinate node (proposition or predicate), as illustrated in (1) where the second adjunct, not being related to the preceding adjunct, crosses over the adjunct and returns to the nucleus. The consequences of return pop are that the skipped-over material is closed off and placed in the background and that upon resumption the returned-to material is re-activated and thus has a direct influence on the following discourse by being a reference point. This means that principles at work as active patterns are relevant for return pops (I will discuss this later when dealing with examples).

In my corpus of expository texts, return pops typically occur in Issue predicates. An Issue predicate consists of a nucleus and its adjuncts. The adjuncts, each focusing on a particular aspect of the claim or statement made in the nucleus,¹ tend to have an equal status in their relationships with the nucleus and each relates directly to the nucleus, thus the immediately following adjunct is an adjunct of the nucleus rather than of the immediately preceding adjunct. The following is a diagram of this pattern:²



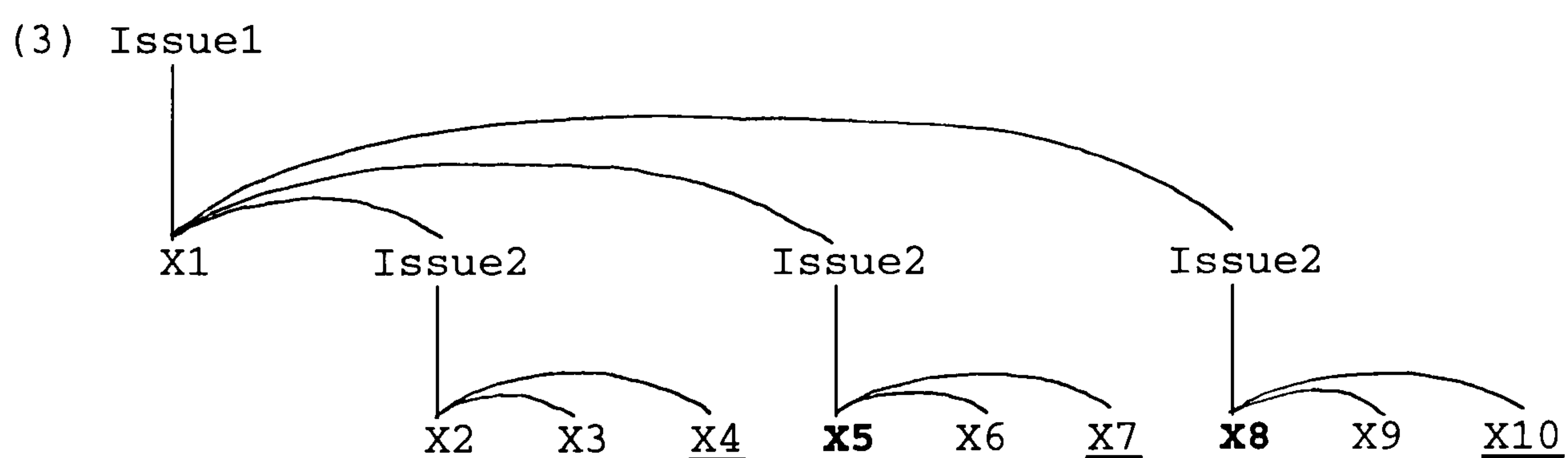
where (3) skips over (2), and (4) over both (3) and (2) and both return to (1), the nucleus of the Issue predicate.

¹For example, in (1) above, the two adjuncts focused on the different aspects of the statement contained in the nucleus: the first focused on the film script whereas the second focused on the acting team.

²The nucleus and its adjuncts, represented by (1), (2), (3) and (4) in the diagram, tend to be rhetorical predicates consisting of propositions rather than simple propositions, as illustrated in example (1) where the nucleus and the first adjunct are both Joint predicates, each consisting of two propositions.

Since each adjunct relates thematically and structurally directly to the nucleus of an Issue predicate, it follows that the anaphor in the popping proposition takes its reference directly from the relevant NP in the returned-to proposition. For example, in (1), the pronominal anaphor in the second adjunct takes its reference from the subject NP in the nucleus. In other words, the NP(s) in the skipped proposition(s) will not normally be used as a reference point for the anaphor in the popping proposition, though, as we will see, the non-coreferential NP(s) in the skipped material, in some cases, do influence the choice of anaphora-types in the return pop.

Since return pops typically occur in Issue predicates, it is necessary to consider the different levels of discourse organisation at which Issue predicates occur. As discussed in the preceding chapters, Issue predicates occur at various levels of discourse organisation and are used very commonly in the higher-level organisation of discourse. That is, the highest-level of discourse organisation is usually formed of the nucleus and the adjuncts of an Issue predicate, each of which may in its turn be realised by a complex system of lower-level predicates. These lower-level predicates can be and often are realised by (embedded) Issue predicates. This is illustrated by the following diagram:



In this diagram the nucleus of Issue1 (the top-most Issue predicate) is realised by X1 (X1 to X10 in the diagram may be a proposition or a predicate) and its three adjuncts are all realised by Issue2 (embedded Issue predicates). The first embedded Issue predicate has its nucleus realised by X2 and its two adjuncts realised by X3 and X4. And the other two embedded Issue predicates exhibit the same internal structure. We can observe two different levels of return pop here: those that return to the nucleus of the top-most Issue predicate (i.e. X5 and X8) and those that return to the nuclei of the embedded Issue predicates (i.e. X4, X7 and X10). Since a top-most Issue predicate represents the global organisation of a discourse and its nucleus carries the main

assertion or statement for the entire discourse, a return to the main assertion or statement contained in the nucleus of a top-most Issue predicate thus constitutes a GLOBAL RETURN POP. An embedded Issue predicate, on the other hand, represents the local organisation of the discourse, with its nucleus carrying an assertion or statement for the segment of discourse that falls under the embedded Issue predicate, thus a pop that returns to the assertion or statement contained in the nucleus of an embedded Issue predicate constitutes a LOCAL RETURN POP.

In my corpus, however, all the adjuncts of the top-most Issue predicates (which represent the global organisation of an entire discourse) start with full NPs which are co-referential with the (topic) NPs in their nuclei.³ This is the situation in which X1, X2, X5 and X8 in the diagram in (2) contain mentions of the same NP as topic. This means that in terms of anaphoric coreference there is no true return pop occurring here because the popping NP would be co-referential with the intervening NP as well as the returned-to NP in the nucleus and thus there is no real need to skip over any intervening material to return to the nucleus for coreference. Since, as far as my data are concerned, there is not sufficient evidence to rule out the possibility of the anaphor in a return pop taking reference from the co-referential "intervening" NP, I do not consider the second or third adjunct of a top-most Issue predicate as constituting an instance of return pop.⁴ In the following, therefore, I will only concern myself with local return pops, as illustrated in (1) (which is an instance of Issue2 in the diagram in (3)).

In the sections to follow, I present a discussion of the distribution of different anaphoric devices in local return pops in my expository texts. Since I will only deal with one type, namely, local return pops, I will, from now on, use the term *return pop* to refer to local return pops.

³There are only 15 instances of PA that occur at the boundaries of the adjuncts of the top-most Issue predicates. Of these, 7 occur at the boundaries of the first Issue adjuncts (and thus fall out of the domain of return pop) and the rest occur following the first Issue adjuncts with their topic NPs coreferential not only with the topic NPs in the preceding adjuncts but also with the topic NPs in the nuclei of the Issue predicates.

⁴The use of anaphors here will be considered, however, in the next chapter on rhetorical units.

6.2.2 The distribution of anaphora in return pops

The following is a table that presents the distribution of anaphora in return pops in my corpus of expository texts.

(4) Table 1 The Occurrences of Anaphora in Return Pops

Types	Return Pops
ZA	0
PA	32 43%
NA	42 57%
Total	74

As shown in the table, ZA is totally absent from return pop patterns. The reason for this absence is in fact not hard to find: ZA is blocked here because as discussed in the context of Active and Controlling patterns, Issue predicates do not allow ZA for their adjuncts. So, in dealing with return pops we are only concerned with PA and NA.

The table indicates that return pops are associated 43% (32/74) of the time with the use of PA and 57% (42/74) of the time with the use of NA. Since both PA and NA occur, with a distribution of similar proportions, in return pops, it would be interesting and also necessary for us to find out what it is that gives rise to the choice of one form of anaphora over the other. I will, in the following section, examine the conditions or principles that control the use of the different types of anaphora in return pops.

6.2.3 The nature of anaphora in return pops

Since the type of return pop that we are examining here occurs at the same level of discourse organisation, and since the figures given in the preceding table show that both PA and NA can occur here, with a more or less similar percentage of distribution in the texts in the corpus, we will in this section concentrate on the factors that give rise to the

choice between PA and NA in return pops. Let us consider the passage in (5).

- (5) 1. Cong yijiuwuqi-nian dao yijiuqiliu-nian, Gao Lao
 from 1957 to 1976

bei-boduole yanjiu zhushu de quanli.
 be-deprived research write-book right

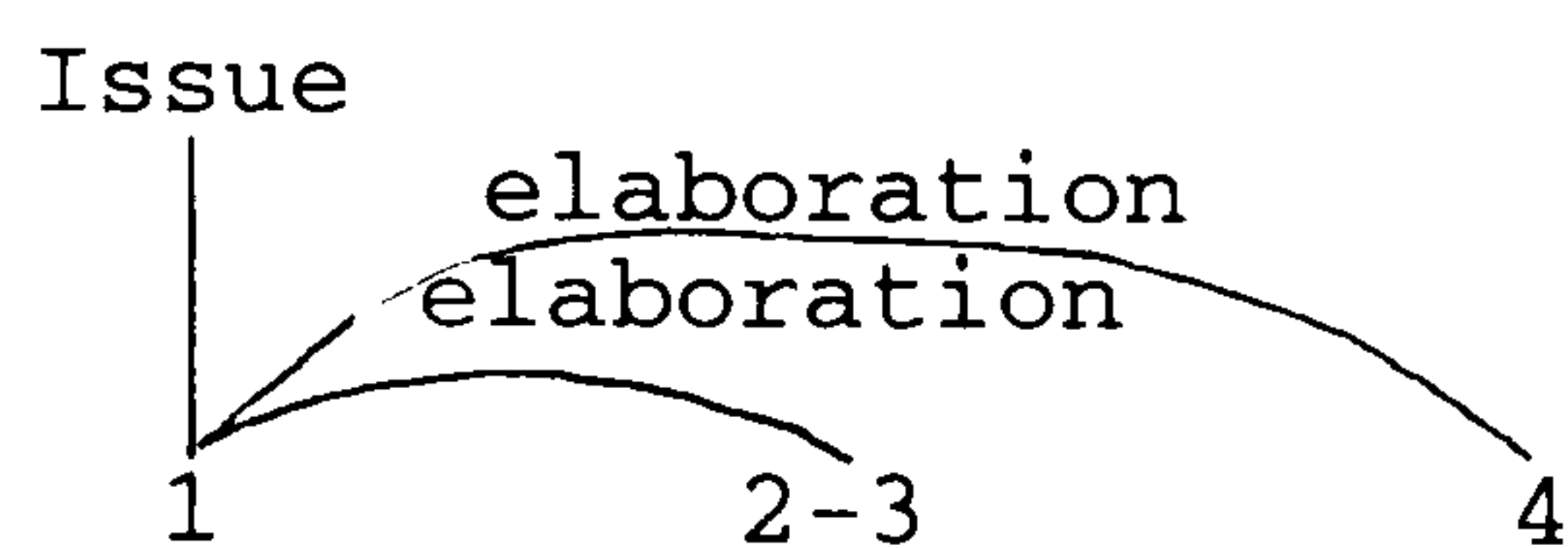
"Mr Gao was deprived of the right to do research and write books from 1957 to 1976"

2. Tanzhi ershi nian,
 lapse-of-finger 20 years
 "Twenty years passed just like the touch of the finger"

3. shiguang baibaide fuzhu-dongliu.
 time in-vain wasted
 "The time was wasted without achieving anything"

4. Ershi nian, keyi gan duoshao shi a! ta tongxi.
 20 years may do how-many thing! he regret
 "How many things could have been done within that twenty years! He deeply regretted it"

[D10]



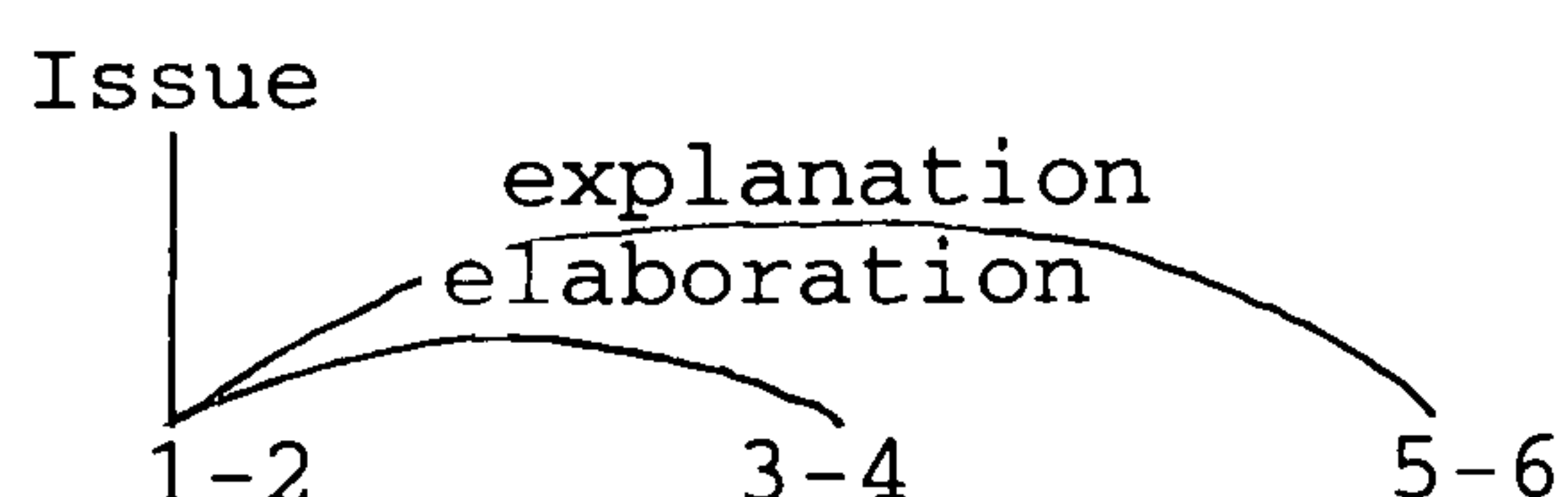
In this passage, the first Issue adjunct (propositions 2-3) focuses on the twenty years that has been wasted without achieving anything and the second Issue adjunct (proposition 4) then switches to talk about Mr Gao's regret over the wasted twenty years. The NP *Gao Lao* is first mentioned in the nucleus of the Issue predicate (proposition 1) and mentioned again in the second adjunct. Note that the anaphor in the second adjunct skips over the preceding adjunct which contains no mention of its antecedent and takes the form of PA.

There are two observations we can make here at this stage. The first is that the NP in question, being mentioned as subject of its proposition in the nucleus and the adjunct, is the topic for the whole of this discourse. The second observation concerns the intervening adjunct. That is, although there is no mention of the relevant NP, there are no mentions of other interfering NPs either.⁵ This non-occurrence of interfering NPs in the intervening adjunct thus does not pose any challenge to the topic-hood of the relevant NP or any problem to the correct coreference of the PA in the return pop.

⁵Remember we are dealing with third-person human nouns. For our purposes therefore, a noun will not be considered as "interfering" unless it is a third-person human noun. Thus, nouns such as *twenty years*, *time* and *things* in the first adjunct do not pose any interference for the identification of the PA in the return pop whose antecedent is a third-person human noun.

We will look at another passage in which PA is used in a return pop.

- (6) 1. Zhe ji-nian, Wu Duotai dui neidi si-hua
 this few-years about mainland China modernisation
- jianshe poduo guanxin,
 construction very concerned
 "In the past few years, Wu Duotai has been concerned about the modernisation programmes in Mainland China"
2. youqi dui Hainandao de jianshe, reqingde
 particular for Hainan Island rebuild with-enthusiasm
- tichu duoxiang fang'an.
 put-forward several proposal
 "in particular, he, with much enthusiasm, made several proposals for the re-construction of Hainan Island"
3. Juzhi, zhaxie jianshe Hainan de ti'an yi dedao
 as-known these re-build Hainan proposal already get
- Guangdong Sheng zhengfu de zhongshi.
 Guangdong Province government attention
 "It is known that these reconstruction proposals have been highly valued by the government of Guangdong Province"
4. Ti'an-zhong guanyu jianshe matou, yugang, shuini-chang
 proposal-in about build port fishing-harbour cement-plant
- deng jianyi yi naru guihua jianshe zhizhong.
 etc suggestion already put-in plan construction in
 "The suggestions in the proposals to build ports, fishing harbours, cement plants have been included in the official reconstruction plan"
5. Chengli Hainan Sheng de jue ding shi ta⁶ jidong-buyi,
 set up Hainan Province decision make him so-excited
 "The decision of establishing Hainan as a province made him so excited"
6. ta renwei zhe shi dangzhengzhe you yanguang de biao xian.
 he think this is government has vision action
 "He thought this was a visionary action by the government" [D36]



We have in this passage an Issue predicate with two adjuncts. The first adjunct which consists of propositions 3-4 provides elaboration for Mr Wu Tuotai's proposals mentioned in the nucleus and the second adjunct which consists of propositions 5-6 switches from the discussion of those proposals to the discussion of his motivation for putting them forward. The NP *Wu Duotai* is mentioned in the nucleus but is absent from

⁶Notice that *ta* occurs in the pivotal position that does not accept ZA. However, even if we change the word order to enable it to occur in subject position, it will still be realised by PA, not because of syntactic reasons but because of discourse structural reasons. Moreover, the use of PA here is also contrasted with the use of NA.

the first adjunct. Its next mention in the second adjunct, which constitutes a return pop, takes the form of PA.

We see that the two observations that we have made about the preceding example hold here too. That is, the NP in question serves as the topic for this discourse (it occurs as topic in both the nucleus and the adjunct) and although it does not appear in the intervening adjunct, the intervening adjunct does not introduce any interfering NPs either (i.e. third person human nouns). Are the topic-hood of the NP and the non-occurrence of interfering NPs in the intervening adjunct the contributing factors to the use of PA in the return pops in the above two examples? The answer is yes. But why?

As we noted earlier, when a pop takes place, that is, when a later adjunct returns to the nucleus of an Issue predicate, it closes off the skipped material and the returned-to material (i.e. the Issue nucleus) is re-activated again. One of the consequences of this reactivation is that the referent in it resumes its role as the reference point for the popping material (i.e. the later Issue adjunct). It follows that principles at work as active patterns still apply in the case of return pops. Since the antecedent NPs in (5) and (6) are the topics for their discourses, the anaphors in these two examples are then legitimately realised as PA, even though the materials they skip over contain no mentions of their antecedents.

In (5) and (6) above, the skipped materials are both two propositions in length, thus they represent fairly simple structures. However, since in a return pop the popping material returns directly to the nucleus which contains the intended antecedent, the sheer length of the skipped material is not a crucial factor. For instance, in the following passage, the intervening adjunct consists of 8 propositions (3-10) with no mention of the antecedent NP, yet the anaphor in proposition 11 in the return pop is realised as PA.

(7) 1. Tian Jiyun zai zhixing Zhao Ziyang zongli changdao de
in carry-out premier advocate

li-gai-shui de gaige zhong qile zhongyao zuoyong,
profit-to-tax reform in play important role

"Tian Jiyun played a major role in implementing the profit-to-tax reform designed by former Premier Zhao Ziyang"

2. zhexiang gaige bei-zhengming dui qiye guanli he
this reform be-proved to industrial management and

- guojia caizheng shouru chanshengle jijide yingxiang.
country financial income produce positive effect
"This reform has proven to bear positive results on industrial management as well as national financial income"
3. Guoqu Zhongguo de qiye jihu jiang tamen quanbude lirun
before China's factory almost give their whole profit

dou shangjiao gei guojia,
all contribute to state
"In the past all enterprises in China were required to turn over nearly all their profits to the state"
4. xuyao qian zai you guojia pizhun bogei.
need money then by state approve give
"when they need money they had to apply to the state"
5. Kuisunde qiye keyi bu shangjiao lirun,
loss-making enterprise may not contribute profit

bingqie you guojia wei tamen zhifu kuisun'e.
and let state for them pay debt
"Loss-making enterprises did not have to turn over any of their profits to the state; instead, the state would cover their deficits"
6. Zheyangde tizhi buneng qubie duidai
such system cannot differently treat

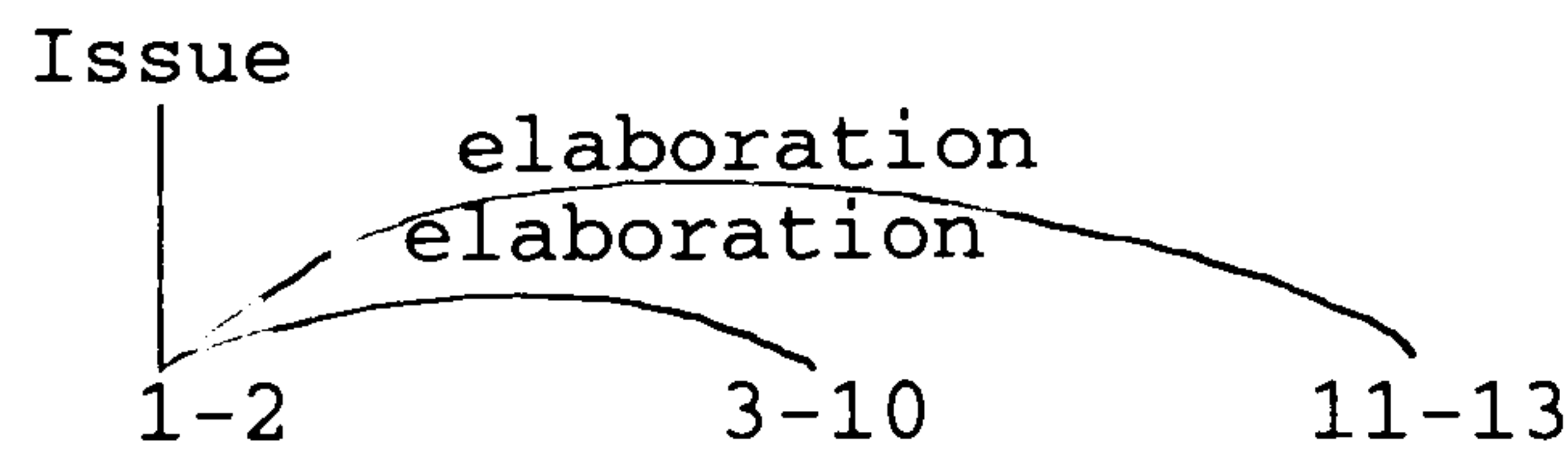
chenggongde he buchenggong qiye.
successful and unsuccessful factory
"Such a system could not discriminate between the successful and unsuccessful enterprises"
7. Yinci, qiye he gongren dui shengchan shiqule xingqu.
therefore factory and worker to production lose interest
"Consequently both the enterprises and their workers lost interest in production"
8. Er gaige hou, guojia zhi yaoqiu qiye shangjiao shuikuan,
but after reform state only require factory pay tax
"However since the reform, the state has now only required the enterprises to pay tax"
9. qiye qude lirun yueduo jiu keyi liuxia gengduode
factory get profit more then can leave-behind more

zijin yongyu jishu gaizao, kuoda zaishengchan,
fund used-for technical reform expand reproduction

gaishan zhigong fuli he fa jiangjin.
improve worker benefit and pay bonus
"The more profits enterprises can make, the more money they can have to advance technology, expand reproduction, improve their workers' benefits and pay bonuses"
10. Zhege banfa diaodongle zhigong de jijixing.
this method give-rise-to workers' initiative
"This has resulted in a great initiative on the part of the enterprises and their workers"
11. Ta hai canyu wujia gaige he gongzi gaigede lingdao gongzuo.
he also involved price reform and wage reform leading work
"He was also involved in policy making and implementing in prices reform and wage reform"
12. Zhe shi liangxiang jiqizhongyao er you jiqifuzade gongcheng,
this is two extremely-important and also complicated project
"These are two extremely important and complicated reforms"

13. keyishuo shi zhengge jingji tizhi gaige de guanjian.
 may-be-said is whole economic system reform key
 "This may be seen as a key-point in the overall reform
 of the economical system"

[D20]



There are, in the corpus, 18 instances of return pop in which the anaphor skips over intervening material which contains no mention of its antecedent but at the same time introduces no other interfering NPs, and returns to the antecedent in the Issue nucleus. In all these instances the anaphor is realised by PA. This suggests that return pops, in essence, are a special kind of active pattern and hence principles for anaphora in active patterns are also applicable in return pops.

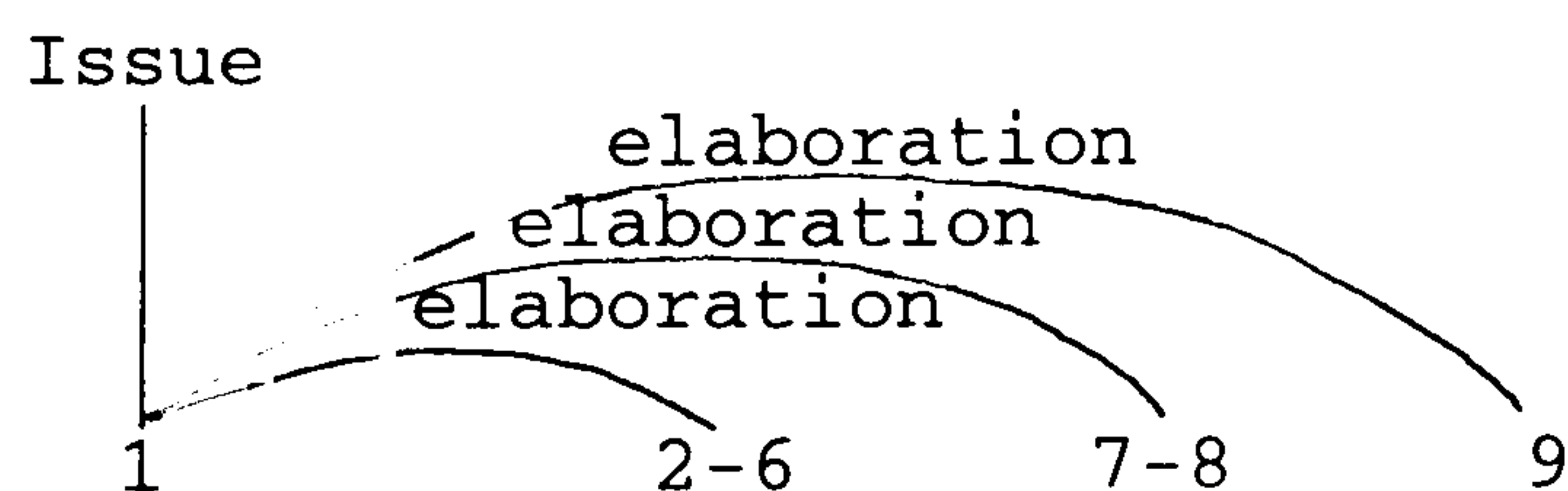
In the above examples, the intervening materials contain no interfering NPs (e.g. third-person humans) and the antecedent NPs serve as topic throughout the discourse. What happens if the intervening material does contain third-person human NPs or interfering NPs? This situation is captured by an earlier example repeated as (8) below.

- (8) 1. Yu Liyun he Pan Hong shangding liji zhaoshou paizhi yibu
 and agree at-once start shoot a
 fanying Zhong-Mei wenhua jinmi-xianglian de gushipian,
 reflecting China-America culture closely-linked film
 "Yu Liyun and Pan Hong have agreed to immediately produce a
 film that reflects close links between Chinese and American
 cultures"
2. taliang jiang lianhe zhuyan.
 they will co-operate act
 "They will both play leading roles in the film"
3. Muqian gai juben yi you dalu fu Mei de yiwei zuojia xiechu,
 now the script already China to America a writer write
 "The script has already been written by a writer who came to
 the States from China"
4. zhengqu shezhicheng yibu you hengao yishu zhiliang, tongshi
 try shoot-into a have high art quality meanwhile
 you shen shou guangda guanzhong huanyingde pianzi.
 also deeply by most audience welcome film
 "and effort will be made to produce a film that is of high
 artistic standards and also popular to the audience"
5. Meiguo jiwei yingxing yi xinran jieshou yaoqing,
 America several stars already gladly accept invitation
 yu taliang gongtong hezuo shezhi gaipian
 with them together co-op shoot the film
 "Several American movie stars have readily accepted their
 invitation to act in the film"

[D8]

- "The 'badness' here is of course not what annoys people, but it is smartness and resourcefulness and is what pleases everyone"
4. Youshihou, daren miandui xiaohaide liangxinde taoqi xingwei,
sometimes parents facing children innocent mischievous act
- ma-you-bubian, kua-you-bubian, zhihao shuo sheng: zhen huai.
scold-not-right praise-not-right have-to say a really bad
"Sometimes, faced with their children's innocent mischievous
behaviour, parents find it difficult either to tell them off or
to praise them, as a way out, they would say: you are bad"
5. Renmen kua Yu Deli "yiliande gushi, yidude zhuyi",
people praise a-face-of stories a-belly-of ideas
- bu-zheng-shi "huai" de tixian ma?
is-this-not badness reflection
"People praise Yu Deli for his story-carrying face and idea-
imbued mind. Isn't this the best footnote for 'badness'?"
6. "Bianjibude Gushi" piantou Yu Deli de "liangxiang",
editor-dept story beginning first appearance
- zenme gao zenme "huai",
however look however bad.
"Yu Deli's first appearance in the TV series "A story of an
Editorial Department is a most telling example of 'badness'
-- it is pleasingly bad!"
7. "Banfu" zhi'er, zhuyi kehua renwu.
axes second give-attention-to depict characters
"Another of the skills is the careful depiction of characters"
8. Ta shuzaode Yu Deli de xingxiang jibenshang shi
he create image basically is
- xiangsheng-wei de renwu, er-bushi xiangsheng-hua de renwu,
cross-talk-flavour person but-not cross-talk-type person
- geng-bushi zhuagen quxiao, zhi sheng yipian kongbai.
even is-not be-funny teasing only leave a blankness
"His acting of Yu Deli is basically someone with a flavour of
cross-talk rather than a cross-talk type of person, let alone
someone who only resorts to funny and teasing acts and nothing
else"
9. "Banfu" zhisan, dongzuo jianlian hanxu, jiezougan-qiang....
axes third action simple reserved rhythm-strong
"The third of the skills is simple, reserved and rhythmic
action"

[D38]



The structure of this text is an Issue predicate, whose nucleus consists of proposition 1, and three adjuncts consist of propositions 2-6, 7-8 and 9 respectively. The nucleus focuses on *Hou Yuehua* and his "three winning skills" (*san-ban-fu*). The three adjuncts focus on each of these skills. What we are interest in here is the use of PA in proposition 8 whose antecedent occurs in proposition 1, the nucleus of the Issue

predicate. Between the two mentions of the NP, there are 6 propositions of complex structures and mentions of several human nouns, particularly, the NP *Yu Deli*, which is the focus of propositions 5-6.

What is the motivation for this long-distance pronominalisation? Again, this has to do with the characteristics of return pop. First of all, despite several human nouns occurring in the intervening adjunct (propositions 2-6), none of these nouns is the topic of the adjunct as a whole, which is focused on the first of the three winning skills of Hou Yuehua. Secondly, the NP *Hou Yuehua* is mentioned as the topic in the nucleus, and as a matter of fact, stays as an implicit topic during the development of the first adjunct because it is his skills that are being discussed, thus, when the pop is made in proposition 7 (which starts the second adjunct), *Hou Yuehua* can be readily co-specified by the pronoun *ta* "he" in proposition 8 (the second proposition in the second adjunct).

This example demonstrates, once more, that a return pop can be done with a pronoun even after skipping over a lengthy chunk of text which contains several (human) nouns, provided that the antecedent NP serves as the topic of the discourse. This is restated in (10) below:

- (10) PA is used for a return pop if the antecedent NP maintains its topic role for the discourse.

In my corpus I found 10 instances in which the skipped-over materials contain different non-topic human NPs, as illustrated in (8) and (9). Of these instances 9 are associated with the use of PA in the return pop. The one exception to this general pattern is given in (11).

- (11) 1. Kang-Ri zhangzheng shiqi, Jiang Jieshi fabiaole yi-pian tiwei
 anti-Japan war period issue a entitled
 "Gao quanguo guomin shu" de "wengao".
 to whole-nation people letter statement
 "During the War of Resistance against Japanese Aggression,
 Chiang Kai-shek issued a statement entitled 'An open letter to
 the people of China'"
2. Wenzhang cuoci kengqiang, qingzhen-yiqie, ganren-feifu.
 statement wording forceful emotional move-hearts
 "The statement was firm and forceful in wording and with such
 a passion that touched the hearts of millions"
3. Qizhongde jiju-hua, di-wu-fen nan-bei-dong-xi, ren-wu-fen
 in it a few words everywhere north-south-east-west everyone

nan-nü-lao-you, yizhi tuanjie-qilai kangzhan daodi,
 male-female-old-young as one unit anti-Japan-war to-the-end

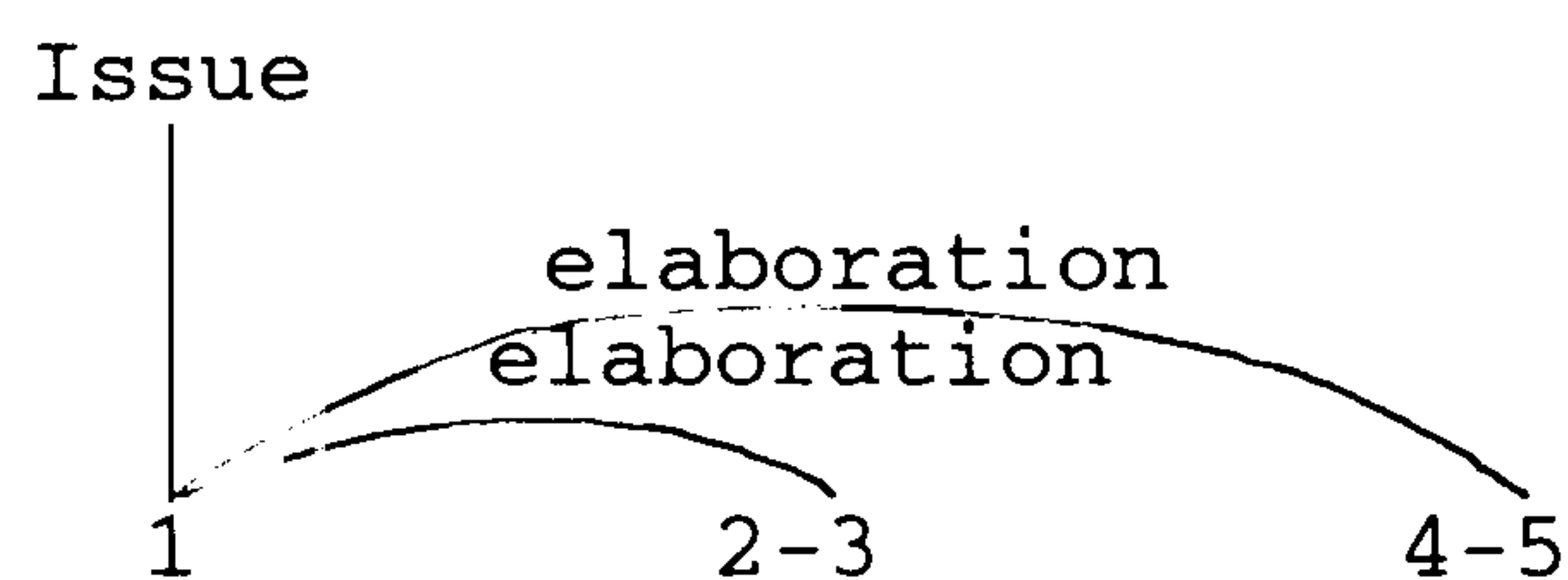
ceng guangwei liuchuan.

then far-and-wide spread

"The following words were especially well-known at the time:
 All Chinese people, no matter where you live and whether you
 are man or woman, old or young, unite as one to carry through
 to the end the War of Resistance against Japanese Aggression"

4. Dangshi guanguo renmin kandao "wengao" zheyang kangkai-ji'ang,
 then whole country people saw statement so impassioned
 "When the people up and down the country were presented with
 such an impassioned statement"

5. 0 renwei Jiang Jieshi da-you zhuanbian.
 think very-much changed
 "(they) thought that Chiang Kai-shek was a changed man" [D9]



The NP *Chiang Kai-shek* occurs as topic in the Issue nucleus and its next mention in proposition 5 in the second Issue adjunct takes the form of NA. As we see, the intervening adjunct (propositions 2-3) focuses on the "statement" mentioned in the nucleus and contains no human NPs. According to what has been established thus far, we should expect a PA for the return pop. The explanation may lie in the fact that the NP in question is not only absent from the first adjunct but also is not mentioned as the topic in the second adjunct, whose topic is another human NP *the people throughout the country*. This effectively means that when the anaphor is reached in the return pop, its antecedent has already ceased to be the topic of the discourse (cf. the active pattern principle (86)),⁸ and as a result the anaphor is done with the use of a full NP, though a PA here would not cause difficulty for anaphoric interpretation.⁹ So, the use of a full NP here does not really affect the principle stated in (10) that the anaphor in a return pop is pronominalisable so long as the antecedent NP holds its topic status in the discourse.

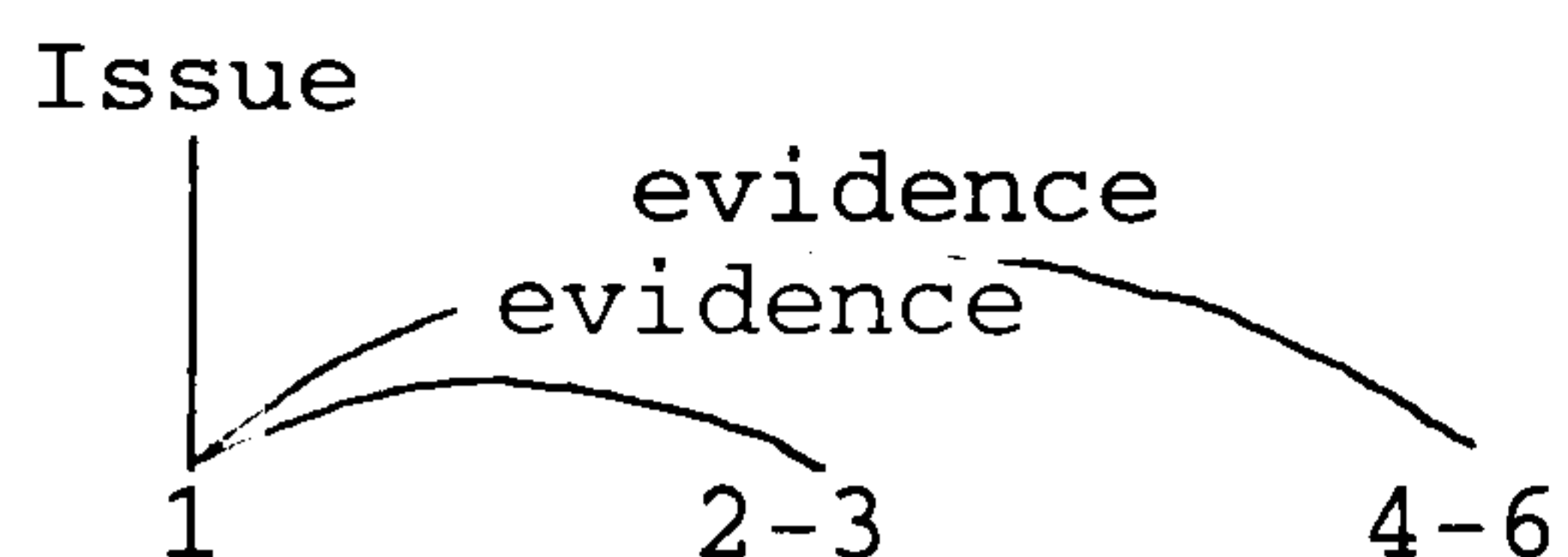
⁸I will return to the phenomenon of topic change later in the discussion.

⁹The instance of NA here may also have to do with the social position of the referent in the real world. In Chinese culture, people tend to avoid using personal pronouns in addressing elders and superiors in face-to-face interaction. This social rule is also reflected in written discourse, especially when referring to national figures such as senior Party and state leaders. In the present example, the person referred to as *Chiang Kai-shek* was the life-long president of the Nationalist government in China and this fact may have had a role in the use of a full NP.

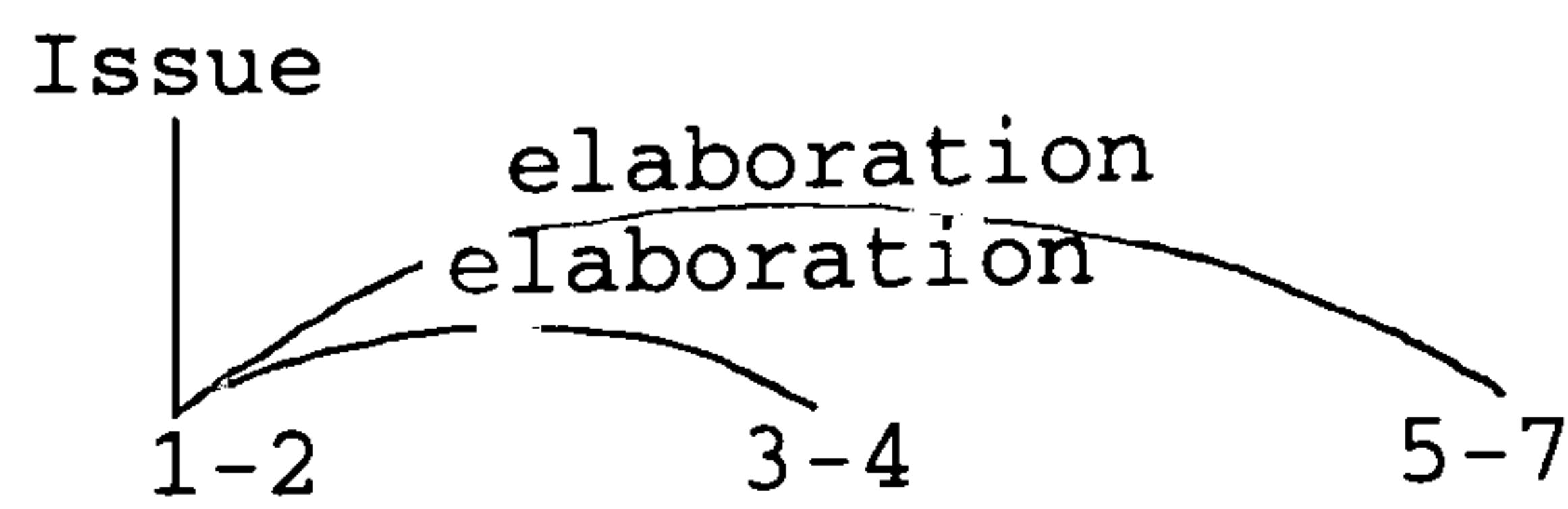
In my corpus, I found cases of return pop realised by the use of PA that skips over an intervening adjunct which contains a coreferential NP and a non-coreferential NP in subject/topic position, as illustrated in (12) below.

- (12) 1. Gao Juefu jiaoshou shifen zhongshi yanjiu zuguo
 professor very care-for research motherland
 xinlixue de yichan.
 psychology heritage
 "Prof. Gao Juefu attaches great importance to the nation's heritage in psychology as a subject"
2. 1983-nian, ta he Pan Shu xiansheng hebianle "Zhongguo gudai
 in 1983 he and Mr Pan Shu co-edit China ancient
 xinlixue sixiang yanjiu" lunwen-ji,
 psychology ideology research paper-selection
 "In 1983 he and Mr Pan Shu co-edited *Papers on Ancient Chinese Psychology*"
3. jianyuele 1949-nian yilai woguo xinlixue gongzuozhe yanjiu
 review 1949-since China psychology worker research
 zuguo yichan de chengji.
 motherland heritage achievements
 "(they) reviewed Chinese researchers' work on ancient-Chinese Psychology since 1949"
4. Zai ta zhubian dabaike "Xinlixue Shi" yishu shi,
 when he edit encyclopedia psychology history book
 "When he had earlier edited the book *A History of Psychology*, a volume in the *Encyclopedia*"
5. ta jiu shifen zhongshi zhongguo gudai xinlixue sixiang,
 he then much attend-to China ancient psychology ideas
 "he had attached much importance to ancient Chinese psychology"
6. ba Zhongguode xinlixue sixiang shi zuowei yige zhongyao bufen,
 BA Chinese psychology ideas history as a important part
 bianjinle "Xinlixue shi" yishu zhong.
 edit-into psychology history book
 "(he) incorporated the history of Ancient Chinese psychology into the book *A History of Psychology* as an important section"

[D10]



Here, *Professor Gao Juefu* is first mentioned as a full NP in the nucleus of the Issue predicate (proposition 1), then mentioned as a pronoun together with another NP *Mr Pan Shu* in subject position in the first Issue adjunct (propositions 2-3), the following mention of *Gao Juefu* in the second Issue adjunct (proposition 4-6), which constitutes an instance of return pop, takes the form of PA. Note that although another third-person human NP *Mr Pan Shu* is mentioned in the first adjunct, it is only part of the subject



The NP *Deng Xiaoping* occurs as topic in the Issue nucleus, as co-topic in the first Issue adjunct (the other co-topic is the NP *Liu Shaoqi*), and the next mention of *Deng Xiaoping* is encoded with a full NP in proposition 5 in the return pop. Since (13) is the same as (12) in terms of discourse structure and coreference relations, one would have expected the use of PA in (13). We can, however, observe two differences which might provide an explanation for this "unexpected" use of NA. The first is that in (12) the NP in question occurs as a pronoun and the other NP occurs as a full NP in the intervening adjunct while in (13) both NPs occur as full NPs. Since, generally, pronouns are used for more prominent referents in discourse, the pronominal encoding in (12.2) indicates that it is the more prominent member of the co-topic pair and thus has more influence on the anaphor in the return pop; the nominal encoding of the NP *Deng Xiaoping* in (13.3) suggests that it is only an equal member of the co-topic in terms of antecedence. The second is that while in (12) the anaphor in the pop occurs as subject, the anaphor in (13) occurs as part of the object NP and the subject NP contains a human noun *Lin Piao* in it. These two points suggest that there has occurred a topic shift when the anaphor in the pop is reached, which results in the use of NA (cf. example 11 and the discussion related to it). The function of this nominalisation in the pop is to re-establish its topic status and serve as the reference point for the subsequent discourse development. The occurrence of PA as subject in proposition 7 is evidence for this.

Examples (12) and (13) indicate that PA is used for the return pop if its antecedent is the running topic of the discourse (as in (12)) and NA is used for the pop if its antecedent becomes an old topic due to a topic shift (as in (13)). And this is consistent with the finding from examples 5 through 9 (and also example 11) captured by the principle (10).

Let us now consider the example in (14).

- (14) 1. Enlai tongzhi de zhezhong renzhen-chushide tashi zuofeng
 Enlai Comrade this responsible earnest style
- laiziyu ta dui Dang he renminde shiye de
 come-from he to Party and people's cause

juedui fuzede taidu.
 absolute responsible attitude
 "Comrade Enlai's conscientious working style came from his
 attitude of absolute responsibility for the cause of the
 Party and the people"

2. Gongchandangren, shouxian shi lingdao zhe,
 Communist particularly is leader

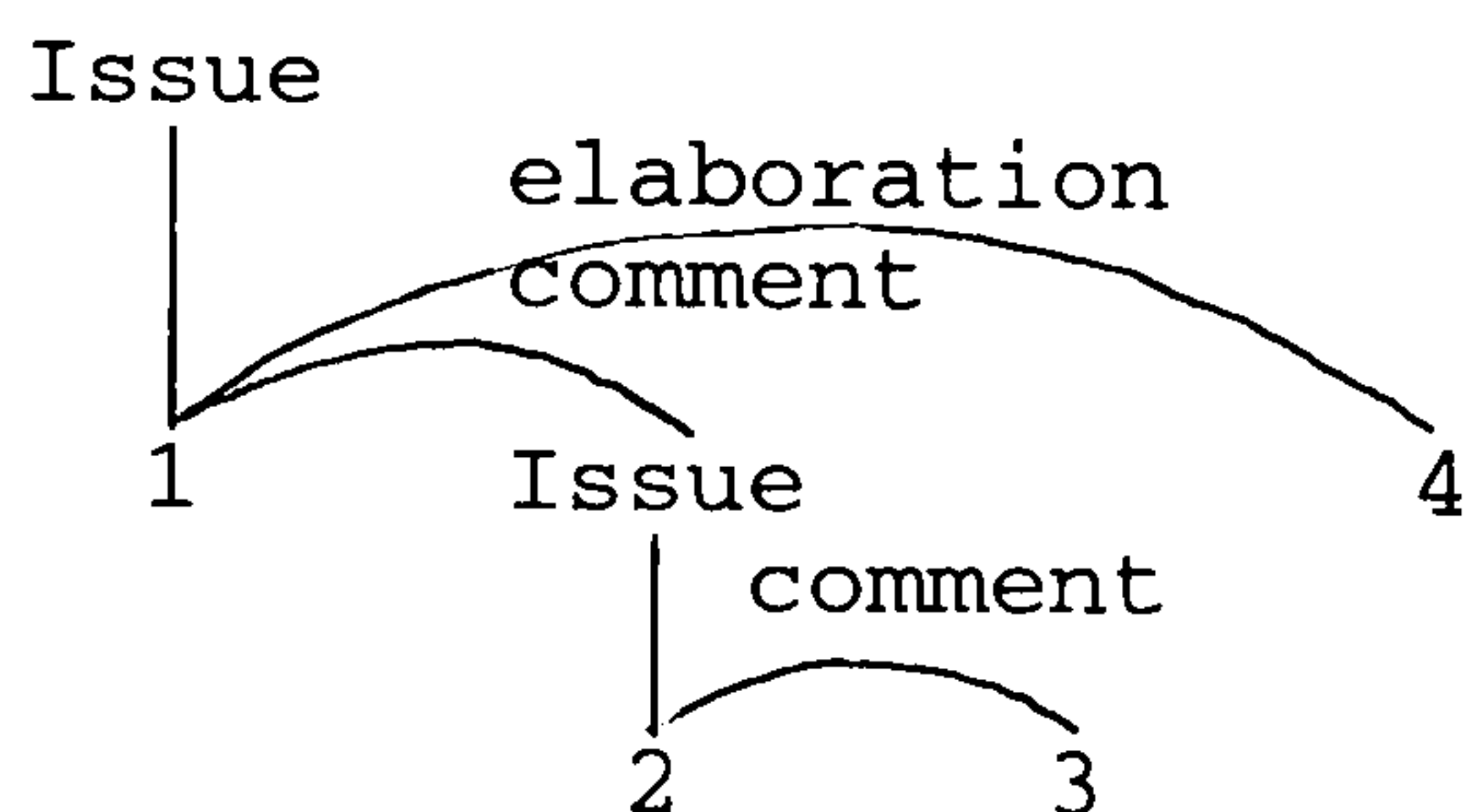
dui renmin de shiye yao fuzeren,
 to people's cause must responsible
 "A Communist, particularly a Communist leader, should be
 responsible for the cause of the people"

3. zhe shi genbende yi-tiao,
 this is fundamental one point
 "And this is a fundamental point"

4. Enlai tongzhi de zhezhong qiushi zuofeng
 Comrade Enlai this-kind seek-truth style

tong tade qianxu ye you henda guanxi.
 with his modest also have very-big connection
 "Comrade Enlai's seeking-truth style also had much to do
 with his modest"

[D12]

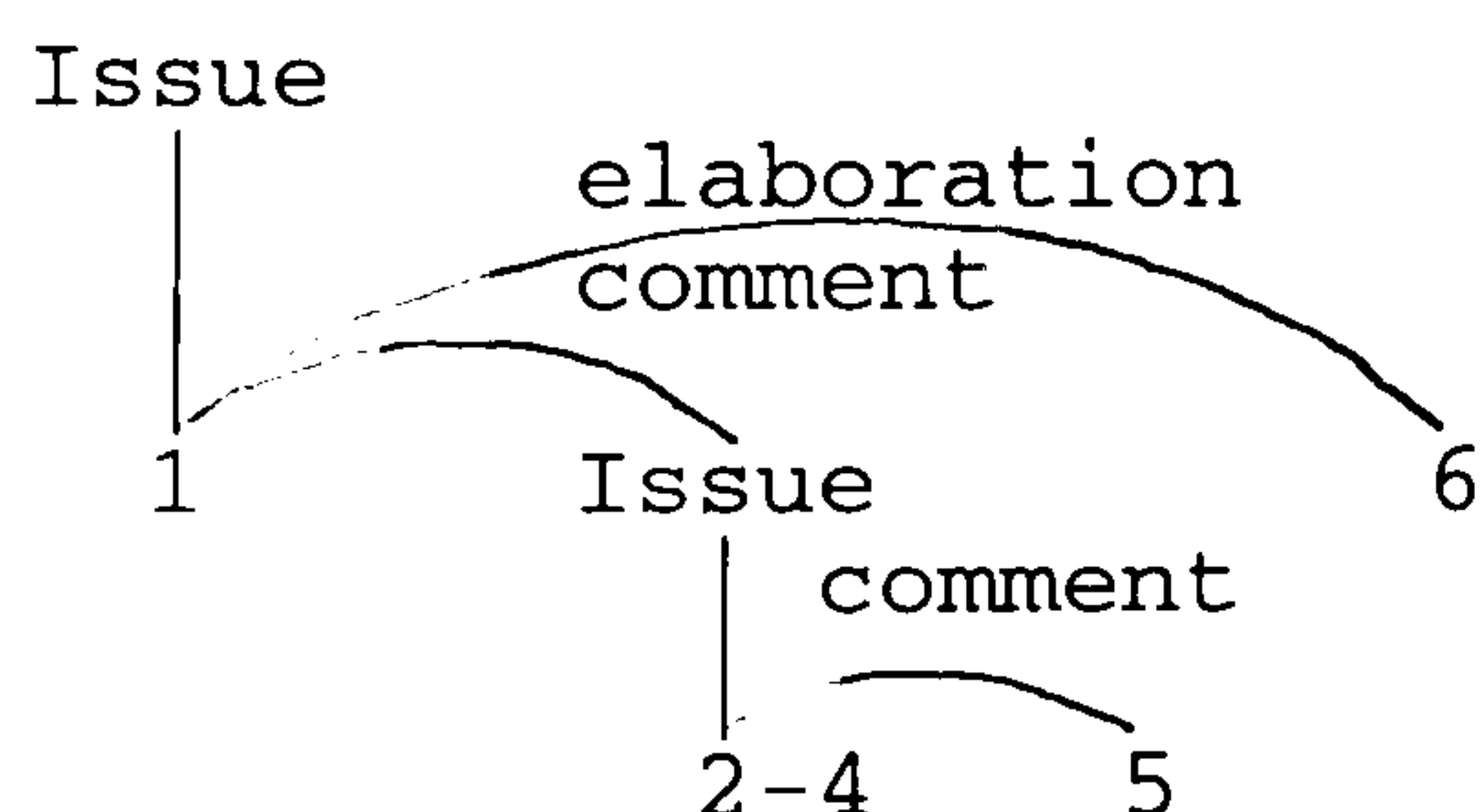


The Issue nucleus is realised by proposition 1 and its two adjuncts are realised by propositions 2-3 and proposition 4 respectively. The NP *Comrade Enlai* is mentioned as a full NP in the nucleus and then mentioned as NA in the return pop in the second adjunct. How do we account for the instance of NA in the return pop here? Since both mentions of the NP occur as topic of their propositions, we must look elsewhere, that is, at the intervening adjunct. The intervening adjunct (propositions 2-3) introduces a different NP *a Communist leader* as its topic, which has the potential to take over the topic role from the topic in the nucleus of the higher Issue predicate, and this poses possible interference if the higher topic in the nucleus is mentioned with PA in the return pop. Thus, the occurrence of an interfering NP as topic in the intervening adjunct works against the occurrence of a disjoint PA in the return pop.

It should be noted that the rhetorical structure of the intervening adjunct is also a contributing factor. That is, when the Issue adjunct is realised by an (embedded) Issue predicate with its own (human) topic, as in the present case, the topic in the nucleus of the higher Issue predicate tends to lose its controlling state in the subsequent

development of discourse as this new topic in the (embedded) Issue nucleus is being discussed in the (embedded) Issue adjunct. Put another way, a change of topic role is taking place in which the topic NP in the adjunct replaces the topic NP in the nucleus as the current topic. As a result, a return pop to the higher topic needs to be expressed with NA. We will, in the following, look at a similarly structured text.

- (15) 1. Enlai kaolü wènti de zhòumi hé xìzhi shì chulemingde.
 consider question thorough and careful is well-known
 "Enlai had a good reputation of being thorough and cautious in considering problems"
2. Wǒ rénwei, yíge guójia língdǎoren, chūlǐ zhòngdà wènti,
 I think a state leader handle major problem
 "In my view, a government leader when he deals with major issues"
3. jìshí shì zìjǐ fùzède rìcháng gōngzuò,
 even-if is own in-charge daily work
 "even if these are his daily responsibilities"
4. jìnshèn yídiǎn, duòhuàxié shíjiān hé jīnglì zuò
 cautious a-bit more-spend time and energy do
 diào chá - yánjiū, fān fù yúnliáng hé tāolun,
 investigation, repeated study and discussion
 "should be cautious and put more time and energy in making investigations and repeated discussions"
5. shì bìyào hé zhíde de.
 is necessary and worth-while
 "It is necessary and worth while"
6. Enlai tóngzhǐ de zhèzhòng rěnzhen-chūshìde tàshì
 Comrade Enlai this responsible earnest
 zuòfēng, lái zì yú tā duì Dǎng, guójia, rénmin de
 style come-from he to Party country people's
 shì yè de juéduì fùzè jīngshen.
 cause absolute responsible spirit
 "Comrade Enlai's conscientious working style came from his attitude of absolute responsibility for the cause of the Party, the nation and the people" [D12]



In this passage the antecedent *Enlai* appears in the Issue nucleus but is not mentioned in the first adjunct (propositions 2-5) which instead introduces a different NP as its topic. The next reference to it in proposition 6 in the return pop is realised as NA. This example shows exactly the same picture as the one in (14): the intervening adjunct is realised by an Issue predicate with its own topic (a third-person human noun) and the

anaphor in the return pop is done with a full NP.

From a semantic point of view, the first adjunct portrays the author's view about the thorough and cautious working style (as exemplified by *Comrade Enlai*) that a state leader should strive for, so it is an apparent departure from the topic NP mentioned in the Issue nucleus (proposition 1). The pop in the second adjunct then returns to *Comrade Enlai* and his working style first mentioned in the nucleus of the higher Issue predicate. From a pure anaphoric point of view however, there would be little difficulty in assigning the correct coreference if the return pop were done with a pronominal anaphor, since when the pop is made, the skipped material is closed off and referents in it will not normally be available for coreference in the succeeding discourse. What then is the motivation for this seemingly "un-economical" use of anaphora (i.e. NA)? Again, this is due to the potential shift of topic roles. To re-establish it as the current topic for the following discourse, the NP takes the form of a full NP in the return pop.

The motivation for the use of NA in the return pop here, from a different perspective, also has to do with the writer's anticipation of the reader's expectations. That is, when an Issue adjunct is being developed into an (embedded) Issue predicate, with a different (human) NP as its topic, the reader may begin to assume that the topic in the higher Issue nucleus is not going to be returned to, and consequently the topic in it loses its potential to be active or controlling for the reader. In other words, the topic in the higher nucleus becomes an old topic, giving way to the current topic being developed in the embedded Issue predicate. As a result a return pop to it is realised by a full NP. If, on the other hand, the adjunct does not have a nucleus-adjunct Issue predicate type of structure and/or does not introduce a different (human) topic, then there may be fairly high expectations on the part of the reader that the nucleus will be returned to, and therefore the NP in the nucleus remains pronominalisable (as demonstrated by the use of PA in (5) through (9)). The following provides another example of this type.

- (16) 1. Rujin shuo Hou Yuehua de haohua, zheng shun-shiqing,
 now say good-words just go with the wind
 "It seems quite popular at the moment to blow the trumpet of
 Hou Yuehua"
2. Ran'er, ni'er-zhongyan bu-jian-de
 but unpleasant-good-advice is-not-necessarily
- bushi haohua, ye lue-shuo jiju ba.
 not good-words also just-say a-few

"However, since honest advice, though unpleasant to the ear, is not necessarily a bad thing, I'll just offer some"

3. Dianshi-lianxuju "Kewang" li de Song Dacheng de banyanzhe
TV series Longing in Song Dacheng's actor

Li Xuejian, ren-cheng-zhi-wei "qianmian yanyuan",
people-call-him-as thousand-face actor

"Li Xuejian, who acted Song Dacheng in the TV series *Longing* is hailed as a 'multiple-face actor' "

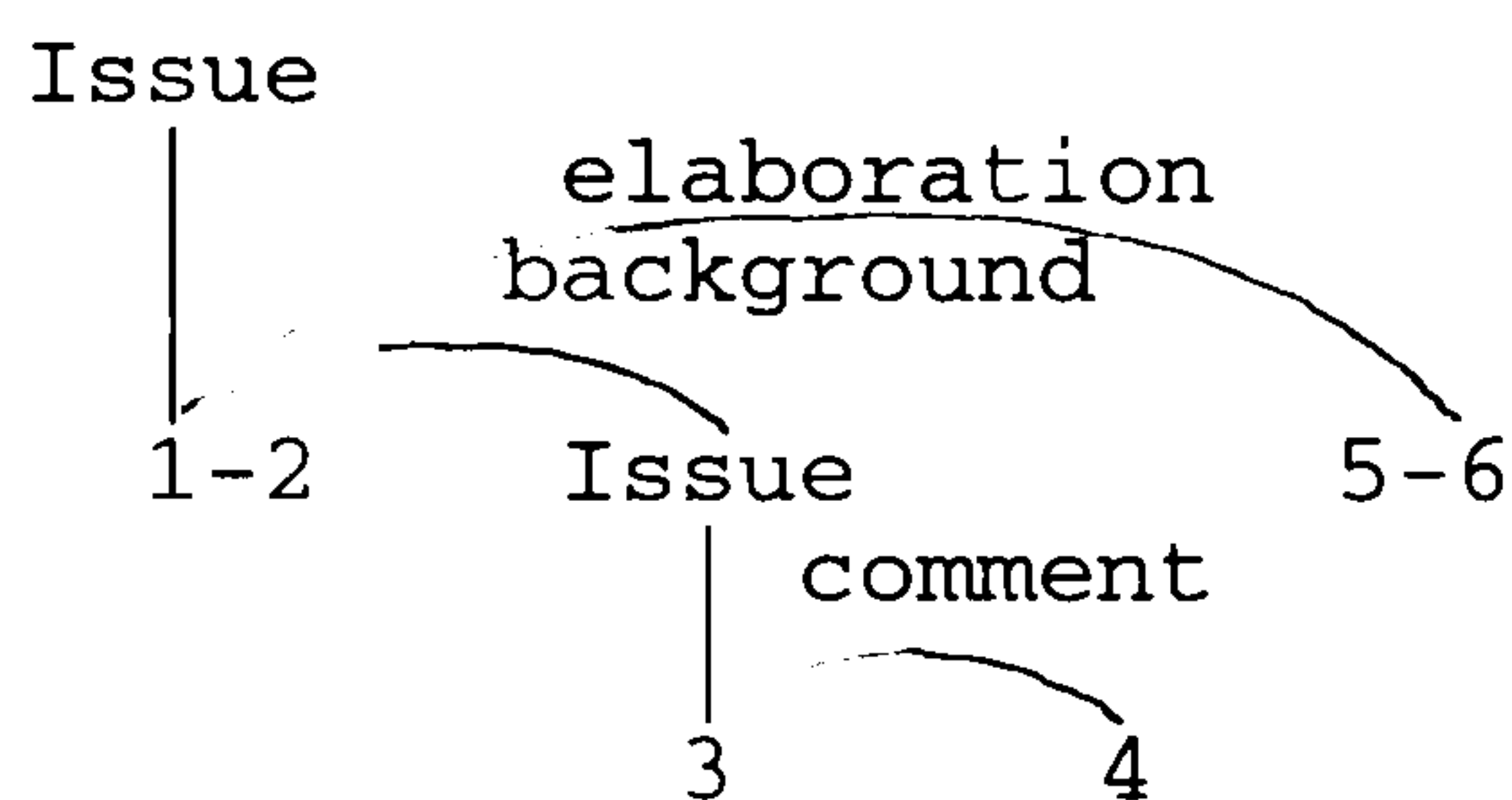
4. dang shu jigaode zanyu.
should be extremely-high praise
"This is a very high praise indeed"

5. Fanguan Hou Yuehua, dianshiju ye yanle jibu,
now look-at TV series already act several

xiaopin ze geng duoxie,
soaps then even more

"By contrast, although Hou Yuehua has already acted in several TV series, and also in quite a few soaps"

6. 0 que buceng liuxia "qianmian" de yingxiang.
but never leave thousand-face impression
"(he) is yet to prove himself as a 'multiple-face' actor" [D38]



The NP *Hou Yuehua* is mentioned in proposition 1 in the nucleus of the Issue predicate and its next mention in proposition 5 in the second Issue adjunct takes the form of NA. As discussed above, this instance of NA in the return pop can be accounted for by the fact that the intervening material (propositions 3-4) is realised by an Issue predicate containing a third-person human noun as the topic, and thus the pop back to the old topic in the Issue nucleus is realised as NA.

My data texts show 10 instances as described by (14), (15) and (16) above and in all these instances full NPs are used in the return pops.

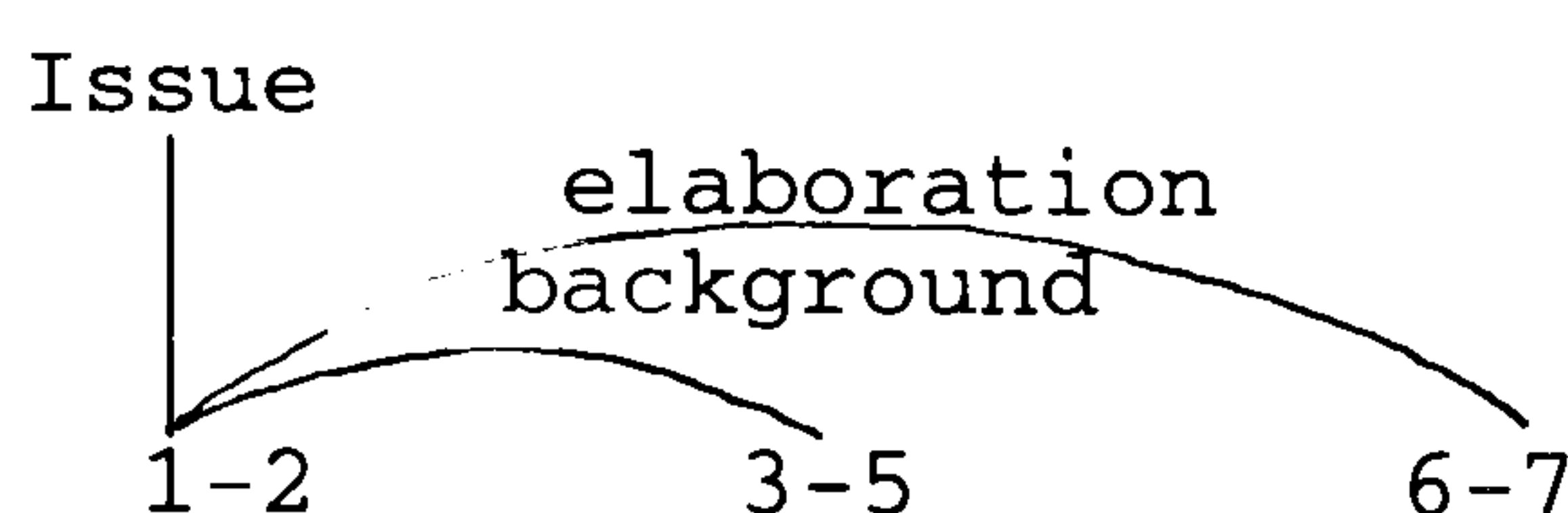
NA is also found where the returned-to material (i.e. the Issue nucleus) contains a different NP as well as its antecedent, as exemplified in (17).

- (17) 1. Yici, Guo Moruo lai zhao Fu Baoshi,
once come see
"Once Guo Moruo went to see Fu Baoshi"

2. 0 yao ta xie ge "wengao".
ask him write a statement
"(he) asked him to draft the Statement "

3. Zhe shi Jiang Jieshi yao de,
this is Chiang Kai-shek want
"The Statement was written for Chiang Kai-shek"
4. xian liang-san-tian-nei jiao juan,
order in-two-or-three-days finish draft
"and had to be completed within two or three days"
5. "wengao" de timu shi "Gao quanguo guomin shu".
statement title is to whole-nation people letter
"The title was 'An Open Letter to the People of the Whole Nation' "
6. Xianyu shijian, Fu Baoshi zhihao aoye ganxie
due-to limited-time has-to stay-up write
"Pressed by the limited time, Fu Baoshi worked the whole
night through without sleeping"
7. 0 yige yewan ruqi wanchangle wengao.
one night as requested completed proclamation
"(he) completed it on time"

[D9]

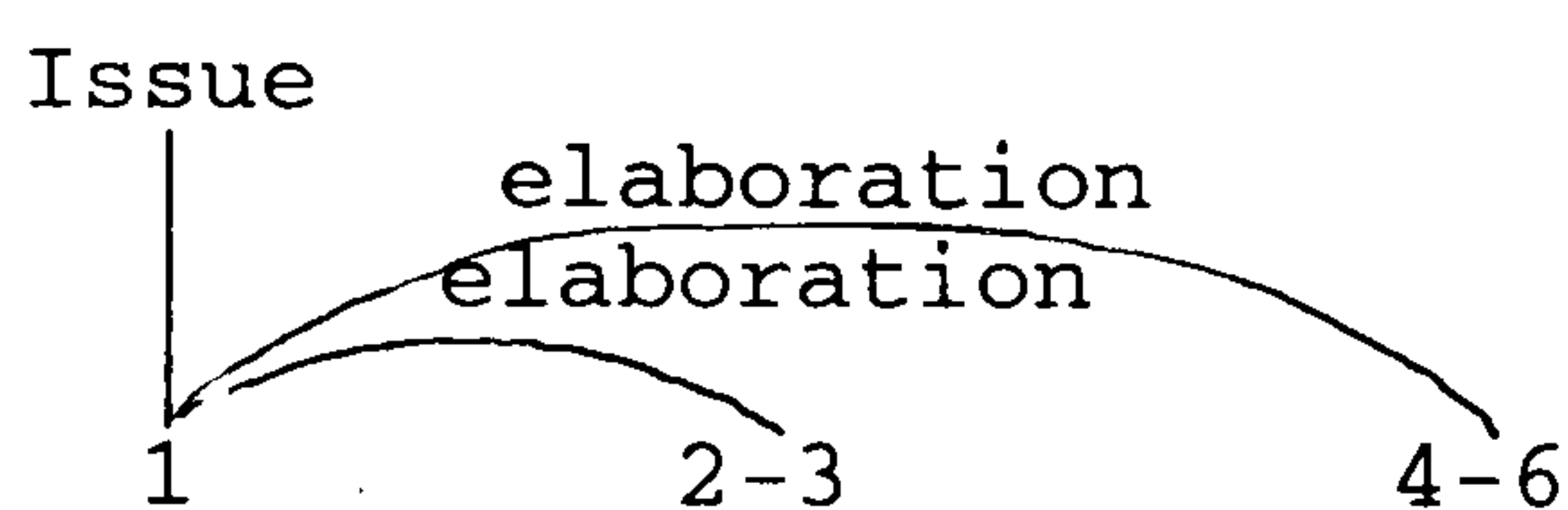


The NP *Fu Baoshi* occurs in object position in proposition 1 in the Issue nucleus where a different third-person human NP *Guo Moruo* occurs in subject position. The first Issue adjunct, where is mentioned another NP *Chiang Kai-shek*, gives background information about the drafting of the "statement" mentioned in the nucleus. The next reference to *Fu Baoshi* in proposition 6 in the second Issue adjunct takes the form of NA. Note that although the intervening adjunct has a different NP *Chiang Kai-shek*, obviously it centres on the "statement" rather than on this NP, which is thus a non-topic in the adjunct. As discussed earlier in relation to examples (8) and (9), a non-topic NP, even though it is a third-person human noun, is not likely to pose interference to the identify of a disjoint pronominal anaphor in a return pop, thus the occurrence of the NP *Chiang Kai-shek* does not function as a trigger for the use of NA in the return pop.

The occurrence of NA in the return pop here actually has to do with the material it returns to. As noted before, upon resumption, the returned-to proposition becomes active again, in other words, our principles determining antecedent-anaphor choice in active patterns also work here. Since the antecedent for the anaphor only occurs in object position, hence a non-topic, and the subject position encodes another NP, the topic NP, the use of PA in the return pop would be interpreted as coreferential with the subject/topic NP in the nucleus, hence the use of NA here.

The following is another example of the same type.

- (18) 1. 1983-nian, Jiaoyubu weituo Pan Shu xiangsheng wei guwen,
in 1983 Education Ministry entrust Mr Pan Shu as adviser
- Gao Lao wei zhubian, fuze bianxie 'Zhongguo Xinlixue shi'.
Old Gao as editor in-charge compile China psychology history
"In 1983, the Ministry of Education entrusted Mr Pan Shu as
the adviser and Mr Gao as the chief editor with the
compilation of *A History of Psychology in China*"
2. Zhe shi yixiang jianjude gongcheng,
this is a difficult work
"This is a difficult project"
3. shi qianwu-gurende chuangju.
is unprecedented creation
"it is also something unprecedented in Chinese history"
4. Gao Lao bugu ziji yishi bashiqi-gaolingde ren yiran-shangzhen,
ignore own being 87-year-old man pitch-into-work
"Old Gao resolutely pitched into the work ignoring the fact
that he was eighty-seven years old"
5. 0 duofang zuzhile sanshi-duo-wei zhuanjia xuezhe,
try organise over-30 expert scholar
"(he) got together more than thirty experts and scholars"
6. 0 kefule chongchong kunnan, kaishile gongzuo.
overcome many difficulty start work
"(he) overcame many difficulties and started the work" [D10]



In this passage, the intervening material (propositions 2-3) only contains two simple propositions with no human NPs in them at all, and yet the return pop in proposition 5 is done with the use of NA. Surely, the intervening adjunct plays no part in the use of NA here; rather it is the topic status of the antecedent of the anaphor that should be held responsible.¹⁰ Since the antecedent NP is mentioned as a member of the co-topic pair (the NP *Mr Pan Shu* being the other member) in the nucleus, when the pop is made, it is actually not available for coreference if the reference to it is encoded in PA. As a result, NA is employed.

There are 8 cases in my corpus in which an anaphor skips over an intervening material containing no interfering NPs and returns to the nucleus in which its antecedent

¹⁰In this example and also in the preceding example, if the intervening material is removed, in which case we get an active pattern, the anaphor in question still requires a nominal encoding, as predicted by the principles for active patterns discussed above.

occurs as a co-topic, as in (18), or as a non-topic, as in (17). All these cases show the use of full NPs for the anaphors.

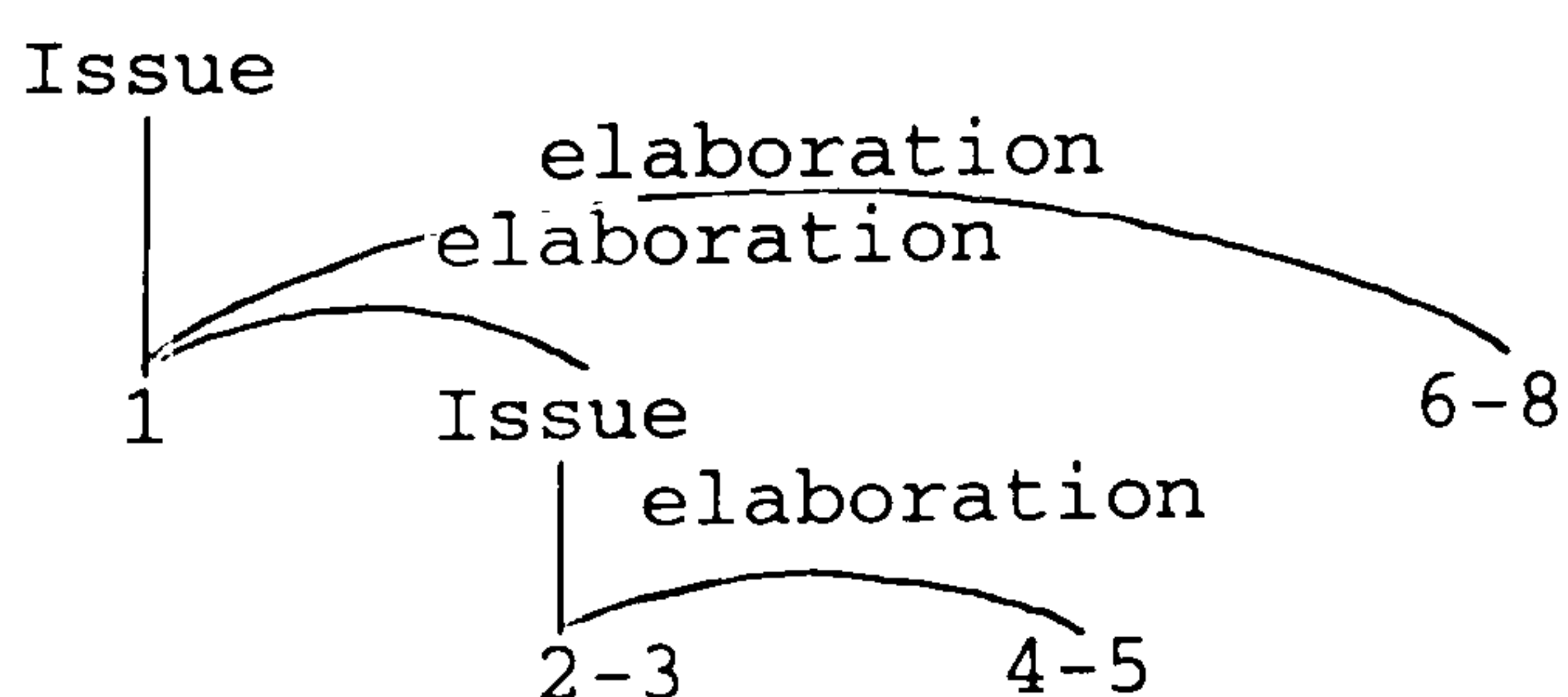
Almost half of the nominal anaphors in return pops in my data, however, occur where both the returned-to material and the intervening material contain mentions of the different NP. Consider the example in (19):

- (19) 1. Youren shuo, Hou Yuehua biao yan xiang Hou Baolin,
 someone says performance is-like
 ci-hua youli.
 this-remark have-reason
 "People say that Hou Yuehua's style of performance is like Hou Baolin. This is correct"
2. Xiangsheng biao yan fengge you suowei "shuai"
 cross-talk perform style have so-called elegance

 "mai", "guai", "huai",
 showing-off unusualness badness
 "Cross-talk performance is characterised by the styles of 'elegance', 'showing off', 'unusualness' and 'badness',
3. Hou Baolin zhan yi 'shuai'.
 possess the elegance
 "Hou Baolin's performance belongs to the 'elegant' category"
4. Shenme shi "shuai" ne?
 what is elegance
 "What is 'elegance' then?"
5. Satuo, piaoyi, chenwen, hanxu, biao yan you qishi,
 free-easy flowing calm reserved performance has charisma

 li wutai-shang you fenliang.
 stand stage-on have weight
 "'Free and easy', 'calm and steady', 'reserved' and imposing stage performance, all these qualities fall under 'elegance'"
6. Hou Yuehua ne, lun xingxiang, dangyu naiyou-xiaosheng wuyuan,
 as-for appearance with playboy not-related

 dao you jifen "hou-xiang",
 rather has a bit monkey-appearance
 "What about Hou Yuehua? He certainly does not have the image of a playboy but rather he seems to have a bit of 'monkey-image'"
7. Ke buzhi zenme gaode, yidan jinru biao yan,
 but not-knowing how happen once enter acting
 "But somehow, as soon as he starts acting"
8. 0 jiu you name guzi "shuai" jin! ...
 then have that type of elegance
 "(he) would show all those qualities of 'elegance'" [D38]



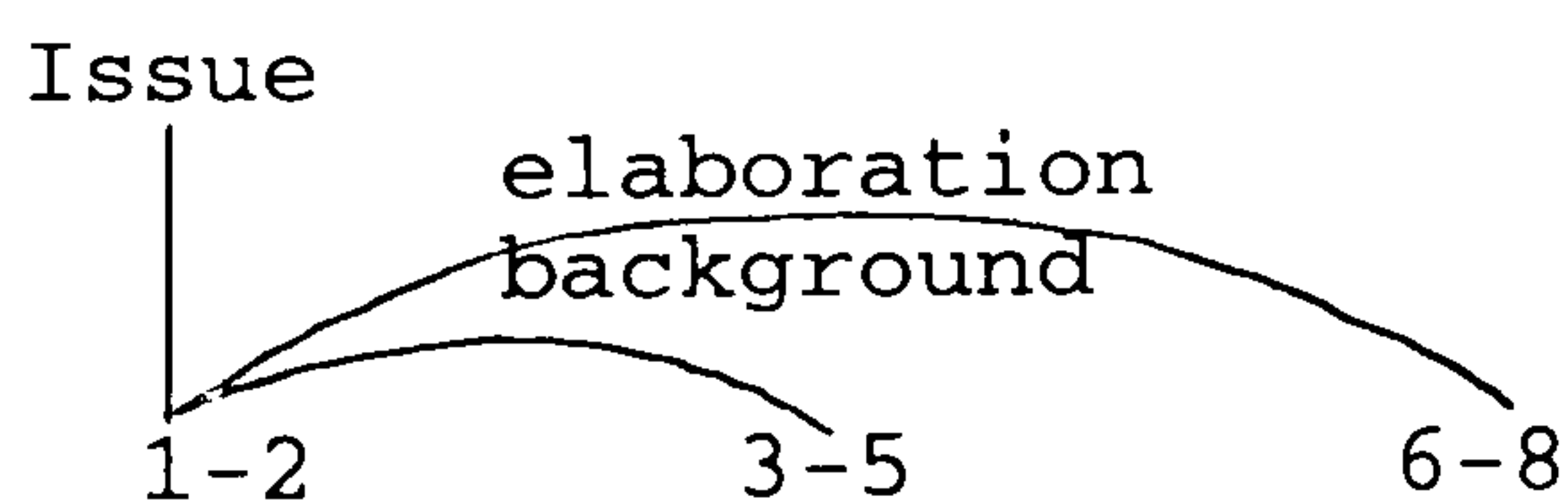
The NP *Hou Yuehua* is mentioned as topic in the Issue nucleus (proposition 1) and is mentioned again as topic in proposition 6 in the second Issue adjunct. A full NP is used for this second mention in the pop. Note that in this text there is another human NP *Hou Baolin* which occurs as an object in the nucleus. This NP then occurs as the topic for the immediately following Issue adjunct which is realised by an embedded Issue predicate. Obviously, the occurrence of this NP in the text is a contributing factor to the use of NA in the return pop in proposition 6.

When we were dealing with controlling patterns in the preceding chapter, we saw that when a non-topic object NP in the controlling proposition is mentioned via NA in the subject position of the immediately following proposition, this second mention takes over the topic role from the NP in the subject position of the controlling proposition. As a consequence, any reference to the old topic NP in the controlled proposition takes the form of a full NP, which has the effect of re-establishing its topic role for the following discourse. In the present case, instead of having an intervening proposition, as in the case of a controlling pattern, we have an intervening Issue adjunct realised by an embedded predicate in which the non-topic NP in the Issue nucleus is referred to as the topic for the intervening adjunct in the form of a full NP. Since it is the topic for an Issue adjunct consisting of several propositions, its topic status should carry more weight than in the case of a controlling pattern in which usually one proposition intervenes. Consequently, to regain its lost grounds and to re-assert itself as the topic for the subsequent development of the discourse, the old topic NP, the one mentioned in the Issue nucleus, is referred to by an explicit linguistic form, i.e. by a full NP in the return pop.

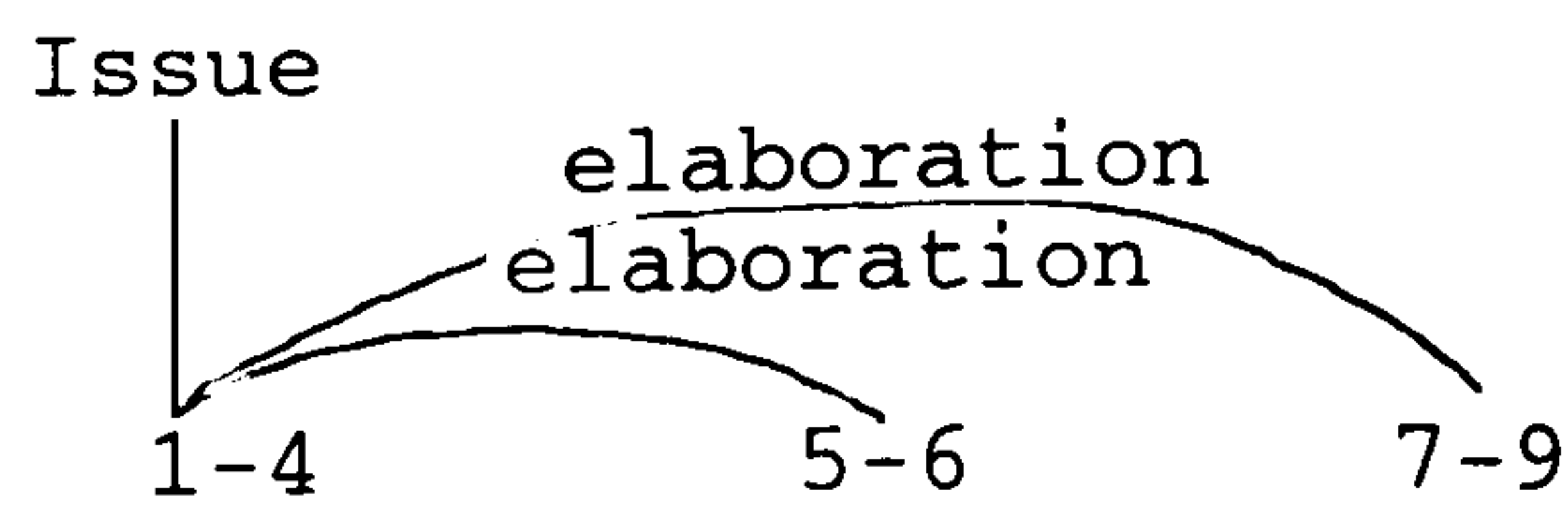
The above analysis along the line of topicalisation provides an explanation for the use of NA in the return pop in (19). The instance of NA here may also be accountable for by the factor of possible interference. That is, the second occurrence of the NP *Hou Yuehua* as subject in proposition 3 would cause interference to the identity of a non-coreferential PA in proposition 6. While this explanation may appear to work for the present example (the two NPs match each other in their feature specifications, e.g. both being *human, male, third-person*), it does not seem to work for the example in (20) where one of the nouns is a singular one and the other a collective one, and thus there

will be no ambiguity or interference if one of the nouns is referred to with PA in the return pop.

- (20) 1. 1982-nian Lin Kexiu mian-fei zhaoshou sanshiming nannü xueyuan
 in 1982 free-charge enrol 30 male-female trainee
 jianli juzhongdui.
 set-up weight-lifting team
 "He enrolled 30 trainees without charging them fees and set up a weight-lifting team in 1982"
2. Ta dui tamen jinxing yan'gede xunlian.
 he to them give strict training
 "He gave them a very strict training"
3. 1986-nian quanguo nüzi langchaobei juzhong bisai zhong,
 in 1986 nation-wide woman wave-cup weight-lifting match in
zhezhi nongmin juzhongdui penghuile tuanti zongfen
 this farmer weight-lifting-term bring-back team score
 diliu-ming de jiangbei,
 the-six-place award-cup
 "This weight-lifting team from the countryside won the six place as a team at the national women's weight-lifting Wave Cup in 1986"
4. zai Yexian yinqi hongdong.
 in Yexian-county cause stir
 "This caused a sensation throughout Yexian County"
5. Xian-tiwei yi zhege dui wei jichu zhujianle xiandui.
 county sport office take this team as basis form county-team
 "The Commission of Sports and Physical Education of the county then set up a county team with members from that team as its backbone"
6. Lin Kexiu rengran guanxinzhe zhezhi nianqing duiwu.
 still concern the young team
 "Lin Kexiu is still concerned about the young team"
7. yiyoukong jiu qu dang yiwu jiaolian,
 once-have-time then go as voluntary coach
 "Whenever (he) finds time, he will go and coach them"
8. meinian hai nachu qiqian yuan wei tamen mai xunlian qicai.
 each year also offer 7000 dollar to them buy training facility
 "(he) also provides them 7000 Chinese dollars every year to purchase training facilities" [D4]



The structural organisation of this text and the use of anaphora in it are exactly the same as those of (19) except that in this text one NP, *Lin Kexiu*, is singular and the other, *the weight-lifting team*, is inherently plural. Furthermore, both NPs here are mentioned via NA in proposition 6 in the return pop, thus leaving absolutely no question of ambiguity or interference at all if the mention of *Lin Kexiu* was made by a pronoun.



The two NPs *Mr Wu Tianming* and *the film directors* differ in number, thus if the pop in proposition 7 were done with the use of a pronoun, there would be no mistaking its identity. Then, why NA here? Again, it is the change of topic roles of the NPs involved that contributes to the choice of anaphor-types.

There are, in the corpus, 20 examples of this type, including (19), (20) and (21) discussed above. In all these 20 examples, full NPs are used to encode the anaphor in the return pops.

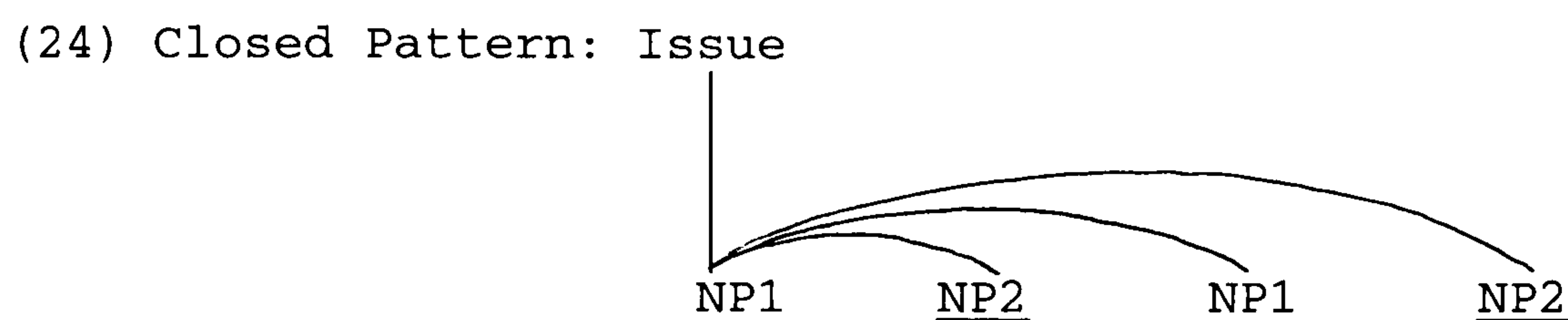
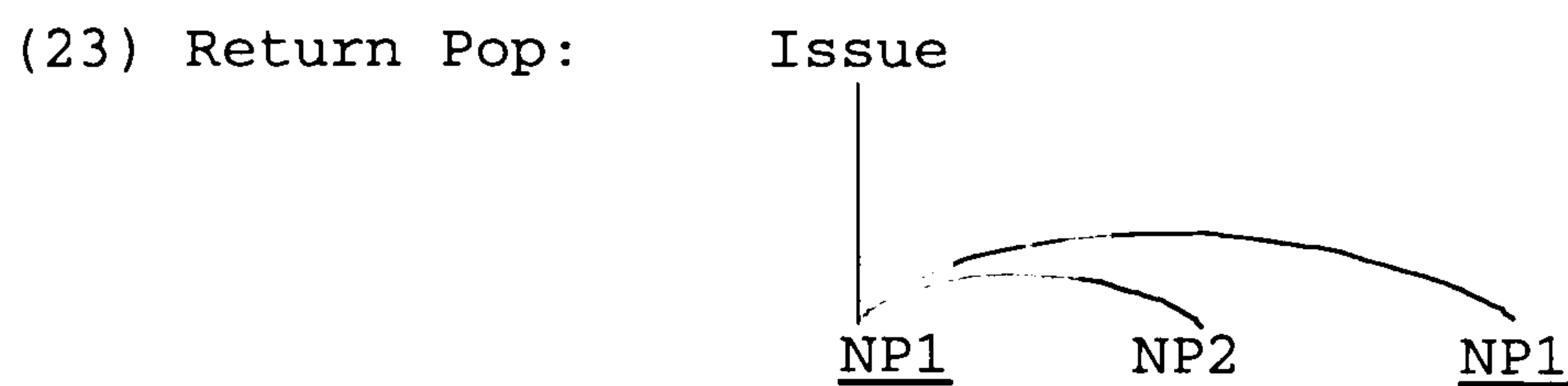
From the analysis of examples like (14) through (21) and the figures showing their distributions in the texts in the corpus, we see that NA is used for a return pop if the antecedent NP is not a topic or just a co-topic of the discourse or if the topic NP has been usurped in its topic role by a different (human) NP in the intervening material. If we add this finding to what was stated in (10) regarding the use of PA in return pops, we get the expanded principle which determines the choice of PA and NA in return pops, in (22).

- (22) PA is used for a return pop if the antecedent NP maintains its topic role for the discourse, otherwise NA is used (i.e. if the antecedent NP is a non-topic or co-topic or if it no longer serves as the current topic due to a topic shift).

6.3 The Closed patterns

Closed patterns, as noted earlier, are typically associated with return pops; to be more precise, they are the by-products of return pops: a return pop has the function of closing off the material it skips over thus creating a closed pattern if there is a subsequent recourse to it. Closed patterns differ from return pop patterns in that in a return pop the proposition containing the anaphor in the current Issue adjunct returns to the *Issue nucleus* containing the antecedent. A return pop manifests a special kind of active or controlling relation, because its popping back to the Issue nucleus has the function of

reactivating the latter, enabling the latter to continue its role as reference point for the succeeding discourse. Thus, the anaphor contained in a return pop, in principle, can be referred to by a less explicit form (e.g. PA). In a closed pattern, on the other hand, the anaphor in the current Issue adjunct goes back to an earlier *Issue adjunct* containing its antecedent. Since this earlier adjunct has been popped over by its immediately following adjunct(s), it is currently in a closed state and the antecedent contained therein is not available as reference point for the succeeding discourse. The two patterns of return pop and closed relations are illustrated in the diagram in (23) and (24).



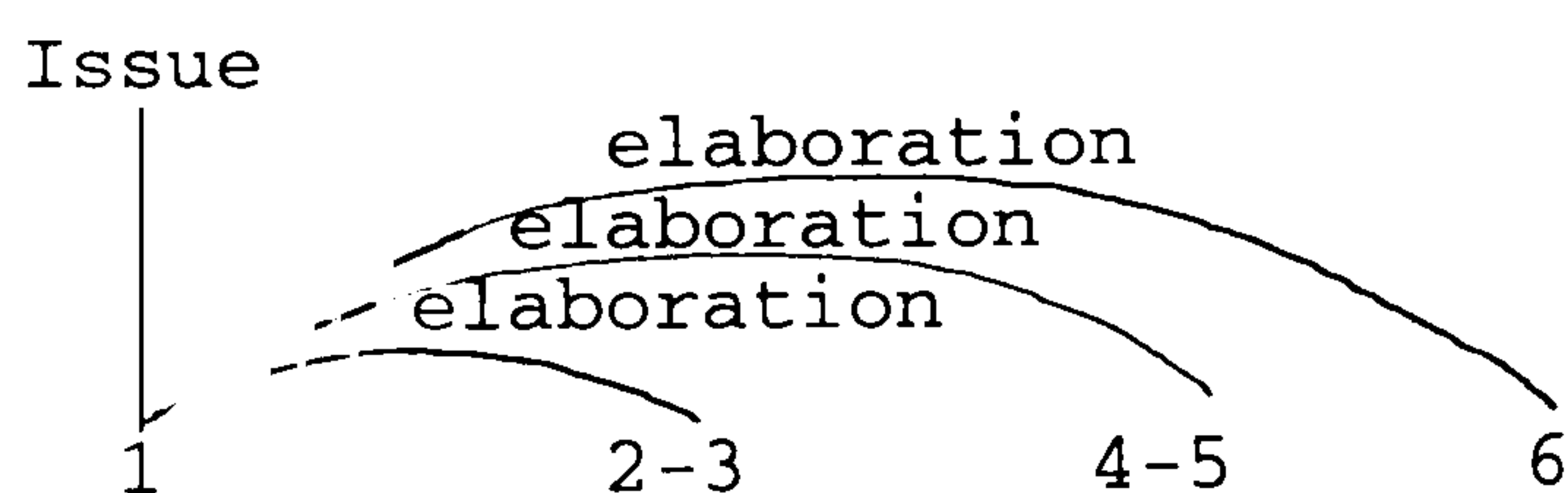
In (23), which is an instance of return pop, the second mention of NP1 in the second Issue adjunct returns to the Issue nucleus for coreference whereas in (24) the subsequent mention of NP2 goes back to the first Issue adjunct, currently in a closed status, for its antecedence, which thus constitutes an instance of the closed pattern.

Will the structural differences as presented above have consequences for the use of anaphora in the closed patterns? Let us consider the following passage.

- (25) 1. Hao yige Xu Ke, sanshou butong-fengge-de daxing erhu xiezouqu,
 what a three different-style grand harp concerto
 ta yanzou de linli-hanchang.
 he played extremely well
 "What a Xu Ke! He played the three different-style grand
 erhu concertos beautifully"
2. Qinnian zhihuijia Yan Huichang changzuo de "Huan" shi yishou
 young conductor compose dreaming is a
 caiyong jindai zuoqu shoufa ji bufen liuxing yinyue jiezou de
 adopt modern compose skill and some popular music rhythm
 erhu xiezouqu, daduan shiliu-fenyinfu kuaisu yidong, datiao,
 erhu concerto long semiquavers fast move big-jump
 ling-ren yanhua-liaoluan.
 make-people fascinated

"The *erhu* concerto 'Dreaming' composed by the young conductor Yan Huichang combines modern music composition techniques with some popular music rhythmic in which large chunks of semiquavers move and jump at a dazzlingly fast pace"

3. Renmen budebu wei yanzouzhe gaochaode jiqiao er zantan.
people have-to for performer skilful performance then praise
"The audience were just fascinated by the performer's high skills"
4. Liu Wenjin de "Changcheng shuixiang" shi dangdai erhu
Liu Wenjin's Great Wall thoughts is contemporary *erhu*
qu-mu de yige daibiaozuo.
music-pieces' a masterpiece
"The *erhu* concerto "Random Thoughts over the Great Wall" is the best of the contemporary *erhu* music pieces"
5. Zai 1984-nian quanguo disanjie minzu yueqi bisai
at 1984 nation-wide third national instruments contest
huojiang zuoping yinyuehui shang, Xu Ke de yanzou
award-winning pieces concert on Xu Ke's performance
shoudao haoping.
receive good-comment
"At the concert of the third national contest for playing the award-winning pieces with traditional Chinese musical instruments, Xu Ke's performance was a success"
6. Wushou xiaoxing duzouqu ye geyou-qianqiu, youqishi
five minor solo also each-has-merit especially
"Qinqiang zhuti shuixiang-qu", lian didaode-Shanxiren
Qin-style theme random thoughts even Shanxi-native
Yan Huichang ye weizhi-jiaohao.
also for-it-cheer
"The five *erhu* solo pieces were also played well, particularly, the Qin-style "Song of Random Thoughts" was highly praised by Yan Huichang, a native of Qin" [D3]



The structure of the text is an Issue predicate consisting of a nucleus (proposition 1) and its three adjuncts. The first mention of *Yan Huichang* occurs in proposition 2 in the first adjunct supporting a claim about *Xu Ke* in the nucleus. In the following adjunct (propositions 4-5) we have another elaboration adjunct supporting the claim about *Xu Ke* in the nucleus. As we noted before, a return pop closes off the material over which it popped, thus after the pop back to the claim about *Xu Ke*, the material in which *Yan Huichang* is mentioned is closed, and thus is not available as a reference point for the following discourse. The next mention of *Yan Huichang* in the third elaboration adjunct (proposition 6) is therefore realised by a full NP. The passage below gives another

example in which the antecedent occurs in a closed proposition.

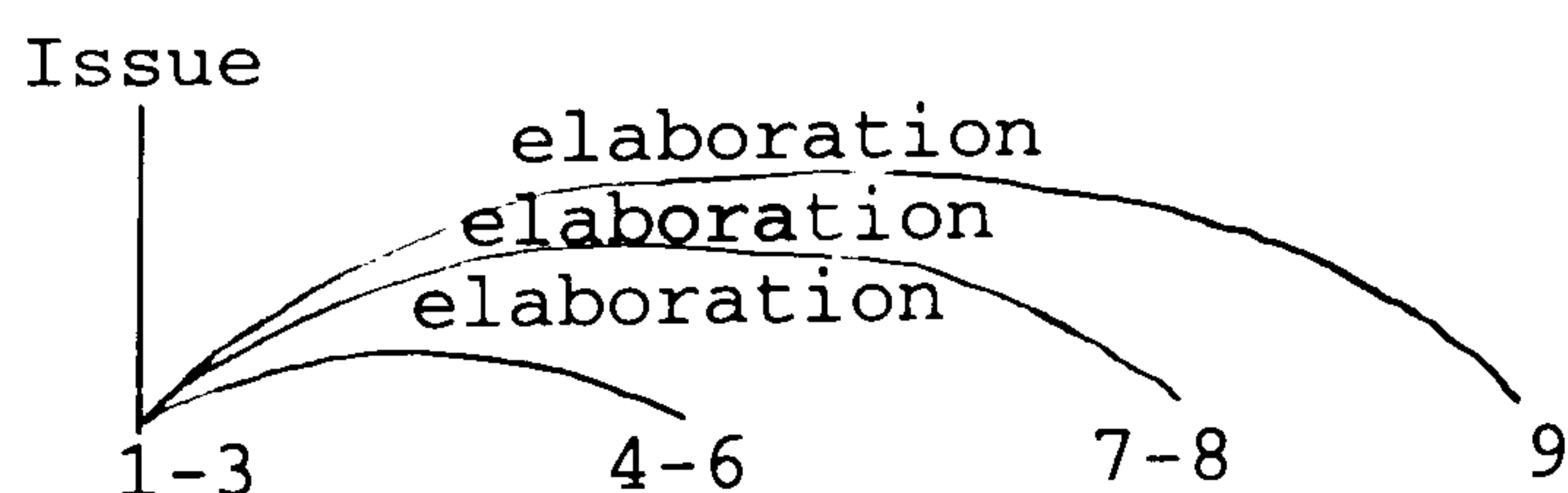
- (26) 1. Shizhengfu lingdao shifen guanxin Xiong Zaiding,
city-government leader very concern
"The city government officials were very concerned about Xiong Zaiding"
2. 0 bochu jiujikuan,
offer relief-fund
"(they) provided a special relief fund"
3. 0 yu yijiubaliu-nian yi-yue jiang ta songdao Wuhan,
in 1986 January get her send-to Wuhan

zhujinle Tongji Yike Daxue fushu Xiehe Yiyuan.
stay-in Tongji medical college affiliate Xiehe hospital
"(they) sent her to Xiehe Hospital affiliated to Tongji Medical University in Wuhan in January 1986 "
4. Ruyuan hou, Xiaohuake zhuanjia Zhang Jinkun jiaoshou tong
in hospital digestion-Dept expert Prof Zhang Jinkun with

qita jiwei yiwu-renyuan yidao, wei Xiao Xiong zuole jiancha,
other several medical-staff for do check-up
"In the hospital, Professor Zhang Jinkun, an expert on digestion, together with other doctors, gave Xiao Xiong a thorough examination"
5. chubu zhenduan wei sanfaxing naoyan yinqi de
initial diagnose as infectious encephalitis causing

shenjingxing tunyan kunnan.
neural swallowing difficulty
"(he) came up with the initial diagnosis of neural swallowing difficulty caused by infectious encephalitis"
6. Jing duizheng zhiliao, tunyan kunnan shaoyouhaozhan.
through effective treatment swallow difficulty improve a bit
"After effective treatment, (Xiong's) swallowing difficulty showed some improvement"
7. Jing Xiong Zaiding yizai yaoqiu,
after repeated request
"After she made repeated requests"
8. ta yu si-yue chuyuan.
she in April leave-hospital
"she was discharged from the hospital in April"
9. Yijiubaqi-nian shier-yue shiliu-ri, Zhang Jinkun jiaoshou
in 1987 December 16th, Prof. Zhang Jinkun

dengmen kanwangle Xiong Zaiding....
come to see
"On 16th of December 1987, Professor Zhang Jinkun came to see Xiong Zaiding..." [D2]



In this passage we have an Issue predicate consisting of an Issue nucleus and three

elaboration adjuncts. The NP *Prof. Zhang Jinkun* is first mentioned in the first elaboration adjunct (propositions 4-6). This adjunct assumes a background closed status when it is skipped over by the second elaboration adjunct (propositions 7-8) which thus usurps its foreground status. *Professor Zhang Jinkun* is referred to with a full NP at its next mention in proposition 9 in the third adjunct.

One might argue that the use of a full NP to refer to an individual in a closed proposition is probably caused by interference from other individuals in the discourse. This, however, does not hold in the present case. That is, the substitution of a PA for the NA in proposition 9 will not in fact cause any ambiguity as to its identity, because the NP referring to the other individual *Xiong Zaiding* occurs as object in the same proposition. Thus, interference is not necessarily a contributing factor to the use of a full NP in reference to an individual in a closed proposition; rather it is the closed status of the proposition and the individuals contained therein that are.

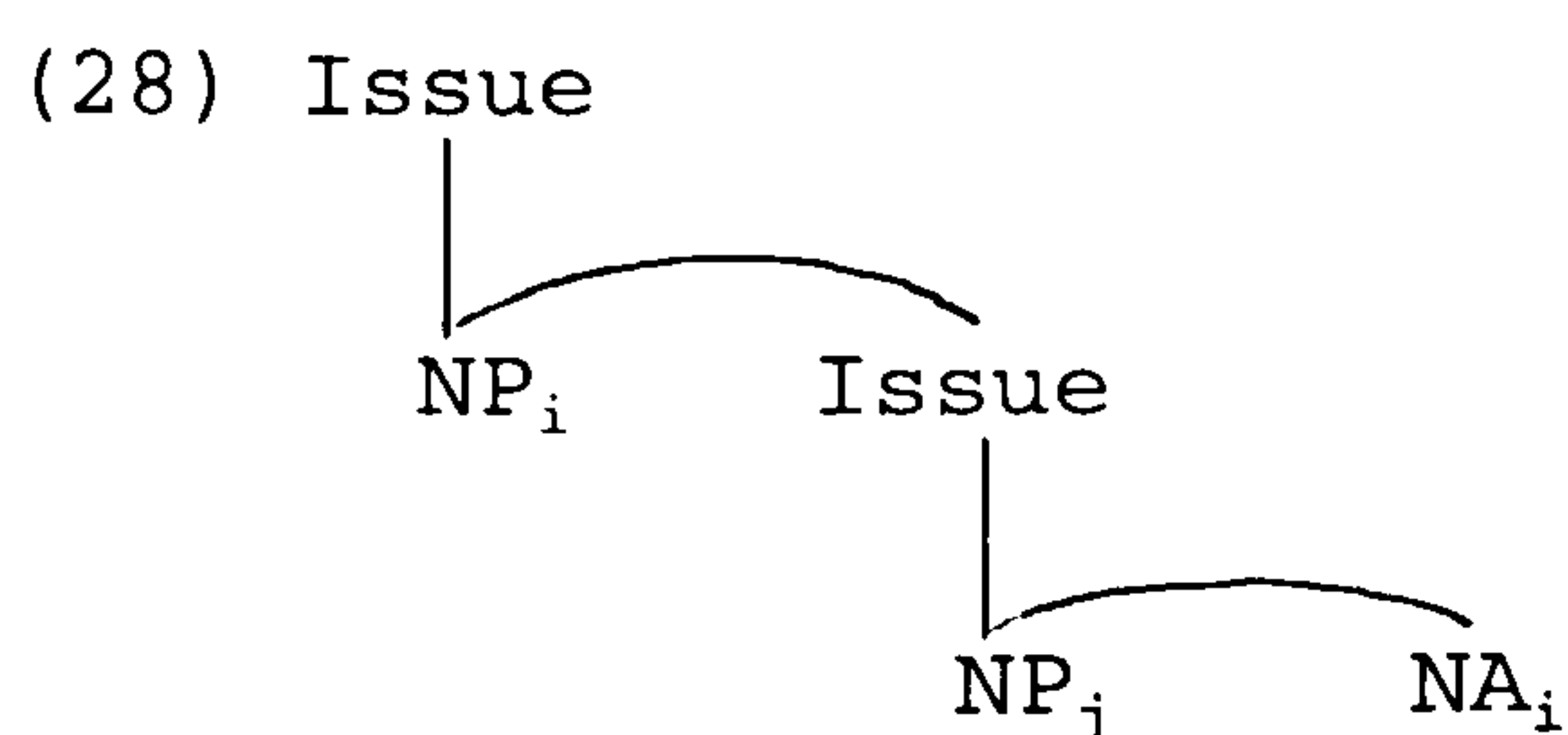
The next mention of an NP in a closed proposition is encoded with a full NP because the proposition that is in a closed status is not in the consciousness of the participants in a communication (in the present case the writer and the reader) and hence is in the background of the discourse. This is rather like a closed file which is removed from the working desk and placed with other closed files. To get access, at a later stage, to this closed file, one needs to look for it and open it, which obviously requires some extra effort, compared with the currently open file or a file still on the desk. In the present case, to refer to an NP in a currently closed proposition an explicit form of the referent is thus required (i.e. NA). A further example of a closed pattern follows.

- (27) 1. Zai jintiande bisai zhong, Ma Xiaochun yiwei-qiwen,
 in today's game try-keep-balance,
 dashi shuizhun,
 lose his-level,
 "In today's game, Ma Xiaochun tried to keep an unruffled
 situation and failed to do justice to his normal standard"
2. cong buju da zhongpan, xingqi-touzi yicuo-zaicuo.
 from initial to mid-stage, move repeated-errors
 "(he) made repeated mistakes from the initial stage to the
 mid-stage"
3. Xianshi ta zaijiaoshang dangfei-bufei,
 first he at-corner should-fly-but-not-fly,
 "First he failed to make an essential move at the corner"

Xiaochun in the Issue nucleus. The next mention of *Yang Jinhua* in the third adjunct (propositions 13-15) is encoded with NA because its antecedent is now in a closed, background state and thus is not available as a reference point for the following discourse.

There are, in the corpus, 36 instances of closed patterns which are all realised by the use of full NPs. This shows clearly that closed patterns are associated with the use of full NPs.

The above examples demonstrate the types of relation in which a referent is *definitely* closed as a result of the material in which it is mentioned being skipped over by another material. There are, however, situations in which a referent could be *potentially* closed. This happens when a referent is mentioned in an Issue nucleus but not in the nucleus of an embedded Issue predicate serving as an adjunct to the higher Issue nucleus which instead introduces another NP as its topic. As this different referent is to be elaborated on in the adjunct of the embedded Issue predicate, it tends to take over the foreground role of the referent in the higher nucleus and push it into a background state. Since the referent in the higher nucleus is pushed into a potentially closed state, consequently, if there is a mention of it in the embedded adjunct, it is realised as NA. A diagram of this is presented below.



It should be noted, however, that this type of potentially closed relation occurs rarely in the data, and when it does occur, it often correlates with one of the controlling patterns discussed in the preceding chapter, and thus it is not further pursued in this study. (For illustrations, see examples (29) and (30) in Chapter 5.)

6.4 Conclusion

In the preceding sections I have presented and discussed the distribution of anaphors in the return pop patterns and the closed patterns. In exploring the return pop patterns, which is the main focus of this chapter, I have looked at several different discourse environments in which anaphors in return pops occur. The first of these is that the intervening material contains no other interfering NPs and the anaphor in the pop which returns back to its antecedent in the Issue nucleus is realised by a pronoun. The reason for this pronominalisation is shown to be due to the topic role of the NP. The second environment is that the intervening material contains no other interfering NPs, but the antecedent NP in the Issue nucleus is either mentioned as (non-topic) object NP or as co-topic with another NP, and the anaphor is encoded in a full NP. The use of NA here has to do with its antecedent's non-topic role or co-topic role. A third context is when the intervening material encodes a different interfering NP whose antecedent also occurs in the nucleus which contains the antecedent for the anaphor in the return pop. The anaphor in the return pop takes the form of a full NP because its antecedent has been usurped its topic role by the intervening NP and becomes a non-topic. It has thus been shown that the choice between PA and NP for a return pop is influenced by the topic status of its antecedent: PA is used if the antecedent still maintains its topic role when the return pop is reached, otherwise NA is used. The closed patterns were shown to be associated invariably with the use of NA. The nominal realisation of anaphors in closed patterns is due to the antecedents occurring in the currently closed propositions having been popped over by their immediately following materials.

These findings indicate once more that distance or recency is largely irrelevant for anaphora, given the counter-evidence in examples like (7) where we observed an instance of long-distance pronominalisation (after a gap of eight propositions) and in examples like (14) where NA is used after only a gap of two propositions. Possible interference from other referents (another important notion in a linear approach to anaphora) does seem to play a role in anaphor interpretation but its role here was shown to be rather limited and secondary. It is the structural organisation of the discourse, coupled with the factor of the topic statuses of the referents in discourse that controls the use of anaphora in the discourse.

2. Tong ta yiqi churen de lingwai liangming fuzongli shi jingji
 with him together appoint other two vice-premier is economy
 guanlijia Yao Yilin he qian waijiao buzhang Wu Xueqian.
 administrator and former foreign minister
 "Together with him the other two newly-elected vice-premiers
 are Yao Yilin, an economics expert, and Wu Xueqian, the
 former Foreign Minister"

The text in (1) makes a statement of Mr Tian Jiyun's re-appointment as vice-premier in the new government. In terms of anaphora, the NP *Tian Jiyun* is introduced into the discourse as a full NP in proposition 1 and its next mention takes the form of a pronoun in proposition 2. Since the anaphor occurs inside the subject NP coindexed with the subject antecedent in the preceding proposition, the use of PA here is accountable for by the active pattern principle (76) which says that PA is used for coreferential subjects in Issue predicates. This instance of PA, from the perspective of the linear account, may also be explained by the short referential distance between the two mentions of the NP.

Between *Tian Jiyun* in proposition 1 and its next mention as PA in proposition 2, there is mention of another NP *Li Peng*, which is a possible antecedent for the PA. But in fact this NP cannot compete with the NP *Tian Jiyun* for this antecedence because it only occurs as part of a prepositional phrase (and hence a non-topic) whereas *Tian Jiyun* is the topic/subject of proposition 1 and thus is the expected antecedent for the PA in the subject position of the following proposition in terms of the thematic development of the discourse. Assigning the interpretation *Li Peng* to *ta* "he" would involve a switch of reference (from non-topic to topic position) and require a full NP because a pronoun here would be taken as being anteceded by the preceding topic NP, in the present case, *Tian Jiyun*.² We have seen that the presence of a different NP in discourse does not necessarily cause interference and require the use of NA. Let us move on and consider the text in (2).

- (2) 3. Tian Jiyun zai yijiubasan-nian liu-yue diyici
 in 1983 June for-first-time
 bei-renming wei fuzongli.
 be-appointed as vice-premier
 "Tian Jiyun was first appointed vice-premier in June 1983"

²As discussed in Chapter 4 on Active patterns, a non-topic NP will not become a topic unless it is mentioned via a full NP in the topic position of the following discourse, and this explains why we cannot assign the interpretation *Li Peng* to *ta* "he" in proposition 2. On the other hand, a topic NP will not normally have its topic status taken away by an initial appearance of another NP in the following discourse, and this explains why the next mention of *Tian Jiyun* takes the form of PA in proposition 2.

4. Zai-na-yiqian daduoshu Zhongguoren dui tade mingzi bingbushuxi,
before-that most Chinese to his name not-familiar
"Before that his name was not familiar to the general public"
5. yinwei ta changqi zai xinan de difang zhengfu-li renzhi.
as he long-time at west-south regional government work
"as he had long worked in local governments in south-west China"
6. Churen 0 fuzongli hou,
appoint-as vice-premier after
"After (he) was appointed vice-premier"
7. youyu ta huoyue zai Zhongguo jingji tizhi gaigede wutai shang,
as he active in China economical system reform stage
"as he was most active on the stage of China's economical reform"
8. tade mingzi jiu changchang he yixie zhongyaode jingji
his name then often with some important economical
juece he jingji huodong lianxi-zai-yiqi.
decision and economical activity associate-together
"his name was frequently associated with important economical decisions and activities"

The passage in (2) provides background information about *Tian Jiyun*'s re-appointment as vice-premier, in which *Tian Jiyun* occurs as a full NP in proposition 3 and is subsequently pronominalised in propositions 4, 5, 7, 8. These instances of PA (and ZA in proposition 6) are accountable for by the active pattern principles (76) (for the PA in proposition 4) and (55) (for the other anaphors in propositions 5-8). The linear account can also account for these instances in that they are adjacent to their antecedent. The one case we have problems with is the use of NA in proposition 3 whose antecedent is mentioned as part of the subject NP in the immediately preceding proposition. According to the active pattern principle (76), a PA would have been expected.

It should be noted that this is not a neat case of coreferential subjects since the pronominal in proposition 2 only occurs as part of the subject NP whose head is also a human noun. That is, *ta* "he" occurs in a PP *tong ta* "with him" which is a PP modifier to the VP *yiqi churen* "appointed together" and together with it forms a relative clause inside the subject NP. It may be argued therefore that the "topic chain" is broken, which provides an explanation for the use of a full NP in proposition 3. While this is a feasible account, in which case our active pattern principles may apply, it should be pointed out that the NP *Tian Jiyun* still carries the topic role at the time of occurrence in proposition 2, and whether or not its topic role is taken over by the head of the subject NP is an arguable case since as discussed before, an initial appearance of a different NP is not likely to usurp the topic role from the current topic unless it is

mentioned again, normally via a full NP, as subject in the following proposition. If it is the case (i.e. no topic shift has occurred), then the use of PA for the NP *Tian Jiyun* in proposition 3 is no doubt possible.

A distance account would be that between the two mentions of the NP *Tian Jiyun* there was a mention of the NP *lingwai liangming fuzongli* "the other two vice-premiers", namely, *Yao Yilin* and *Wu Xueqian* which are mentioned together later in proposition 2, which contributed to the use of NA in proposition 3. From the viewpoint of linear distance, these two individuals might compete for the identity of the anaphor in proposition 3 if they took the form of a pronoun, because they are "closer" to it than the intended antecedent *Tian Jiyun*. But they are not possible candidates for the pronominal here for at least two reasons. First, since they were introduced into the discourse together as a noun phrase, if they were referred to separately, to avoid ambiguity, a full NP would be needed, otherwise they would be competing against each other. Second, if they were mentioned together via a pronoun, a plural pronoun would be required, which then excludes them from being the antecedent for the singular pronoun in proposition 3. These considerations which are based on semantic selectional restrictions (Palmer, 1971) indicate that these two NPs are not interfering NPs and thus are not the real cause for the use of a full NP in proposition 3. If it is not thanks to the factors of distance or interference, and since it apparently falls out of the structural principles established thus far, what else then has contributed to the occurrence of NA here? Bearing this question in mind, let us go on with the text in (3).

- (3) 9. Tian Jiyun zai zhixing Zhao Ziyang zongli changdao de
in carry-out premier advocate

li-gai-shui de gaige zhong qile zhongyao zuoyong,
profit-to-tax reform in play important role
"Tian Jiyun played a major role in implementing the profit-to-tax reform designed by former Premier Zhao Ziyang"

10. zhexiang gaige bei-zhengming dui qiye guanli he
this reform be-proved to industrial management and

guojia caizheng shouru chanshengle jijide yingxiang.
country financial income produce positive effect
"This reform has been proven to bear positive results on industrial management as well as national financial income"

11. Guoqu Zhongguode qiye jihu jiang tamen quanbude lirun
before China's factory almost give their whole profit

dou shangjiao gei guojia,
all contribute to state
"In the past all enterprises in China were required to turn over nearly all their profits to the state"

12. xuyao qian zai you guojia pizhun bogei.
need money then by state approve give
"When they need money they had to apply to the state"
13. Kuisunde qiye keyi bu shangjiao lirun,
loss-making enterprise may not contribute profit

bingqie you guojia wei tamen zhifu kuisun'e.
and let state for them pay debt
"Loss-making enterprises did not have to turn over any of
their profits to the state; instead, the state would cover
their deficits"
14. Zheyangde tizhi buneng qubie duidai
such system cannot differently treat

chenggongde he buchenggong qiye.
successful and unsuccessful factory
"Such a system could not discriminate between the successful
and unsuccessful enterprises"
15. Yinci, qiye he gongren dui shengchan shiqule xingqu.
therefore factory and worker to production lose interest
"Consequently both the enterprises and their workers lost
interest in production"
16. Er gaige hou, guojia zhi yaoqiu qiye shangjiao shuikuan,
but after reform state only require factory pay tax
"However since the reform, the state has now only required
the enterprises to pay tax"
17. qiye qude lirun yueduo jiu keyi liuxia gengduode
factory get profit more then can leave-behind more

zijin yongyu jishu gaizao, kuoda zaishengchan,
fund used-for technical reform expand reproduction

gaishan zhigong fuli he fa jiangjin.
improve worker benefit and pay bonus
"the more profits enterprises can make, the more money they
can have to advance technology, expand reproduction, improve
their workers' benefits and pay bonuses"
18. Zhege banfa diaodongle zhigong de jijixing.
this method give-rise-to workers' initiative
"This has resulted in a great initiative on the part of the
enterprises and their workers"
19. Ta hai canyu wujia gaige he gongzi gaigede lingdao gongzuo.
he also involved price reform and wage reform leading work
"He was also involved in policy making and implementing in
prices reform and wage reform"
20. Zhe shi liangxiang jiqizhongyao er you jiqifuzade gongcheng,
this is two extremely-important and also complicated project
"These are two extremely important and complicated reforms"
21. keyishuo shi zhengge jingji tizhi gaige de guanjian.
may-be-said is whole economic system reform key
"this may be seen as a key-point in the overall reform of the
economical system"

This text notes two of Mr Tian Jiyun's achievements as vice-premier in the previous government headed by Mr Zhao Ziyang and thus is another piece of background information for the statement in (1). The text is particularly interesting in that there is

The passage describes Mr Tian Jiyun's involvement in the promotion of economic development in the poor rural regions and constitutes yet another piece of background information for his re-appointment mentioned in (1). In the text, there are two instances of full NPs: the one in proposition 22 has its referent mentioned in proposition 19, with no other potential referents available between the two mentions; the one in proposition 25 follows a similar pattern. Why were full NPs used where neither referential distance nor potential interference seems to be relevant? The occurrence of NA in proposition 25 constitutes an instance of return pop, which, as discussed in the previous chapter, calls for the use of PA since it skips over an intervening material (propositions 23-24) which does not contain a human topic NP and returns to the nucleus (proposition 22) which contains its antecedent serving as the topic. I will, in the next chapter as well as here, argue that the use of NA in proposition 25 is associated with the non-structural factor of *emphasis* rather than pure structural principles (e.g. return pop). The use of NA in proposition 22 joins the instances of NA in propositions 3, 9 and awaits investigation. We now go on with the passage in (5):

- (5) 27. Tian Jiyun 1929-nian shengyu Shandong-sheng Feicheng-xian,
in 1929 born-in Shandong Province Feicheng County
"Tian Jiyun was born in Feicheng County, Shandong Province"
28. Q shiyi-sui zai xiancheng dang xuetu.
11-years-old at town become apprentice
"(He) became an apprentice in town at the age of eleven"
29. Ta yijiusiwu-nian wu-yue jiaru Zhongguo Gongchandang.
he in 1945 in May join Chinese Communist Party
"He joined the Chinese Communist Party in May 1945"
30. Q Yijiusiqi-nian hou canjiaguo tugai gongzuo.
in 1947 after participate-in land-reform work
"(He) was involved in the Land Reform in 1947"
31. Q Yijiusijiu-nian sui Jiefangjun daoda xinande Guizhousheng,
in 1949 with P.L.A. go-to south-west Guizhou Province
"(He) went to Guizhou Province south-west of China with the
People's Liberation Army in 1949"
32. Q xian zai ganbu peixun xuexiao gongzuo,
first at cadre training school work
"(he) first worked at a cadre training school"
33. Q yijiuwusan-nian dao liushi-niandai chu zai Guizhousheng
in 1953 to 1960s beginning at Guizhou Province
caizhengting gongzuo, houlai shengwei fu-tingzhang.
Treasury Dept work later promoted-to deputy director
"from 1953 to the 1960s (he) worked at the Treasury Department
of the Guizhou Province and later became deputy director of
the Department"
34. Zhihou, ta bei diaodao Sichuansheng gongzuo,
later he is transferred to Sichuan Province work
"He then worked in Sichuan Province"

35. 0 xianhou danrenguo zhege Zhongguo renkou zuiduode
 first-then become this China population most
 shengfende caizhengju (ting) fu-juzhang, juzhang.
 province's Treasury Dept. deputy-director director
 "(he) was Deputy Director of the Treasury Department of this
 China's most heavily populated province, then the Director
 of the Department"
36. Zhao Ziyang ren Zhonggong Sichuan Shengwei Diyishuji shi,
 is CCP Sichuan Committee First-Secretary when
 "When Mr Zhao Ziyang was the First Party Secretary of Sichuan
 Province"
37. 0 zai nali zhaoshou jingxing jingji tizhi gaige de shiyan.
 at there start carry out economic system reform experiment
 "(he) was carrying out economical reform in the Province"
38. Tian Jiyun duiyu zhexiang kaicuangxingde gongzuo
 to this pilot work
 geiyule youlide zhichi.
 give strong support
 "Tian Jiyun gave his strong support for this pilot work"

The text in (5) gives a chronological description of Mr Tian Jiyun's experiences at the provincial level before his promotion to the central government, thus serving as background information for the statement in (1). *Tian Jiyun* occurs as a full NP in proposition 27 and as ZA in proposition 28. It is then referred to by PA in proposition 29 and as ZA in propositions 30-33. In proposition 34 it switches to PA and then back to ZA in proposition 35. Again, these zero and pronoun anaphors fall under the principle (68) for active patterns involving conjoining predicates. All these instances of ZA and PA might be handled by a distance-based account too, though such an account may not be able to offer a convincing explanation for the alternation between PA and ZA in the text.⁴ The occurrence of NA in proposition 38 does seem to be influenced by the presence of a different NP *Zhao Ziyang* in propositions 36-37⁵ and thus is accountable for by the parameter of potential interference from other NPs, but the instance of NA in proposition 27 whose antecedent occurred in the immediately preceding proposition goes against the parameter of referential distance.

⁴A possible explanation would be that the choice between ZA and PA is determined by the sentence boundary. That is, ZA occurs within sentences and PA occurs across sentences (cf. Li & Thompson, 1979 and Chen, 1986). This explanation, however, runs into problems with the instances of ZA in propositions 29 and 30 which occur at the beginning of new sentences (marked by periods).

⁵The NP *Zhao Ziyang* had its antecedent mentioned in proposition 9. It is expressed here with a full NP because its antecedent occurs as non-topic in a currently closed proposition.

propositions in a conjoining predicate, but the instance of NA in proposition 39, like those NAs in propositions 3, 9, 22, and 27, is yet to be tackled.

A linear explanation appears to be a feasible one for the instances of ZA here in that they are close to their antecedent, but the occurrence of a full NP in proposition 39 is still left unaccounted for because its antecedent occurred in the immediately preceding proposition with no other possible NPs present in the relevant context.

We have seen in (1) through (6) that NA occurred in propositions 3, 9, 22, 27, 39 when its referent was mentioned in the immediately preceding proposition⁷, with no other possible referents in the relevant context.⁸ On the other hand, although most instances of ZA and PA here may be predicted by the linear account in that they tend to be close to their antecedents, the choice between ZA and PA does not seem to be predicted accurately.⁹ For instance, ZA was found to occur across three sentences in propositions 29 through 33, and three sentences in propositions 39 through 42, whereas PA was found to occur in propositions 4, 5, 7, 8, with almost no gap in between. This illustrates that the linear approach is inadequate to account for the anaphoric patterns as shown in (1)-(6). However, although the principles determining active, controlling, return pop and closed patterns discussed in the preceding chapters can account for most of the anaphors here, the instances of NA in propositions 3, 9, 22, 27, and 39 are apparently not captured by any of these principles. In the rest of this chapter therefore, I want to address the following two questions: a) What is it that contributes to these occurrences of nominal anaphora? b) What is it that contributes to the choice between ZA and PA in the places just mentioned and elsewhere in (1)-(6)? I will look at the first question in the remainder of this section, and the second question in the next section.

As noted above, from an anaphoric point of view, since the NP *Tian Jiyun* is the topic of the whole discourse (i.e. the whole discourse centres on it) and there are no

⁷The nominal anaphor in proposition 22 had its referent last mentioned in proposition 19 but there was no other possible referents in the intervening propositions.

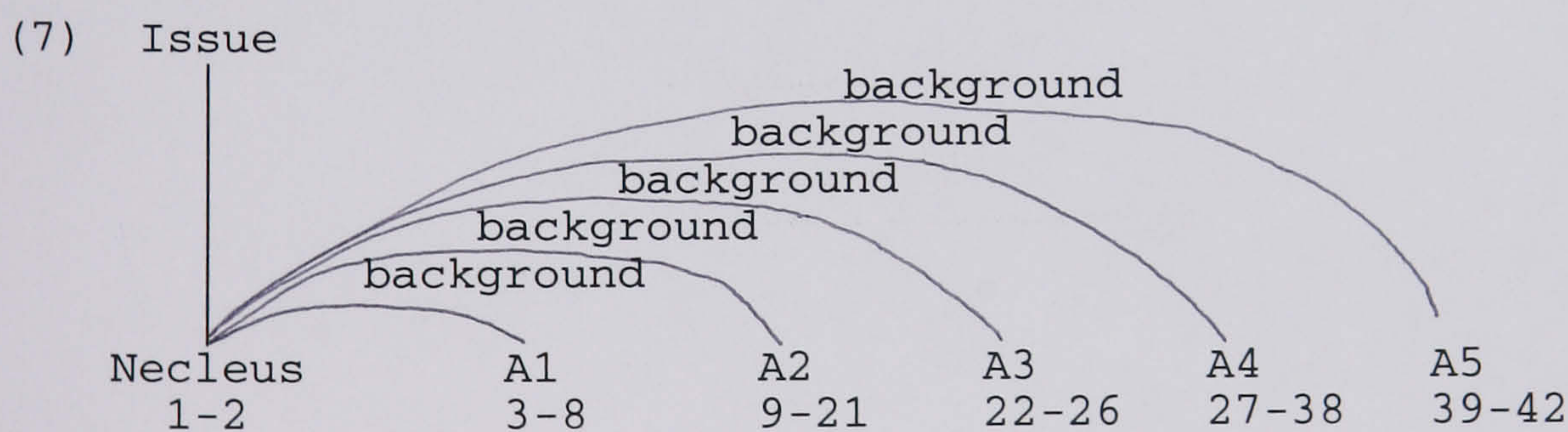
⁸A possible exception to this is (1) in which there is mention of two other referents between the two mentions of the referent referred to as *Tian Jiyun* in propositions 2 and 3. But it has been argued that these two referents are not interfering ones.

⁹The occurrence of PA in proposition 19, however, clearly contradicts the linear account.

other interfering NPs present in the discourse,¹⁰ there would be no ambiguities whatever if the instances of NA in propositions 3, 9, 22, 27, 39 were all replaced by the use of PA. An obvious question to ask is why does the referent take the form of a full NP in these positions? This question may be put in more general terms, that is, what prompts the use of a full NP where a pronoun seems to be sufficient in terms of anaphor resolution?

Since these instances of NA are not accountable for by any of the structural principles proposed in the preceding chapters, and since it has also been shown that these instances are not due to the factors of distance or interference, then something else must be responsible here. I suggest that these instances of NA in these positions in the text have to do with the global hierarchical organisation of the text. To demonstrate, let us have another look at the text in (1)-(6).

In this text, we have a top-most Issue predicate, which is realised by a nucleus consisting of propositions 1-2 and five background adjuncts consisting of propositions 3-42. The rhetorical representation of the text is given in (7) below, where "A" indicates an adjunct and the number following it indicates the order of the adjunct in the text and the number underneath each adjunct indicates the propositions contained in the adjunct.



Contained in the nucleus is the main message of this article, that is, Mr Tian Jiyun has been re-appointed as vice-premier. The first adjunct (consisting of propositions 3-8) is about Mr Tian's previous appointment as vice-premier. The second adjunct (propositions 9-21) presents his achievements as vice-premier in the previous government headed by Mr Zhao Ziyang. The third adjunct (propositions 22-26) explores his policies for the

¹⁰As analysed above, there were other NPs denoting human beings in the relevant context, but these were not interfering NPs as far as the instances of anaphora in propositions 3, 9, 22, 27 and 39 are concerned.

development of the poor rural areas. The fourth adjunct (propositions 27-38) gives a chronological description of Mr Tian's experiences at the provincial level before his promotion to the central hierarchy. And the fifth (propositions 39-42) describes his experiences in the central government directly related to his re-appointment as vice-premier.

Note that in all of the adjunct-initial propositions (3, 9, 22, 27, 39) the NP *Tian Jiyun* is encoded in NA while in all the propositions which do not begin a new Issue adjunct it is encoded in either PA or ZA.¹¹ But why is it the way it is? As an answer to this, I want to make the following proposal:

- (8) In expository texts each of the adjuncts of a top-most or high-level Issue predicate constitutes a new rhetorical unit, and each of these new units tends to be associated with the use of NA, even if in terms of anaphor resolution the use of PA would have been appropriate.¹²

To substantiate this proposal,¹³ I made a study of the 44 newspaper articles in the corpus to examine the distribution of the anaphoric forms of the topic NP in Issue adjuncts or rhetorical units. The results are presented in the table below.

¹¹The reference to *Tian Jiyun* via a full NP in proposition 25 and proposition 38 occur within the Issue adjuncts and thus seems to be counter-evidence to the claim being made here. I have pointed out before that the use of NA in proposition 25 has to do with the non-structural factor of emphasis and the use of NA in proposition 38 actually falls under the principle (31) for controlling patterns. These two instances of NA, however, do not affect the main argument that NA occurs at adjunct initial positions.

¹²I will discuss the issues of high-level Issue predicates and the adjuncts of such predicates mentioned in (8) after I have presented the figures of the distributions of anaphora associated with rhetorical units in my corpus.

¹³There is some evidence in other languages for this proposal. For example, Fox (1984) reports that adjuncts of Issue predicates in her rhetorical structure model for English is usually associated with the use of full NPs.

(9) Table 1. PA vs. NA at Boundaries of High-level Rhetorical Units¹⁴

Type	New Rhetorical Unit	Same Rhetorical Unit	Total
NA	278 (61%) (97%)	178 (39%) (30%)	456
PA	8 (2%) (3%)	406 (98%) (70%)	414
Total	286	584	870

The table shows that 97% (278/286) of the high-level rhetorical units in the texts in the corpus are initiated by the use of NA while only 3% (8/286) are initiated by the use of PA. These figures strongly suggest that NA is associated with the demarcation of new rhetorical units.

It is also shown that 61% (278/456) of the NAs are used as markers for new high-level rhetorical units and 39% (178/456) are used to continue same rhetorical units, whereas only 2% (8/414) of the PAs occur in this structural slot but a overwhelming 98% (406/414) occur within rhetorical units. This demonstrates that while NA and PA can appear in either type of slot, there is a skewing of the former towards new rhetorical units and a massive skewing of the latter towards continuing rhetorical units at this level.

These figures provide convincing evidence for the proposal in (8). The important questions to address now are: How do we define a high-level Issue predicate? Why do the adjuncts of Issue predicates function as rhetorical units associated with the use of full NPs? We will consider the first question first. The definition of a high-level Issue predicate in general terms will perhaps present some difficulties because of the varying complexities or length of texts. But as far as the type of texts used in this study are concerned which are largely short and medium-length newspaper articles, the whole text may be represented as a dominating or high-level Issue predicate with multiple

¹⁴I use high-level rhetorical units because they are adjuncts of high-level or top-most Issue predicates. They are distinguished from lower-level rhetorical units that are adjuncts of embedded lower-level Issue predicates, which we will look into shortly.

(recursive) embedding predicates including Issue predicates as its arguments (as shown by the text in (1) through (6) above).

A top-most or high-level Issue predicate consists of a nucleus which acts as a "topic setter", presenting a claim or a statement which contains the topic for the whole discourse, and one or more adjuncts which provide details of information supporting, challenging or elaborating on the claim/statement made in the nucleus. For example, the Issue nucleus contained in (1) above presents the claim/statement "Mr Tian Jiyun was re-appointed as vice-premier" with *Mr Tian Jiyun* as the topic for the whole discourse, and the following five adjuncts in (2)-(6) elaborate on the claim/statement from different angles.

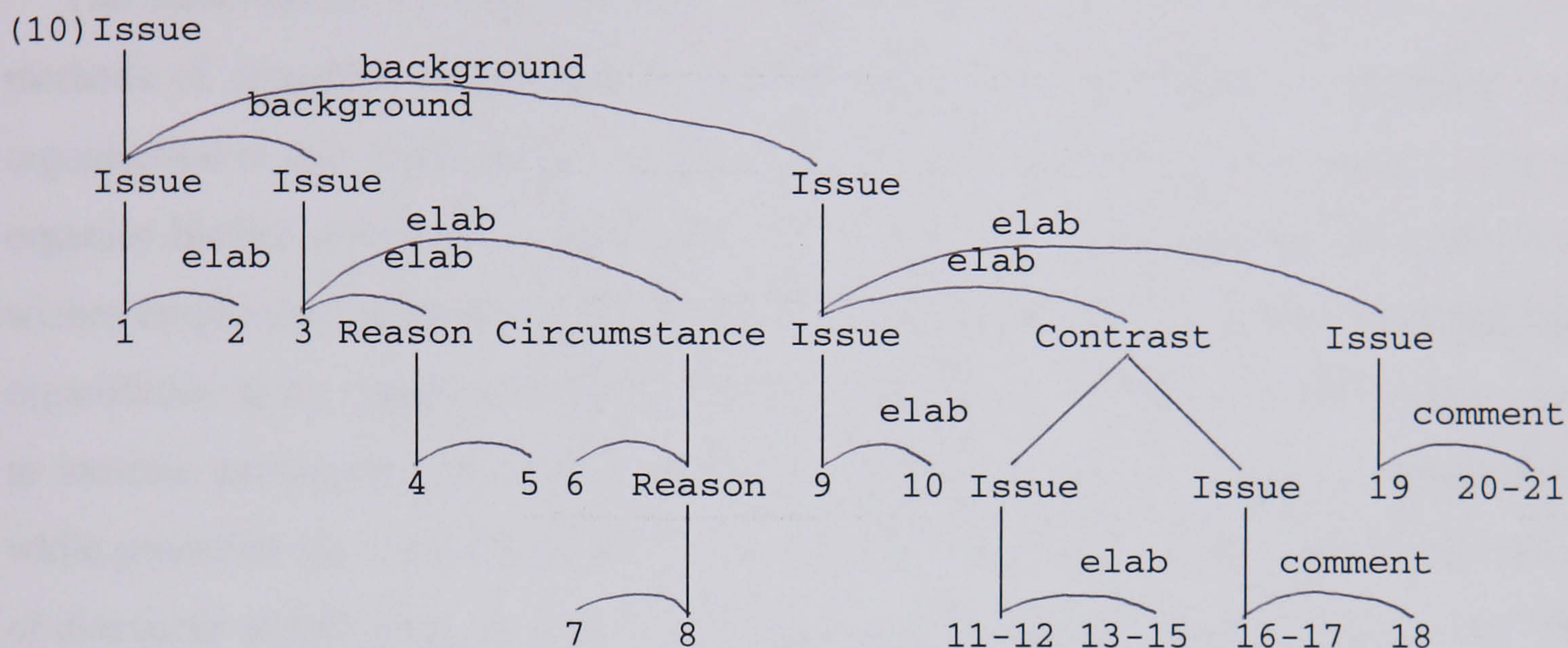
Apart from the structural and semantic/thematic characterisations there is the formal characterisation. That is, the nucleus of a high-level Issue predicate starts with a full NP (except in the rare cases of a pre-posed adjunct done with a full NP¹⁵) and its adjuncts also start with a full NP referring back to the NP first introduced in the nucleus. This was illustrated in the text in (1)-(6) above, where the nucleus and the adjuncts of the Issue predicate were all started by the use of full NPs.

From the above characterisations emerges a working definition of high-level Issue predicates as they occur in my corpus: in expository texts a high-level Issue predicate is one that dominates a whole piece of discourse, with its nucleus, which sets the topic for the discourse, starting with a full NP and its adjunct(s), which develops the Issue topic so set, starting with a nominal anaphor coreferential with the topic NP in the nucleus.

The second issue I want to address concerns the adjunct of a high-level Issue predicate and the possibility of its becoming a discourse/rhetorical unit. An Issue adjunct may be defined in structural and semantic as well as formal terms. Structurally, it is the adjunct of a high-level Issue predicate consisting of at least one proposition or, more frequently, of an embedded predicate consisting of several propositions.

¹⁵The purpose of this kind of adjunct is presumably to build up suspense, a feature often seen in texts of a literary type.

Issue adjuncts at this level usually exhibit complex internal structures with several embedded predicates, for instance, the first adjunct in (2) (propositions 3-8) is realised by an embedded Issue predicate which shows further embedding, and so is the immediately following adjunct in (3) (propositions 9-21), as diagrammed in (10) below (where *elab* stands for *elaboration*):



Semantically, an Issue adjunct is a development of the statement or claim contained in the Issue nucleus and exists in a specifiable number of relationships to the Issue nucleus. An Issue adjunct may be in an elaboration, explanation, evidence, comment or background information providing relations to the Issue nucleus (also see section 3.3.1.3 in Chapter 3). In other words, it maintains the thematic continuity and/or participant focus by providing semantically prominent information about the statement or claim made in the Issue nucleus from various different perspectives.

Furthermore, Issue adjuncts that develop the claim/statement contained in the Issue nucleus very often contain sub-claim/statement of their own (i.e. the local claim or statement) in relation to the one for the whole discourse (i.e. the global claim or statement). For instance, adjuncts 1, 2 and 3 all contain a sub-claim (propositions 3, 9, 22) for the segments of discourse contained in these adjuncts.

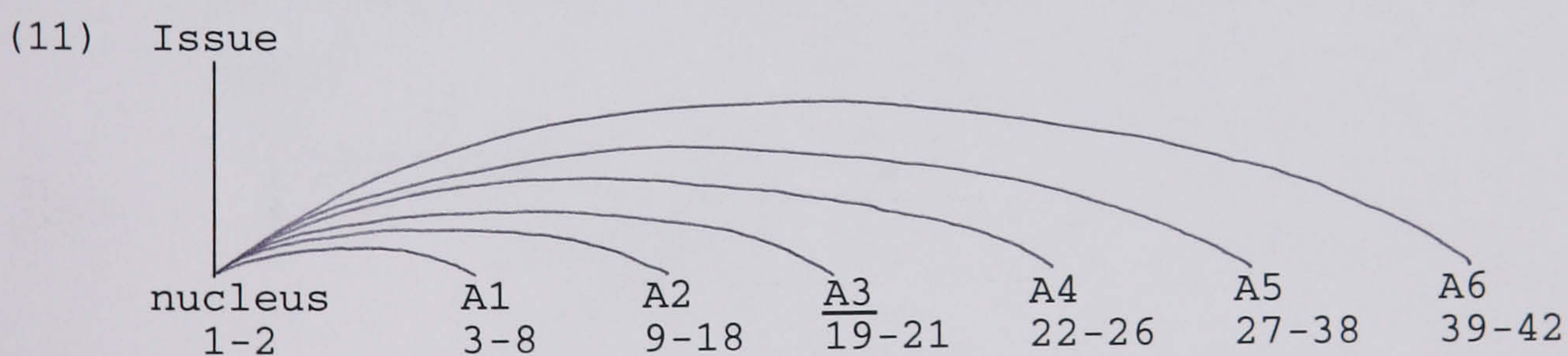
The occurrence at the high level of discourse with a complex structure and a possibility of introducing a sub-claim or statement combine to contribute to Issue adjuncts becoming a rhetorical unit.

To highlight the information contained in this kind of discourse unit and also to

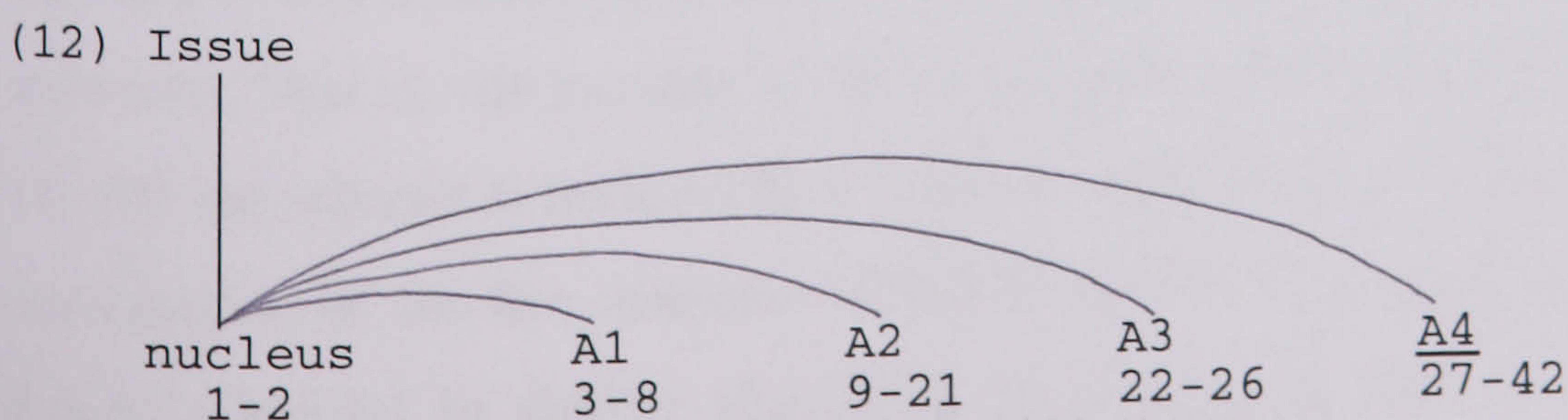
guide the reader's attention through the discourse by helping the reader identify discourse units of complex structure, NA is called for. In other words, from the point of view of formal characterisation, the occurrence of NA at the boundaries of Issue adjuncts indicates the beginning of a new rhetorical unit.

The motivations for this formal feature appear to have to do with the writer's methods of discourse organisation and also with his/her intentions of revealing that organisation to the reader so as to facilitate discourse interpretation. A writer is free to organise his/her materials in any fashion that he/she feels will highlight the points he wishes emphasised, and one method of achieving, and at the same time displaying, this organisation is by choice of different forms of anaphora. In general full NPs are used to indicate prominent information occurring at higher level of discourse organisation while pronouns are used to indicate less prominent information occurring at lower level of discourse organisation (I will come back to this point later). The choice of a full NP or a pronoun thus contributes to the hierarchical organisation of a discourse.

For instance, in the text under discussion, if NA was used instead of PA in proposition 19 in the second adjunct, then this proposition and its supporting material in propositions 20-21 would create a new same-level adjunct (i.e. "A3" in the following diagram) and the information in it would be treated as equally important as that of any of the other adjuncts at the same level. This is diagrammed in (11) below:



Similarly, if PA was used for NA in proposition 39, the original adjunct would then drop to a lower level in the discourse, becoming part of A4 (see the diagram in (12) below), and the information contained in it would then be regarded as less important.

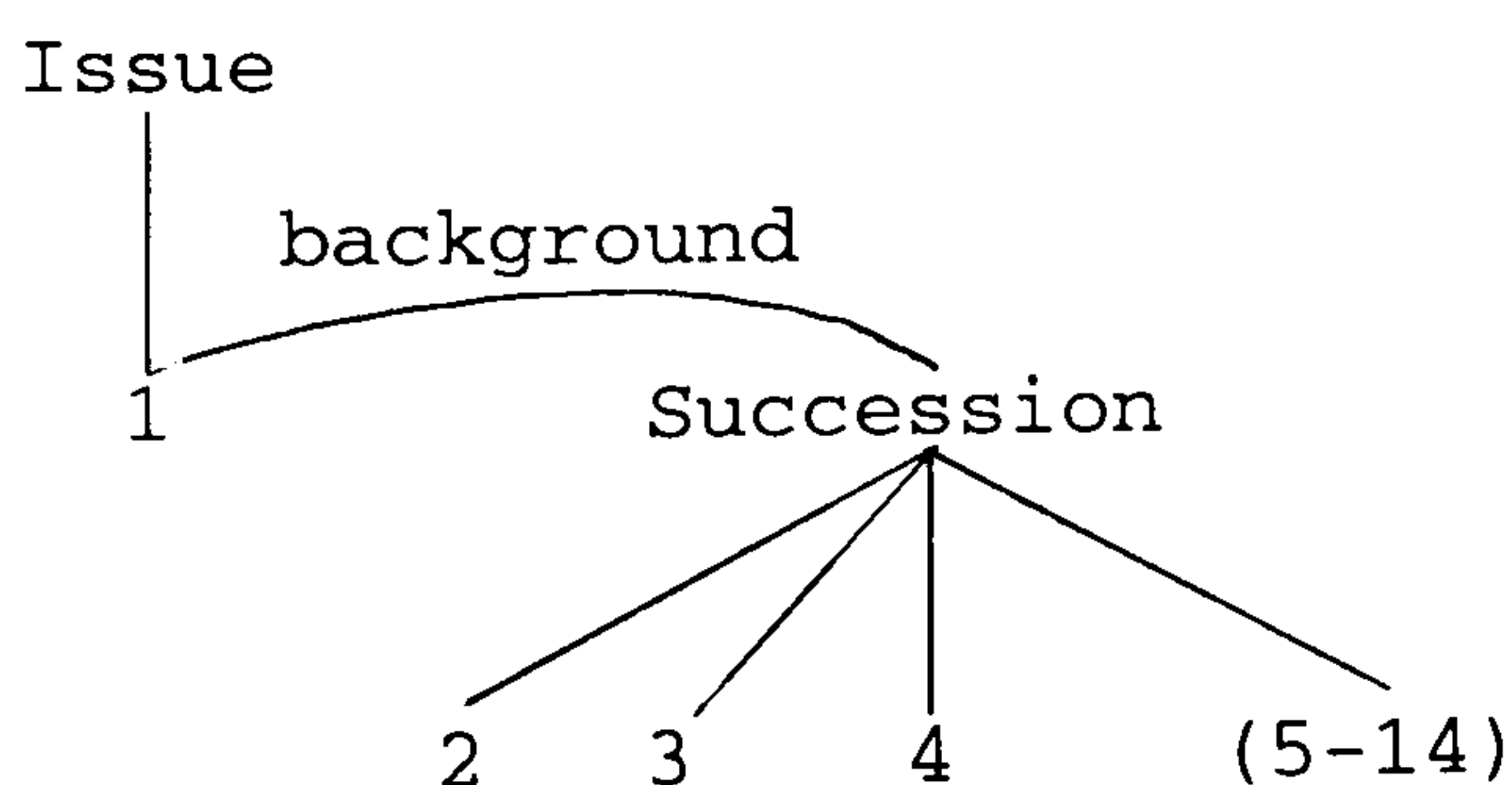


Thus we see that choice of anaphora at the discourse level is not at random; it is in fact determined by the hierarchical organisation of the discourse.

We have seen that the association of full NPs and new rhetorical units are well motivated both in terms of discourse organisation and the writer's intention to display this organisation to the reader for a smooth discourse interpretation. But how can we account for the few occurrences of PA at the boundaries of the rhetorical units at this level in the corpus? Consider the text in (13) below:

- (13) 1. Li Guangqian shi Xing Ma shenzhi Dongnan-Ya diqu de
is Singapore Malaysia even Southeast Asia region's
zhuming qiyejia he Huaren lingxiu zhiyi.
famous entrepreneur and Overseas-Chinese leader one-of
"Li Guangqian (1893-1967) was a famous entrepreneur and a
leader of the Overseas Chinese in Singapore and Malaysia and
even in the whole Southeast Asia"
2. Ta yuanji Fujian Sheng Nan'an Xian, jiajing pinhan.
he home town Fujian Province Nan'an county, family poor
"He was born into a poor family in Nan'an county, Fujian
Province"
3. 0 Shisui-na'nian sui fu guofan daole Xinjiapo.
at-age-of-ten with father cross-channel arrive-at Singapore
"At the age of ten his father took him to Singapore"
4. Zai nali, ta jieshoule Zhong Yinwen jiaoyu.
at there he received Chinese English education
"There he received his formal education in Chinese and
English" [D7]

(10 clauses involving chronological presentation of his education within the adjunct are omitted, which is followed by several same-level adjuncts started by the use of NA.)



Li Guanqian occurs as a full NP in proposition 1, the nucleus of the top-most Issue predicate, and as PA in proposition 2 in the adjunct of the Issue predicate. Here the instance of PA is found both with a simple preceding nucleus and with a simple adjunct structure. That is, the nucleus of the Issue predicate is realised by a simple proposition (1) and the adjunct is realised by a Succession predicate with no further embedding. An examination of the few instances of PA at this level in the corpus shows that the use of PA all occurred in similar situations. This suggests that the simple structure of the

immediately preceding nucleus and/or of the current adjunct is likely to trigger the use of PA. An Issue nucleus often takes the form of a simple proposition and thus has a simple internal structure; this seems to have consequences for the anaphoric choice in the immediately following adjunct, especially when the adjunct itself is just a simple proposition or a predicate with no further embedding.¹⁶

We have seen, in this section, that with the correlation of new rhetorical units and the use of NA, it would not be accurate to say that a less explicit form of anaphora (PA or ZA) is used when the antecedent is mentioned in the immediately preceding text and an explicit form of anaphora (NA) is used when the antecedent is mentioned further back in the text, as suggested in Givon (1983). In fact, in my expository texts most of the 278 NAs occurring at the boundaries of rhetorical units had their antecedents mentioned in the immediately preceding propositions, where there would be no question of interference at all. This fact indicates that it is not simple distance that gives rise to the use of one anaphoric device over the other, but, rather, it is the rhetorical organisation of that distance that determines whether PA/ZA or NA is appropriate.

7.3 Different levels of rhetorical units and anaphora

I have claimed, thus far, that the adjunct of a top-most Issue predicate constitutes a new rhetorical unit which is associated with NA at its boundary. The figure based on the analysis of the 44 newspaper articles in my corpus demonstrated that the claim was well attested. What we are interested in here is the question of what happens within the rhetorical unit, the adjunct of a top-most Issue predicate. Specifically, we will be considering the unit-forming possibility of lower-level Issue predicates and the effect of such units on the use of anaphora in discourse.

As discussed earlier, an essential feature of rhetorical predicates is that they may function recursively, by allowing each partner of a predicate to expand to another predicate (e.g. a sequence of clauses). Issue predicates whose adjuncts form new

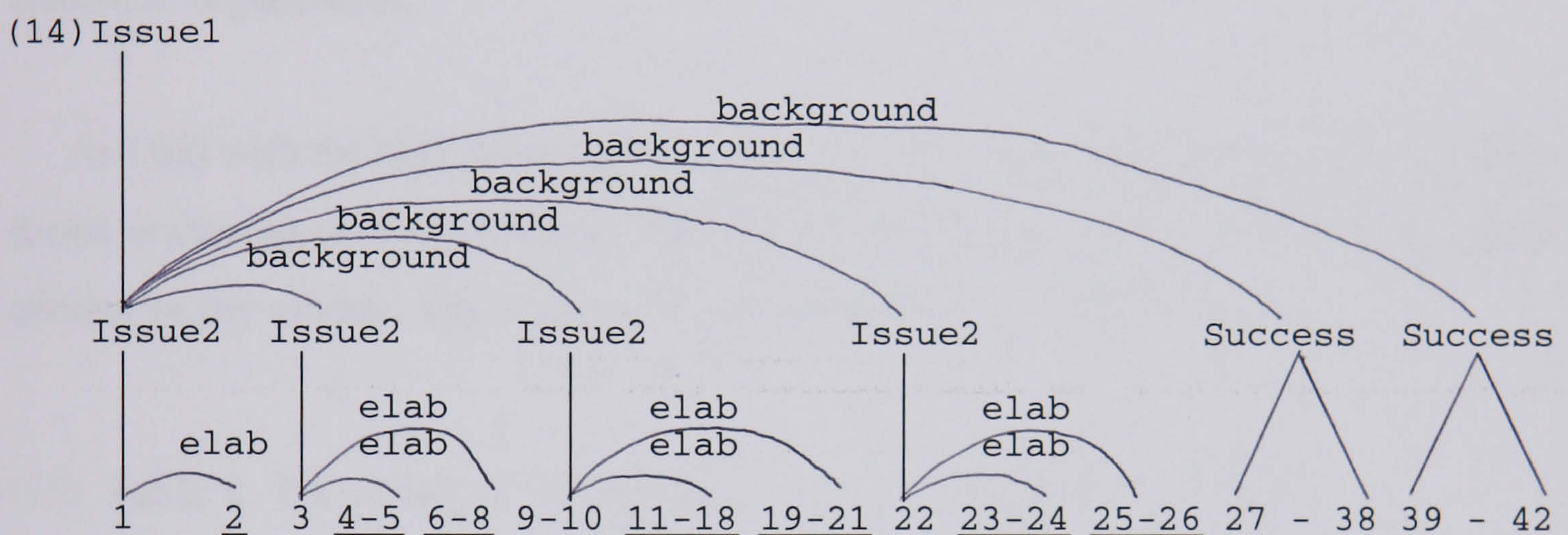
¹⁶The instance of PA in proposition 2 may also be explained by the active pattern principle (76) in that both mentions of the NP are subjects of their propositions in an Issue predicate. And this may have contributed, at least partly, to the pronominalisation here, which, by the principle (8) proposed in this chapter, should have been realised by a full NP.

rhetorical units are most typical of this feature. Now in the case of a high-level Issue predicate taking another Issue predicate as its adjunct, one would ask: is the adjunct of this lower-level Issue predicate also likely to become a new rhetorical unit? If it is, does this bear on the use of anaphora?

To answer these questions, it is necessary to distinguish between a high-level and a lower-level Issue predicates and then between rhetorical units at these two levels. Put simply, the main difference between Issue predicates at these two levels is that a high-level Issue predicate is one that dominates a whole piece of discourse while a lower-level Issue predicate serves as a realisation of the adjunct of a high-level Issue predicate. For example, in (14) below, which is a tree representation of the text in (1)-(6), *Issue1* is a high-level Issue predicate which dominates the whole discourse while *Issue2* is a lower-level Issue predicate which serves as an adjunct of the top-most Issue predicate and only dominates the propositions under it. In other words, a high-level Issue predicate concerns the global organisation of a discourse whereas a lower-level Issue predicate concerns the local organisation of a discourse.

Another difference is that a high-level Issue predicate has a nucleus that makes a statement or an assertion for the whole discourse while the nucleus of a lower-level Issue predicate makes a statement or an assertion for the part of the discourse that falls under the embedded Issue predicate only and hence is a sub-statement/assertion in relation to the whole discourse. For instance, in the diagram in (14), the nucleus (propositions 1-2) of the top-most Issue predicate contains an assertion for the entire discourse (propositions 1-42) while the nucleus (proposition 3) of the embedded Issue predicate realising the first adjunct contains an assertion for the embedded predicate only (propositions 3-8). However, although there is a difference in the level at which they occur (and perhaps in the complexity of the structures which they represent), the relationships between the nuclei and the adjuncts of Issue predicates occurring at different levels are basically the same. That is, the nucleus of an Issue predicate presents a statement or an assertion, for which its adjunct(s) provides elaboration or background information. In other words, there are no functional differences between the adjuncts of Issue predicates of different levels and this makes Issue adjuncts a new rhetorical unit, whatever their level of occurrence in discourse.

However, since these two types of rhetorical units occur at different levels of discourse organisation and thus carry different weight in terms of the content and organisation of the discourse, these differences will inevitably have their consequences in one way or another, and the use of anaphora seems to be one of these consequences. We have seen that high-level rhetorical units are associated with the use of NA, what about rhetorical units of lower level? Let us now go back to the text presented in (1)-(6) for the use of anaphora at the boundaries of lower-level Issue adjuncts or rhetorical units.¹⁷ The tree structure of this passage is as follows (*elab* stands for *elaboration* and *Success* for *Succession*):



The Issue predicate (*Issue1*) consists of a nucleus, which is realised by an embedded Issue predicate, and five adjuncts, among which the first three are realised by embedded Issue predicates. The first adjunct is realised by an Issue predicate (*Issue2*), in which NA occurs in the nucleus (proposition 3) to encode the NP *Tian Jiyun* -- this is predicted by the principle (8) discussed in the preceding section, and PA occurs in the two adjuncts (propositions 4-5, and propositions 6-8). In the second adjunct which is also an Issue predicate (*Issue2*), NA occurs in the nucleus (proposition 9), which is again predictable by the principle in (8), and PA occurs in the second embedded adjunct (proposition 19). Finally, the higher nucleus (propositions 1-2) is realised by an embedded Issue predicate (*Issue2*) whose adjunct contains an instance of PA in proposition 2.¹⁸

¹⁷For the convenience of exposition, from now on I will use, where appropriate, high-level Issue predicate for a top-most, dominating Issue predicate, lower-level Issue predicate for an embedded Issue predicate, and high-level adjunct for an adjunct of a high-level Issue predicate and lower-level adjunct for that of a lower-level Issue predicate. Likewise, high-level rhetorical unit will be used to refer to the unit occurring at the high-level Issue adjunct position and lower-level rhetorical unit to refer to the unit occurring at the lower-level Issue adjunct position.

¹⁸We will consider the two Issue adjuncts realised by Succession predicates later.

Note that the adjuncts of these embedded Issue predicates (*Issue2*) are correlated with the use of PA at their boundaries in propositions 2, 4, 7, and 19.¹⁹ What then motivates the use of PA here? I propose that the use of PA here has to do with the adjuncts of lower-level Issue predicates being new rhetorical units. Since new rhetorical units in this case occur at a lower level in the hierarchical organisation of the discourse, to mirror the relatively lower level of the units in embedded Issue predicates, and also to guide the reader's attention through the discourse, the writer resorts to the use of PA for the lower-level units in order to distinguish them from the high-level units which correlate with NA. Thus the occurrence of PA at this level has a distinguishing function in discourse organisation.

As I did with the high-level rhetorical units, I examined the distributions of anaphoric forms occurring at the boundaries of lower-level rhetorical units in the 44 newspaper articles in my corpus. The results are presented in the table below:

(15) Table 2 PA vs NA at Boundaries of Lower-level Rhetorical Units

Type	New Rhetorical Unit	Same Rhetorical Unit	Total
NA	60 (47%) (19%)	68 (53%) (33%)	128
PA	248 (65%) (81%)	136 (35%) (67%)	384
Total	308	204	512

From the table we see that the lower-level rhetorical units are realised 81% (248/308) of the time by the use of PA and only 19% (60/308) of the time by the use of NA. On the basis of the figure in Table 2, it is apparent that there is no sign that NA has a boundary marking function at this subordinate level, which is the domain of PA.

¹⁹The embedded adjuncts consisting of propositions 11-18 and 23-24 contain no mentions of the referent in question; the embedded adjunct consisting of propositions 25-26 on the other hand shows the occurrence of the referent as a full NP, which is apparently inconsistent with the overall picture. It was argued before that this instance of NA is triggered by the non-structural factor of emphasis. I will come back to this shortly.

The discussion leads to the proposal for the use of anaphora at the boundaries of lower-level rhetorical units or Issue adjuncts, given in (16) below:

- (16) In expository texts each of the adjuncts of a lower-level Issue predicate realising the adjunct of a high-level Issue predicate also constitutes a rhetorical unit, but due to its occurrence at a lower-level of discourse organisation, each of these rhetorical units tends to be correlated with the use of PA at its boundary.

As shown in Table 2, 19% (60 instances) of the lower-level rhetorical units were started by the use of NA. A scrutiny of these instances reveals that about half of these instances were associated with non-structural factors such as *contrast*, *emphasis* or *further characterisation*. For example, the instance of NA in proposition 25 in (4), which would be realised as PA according to the principle (8), may have to do with its use for emphatic or contrastive purposes, that is, Mr Tian Jiyun's view on how those government grants should be properly used for the benefits of those poor regions was being emphasised. The other half of the NAs occurred where the immediately preceding material (rhetorical unit) contains a different topic NP and/or the nucleus of the higher Issue predicate contains a different interfering NP as well as its own antecedent. These are actually the cases that we dealt with as return pops in the preceding chapter. These 60 "deviant" uses of anaphora at the boundaries of lower-level rhetorical units are thus consequences of other discourse factors (see Chapter 6 for a detailed discussion of return pops and Chapter 8 for a discussion of non-structural factors and use of anaphora).

Now If we compare Table 2 with Table 1, we find that the occurrence of NA and PA at the boundaries of rhetorical units of high-level and lower-level Issue predicates largely shows a complementary distribution. That is, NA occurs in high-level rhetorical units and PA occurs in lower-level rhetorical units. This is summarised in Table 3 below:

(17) Table 3: Anaphors at Boundaries of High- vs Lower-Level Rhetorical Units

Type	High-level Unit	Lower-level Unit	Total
NA	278 (82%) (97%)	60 (18%) (19%)	338
PA	8 (3%) (3%)	248 (97%) (81%)	256
Total	286	308	594

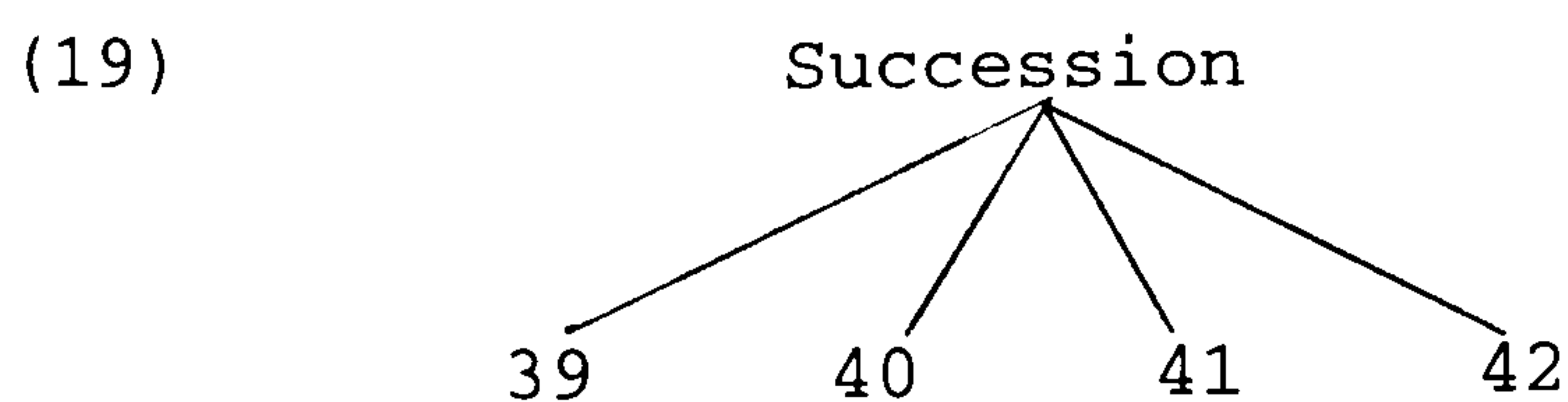
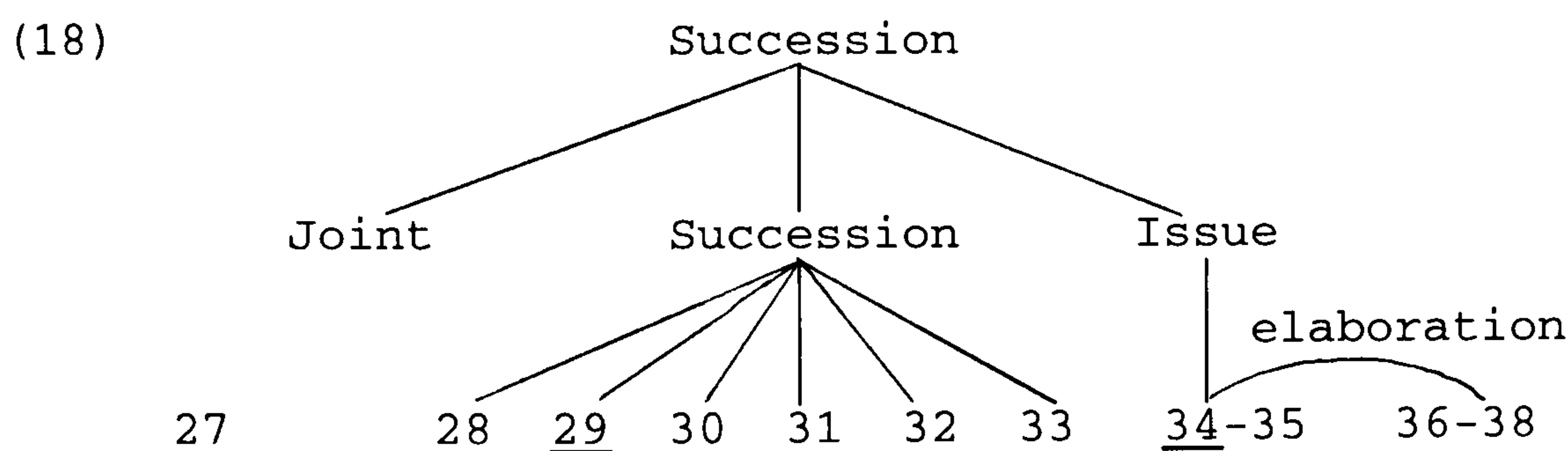
As this combined table shows, high-level rhetorical units are associated 97% (278/286) of the time with the use of NA while lower-level rhetorical units are associated 81% (248/308) of the time with the use of PA. These figures lend strong support to the claim that NA has a boundary marking function at a high level of discourse organisation whereas PA has a boundary marking function at a lower level. The choice between NP and PA here is determined by and thus reflects the hierarchical organisation of the discourse.

We have been so far looking exclusively at Issue predicates. This is natural because the texts in my corpus are all representable by a top-most Issue predicate, as shown by the text in (1)-(6). However, when it comes down to the second level of discourse organisation, the picture becomes more divergent. That is to say, not all adjuncts of a top-most Issue predicate (rhetorical units) are necessarily realised by (embedded) Issue predicates and Issue adjuncts do not always carry a topic message of their own. For instance, the fourth and fifth background adjuncts in (5) and (6) are realised by non-Issue predicates, Succession predicates, in which all arguments are of equal status (see the diagrams in (14) above). The question is whether it is possible for the adjuncts or arguments of non-Issue predicates at this lower level to become rhetorical units.

In discussion of Issue predicates and rhetorical units, we noted basically three criteria, that is, nucleus-adjunct order, assertion-elaboration relationship and relatively complex structure. If any other rhetorical predicates can satisfy these criteria, they then hold the possibility of being rhetorical units. Since a non-Issue adjoining predicate in Chinese (e.g. Condition, Circumstance) has an unmarked order of adjunct preceding

nucleus, and the preceding adjunct is unlikely to have a complex structure, it is not likely for the adjunct of such a predicate to become a rhetorical unit, let alone the possibility of having several equal-status adjuncts as in the case of an Issue predicate. In the case of a conjoining predicate, the members of such a predicate have equal status within the predicate: none of the members being subordinate to one another. This coordinate relationship among the predicate members seems to "waive" the requirements of nucleus-adjunct order and assertion-elaboration relationship displayed by an Issue predicate so that their possibility of being rhetorical units depends solely upon the internal structure of the predicate.

We can reasonably hypothesise that if members of a conjoining predicate (e.g. Joint or Succession) exhibit a relatively complex structure through developing into subordinate predicates, then they hold the possibility of being rhetorical units. To test this hypothesis, we may consider the fourth and fifth adjuncts of the top-most Issue predicate presented in (5) and (6). To facilitate discussion, the rhetorical structures of these adjuncts are given below:



The entire structure of (18) is a Succession predicate and each member of the predicate is realised by an embedded predicate, i.e. Joint, Succession and Issue. The NP *Tian Jiyun* first occurs as a full NP in proposition 27, then as ZA in proposition 28, in the first embedded predicate (Joint). This NP is mentioned as PA in proposition 29 and then as ZA in the remaining propositions (30, 31, 32, 33) in the second embedded predicate (Succession). It takes the form of PA at its next mention in proposition 34 and of ZA in proposition 35 in the nucleus of the third embedded predicate (Issue). Note that the instances of PA here all occur at the boundaries of the embedded predicates realising

the arguments of the higher Succession predicate (the adjunct of the top-most Issue predicate). The structure of (19) is realised directly by propositions and does not show further embedding. The NP *Tian Jiyun* occurs as a full NP in proposition 39 and then as ZA in propositions 40-42.

Why does the referent in (18) takes the form of PA in propositions 29 and 34, whereas in (19) the referent is encoded in ZA throughout in propositions 40-42? I suggest that the choice between PA and ZA here has to do with the presence or otherwise of rhetorical units that are formed as a result of the predicate members developing into embedded predicates. In (18) PA is used at the boundaries of rhetorical units realised by embedded predicates whereas in (19) no such units are formed and hence no occurrence of PA.

The analysis of (18) and (19) suggests that each of the members of a conjoining predicate holds the possibility of being a rhetorical unit if it has a relatively complex structure (i.e. realised by a separate predicate), and each of such units tends to be associated with the use of PA, otherwise ZA occurs.

The following table gives the figure of anaphors occurring at the boundaries of lower-level rhetorical units associated with conjoining predicates in the 44 newspaper articles in my corpus.

(20) Table 4: PA vs ZA at Boundaries of Lower-level Rhetorical Units Associated with Conjoining Predicates

Type	New Rhetorical Unit	Same Rhetorical Unit	Total
PA	28 85% 100%	5 15% 6%	33
ZA	0	75 100% 94%	75
Total	28	80	108

As the table shows, the rhetorical units associated with conjoining predicates are

started 100% (28/28) of the time by the use of PA. On the other hand, within the rhetorical units ZA makes up 94% (75/80) and PA only a marginal 6% (5/80). These figures suggest that PA has a unit-initial marking function at this level, with ZA used to continue the units. This finding is consistent with the one in (16), in which lower-level rhetorical units associated with Issue predicates were started by the use of PA.²⁰

It should be pointed out, however, that conjoining predicate associated rhetorical units are rather marginal in my corpus (28 instances), compared with Issue predicate associated rhetorical units (248 instances), and therefore any conclusion made here must be tentative.²¹

If we look at the principles in (8) and (16) as well as the finding about conjoining predicate associated rhetorical units, we see that the hierarchical organisation of discourse or the different levels of this organisation plays a crucial role in the choice of anaphora. This then leads to a more general proposal, which may be termed the DISCOURSE LEVEL PRINCIPLE, given in (21):

- (21) (In expository texts) the higher up in the tree structure of discourse a discourse unit is, the more likely that unit is to be correlated with the use of a full NP.

7.4 Rhetorical units and paragraph structure

Before concluding, I want to consider briefly the notion of PARAGRAPH STRUCTURE and its relevance to (high-level) rhetorical units in this chapter. Previous studies on anaphora in discourse have suggested that full NPs usually occur at major breaks of discourse, marked by major hesitations in conversation and by paragraph boundaries in writing (Hinds 1977, Chafe 1980, Li, C-i 1985 and Chen 1986). Rhetorical units associated with the use of full NPs are signalled, very often, by paragraph breaks, and in this sense they

²⁰It is interesting to note that not a single occurrence of NA was found in the lower-level rhetorical units associated with conjoining predicates in my corpus. This suggests that within "flat" structures of conjoining predicates, the basic choice is between ZA and PA.

²¹It should be noted that the use of PA in conjoining predicate associated rhetorical units can also be accounted for by the principle (68) for active patterns.

may be seen as reflecting a kind of paragraph structuring. There is, however, at least one important difference between structures of these two kinds. That is, although a paragraph is treated as a structural unit exhibiting a thematic unity, the relationship between a paragraph and the discourse in which it occurs and the relationship between the paragraphs within the discourse are yet to be explicitly formulated. In work using the notion of paragraph, paragraph tends to be treated as a discrete, top-most unit in its influence on the use of anaphora. In my work on expository Chinese, rhetorical units are treated crucially as the adjuncts of high-level Issue predicates, and as such they are in a supporting or elaborating role in relation to the nuclei of Issue predicates and in a conjoining/coordinate relationship among themselves. Such characterisations make rhetorical units a dynamic structural device in discourse representation.

As for the use of anaphora, although high-level rhetorical units are often signalled by paragraph breaks in expository texts, it would not be accurate to simply say that in expository texts all paragraphs are initiated by the use of NA. One could easily find a paragraph which is not started by NA. Take the text in (1) through (6). The PA in proposition 19 actually occurs at the boundaries of a new paragraph (the other paragraphs are started at propositions 1, 3, 9, 11, 22, 27 and 39). The following table presents the figures showing the occurrence of NA/PA at the boundaries of paragraphs vs. rhetorical units in the 44 newspaper articles used as data for this study:

(22) Table 5: PA vs NA at the Boundaries of Paragraphs vs. Rhetorical Units

Type	Paragraph	Rhetorical Unit
NA	206 87%	278 97%
PA	31 13%	8 3%
Total	237	286

The table shows that 87% (206/237) of the paragraphs are started by the use of NA and 13% (31/237) are started by the use of PA. In the case of rhetorical units, 97% (278/286) are started by the use of NA and only 3% (8/286) by the use of PA. Note that

the distribution of PA at the boundaries of paragraphs shows a 10% increase compared with that of rhetorical units (13% vs. 3%). Apart from the higher number of occurrence of PA here, the paragraph approach has 72 (15%) more nominal anaphors (the difference between 278 and 206) to account for which occur within paragraphs and should be encoded in PA.

Another strength of the rhetorical approach, as delineated before, is that rhetorical units can be, and very often are, realised by embedded lower-level rhetorical units, and these different levels of units reflect the different levels of discourse organisation in general and the internal organisation of paragraph structuring in particular. This provides a strong motivation for the choice of different anaphor types at the boundaries of paragraphs as well as within paragraphs, that is, NA is used for high-level units and PA for lower-level units to display formally the different levels of discourse organisation. With a paragraph approach, however, presumably it would be difficult to deal, in a unified way, with such recursive embedding as revealed by new rhetorical units and its effect on the choice of anaphoric devices.

Li, C-i (1985) and Chen (1986) both recognise the effect of paragraph breaks on triggering the use of NA in Chinese, but these approaches do not take account of the recursive embedding of paragraph structures, and thus fail to account for many instances of anaphora which could have been better explained with a structural approach such as the present one that recognises the recursion of rhetorical predicates. Hinds (1977, 1979) proposes the correlation of full noun phrase with the peak sentence and of pronoun with non-peak sentences within a segment which itself is a constituent of the paragraph. While Hinds' correlation is generally interesting it is obviously too rigid to allow for full NPs to appear in non-peak sentences or pronouns to appear in peak sentences, which is, unfortunately, very often the case. What is more, it seems to me that his notion of segment is somewhat similar to that of my high-level new rhetorical unit and therefore he still does not go as far down in the internal structure of paragraph/discourse as does the present approach which recognises higher and lower-level rhetorical units. Therefore, paragraphs, though rhetorical units of a sort, are not taken as the major units that influence anaphora in this analysis; the units that do influence anaphora are rhetorical predicates, most notably the adjuncts of Issue predicates.

7.5 Conclusion

In this chapter I have discussed the effect of the global hierarchical organisation of the discourse on anaphoric choice in terms of rhetorical units. It has been shown that in the expository texts that I have examined the adjunct(s) of an Issue predicate starts a new rhetorical unit which correlates with either PA or NA depending upon its relative level in the hierarchical organisation of the discourse. I have argued that what is at work here is the Discourse Level Principle, according to which a high-level rhetorical unit is more likely to start by the use of NA while a lower-level rhetorical unit is more likely to start by the use of PA. It has thus shown that what determines the choice of one anaphoric device over the other at the boundaries of rhetorical units in a discourse is, basically, not the distance or interference, but the hierarchical organisation of the discourse.

CHAPTER 8 SOME NON-STRUCTURAL FACTORS IN ANAPHORA

8.1 Introduction

In the preceding chapters, I have tried to describe the patterns of anaphora in my expository texts that appear to have a structural basis. It has been shown that it is the hierarchical organisation of the propositions in the discourse that in these instances determines which anaphoric device is used. However, there are instances of anaphora in my texts that seem to be exceptions to the structural principles formulated in the preceding chapters. The passage in (1) is a case in point.

- (1) 1. Zhe ye shi sanshiliu-suide Yang Jinhua cong yi
 this also is 36-year-old start *weiqi*-career
 yilai zuiwei huihuangde chengji.
 since most splendid record
 "This is also the best record of the 36-year-old Yang Jinhua
 since he started his *weiqi* career"
2. Sinian qian likai guojiaduide Yang Jinhua zai qishi-niandaide
 four-year ago leave national-team only in 1970s
 yici quanguo bisai zhong dajinguo qian-liu-ming,
 one nation-wide match in enter first-six-place
 "Yang Jinhua, who left the national team four years ago, only
 won a sixth place in a nation-wide competition during the
 seventies"
3. ta xianzai shi Beijing nüdui jiaolian.
 he now is Beijing women-team coach
 "He is now the coach for Beijing women's *weiqi* team" [D6]

Structurally, this passage is an Issue predicate consisting of a nucleus (proposition 1) and two background adjuncts (propositions 2 and 3). According to our structural principles for active patterns, the anaphor in proposition 2 should take the form of PA because it occurs as subject in an Issue adjunct coreferential with the subject antecedent in the nucleus.¹ However, what we get here is a full NP. The following is another passage in which a full NP is used where a pronoun would be possible according to the structural patterns presented earlier.

¹If we proceed from the principle determining the use of anaphora in rhetorical units, the anaphor in proposition 2 should have been realised as PA since it occurred at the boundary of a lower-level rhetorical unit.

- (2) 1. 1983-nian, ta (Wan Li) zai yici youyisai zhong jibaile laizi
 in 1983 he at a friendly match beat come-from
 "wangqiu-zhiguo" Aodaliya de zhu-hua dashi.
 tennis' country Australia's to-China ambassador
 "At a friendly match in 1983, he (Wan Li) beat the Australian
 ambassador to China, who came from a tennis-strong country"
2. Aodaliya xinwenjie dezhi hou,
 Australian press know after
 "When this news reached the Australian press"
3. zai baoshang dengle Wan Li de dafu zhaopian,
 in newspaper carry Wan Li's big photo
 "(they) publicised big photos of Wan Li in newspapers"
4. bing zhuwen baodao Zhongguo fuzongli de qiuyi.
 and write-article tell China vice-premier's tennis-skill
 "and wrote articles about the Chinese vice-premier's
 tennis skills" [D17]

The NP *Wan Li* is first mentioned as subject in proposition 1 and then mentioned as objects in propositions 3 and 4. Note that the reference in proposition 4 is done with a full NP despite its antecedent occurring in proposition 3. According to the principle (108) for active patterns, the use of PA should be possible since both the anaphor and its antecedent occur in antecedent-anaphor parallelism.

Examples like (1) and (2) suggest that apart from structural principles there are other possibilities that bear on the use of anaphora in discourse. In the 44 newspaper articles used as data for this study, I found 78 instances of NA, which, according to the structural principles presented earlier, could have been realised as PA. These exceptions to the structural principles appear to correspond to other non-structural factors. These factors that I have identified include FURTHER CHARACTERISATION, CLASSIFICATION, COMPARISON and CONTRAST, EMPHASIS, CONCLUSION, and DIFFERENT PERSPECTIVES.

The following table presents the occurrences of the nominal anaphors that are triggered by these factors.²

²I do not believe that the list here is an exhaustive one; given more data or data of different text-type, more non-structural factors that influence the use of anaphora in discourse could be found.

(3) Table 1. Occurrences of Anaphors in Non-structural Patterns

Further Characterisation	16 (20%)
Classification	17 (22%)
Comparison and Contrast	11 (14%)
Emphasis	11 (14%)
Conclusion	13 (17%)
Different Perspectives	10 (13%)
Total	78

As shown in the table, 16 instances of NA occurred in the pattern or environment of further characterisation, 17 instances of NA in the pattern of classification, 11 instances of NA in the pattern of comparison and contrast and the same number of nominal anaphors in the pattern of emphasis, 13 instances of NA in the pattern of conclusion, and finally 10 instances of NA in the pattern of different perspectives. We see that the numbers of occurrences of nominal anaphors in these patterns are quite similar, ranging from 10 instances (13%) in the case of different perspectives to 17 instances (22%) in the case of classification. In the rest of the chapter, I shall present and discuss these non-structural factors and their influence on the use of anaphora in my 44 data texts.

8.2 Further characterisation

Generally speaking, any subsequent reference to an individual in discourse is a place where further information about that individual can be added. In the data I have found a recursive pattern in which a full NP is employed, together with modifiers, for the next mention, where a pronoun would have been possible according to the structural patterns presented earlier.

- (4) 1. Zai Fuzhou duanduande shi-tian Fan Dalei quguo jici yiyuan,
 at Fuzhou short 10 days go several-times hospital
 "During his ten days in Fuzhou, Fan Dalei went to the hospital
 several times"
2. 0 budebu kao huan-xue lai weichi richang shenghuo.
 have-to rely-on change-blood to keep daily life
 "(he) had to undergo blood transfusion to keep his life going"

3. Bingmo shi gangguo buhuo-zhinian de Fan Dalei
 sick-devil make just-over 40-years Fan Dalei
 mianrong-tu Huang, qiaocui.
 face-grey withered
 "The devil of disease has made the 40-year-old Fan Dalei
 look very grey and pallid" [D40]

In this passage the NP *Fan Dalei* is first mentioned in the subject position of proposition 1, then mentioned via ZA in the subject position of proposition 2 and then mentioned again via NA in the object position of proposition 3. According to the principle (86) for active patterns, we would expect the use of a pronoun for the anaphor in proposition 3, in that the NP is the topic of the discourse. But if we take another look at the anaphor we will find that the nominal mention of *Fan Dalei* in proposition 3 is preceded by a complex modifier or relative clause which gives the added information or further characterisation in a condensed form that *Fan Dalei* was reduced by his illness to a grey and withered face though he was only 40 years old. The factor of further description or characterisation through a condensed form appears to be responsible for the use of a full NP in proposition 3 in this passage.

Let us consider an earlier example repeated as (5) below.

- (5) 1. Zhe ye shi sanshiliu-suide Yang Jinhua cong yi
 this also is 36-year-old start weiqi-career
 yilai zuiwei huihuangde chengji.
 since most splendid record
 "This is also the best record of the 36-year-old Yang Jinhua
 since he started his weiqi career"
2. Sinian qian likai guojiaduide Yang Jinhua zai qishi-niandaide
 four-year ago leave national-team only in 1970s
 yici quanguo bisai zhong dajinguo qian-liu-ming,
 one nation-wide match in enter first-six-place
 "Yang Jinhua, who left the national team four years ago, only
 won a sixth place in a nation-wide competition during the
 seventies"
3. ta xianzai shi Beijing nudui jiaolian.
 he now is Beijing women-team coach
 "He is now the coach for Beijing women's weiqi team" [D6]

The NP *Yang Jinhua* first occurs as a full NP in proposition 1 (the Issue nucleus), then occurs as a full NP in proposition 2 (the first Issue adjunct), and finally occurs as a pronoun in proposition 3 (the second Issue adjunct). What is interesting here is that the reference to *Yang Jinhua* in these two co-adjuncts take different forms of anaphora. That is, while it is realised via PA in proposition 3 it is realised via NA in proposition 2,

which is not explainable by any structural factors discussed in the preceding chapters. Note, however, that the use of a full NP in proposition 2 is also associated with the factor of further characterisation, that is, the noun *Yang Jinhua* is preceded by a complex modifier or relative clause which gives the further information in a condensed form that Yang Jinhua left the national team four years ago, a fact that might be intended to hint at his "re-emergence" as a popular national *weiqi* player.

Examples like (4) and (5) suggest that the factor of further characterisation operates as a trigger for the use of full NPs where by the structural principles, PA would have been possible. It may be worth noting that this pattern can be immediately followed by another one of the same kind. For example, put in a larger context, the full NP, "the 30-year-old Yang Jinhua", in the first proposition of this passage can also be seen as an instance of further characterisation with a full NP. Observe the passage in (6).

- (6) 1. Wu Tianming zhidao de "Meiyou Hangbiao de Heliu" chengwei
 direct "not-have navigation-mark river" become
 woguo diyibu zai Meiguo Xiaweiyi guoji
 our-country first at US Hawaii international
 dianying-jie shang huojiang de yingpian.
 film-festival get-prize film
 "'A River without Navigation Mark' directed by Wu Tianming
 turned out to be China's first film that won a prize at the
 Hawaii International Film Festival"
2. 1984-nian chu ganggang jieshu "Rensheng" houqi zhizuo de
 in 1984 beginning just finish Life last-stage production
Wu Tianming churen Xiyingchang changzhang.
 become Xi'an Studio director
 "At the beginning of 1984 Wu Tianming, having just completed
 the final-stage production of the film 'Life', was appointed
 director of Xi'an Film Studio"
3. Baofuyuandade Wu Tianming meiyou taozui zai yiqudede
 ambitious do not indulged in gained
 chengji shang, ta qingxingde renshi dao, ...
 achievement, he soberly aware that
 "The ambitious Wu Tianming did not let his success go to
 his head. He was soberly aware that..." [D31]

There are two points to be noted about this passage. Firstly, this passage offers an example of how full NPs are used in situations where instances of further characterisation follow each other. That is, the NP, together with the relative clause in the second proposition, is immediately followed by a similar construction in the third proposition. Secondly, while the first case of further characterisation offers an objective

description of the NP *Wu Tianming*, the second case is a subjective characterisation on the part of the writer. These two pieces of new information are brought in not through complete clauses, but through an anaphoric device, full NP.

The examples (4), (5) and (6) suggest that the discourse structural principles may be overruled, under certain conditions, by discourse functional considerations; in the present case the factor of further characterisation induces the use of full NPs where by the structural principles, PA would have been possible. The motivations for the association of further characterisation and the use of full NPs appear to be those of space-saving and a more smooth flow of discourse. Since these texts are short or medium length newspaper articles, in which space is at premium, any piece of information that can be packaged in a modifier or relative clause will appear in this "condensed" form, as part of an NP. Apart from the space-saving strategy, the use a full NP complete with modifiers also helps to achieve a more smooth flow of the main information that the writer wants to convey within a limited space because he does not have to "digress" to provide relevant but not necessarily essential information.

In my corpus of 44 newspaper articles, I found 16 instances of further characterisation in which full NPs, instead of structurally expected pronouns, are used.³

8.3 Classification

Under the pattern of classification, we identify a different communicative situation in which a full NP is used in the place of an expected pronoun when the membership of the referent in a category is being highlighted. Let us start by revisiting an earlier passage repeated in (7)

- (7) 1. 1983-nian, ta (Wan Li) zai yici youyisai zhong jibaile laizi
 in 1983 he at a friendly match beat come-from
 "wangqiu-zhiguo" Aodaliya de zhu-hua dashi.
 tennis' country Australia's to-China ambassador

³It should be pointed out that in my data, there is an additional 22 instances of further characterisation which are associated with high-level rhetorical units that require the use of full NPs. Since these 22 instances of full NPs are accountable for by the structural principles of rhetorical unit demarcation, I do not bring in and discuss these occurrences in this section, though the factor of further characterisation in these occurrences is likely to contribute, at least in part, to the use of full NPs at the boundaries of high-level rhetorical units.

- "At a friendly match in 1983, he (Wan Li) beat the Australian ambassador to China, who came from a tennis-strong country"
2. Aodaliya xinwenjie dezhi hou,
Australian press know after
"When this news reached the Australian press"
 3. Zai baoshang dengle Wan Li de dafu zhaopian,
in newspaper carry Wan Li's big photo
"(they) publicised big photos of Wan Li in newspapers"
 4. bing zhuwen baodao Zhongguo fuzongli de qiuyi.
and write-article tell China vice-premier's tennis-skill
"and wrote articles about the Chinese vice-premier's tennis skills"
[D17]

The NP *Wan Li* first occurs in the subject position of proposition 1, then occurs as full NPs in the object positions of propositions 3 and 4. Surely, by the structural principle (68) for active patterns, the anaphor in proposition 4 could have been realised as a pronoun since its antecedent is mentioned in the same object position in the immediately preceding proposition. The use of full NP here adds little to establishing the referent's identity since by the time the reader has already known that *Wan Li* is a Chinese vice-premier.

What, then, is the motivation for the use of a full NP here? It seems that the use of a full NP in a place of an expected pronoun here is intended to bring out the membership of the referent in a category. In other words it is the referent's membership in a category rather than the referent's identity that is the primary motivation for the use of a full NP here.

Let us go on and consider the passage in (8).

- (8) 1. Xilali hun-hou bu guan fu-xing ... yi xianshi
Hilary after-marriage not use husband's name so-as-to show

ziji shi ge dulide xiandai nüxing.
herself is an independent modern woman
"Hilary did not adopt her husband's surname after marriage in order to show that she was an independent modern woman"
2. Zhidao Kelindun 1980-nian jingxuan lianren Akense Zhou
until Clinton in 1980 run-for successive Arkense State

zhouzhang luoxuan shi,
governor defeated when
"Not until Clinton failed to be re-elected governor of the State of Arkense in 1980"
 3. 0 cai gaiwei Xilali Kelindun.
then change-as Hilary Clinton
"did (she) changed her name to Hilary Clinton"

4. Ta zheyang zuo yi biao ming ta dui tade zhangfu de zhichi,
 she so doing is show her for her husband support
 guli ta dongshan-zaiqi.
 encourage him east-mountain-rise-again
 "She did this to show her support for her husband and
 encourage him to stage a comeback" [D42]

The NP *Clinton* is mentioned in the subject position of proposition 2 and then mentioned in the object position of proposition 4 and this second mention takes the form of a full NP though a pronoun here would be possible. Again, it appears that a full NP is used to categorise the referent rather than simply establish the referent's identity, for which a pronoun would be sufficiently adequate.

The following passage is another example in which the NP *Laoren* "the old man" is used in proposition 3 to categorise the referent referred to as *Zhang Jiangjun* "General Zhang" in proposition 1 rather than just to establish the referent's identity, for by the time we have already known that *General Zhang* is an old man.⁴

- (9) 1. Zhang jiangjun suiran yijing jiushi-you'er,
 General Zhang though already 92 years old
 danshi rengran jingshen henhao.
 but still spirit very-good
 "General Zhang looked very spry for his 92 years"
2. Bin-zhu weizuo yiqi, xiangtan shenhuan.
 guest-host sit-round together talk cordially
 "The host and his guests sat together in a cordial conversation"
3. Xie Jin gaosu laoren, Dongbei dangnian "Shuaifu"
 tell old man North-east then marshal-residence
 yi xiurong-yixin, Dongbei xiangqin dou guanxin
 already repaired-as-new North-east people all care-about
 huainian "Hangong yu Zhang furen"
 miss Mr Zhang and Mrs Zhang
 "Xie Jin told the old man that the former 'Marshall's Residence' had been recently repaired and redecorated and that the people in the North-east of China all missed him and his wife" [D39]

This pattern exhibits 17 instances in the 44 texts in my corpus, all of which are correlated with the use of full NPs. The difference between this pattern (classification) and the previous one (further characterisation) lies in that while in the previous pattern new information is given about the referent, in a densely packaged form, in the present

⁴It should be noted that a PA in proposition 3 would have resulted in no ambiguity whatsoever, and is predicted by the principle (46) for controlling patterns discussed in Chapter 5.

it is contained. That is, *Piao Mu*'s understanding attitude towards young people is being contrasted with *Huang Shigong*'s excessively demanding attitude towards young people.

Below is another example in which a full NP is used in the place of an expected pronoun in proposition 4 due to the contrastive nature of its proposition.

- (11) 1. Youren ba "dou-baofu" jiaozuo "shuai-gen",
people BA shake wrapper call-as throw-funny-act
'Shaking the cloth-wrapper' is called by some 'throwing out funny acts'
2. Hou Yuehua na jiao hui "shuai",
then is able throw
"Hou Yuehua is really an expert of doing this"
3. O bu "shuai" zeyi, "shuai" bi shan-xiang,
not throw OK throw then mountain-resounding
"Whenever (he) starts doing this, he would cause a hall of laughter"
4. Nanguai kanle Hou Yuehua de biao yan,
no wonder see Hou Yuehua's perform
"No wonder when one watched Hou Yuehua performing"
5. ziran-erran xiangqi Hou Baolin.
naturally think of
"he would naturally think of Hou Baolin" [D38]

The structure of this passage is an Issue predicate with propositions 1-3 being the nucleus and propositions 4-5 the adjunct. The NP *Hou Yuehua* occurs as subject in both propositions 2 and 3 and the reference to it in proposition 4 is done with a full NP. As we have seen, since the referent is the topic of the discourse, its pronominalisation in proposition 4 should have been possible. The motivation for the use of NA here appears to be connected with the purpose of comparison: that is, Hou Yuehua's performance is being compared with that of Hou Baolin. Here is another passage.

- (12) 1. Youren shuo, Hou Yuehua huotuo yige Hou Baolin,
people say exactly-like a
"Some people say that Hou Yuehua is exactly like Hou Baolin"
2. "Huotuo", shizhi-taiguo, you zhenli xiangqian
exactly-like is-exaggeration have truth forward

kuayue yibu biancheng miaolun de weixian.
move a step become untruth danger
"The word 'exactly' is apparently an exaggeration and runs the risk of being an untruth"
3. Ruguo Hou Yuehua xiang cong Hou Baolin de mozili kechu de,
if like from mould come-out
"If Hou Yuehua was just an imitation of Hou Baolin"
4. Name, shixia kongpa buhui ruci qiangliede hongdong xiaoying.
then now probably not so intense sensation effect
"then there might not have been, at the moment, such a strong hit-effect" [D38]

In the passage, proposition 1 is the Issue nucleus and proposition 2 is the first adjunct and propositions 3 and 4 are the second adjunct. The NP *Hou Yuehua* is first mentioned as subject in the nucleus and its next mention is made in subject position in the second adjunct, which is realised by a full NP. According to our principles determining the use of anaphora in return pops, a PA would have been possible because it skips over an adjunct containing no interfering NP and returns to its subject antecedent in the nucleus. Again, the factor of comparison and contrast is accountable for the use of NA here.

Unlike the patterns of further characterisation and classification discussed earlier which are motivated by space-saving and a more smooth and concise flow of the main information and the strategy of bringing out the referent's membership in a category, the use of NA for the purpose of comparison or contrast, in my view, has to do with the strategy of highlighting, that is, the communicative function of comparing or contrasting is being highlighted through the use of a full NP where pure structural conditions will sanction the use of PA.⁶

There are 11 occurrences of NA that fall under the non-structural factor of comparison and contrast. This figure is not large and may have to do with the nature of my data texts mostly centering on a major character, but what is important is that in all the instances involving comparing or contrasting two or more individuals, full NPs are invariably employed.

8.5 Emphasis and conclusion

In my corpus I found a number of cases where the writer uses a full NP to refer to an antecedent in an emphatic situation, which could have been pronominally realised according to the structural patterns presented earlier.⁷ Here there is no question of

⁶Li & Thompson (1981) use the principle of highlighting to account for the occurrence of a pronoun in the place of an expected zero pronoun (also see my discussion of their work in Chapter 2).

⁷Li, C-i. (1985) mentions briefly the effect of the factors of contrast and emphasis on anaphora in relation to topic chains. He observes that when linguistic elements are being emphasised or contrasted, pronouns tend to be used where zero pronouns would otherwise be expected. However, Li does not mention the relationship between these factors and the use of full NPs.

possible ambiguity or interference from other referents present in the context. Consider the following example.

- (13) 1. Zhao Ziyang cong yijiubaling-nian qi danren Guowuyuan
 from 1980 start become State Council
 zongli, chengwei Dang he guojia zuigao jueceren zhiyi.
 premier become Party and state top decision-maker one-of
 "Zhao Ziyang became one of the top leaders of the Party and
 the state in 1980 when he took up the premiership of the State
 Council"
2. Ta jianren guojia jingji tizhi gaige weiyuanhui zhuren,
 he is also state economic system reform committee chairman
 zhongyang caijing lingdao xiaozu zuzhang.
 central finance leading group leader
 "He was also chairman of the National Committee for Reforming
 the Economic Systems and director of the Central Financial
 Group"
3. Zhao Ziyang shi zai yijiubaliu-nian di Zhongguo yixie chengshi
 is in 1986 end China some cities
 fasheng xuechao hou shouming danren daili Zongshuji de.
 break-out student-protest appointed acting General-Secretary
 "It was after the student demonstrations in some of the
 cities in China in the end of 1986 that Zhao Ziyang was
 appointed acting Party General Secretary" [D18]

This passage has the structure of an Issue predicate in which propositions 2 and 3 are each adjuncts to the nucleus in proposition 1. According to the structural patterns for rhetorical units discussed earlier, the reference to *Zhao Ziyang* in proposition 3 should have been realised as PA, as in proposition 2, since it occurs at the boundary of a lower-level rhetorical unit. I suggest that the nominalisation here is a consequence of the emphatic use. By the use of a full NP in the place of an expected pronoun the writer may intend to emphasise what is contained in the current adjunct, making it more prominent than the preceding adjunct. In the present case, the dramatic circumstances under which *Zhao Ziyang* was appointed the acting General Secretary as well as the greater importance of this appointment than the previous appointments is being emphasised.⁸

It is worth pointing out that this pattern typically occurs in an Issue predicate with more than one adjunct and one of these adjuncts which conveys more important information than the others is the one that gets emphasised through the use of a full NP

⁸An additional piece of evidence for this emphatic use is the presence of the emphatic construction *shi...de* in the sentence in which the part being emphasised is placed after *shi*.

in the place of an expected pronoun. Now consider the passage in (14).

- (14) 1. Tian Jiyun zhongshi pinkun diqu nongcun jingjide fazhan.
give-priority-to poor region rural economic develop
"Tian Jiyun has attached great importance to the rural
economical development in the poverty regions"
2. Yijiubaliu-nian wu-yue Guowuyuan chenglile pinkun diqu
in 1986 May State Council set-up poor region
jingji fazhan xiaozu,
economic development group
"The State Council set up the Group for the Economical
Development in Poor Regions in May 1986"
3. zhihou Guowuyuan jueding cong-zhenian-qi lianxu wunian
later State Council decide from-that-year consecutive 5-year
meinian xiang yue baqian-wan renkou de pinkun diqu
each-year to about 80,000,000 people poor region
zeng-bo shiyi yuan de daikuan.
provide-additional one billion Chinese dollars fund
"it later decided to provide an additional fund of one
billion yuan to the poor regions with a population of 80
millions each year for five consecutive years"
4. Dan Tian Jiyun zai pinkun diqu xunshi shi,
but in poor region inspect when
"When Tian Jiyun inspects the poor regions however"
5. 0 zongshi qiangdiao, naxie diqu de zhenfu he renmen
always stress, those region's government and people
yao nuli tansuo shihe zishen fazhan de menjing,
must hard find suit own development way
buduan zengqiang zishende 'zaoxue jineng'.
continually strengthen own make-blood capability
"(he) always stresses that the local governments and the
people in those regions should make continual efforts to
explore ways for their own development and enhance their
'capability of producing blood'" [D20]

This passage was used in the previous chapter on rhetorical units where it was noted that the instance of NA in proposition 4 was related to the non-structural factor of emphasis even though a PA would have been expected by structural considerations. Note that the first Issue adjunct (propositions 2-3) only presents factual background information for the claim made in the Issue nucleus (proposition 1), whereas the second adjunct (propositions 4-5) in which the NA is contained not only supports but also re-enforces the claim by emphasising Mr Tian Jiyun's personal involvement in the matter. Obviously the information contained in this adjunct outweighs the preceding one in terms of thematic development. To reflect the greater significance of the second adjunct, a full NP is used for the anaphor contained thereof, although a pronoun would be perfectly OK in terms of anaphor resolution, and in fact is predicted by our structural

principles. The passage in (15) offers another example.

- (15) 1. Wu Xueqian ba waijiao shi-wei guojia zhengzhi huodong de
BA diplomacy see-as country politics activity
yige zhongyao fangmian.
an important aspect
"Wu Xueqian regards diplomacy as an important aspect of
political activities of the state"
2. Ta qiangdiao ban waijiao bixu yi zhengquede zhengce wei
he stress handle diplomacy must use right policy as
zhidao, yi qiangdade guo-li wei houdun.
guide use strong national-strength as home-base
"He stresses that diplomatic work should be guided by the
correct policies and backed by the strength of the state"
3. Ta yaoqiu waijiaobu nuli fahui zai waijiao fangmian
he ask Foreign Ministry try show at diplomatic front
zuwei Dangzhongyang he Guowuyuan de zhixing
as Party central committee and State Council's executive
jian canmou jiguan de zuoyong,
and consultative office role
"He insists that the Foreign Ministry should give a full play
to its executive and consultative role for the Party Central
Committee and the State Council in making foreign policies"
4. 0 bing lingdao waijiaobu jianjue guance zhongyang
and lead foreign ministry firmly implement central-committee
zhidingde duli zizhu heping waijiao zhengce,
make independent self-decision peace foreign policy
jiji kaizhan waijiao huodong, kaichuanle xinde junian.
actively do diplomatic work create new situation
"and (he) leads the Foreign Ministry to resolutely implement
the policy of independence, self-decision and peace made by
the Party Central Committee and actively carry out diplomatic
work, thus having brought about a good new situation"
5. Wu Xueqian qiangdiao, waijiao yao wei guoneide gaige he
stress diplomacy must for internal reform and
duiwai kaifang fuwu.
external open-door serve
"Wu Xueqian emphasises that diplomacy must serve the current
economic reform and open-door policies."
6. Jin-ji-nian Zhongguode "jingji waijiao" ye qudele chengxiao.
last-few-years China's economic diplomacy also gain effect
"In the past few years China's 'economic diplomacy' has
been effective" [D21]

The NP *Wu Xueqian* is first mentioned as a full NP in the Issue nucleus (proposition 1), as PA in the first two adjuncts (propositions 2 and propositions 3-4), and then as NA in the third adjunct (proposition 5). In terms of topicalisation, the NP, being mentioned as subjects of its propositions, is the topic of the whole discourse. Yet, in the place of an expected pronoun, we find a full NP.

The use of a full NP in proposition 5 appears to be motivated by the semantic or thematic importance of the proposition. That is, while the first two adjuncts are concerned with the general "code of conduct" that the Foreign Ministry is supposed to follow, the third adjunct (propositions 5-6) relates to the current central task for China: its economic reform and open-door policy. It is apparently more important than the preceding two adjuncts. The use of a full NP thus reflects an effort on the part of the writer to emphasise the greater importance of the material contained in the adjunct.

The use of NA for emphatic purposes may also fall under the umbrella of highlighting discussed in relation to the pattern of comparison and contrast. That is, the communicative function of emphasising is being highlighted by the use of a full NP which otherwise could have been realised as a pronoun. In my data texts I came across 11 instances of full NPs which are associated with the pattern of emphasis.

In my corpus I also found a number of cases in which a full NP was used for an anaphor occurring in the last of the adjuncts of an Issue predicate, as exemplified in the following passage.

- (16) 1. Jian-guo hou dao 1966-nian "Wenhua Dageming" kaishi shi Wan Li
 since 1949 till 1966 Cultural Revolution start when
 changqi congshi chengshi jianshe fangmiande lingdao gongzuo.
 long-term do urban building aspect leading work
 "From the founding of New China in 1949 until the start of the
 Cultural Revolution in 1966, Wan Li was in charge of the work
 of urban reconstruction in China"
2. Ta danrenguo zhongyang jianzhu gongcheng bu fu-buzhang,
 he was central building project Dept. vice-minister
 zhongyang chengshi jianshe bu buzhang.
 central urban building Dept. minister
 "He was deputy head of the Department of the Central
 Construction Projects and head of the Department of Central
 Urban Construction"
3. 1958-nian-qi Q ren Beijing shi fushizhang,
 from 1958 was Peking city deputy-head
 reng fenguan shizheng jianshe.
 still in-charge-of urban construction
 "From 1958 onwards (he) was deputy mayor of Beijing
 Municipality in charge of the urban construction in Beijing"
4. Ta xiezhu yigu Zhou Enlai zongli lingdaole wushi niandai
 he help late premier lead 50's decade
 baokuo renmin dahuitang zaineide zhumingde shi-da
 include people's great-hall in famous ten-big

jianzhu he shoudu qita zhongyao jianshe xiangmude
buildings and capital other major building projects'

guihua yu zuzhi gongzuo.
plan and organisational work

"He assisted the late Premier Zhou Enlai in planning and organising the construction of the well-known ten major buildings including the People's Great Hall and other major building projects in the capital"

5. Youyu zhe fangmiande jingli, Wan Li 1984-nian bei-xuanwei
because of these experiences in 1984 was-elected

Zhongguo chengshi kexue yanjiu hui mingyu huizhang.
Chinese urban science research association honorary head
"Because of these experiences, Wan Li was elected, in 1984,
honourary president of the Association of Chinese Urban
Scientific Research"

[D17]

The NP *Wan Li* is first introduced into the discourse through a full NP in proposition 1 (the nucleus of the Issue predicate), then mentioned as PA and ZA in propositions 2-3 (the first Issue adjunct), and mentioned again as PA in proposition 4 (the second Issue adjunct). The following mention of *Wan Li* in proposition 5 (the third adjunct) takes the form of a full NP. Surely, from the point of view of anaphor interpretation, the mention of the NP in proposition 5 could be realised as PA since it occurs at the boundary of a lower-level rhetorical unit and its referent is the topic throughout the discourse. Why, then, is a full NP used where a pronoun is structurally warranted?

As a possible answer, I suggest that the use of NA has to do with the conclusive nature of the proposition it occurs in. That is, the third adjunct (proposition 5), while being a further adjunct of the nucleus, actually concludes what is presented in the preceding adjuncts (and the statement made in the nucleus). That is, Wan Li's election to the position of the honorary presidency of the Association of the Chinese Urban Scientific Research in 1984 follows on and successfully concludes his past experiences presented in the preceding material. In other words, it "stands out" from the preceding co-adjuncts in terms of semantic/thematic prominence. The use of a full NP in the place of an expected pronoun is thus intended to mark the conclusive nature of the proposition or the adjunct. The following is another illustrative passage.

- (17) 1. 1903-nian, zhu Xini de ershi-guo lingshi qianshu
in 1903 in Sidney 20 countries consuls sign

gongtong shengming, zidong chengren Mei Guangda wei
together statement offer recognise as

shishishangde Zhongguo lingshi.
factual Chinese consul

"In 1903 the consuls from the 20 countries stationed in Sidney signed a statement recognising Mei Guangda as *de facto* Chinese consul"

2. Yuci-tongshi, yi Aozhou zongli weishou baokuo
meanwhile with Australia premier as-head including
shengzhang, dafaguan, shizhang, yiyuan gong ershisi-ming
province-head supreme-justice mayor MP in-all twenty-four
guanyuan lianming, queren ta wei Aozhou
official joint-name recognise him as Australian
huaqiao daibiao.
Overseas-Chinese representative
"At the same time, twenty-four officials headed by the
Australian Prime Minister, including provincial heads, supreme
justices, mayors and MPs, joined their names in recognising
him as representative of the Overseas-Chinese in Australia"
3. Xini shizhang zai shizhengting juxingde yige dayanhui shang
Sydney mayor at city-hall held a great-banquet
daibiao gejie zenggei ta yige yinpan he sanbaisanshi aobang,
represent all-circle present him a silver-plate & 330 pounds
"At a banquet held in the City Hall, on behalf of people of
all circles, the mayor of Sydney presented him with a silver
plate and 330 Australian pounds"
4. yi biao Zhang ta zai fazhan Xini shangye zhong
to commend him in develop Sydney commerce
suo zuochude gongxian.
what-he-do contribution
"to commend him on his contribution in the development of
commercial business in Sydney"
5. Mei Guangda shi huo ci shurong de diyige Zhongguo yimin.
is get the honour first Chinese immigrant
"Mei Guangda was the first Chinese immigrant to be
granted these honours"

[D35]

The structure of this entire text is an Issue predicate in which proposition 1 is the nucleus, proposition 2 the first adjunct, propositions 3-4 the second adjunct and proposition 5 the third adjunct. Although the NP *Mei Guangda* is mentioned in object position until proposition 5, the whole text obviously centres on this NP and the references to it are all realised by the use of PA in the first and second adjuncts. The use of a full NP in the third adjunct (proposition 5) appears to be motivated by the conclusive nature of the proposition in which it is contained, namely, the fact that he was the first Chinese immigrant to be granted these honours concludes what is presented in the preceding material.

It may be worth noting that in the pattern of conclusion, it is the last of the adjuncts of the Issue predicate that is associated with the use of a full NP for conclusive purposes. In the case of the pattern of emphasis, however, there does not seem to be any

placement requirement, and in theory, any of the adjunct can stand out for emphasis which is marked by the use of a full NP, though it should be pointed out that most of the full NPs associated with the pattern of emphasis in my texts occurred in the last of the adjuncts of an Issue predicate (which may have to do with the so-called end-weight). The distinction between these two patterns of emphasis and conclusion is then to be drawn, crucially, by the thematic nature of the materials in which they are contained, that is, whether the materials are of emphatic or conclusive kind.

In the corpus there are 13 instances of NA which are used in the pattern of conclusion.

8.6 Different perspectives

In a discourse consisting of several propositions, the whole discourse can be presented from the perspective or point of view of a particular individual or it may be presented from the perspectives of two or more individuals. The different perspectives from which a discourse is presented seem to have consequences for the use of anaphora in the discourse. Let us now consider the following passage.

- (18) 1. Beijing-shi shizhang Chen Xitong zai jintian de
 Peking-city mayor at today's
 rendaihui shang bei-renming wei guowu weiyuan.
 people's-congress-meeting be-appointed as state secretary
 "Chen Xitong, mayor of Beijing, has been appointed Secretary
 of State Council at today's session of the People's Congress"
2. Chijian guanchajia renwei, anpai Chen Shizhang jinru Guowuyuan
 local observers think arrange enter State Council
 keneng shi weile bianyu xietiao zhongyang zhengfu he
 maybe is for easy co-ordinate central government and
 Beijing-shi difang zhijian de guanxi.
 Peking-city local between relationship
 "According to the local observers, the appointment of Mayor
 Chen as Secretary of the State Council may aim to facilitate
 the co-ordination between the central government and the
 local government of Beijing" [D29]

The passage has the structure of an Issue predicate with proposition 1 serving as the nucleus and proposition 2 as its elaboration adjunct. The NP *Mayor Chen Xitong* is first mentioned in proposition 1 and its following mention in proposition 2 takes the form of a full NP. This second mention could be realised by a pronoun, resulting in no

ambiguity as to its identity at all, since its referent is the topic of the discourse (cf. the structural principles for active patterns). It is interesting to note that although the NP *Mayor Chen Xitong* is the focus of the discourse, there occurs a change of discourse perspective (or point of view, see Kuno (1987)), from that of the subject NP of the first proposition to that of the subject NP of the second proposition (i.e. *the local observers*). Although the NP *Mayor Chen Xitong* is an established topic in the first proposition, it is a first-mention topic from the perspective of the (matrix) subject NP in the second proposition, which thus gives rise to the use of a full NP. The factor of different perspectives seems to be the motivation for the use of NA in proposition 2 in (18).

It should be noted that the 10 instances of full NPs used in a similar circumstances to (18) in my data are associated with the verbs such as *renwei* "think"; "take the view that", *toulu* "reveal", *miaoshu* "regard as; describe as", or phrasal prepositions such as *ju...suoshuo*; *ju...(toulu)* "according to". These words are used to introduce or "frame" different points of view. The following is another passage in which a full NP is used for the purpose of a different perspective.

(19) 1. Zhao Ziyang danren zongli hou duoci chuguo fangwen.
become premier after many-times out-of-China visit
"Zhao Ziyang paid several foreign visits after becoming the premier"

2. 1985-nian shi-yue, ta zai di-sishi-jie Lianheguo dahui shang
in 1985 October he at the 40th UN conference

fabiao yanshuo, chanshu Zhongguode duli
make speeches expound-on China's independence

zizhu heping-waijiao zhengce.
self-decision peace-diplomacy policy

"In October 1985 he addressed the 40th general assembly of the United Nations, expounding on China's foreign policies of independence, self-decision and peace-making"

3. Xifang xinwenjie yi "congrong-bupo xianshile
western press use relaxed display

jingrende zixinxin" lai xingrong Zhao Ziyang
surprising confidence to describe

zai waijiao huodong zhong de fengdu.
in diplomatic activity manner

"The western press described Zhao Ziyang's diplomatic activities as "relaxed and easy-going, which displayed his remarkable self-confidence"

[D18]

The whole text focuses on the NP *Zhao Ziyang*, which first occurs as a full NP in proposition 1, then as a pronoun in proposition 2, and occurs again as a full NP in

8.7 Conclusion

In the preceding sections, I have presented some non-structural factors that are shown to favour the occurrence of nominal anaphora.⁹ They include further characterisation, classification, comparison and contrast, emphasis, conclusion, and different perspectives.

The correlation of these non-structural patterns with the use of full NPs has been argued to be well motivated. For example, the use of full NPs in the pattern of further characterisation is motivated by the strategy of space-saving and/or a more smooth and concise flow of discourse, while the use of full NPs in the pattern of classification is motivated by the strategy of bringing out the referent's membership in a category on the basis of already-given information. The use of full NPs in the patterns of comparison and contrast, emphasis and conclusion, on the other hand, is motivated by the strategy of highlighting the contrastive, emphatic and conclusive nature of the materials. And the use of full NPs in the pattern of different perspectives is motivated by the strategy of highlighting the different perspectives or points of view from which the discourse is being presented at a particular point.

These findings indicate that while rhetorical organisation of the discourse is crucial in the patterning of anaphora, it cannot account for *all* instances of anaphora; there are also non-structural factors that play a part in determining the use of anaphora. These non-structural factors have other communicative functions as their sources, but they are rarely discussed in the literature on anaphora in Chinese and thus it is particularly important to examine them here.

⁹Non-structurally motivated use of pronominal anaphora in places where structurally we would expect zero anaphora is not impossible (Li, C-i. 1985), but it is not obvious in my data; where there appear to be such instances, they seem to be accountable for by our structural rules. Consequently discussion of it has not been included in the present study. It is interesting to note however that non-structural use of anaphora of the reversed order is non-existent in my data. That is, I did not find any instance in which a pronoun or zero pronoun is used for non-structural reasons in a place where a noun or pronoun is structurally expected. This appears to suggest that non-structural factors represent the "marked cases" and that marked cases tend to require more explicit forms in terms of anaphora.

CHAPTER 9 COMPARISON WITH OTHER APPROACHES TO ANAPHORA

9.1 Introduction

In this chapter, we will be considering a number of crucial example passages taken from my corpus of expository texts in order to compare the approach delineated in the preceding chapters with some of the other major theories of discourse anaphora examined in chapter 2. These theories that I will discuss below are Givon's Continuity Principle, Reichman's Context Space theory, Hind's Peak Sentence hypothesis (these three are based on English), and Chen's discourse pragmatic approach and Li C-i's discourse structural approach (these two are based on Chinese). I will attempt to demonstrate that these theories of discourse anaphora fail in their own individual ways to account for the range of anaphoric facts explored in this study.¹ I will proceed by presenting five expository passages with critiques on how each of the other theories of discourse anaphora fails where the approach developed in this study succeeds.

9.2 Comparison with other approaches

Let us start by considering the passage in (1) below.²

- (1) 1. Wushiyi sui de Li Tieying zai jintian Renda huiyi shang
 51 years old Li Tieying at today national people's congress
 bei-renming wei xinde yijie Guowuyuan de guowu-weiyuan
 be-appointed as new term State Council's councillor
 jian Guojia Jiao-wei zhuren zheyi zhongyao zhiwei.
 and National Educational Council chairman this important post
 "51 years old Li Tieying was appointed at today's session of
 the National People's Congress as state councillor of the new
 State Council and chairman of the State Educational Council"

¹Since Givon, Reichman and Hinds deal with English which only has two types of discourse anaphora, namely, PA and NA, as against three types of anaphora in Chinese, i.e. PA, NA and ZA, in the following analysis of the Chinese texts, I will obviously not subject these English-based theories to analysing anaphoric choices between ZA and PA; attention will instead be focused on the use of PA (or ZA) and NA. When I examine the approaches by Chen and Li C-i however, I will consider the alternation between ZA and PA in the texts as well.

²The example passages in this chapter were all used in the preceding chapters except the one in (1), which, despite its short length, is the full text of an article.

2. Li Tieying yijiusanliu-nian shengyu Zhonggong lingdao de
in 1936 be-born CCP lead
kang-Ri genjudi Yan'an.
anti-Japanese base Yan'an
"Li Tieying was born in 1936 in Yan'an, a base led by the
Chinese Communist Party during the war against Japan"
3. Fuqin Li Weihang shi he Mao Zedong tongshidai de gemingjia.
Father is with contemporary revolutionary
"(His) father, Li Weihang, was a contemporary revolutionary of
Mao Zedong"
4. 1961-nian, Li Tieying cong Jiekesiluofake liuxue hui-guo hou,
in 1961 from Czechoslovakia study return after
"After Li Tieying returned to China from Czechoslovakia upon
completion of his study there in 1961"
5. Q changqi zai dianzi gongye bumen renzhi.
long-term at electronics industrial departments work
"(he) had worked for a long period of time in electronics
industries"
6. 1981-nian Q ren Zhonggong Shenyang Shiwei shuji,
in 1981 become CPC Shenyang Municipality secretary
"(He) became Party Secretary of Shenyang Municipality in 1981"
7. liang-nian hou Q ren Liaoning Shengwei shuji,
two-years later become Liaoning Province secretary
chengwei guonei zuinianqingde shengwei shuji zhiyi.
become China's youngest province secretary one-of
"two years later (he) became Party Secretary of Liaoning
Province, one of the youngest provincial Party bosses in China"
8. 1982-nian Zhongyang "shi'er-da" shang, Li Tieying bei-xuan-wei
in 1982 CPC 12th plenary on is-elected-as
houbu zhongyang weiyuan,
alternate central-committee member
"At the Party's 12th plenary session in 1982, Li Tieying was
elected an alternate member of the Party Central Committee"
9. 1985-nian Q jinsheng-wei zhongyang weiyuan.
in 1985 promoted-as Central-Committee member
"(he) became a full member of the Committee in 1985"
10. 1985-nian Q diaoren dianzi gongyebu buzhang.
in 1985 is-appointed electronics industry minister
"(He) was appointed in the same year head of the Ministry
of Electronics Industry"
11. 1987-nian si-yue Q you bei-renming-wei guojia jingji
in 1987 April then is-appointed-as national economy
tizhi gaige weiyuanhui zhuren.
system reform committee chairman
"(He) was then appointed chairman of the National
Committee for Reforming the Economical Systems" [D22]

The NP *Li Tieying* is introduced into the discourse via a full NP in proposition 1, whose following mentions in propositions 2 and 4 also take the form of full NPs. It is subsequently referred to by ZA in propositions 5 through 7. Its following mentions are encoded with NA in proposition 8 and ZA in propositions 9 through 11.

With the approach adopted in this study, the NAs in propositions 2, 4 and 8 are predicted by their occurrence at the beginning of high-level rhetorical units, in which propositions 2, 4 and 8 each begins a background adjunct to the nucleus (proposition 1) of the encompassing Issue predicate. That is, the first adjunct (propositions 2-3) gives information about his family background; the second adjunct (propositions 4-7) switches to his early experiences in electronics industry and experiences of being a local Party secretary; the third adjunct (propositions 8-11) then goes on to present his ministerial experiences, which is directly relevant to his new appointment mentioned in the Issue nucleus (proposition 1). The instances of ZA in propositions 5-7 fall under the active pattern principles (and reapplication of these) which specify that ZA is used for co-referential subjects in active patterns involving conjoining predicates or non-Issue adjoining predicates. And this analysis applies to the instances of ZA in propositions 9-11 as well. Thus, the instances of anaphora in this passage are accurately predicted and well accounted for in this study.

Givon's continuity principle is crucially based on the notion of referential distance, according to which the greater the distance between two mentions of a referent, the greater the likelihood that the second mention will be realised as a full NP.³ Note in the passage, however, that the full NPs in propositions 2 and 8 occur when their antecedents are mentioned in the immediately preceding propositions and the full NP in proposition 4 has its referent implicitly mentioned in proposition 3 and explicitly mentioned in proposition 2. Since zero pronouns are used under the same distance conditions (in propositions 5, 6, 7, 9, 10, and 11), clearly, then, the continuity principle cannot predict the use of ZAs (or PAs) and NAs in this passage.

Within Reichman's context space theory, the use of PA is possible so long as the proposition containing the antecedent is active or controlling. If we suppose that Reichman's model could be extended to include the relations such as background and elaboration, then the instances of zero pronouns in the text are in fact predicted in her hypothesis, since they are all in the active environment. What Reichman's theory cannot predict is the NAs in propositions 2, 4 and 8 where PAs would have been perfectly

³As noted in Chapter 2, although thematic continuity is briefly introduced in Givon's work, it is never integrated into the quantitative analyses.

acceptable and interpretable. The use of full NPs to mark the boundaries of (high-level) rhetorical units apparently is not captured in Reichman's model.

According to Hinds' peak sentence hypothesis, full NPs occur in peak sentences of segments/paragraphs and pronouns occur in non-peak sentences. While it is not entirely clear what criteria should be used in judging the "peakness" of a sentence, it is reasonable to say that the sentence consisting of propositions 4 and 5, which contain a nominal reference to the NP *Li Tieying*, is no more "peak" than the following sentence consisting of propositions 6 and 7, which contains ZA references to *Li Tieying*; both sentences are equal members of a Succession predicate. Similarly, the sentence (propositions 8 and 9), in which *Li Tieying* is mentioned via a full NP, seems no more "peak" than the following two sentences (propositions 10-11), in which the same NP is mentioned via ZAs. It thus appears that "peakness" is not what is at issue here.

Within Chen's discourse-pragmatic model, nominal anaphora is used if competing antecedents are present, or the anaphor and its antecedent are separated by a great distance or the anaphor occurs at such major breaks as paragraph boundary. The instance of a full NP in proposition 4 may, arguably, have to do with the occurrence of two different NPs in the preceding proposition (i.e. *Li Weihan*, *Mao Zedong*) and thus is accountable for in terms of possible interference from other referents, but the instances of full NPs in propositions 2 and 8 whose antecedents are mentioned in the immediately preceding propositions with no other competing NPs present clearly go against any predictions based on notions of possible interference and/or great distance between two mentions of the referent. The NAs in propositions 2 and 8, however, may still be accommodated if we assume that these propositions represent the major breaks of the discourse (i.e. paragraph boundaries), though it is quite doubtful that there is such a major break at proposition 8, which contains a full NP reference to *Li Tieying*, from the preceding propositions (4-7).

In Chen's work, the choice between pronouns and zero pronouns involving coreferential subjects depends crucially on whether they occur within or across sentence boundaries, and if they occur within sentences, whether they occur in subordinate or main clauses. ZA is used within sentences and in the subordinate clauses, whereas PA

is used in the main clauses or across sentences. However, we see that ZA occurs in the main clause in proposition 5 and occurs at the beginning of a new sentence in proposition 6. ZA is also found to occur at the boundaries of new sentences in propositions 10 and 11. Clearly, Chen's discourse-pragmatic model cannot predict the use of ZA and PA in this text and its prediction of the use of NA is doubtful at least for the NA in proposition 8 here.

With regard to Li C-i's discourse structural model, full NPs are used at the boundaries of paragraphs and pronouns are used at the boundaries of topic chains and empty pronouns are used within topic chains. Viewed in this vein, it is tempting to say that the NAs are used in propositions 2, 4 and 8 because they correlate with paragraph boundaries. However, this analysis is open to question since it is not altogether clear what criteria should be used to decide on paragraph boundaries. For instance, it is quite possible to treat propositions 4-7 as forming a paragraph either with propositions 8-11 or with propositions 2-3. As for the instances of ZA in the passage, one may say they fall in the same topic chains: the ZAs in propositions 5-7 are within the topic chain headed by proposition 4 in which the antecedent is mentioned via a full NP. The same description is applicable to the instances of ZA in propositions 9-11.

The difficulty with this analysis however is that one is not clear whether it is the type of discourse structure (e.g. topic chain) that "induces" the type of anaphora (e.g. pronoun) or vice versa. This problem is particularly acute in the alternation between ZA and PA. If one comes across an instance of PA, this can be easily explained away by saying that it starts a topic chain; or if ZA is used, the ready explanation would be that it is still within the topic chain. How one would say if we found the use of PA in propositions 6, 10, and 11, which would be perfectly acceptable? Thus, in the present lack of proper characterisation of topic chain and of the relationships between topic chains within a paragraph, such a hypothesis offers little in predicting or accounting for the alternation between ZA and PA.

The following passage presents the use of pronouns in the environment where there are multiple possible antecedents.

According to the analysis developed in this study, this text shows the structure of an Issue predicate consisting of the nucleus and its three elaboration adjuncts. The nucleus comprises proposition 1, the first adjunct comprises propositions 2-6, the second adjunct comprises propositions 7-8, and the third adjunct comprises proposition 9. Now we turn to the use of anaphora in the text. The NP referred to as *Hou Yuehua* is first mentioned in proposition 1 via a full NP and its next mention is encoded in pronoun in proposition 8. I claimed in Chapter 6 that the pronoun in proposition 8 was possible, despite a gap of 6 propositions containing four other human NPs (*people, parents, children, and Yu Deli*), because of the topic status of its referent and its occurrence in a return pop (in which propositions 7-8 (the second adjunct) skip over propositions 2-6 (the first adjunct) and return to proposition 1 (the nucleus) containing the antecedent NP).

The essential claim of Givon is that the greater the gap between two mentions of a referent and/or the greater the number of other referents introduced between two mentions of a referent the greater is the tendency to use a full NP for the second mention of that referent. While this claim may be true at a general statistical level, in this particular case it appears to make a misleading prediction. As noted above, between the two mentions of the NP *Hou Yuehua* there is a gap of 6 propositions in which several human NPs are introduced -- enough by Givon's criteria to induce the use of a full NP; yet a pronoun is used. The failure of Givon's continuity principle to predict the use of a pronoun in this text suggests that recency and number of interfering referents by themselves are not the crucial issue on anaphora.

Reichman's context space framework seems to lack the machinery necessary for modelling this text since it lacks the structural relation of elaboration and thus lacks return pops associated with elaboration (and indeed background as noted in relation to (1) earlier). It is thus not clear how the instance of PA in proposition 8 would be accounted for by her theory. It is possible that the pronoun would be predicted since in the context space model return pops in general are realised by pronouns, but this cannot be known for certain. This indicates that Reichman's model is not powerful enough to provide a structural analysis of the text.

Hinds' paragraph structure model makes no claims about environments with potentially interfering referents and thus the use of anaphora in this passage falls out of

his hypothesis. However, if we take the passage as consisting of four segments, in parallel with the Issue nucleus and its three elaboration adjuncts, we should then expect a full NP in proposition 8 in the third segment (i.e. our second adjunct), as would be predicted by Hinds' hypothesis. We can, in the face of this passage, at least say that Hinds' scheme is rather too narrow and not powerful enough.

Chen's discourse-pragmatic approach would make wrong prediction about the choice of anaphora in proposition 8 here, because one of her claims, like Givon's hypotheses, specifies that a full NP is used in the case of competing referents and/or great distance between two mentions of a referent. Since both conditions are met here, a full NP would be wrongly predicted.

Li C-i's three-level discourse units may be able to predict the use of PA in proposition 8 in the passage in that the pronoun begins a topic chain. The drawback of this analysis, however, is that Li's account does not appear to allow for or at least makes no claims about the separation of a pronoun-led topic chain from its antecedent sentence. Li's hypothesis thus is not adequate for the account of the pronominal anaphor in this passage.

Let us now move on to the passages in (3) and (4) which contain full NP references where pronouns would have been completely interpretable.

- (3) 1. Zai Fuzhou duanduande shi-tian, Fan Dalei quguo jici yiyuan,
 at Fuzhou short 10 days go several-times hospital
 "During his ten days in Fuzhou, Fan Dalei went to the hospital
 several times"
2. 0 budebu kao huan-xue lai weichi richang shenghuo.
 have-to rely-on change-blood to keep daily life
 "(he) had to undergo blood transfusion to keep his life going"
3. Bingmo shi gangguo buhuo-zhinian de Fan Dalei
 sick-devil make just-over 40-years Fan Dalei
 mianrong-tuhuang, qiaocui.
 face-grey withered
 "The devil of disease has made the 40-year-old Fan Dalei look
 very grey and pallid" [D40]
- (4) 1. 1983-nian, ta (Wan Li) zai yici youyisai zhong jibaile laizi
 in 1983 he at a friendly match beat come-from
 "wangqiu-zhiguo" Aodaliya de zhu-hua dashi.
 tennis' country Australia's to-China ambassador
 "At a friendly match in 1983, he (Wan Li) beat the Australian
 ambassador to China, who came from a tennis-strong country"

2. Aodaliya xinwenjie dezhi hou,
Australian press know after
"When this news reached the Australian press"
3. zai baoshang dengle Wan Li de dafu zhaopian,
in newspaper carry Wan Li's big photo
"(they) publicised big photos of Wan Li in newspapers"
4. bing zhuwen baodao Zhongguo fuzongli de qiuyi.
and write-article tell China vice-premier's tennis-skill
"and wrote articles about the Chinese vice-premier's
tennis skills" [D17]

The structural organisation of these two passages would sanction the use of PA in proposition 3 in (3) and proposition 4 in (4), in that in (3) the NP *Fan Dalei* is the running topic of the passage and in (4) both the antecedent and the anaphor are mentioned as objects in two consecutive propositions. The motivations which I proposed for the use of full NPs in these two passages are the non-structural factors of further characterisation in (3) and classification in (4). In (3) it is the age of *Fan Dalei* that is being highlighted -- a fact that is significant in displaying his absolute dedication to his work, that is, it is not because of his age but because of his extremely hard work that has caused him his health. But this information is brought in not through a full clause/sentence, but through a full NP, to save space and to achieve a more succinct style. In (4), the use of a full NP in the place of an expected pronoun serves to bring out the referent's membership in a category. That is, what interests the Australian press is not that their ambassador was beaten in a tennis match but that he was beaten by an aging vice-premier of communist China, which really was something quite unexpected. The status (or membership-in a-category) of the referent is thus important to understand the excitement of the Australian press. So, the use of full NPs in the above two passages are not based in the rhetorical organisation of the texts but in some other, non-structural, aspects of the texts.

Here again Givon's continuity principle fails to make an accurate prediction. In both passages the propositions containing the full NPs, *the 40-year-old Fan Dalei* in (3) and *the Chinese vice-premier* in (4), both come immediately after the propositions containing their antecedent NPs. There is absolutely no gap between the mentions of the referents. There are no other interfering referents either. Yet the references are realised by full NPs. If the claim is that short distances and no interfering referents are the factors for the use of pronouns, then there is surely something missing from the account, since in these two passages the distances are minimum and interfering referents are non-existent.

Reichman's theory makes inaccurate predictions, at least for the passage in (3), because it does not allow the possibility of a full NP being used where a pronoun would be cognitively interpretable. The model predicts a pronoun in (3) since the propositions containing mentions of the referent are clearly in an active context space and the referent is in high focus, thus the use of a full NP here seems to go unaccounted for in this model. It can however predicts the use of a pronoun in (4) since although the antecedent and its anaphor occur in an active space, they are, by being objects, both in medium focus. It should be pointed out however that although the full NP in (4) is predictable in Reichman's account, some of the focus level assignment rules and the reference rules proposed by Reichman are open to question (see the discussion on Reichman in Chapter 2), since it is beyond doubt that the use of pronoun in (4) is perfectly allowed.

If we turn and consider the instances of nominal anaphora in (3) and (4) in terms of Hinds' peak sentence hypothesis, we will not get any further either because the sentences containing the full NPs are not any more peak than the others. Taking into consideration that "peakness" is difficult to determine, it appears to me that the first two propositions in (3) and the first proposition in (4) are most likely to qualify as peak sentences since they scope over the other sentences in the texts whose roles are supportive of the assertions made in the peak sentences. Since the only explanation offered for the use of full NPs is peakness, the instances of full NPs in these two passages also seem to go unaccounted for in Hinds.

The use of full NPs in (3) and (4) also appears to cause problems for Chen because her model will predict the use of pronouns instead of full NPs here. In (3) a pronoun is expected since the reference is made at the beginning of a sentence, a location of minor discontinuity in discourse, within the boundary of a paragraph with no other possible referents present in the relevant environment. Chen's scheme will also predict the use of pronoun in (4) since the mentions of the referent in propositions 3 and 4 occur in the same sentence, and in the same syntactic positions (i.e. in a maintained reference, to use Chen's terminology). Its failure to account for the use of full NPs in (3) and (4) indicates that Chen's discourse-pragmatic approach, which leans significantly on Givon's continuity principle, is some distance away from being a full account of anaphora in discourse.

6. Zai jiaxiang yishu zhongxin yici yanchu-zhong Li Xiaolong
 at home-town art centre a performance-in
 you yiwaide faxianle zijide yinyue caineng.
 again unexpectedly discover his music talent
 "During a performance at the Arts Centre in town, Li Xiaolong discovered, quite unexpectedly, his talent for music"
7. Yuedui you wei gushou linshi sheng-bing,
 band have a drummer unexpectedly fall-ill
 buneng shangchang, shei neng daiti ne?
 cannot perform who can replace
 "A drummer of the band was taken ill just before the performance and could not act in the performance. Who could take his place?"
8. Congwei dengguotaide Li Xiaolong yipai-xiongpu shuo: "Wo lai"
 never appear-on-stage stuck out his chest say I come
 "Li Xiaolong, who had not had any stage experience before, stuck out his chest and said, 'I can do it' "
9. Yanchu jing yiwaide chenggong.
 performance unexpectedly successful
 "He did his part unexpectedly well"
10. Yinian-hou, Li Xiaolong kaoshangle Tianjin Yinyue Xueyuan.
 a year later exam-succeed Tianjin Musical College
 "A year later, Li Xiaolong took the exam and was admitted to the Tianjin Musical College" [D11]

The NP *Li Xiaolong* is introduced into the discourse as a full NP and then mentioned as pronouns in propositions 2-4. It is then mentioned via full NPs in propositions 6, 8, and 10. In terms of rhetorical organisation, this passage displays the structure of an Issue predicate consisting of the nucleus (propositions 1-3) and two elaboration adjuncts. The first elaboration adjunct consists of propositions 4-5 and the second adjunct consists of propositions 6-10. The Issue nucleus is realised by a Joint predicate with the first member realised by an embedded Issue predicate (propositions 1-2). The PA in proposition 2 is predicted by the active pattern principle (76) which specifies that PA is used for coreferential subjects in the adjunct of a (lower-level) Issue predicate and the PA in proposition 3 is predicted by the Active pattern principle (68) which specifies that PA is used for coreferential subjects in a conjoining predicate (Joint here). These two instances of PA thus are accounted for by the repeated application of the principles determining Active patterns.

Our principles for the use of anaphora at the boundaries of rhetorical units predict the occurrence of PA in proposition 4 at the boundary of the first Issue adjunct, but the occurrence of NA in proposition 6 at the boundary of the second Issue adjunct indicates that something other than rhetorical unit marking is at issue here. The account of this

NA is in fact non-structural: the NA in proposition 6 apparently has to do with the factor of emphasis. The use of a full NP in the place of a pronoun here is intended by the author to emphasise the importance of the event mentioned in the proposition in which the anaphor is contained: the event, although accidental and insignificant at first, was to change his life and for the better. The emphatic function achieved through the use of a full NP in the place of an expected pronoun thus motivates the use of the full NP in proposition 6 in the passage.

Within the second elaboration adjunct, there are two other instances of NA, namely, those of propositions 8 and 10, which should have been PA by our principles of rhetorical units (that is, propositions 7-9 and proposition 10 form separate adjuncts to the Issue nucleus in proposition 6). Again these instances of NA are accounted for by our non-structural principles. In proposition 8 the factor of further characterisation is responsible for the use of a full NP instead of an expected pronoun, and in proposition 10 the factor of conclusion contributes to the use of a full NP (that his admission to a musical college a year later "concludes" the event mentioned in propositions 6-9). Thus we see that the topic NP is referred to via full NPs in proposition 6, 8, and 10, where no other interfering NPs are present, for non-structural reasons.⁵ All the instances of anaphora in this text are well predicted in this study. How well are they accounted for by other approaches? As before, we first consider Givon.

Givon's hypothesis of recency and interference seems able to predict the instances of PA in propositions 2-4 in that the distance between mentions of the NP is short and interference from other NPs are non-existent. The theory however clearly runs into trouble in the case of the full NPs used in propositions 6, 8, and 10, since neither distance nor interference holds here: there is only one proposition/clause between mentions of the NP and there is practically no other interfering NPs in the context. Clearly Givon's continuity hypothesis cannot explain these instances of NA in the passage.

⁵A different NP *a drummer* is mentioned in proposition 7, which may pose some interference to the NP *Li Xiaolong* if it is mentioned as pronoun in proposition 8. However, this different NP actually will not cause any ambiguity since it is already replaced by the use of the interrogative pronoun *shui* "who". According to our Controlling pattern principles, the use of PA in proposition 8 is acceptable both structurally and cognitively since its antecedent is mentioned as topic in the controlling proposition (6).

Reichman's framework accurately predicts the use of PA in propositions 2-4 because the referent is in high focus in the active and the controlling context spaces. Her framework may also predict the occurrence of NA in proposition 6 if we assign the material contained in propositions 6-10 to a generating context space.⁶ However, within this generating space, the high-focus referent will be pronominalised; in other words, the use of full NPs in propositions 8 and 10 in the passage contradicts Reichman's account.

The instances of pronoun in propositions 2-3 can be predicted in Hinds' model of peak sentence since they occur in non-peak sentences. If we take propositions 4-5 and propositions 6-10 as comprising two highlighting segments (propositions 1-3, in this analysis, would be an introductory segment), then the full NP in proposition 6 will be accurately predicted in Hinds' model since proposition 6 is the peak sentence of its segment. However we still have the pronoun in proposition 4 left accounted for because this proposition should be the peak sentence of the segment and a full NP should be used if we are to accept Hinds' account. If Hinds' scheme allowed for the possibility of a segment containing (several) subordinate segments, then the full NPs in propositions 8 and 10 could be accommodated in his scheme. However, Hinds makes no claims about the recurrent embedding of segments within segments and thus the two instances of full NPs seem to go unaccounted for there.

Chen's approach also correctly predicts the instances of pronouns in propositions 2-4 because they occur at locations of minor discontinuity marked by the presence of conjunctions and/or sentence boundaries. Nevertheless, the use of full NPs in propositions 6, 8, and 10 does not seem to be captured by any of Chen's claims: both the referential distance and possible interference are minimum and these full NPs occur within the boundary of a paragraph (see footnote 4). Apparently, Chen's framework fails to account for the use of full NPs in this text.

Let us, finally, turn to Li C-i to see if his model offers a better account for the anaphoric choices in this passage. In Li's framework, as noted before, pronouns are correlated with topic chain and full NPs with paragraphs, and these two types of

⁶A generating context space is one in which a subordinate space is further developed into another subordinate space. Full NP are usually required for such context spaces.

anaphora are taken as formal markers for the relevant discourse units. In other words, the use of pronouns in propositions 2, 3, and 4 are contributable to the marking of the boundaries of the topic chains. This is a plausible explanation for the use of pronouns here, although it is not altogether clear what criteria should be use in judging topic chain boundaries other than formal markers of anaphoric expressions. With regards to the use of full NPs in propositions 6, 8, and 10, as noted earlier in discussing Chen's work, since there are no sufficient grounds to break up propositions 6 through 10 into three separate paragraphs, I find no explanation in Li's hypothesis for these instances of full NPs in this passage.

9.3 Conclusion

I have, in this chapter, presented five passages taken from my corpus of expository texts and analysed the use of anaphora in these passages. It has been demonstrated that while the other major theories of discourse anaphora capture many significant insights, each of them fails to account for a substantial range of anaphoric facts exhibited in the texts analysed. It has also demonstrated that the approach developed in this study succeeds where the other major approaches fail, which thus indicates that the present study is more comprehensive and ultimately better than the other approaches I have discussed.

CHAPTER 10 CONCLUSION

10.1 Summary

In the thesis I have considered the nature and distribution of anaphora in a corpus of expository Chinese texts, using the framework of Rhetorical Predicate Analysis developed and used for this study. In the first chapter of this dissertation, I made two strong claims about the use of anaphora in discourse.

1. Anaphora in discourse is determined to a great extent by the structural organisation of the discourse.
2. Although the hierarchical structure of a discourse plays a major role in anaphor production and resolution, it cannot account for all instances of anaphora; there are also non-structural factors that play a part in determining the use of anaphora in discourse.

Chapters 4-9 presented the evidence which led me to make these claims. I have demonstrated, in keeping with the findings of Grosz (1977), Reichman (1981), Sidner (1983), Fox (1984), Tai (1978) and Li, C-i (1985), that anaphora is governed not by the linear surface nature of the texts -- i.e. not by distance or simple introduction of other referents -- but by the hierarchical structure and functional formation of the text. This essential finding about anaphora was based on a number of major patterns of anaphora that I have identified in my expository texts, which are summarised below.

The first major anaphor pattern that was considered in Chapter 4 is the Active pattern in which the antecedent is mentioned in the active proposition and the anaphor in the immediately following, current proposition. It has been found that in an active pattern, ZA or PA is used if the referent is the topic of the relevant discourse, otherwise NA is used.¹ The choice between ZA and PA here is then determined by the rhetorical structure of the relevant discourse: PA is used in Issue predicates while ZA is used in non-Issue predicates. Here, we can single out two factors that are crucial to the use of

¹As was argued in Chapter 4 on the Active pattern, PA was possible for a non-topic NP if both mentions of the NP occurred in the same syntactic positions (i.e. as objects). This was referred to as object antecedent-anaphor parallelism.

anaphora in this discourse context: types of discourse structure (as represented by different rhetorical predicates) and the topic status of the referent. I will come back to these two points again in the following discussion.

The next pattern which I discussed in Chapter 5 is the Controlling pattern, where the anaphor in the current proposition takes its reference from its antecedent mentioned in the controlling proposition. It has been shown that within a controlling pattern, the discourse structure of the propositions involved, particularly the discourse structure of the intervening proposition(s) which contains different subject NPs bears significantly on the use of anaphora in the current controlled proposition. PA or even ZA is possible if such an intervening proposition is an adjunct partner of a rhetorical predicate and NA is licensed if it is a nucleus partner.² As in the case of the Active pattern, the topic status of the referent in the Controlling pattern also affects the use of anaphora. PA (or ZA) is used if the referent serves as the topic of the relevant discourse (and if the intervening proposition(s) containing a different subject NP is an embedded adjunct, as noted earlier), otherwise NA is employed. Again the topic status of the referent and the discourse structural environment in which it occurs were shown to be the main constraints on anaphora.

We then considered the Return Pop and the Closed patterns in Chapter 6, both of which are involved with Issue predicates. I have tried to show that Return Pop is a special type of Active pattern in that when a return pop is made, the current proposition(s) returns to and reactivates a previous, higher-node proposition(s) (i.e. the nucleus of an Issue predicate), which as a result resumes its role as a reference point for the following discourse. In other words, the length of gap between two mentions of the referent or the presence of other possible referents in the intervening material is not crucial for the purpose of anaphora in a return pop. Consequently, principles determining the use of anaphora in the Active pattern apply to the Return Pop pattern as well: that is, PA is used for a return pop if the referent serves as the topic of the discourse, otherwise NA is used.

²The choice between PA and ZA here is, again, made on the basis of rhetorical predicate type: ZA is used with non-Issue predicates and PA is used in Issue predicates as well as non-Issue predicates, particularly conjoining predicates (see Chapter 5).

The Closed pattern, on the other hand, represents the kind of discourse environment in which the antecedent assumes a closed, background status as a consequence of its proposition(s) being popped over by the succeeding propositions. It has been demonstrated that NA is invariably used in the Closed pattern. As with the previous two patterns, i.e. the Active and the Controlling patterns, the use of anaphora in the Return Pop and the Closed patterns was shown to be governed by the structural organisation of the discourse and the topic status of the referent in the discourse.

The effect of rhetorical units on anaphora was the theme for Chapter 7, where it was demonstrated that the global structural organisation of the discourse dictated choice of anaphora such that different forms of anaphoric devices were used at the boundaries of discourse units of different levels in the hierarchical organisation of the discourse. We saw that NA was used at the boundaries of high-level discourse units and PA was used at the boundaries of lower-level discourse units.

10.2 Discourse structure and referents' topic statuses

I have tried to show that discourse structure and the referent's topic status are the two main constraints on the use of anaphora in my expository texts. We may call the first constraint the DISCOURSE STRUCTURAL CONSTRAINT and the second constraint the DISCOURSE TOPICAL CONSTRAINT. The Discourse Structural Constraint is concerned with the structural statuses of the propositions or rhetorical predicates in the hierarchical organisation of a discourse, which in this study are represented by the Active, Controlling, Closed, Return Pop and Rhetorical Unit patterns, and constrains the use of anaphora across different discourse structural patterns. As demonstrated in the dissertation, location at different points in the structural hierarchy of the discourse (as represented by the various structural patterns) will lead to variation in the use of anaphora in the discourse. For instance, the Active pattern was associated 61% of the time with the use of ZA (and 34% of the time with the use of PA and only 5% of the time with the use of NA). The Controlling pattern, on the other hand, was associated 56% of the time with the use of PA (and 36.5% of the time with the use of NA and only 7.5% of the time with the use of ZA). While the Return Pop pattern showed a

similar frequency of occurrence of PA (43%) and NA (57%), the Closed pattern was exclusively associated with the use of NA (100%). Finally, the occurrence of anaphoric expressions in the Rhetorical Unit pattern was governed, quite strictly, by the location of the propositions or rhetorical predicates in the structural hierarchy of discourse organisation: high-level rhetorical units were associated 97% of the time with the use of NA at their boundaries (only a marginal 3% with PA here) and lower-level rhetorical units were associated 81% of the time with the use of PA at their boundaries (only 19% with NA here).

These figures no doubt provide strong evidence for the important role of discourse structure in influencing the use of anaphora in discourse. We saw, however, that in most of the structural patterns, more than one form of anaphora could occur. How is this explained? This is where the second constraint, the Discourse Topical Constraint, comes into play. As shown in the thesis, the Discourse Topical Constraint helps select the right types of anaphora within a particular discourse structural pattern. In the Active and Controlling patterns, for instance, the following mention of a referent was expressed with ZA or PA if it was the topic of the relevant discourse,³ otherwise NA was used. Similarly, return pops were realised by the use of PA if the referents were discourse topics, otherwise NA was used. By the same reason, the Closed pattern was realised by the use of NA because the referents were non-topics by the time of their following mentions. Although the referents associated with rhetorical unit boundary marking were, by default, discourse topics and the choice between PA and NA were thus made mainly in discourse structural terms, it was still the case that the use of PA here did not violate, and thus was bound by, the Discourse Topical Constraint. It is thus clear that the Discourse Topical Constraint operates together with the Discourse Structural Constraint in governing the patterning of anaphora in discourse.

Although the structural organisation of a discourse played a major role in patterning anaphora, there were, in my corpus, uses of anaphora that were exceptional to it. It was argued that these exceptions were related to non-structural factors, which fulfilled other functional ends. The non-structural factors identified in my expository texts included Further Characterisation, Classification, Comparison and Contrast, Emphasis, Conclusion

³See Footnote 2 for an explanation of the alternation of ZA and PA here.

and Different Perspectives. For purposes of generalisation, these may be subsumed under the name of the DISCOURSE FUNCTIONAL CONSTRAINT, which accounts for the "marked" uses of anaphora in discourse. The number of the anaphoric uses that fell under this constraint was rather marginal in my corpus, only making up about 5% of the total anaphors considered, it nevertheless helped to bring an element of balance into the discourse structurally-based account.

Thus, with the three discourse constraints, the Discourse Structural Constraint, the Discourse Topical Constraint and the Discourse Functional Constraint, this study has, it is hoped, provided a principled account of anaphora in discourse and contributed to the understanding of the nature or mechanism of anaphora in discourse.

APPENDICES

[D1]

鄧小平為夏理遜紀念碑題字

新華社鄭州一月七日電（記者趙平安）中外來賓及各界人士千餘人，今天在河南省開封市集會，紀念偉大的國際和平戰士、中國人民的忠實朋友、加拿大人民的優秀兒子蒂爾聖·萊萃·夏理遜大夫誕辰一百週年。

夏理遜一八八八年一月七日生於加拿大安達略省蒂爾聖堡，是一位著名的外科專家和醫學博士。他長期從事國際戰災救援工作，一九二二年來到中國廣州，支持孫中山的革命工作。在三十年代，他到上海、天津等地行醫。在中國人民抗

擊日本帝國主義的戰爭中，他無私地幫助新四軍。抗日戰爭勝利後，他參加了聯合國善後救濟總署衛生醫務組工作，多次為解放區運送醫藥物資。一九四七年一月十日，他不幸於山東張秋逝世。遺體運至開封，安葬在一所小學院內。現在這所小學已被命名為夏理遜小學，以表示對夏理遜大夫的永遠紀念。

為了永遠紀念夏理遜大夫對中國革命和國際和平事業做出的重要貢獻，在開封烈士陵園還為夏理遜大夫修建了陵墓和紀念碑。

鄧小平親自為夏理遜大夫紀念碑題字。

全國人大常委會副委員長黃華、夏理遜大夫的侄女馬蒂·斯道理·夏理遜以及河南省有關官員參加了今天的紀念活動。

[D2]

人類生存史上罕見 醫學界又一未知數
農家女十年粒米未進言行自如

本報訊 湖北麻城市熊家鋪區月形塘村二十五歲的姑娘熊再定，近十年粒米未食。然而，令人驚異的是，她不僅活着，而且在臥牀八年之後獨立走路了。同濟醫科大學附屬協和醫院的專家認為，這是人類生存史上的罕事，醫學領域裏又多了一個未知數。

一九七八年二月，正在上初中二年級的十五歲學生熊再定突染重病，持續高燒，數日不退。經當地醫生診治，雖挽救了生命，但她再也不能吞嚥食水了。每當食水吞到食管中段，便產生劇烈的痙攣而嘔吐，極為痛苦，被迫“因噎廢食”。

小熊的父母請了不少醫生，均無濟於事，只好請鄉衛生所的醫生每隔十天上門為她注射百分之五十葡萄糖液，以維持生命。一九七九年，小熊曾昏迷十五天，心臟出現了停跳，但不治而癒。

麻城市委和市政府領導十分關心熊再定，撥出救濟款，於一九八六年一月將她送到武漢，住進了同濟醫科大學附屬協和醫院。

入院後，消化科專家張錦坤教授同神經內科、康復理療科的醫務人員一道，為小熊作了檢查，初步診斷為散發性腦炎引起的神經性吞嚥困難。經對症治療，吞嚥困難稍有好轉。經熊再定一再要求，她於四月出院。

一九八七年十二月十六日，張錦坤教授，登門看望了熊再定。她步子穩健，滿面笑容地歡迎遠道而來的客人。與一年零八個月前相比，她那鷹爪形的手指伸直了，嚴重畸形的雙足已

基本矯正，體重增加了十公斤，頭髮長了約三十厘米。雖是冬至時節，她仍沒穿棉衣，思維敏捷，談笑自如。她能走路，還能做些輕微的家務活，如洗衣、掃地等。

熊再定的父母告訴醫生，再定九年來沒有解過一次大便，而小便正常，月經週期也正常。現在，她每天依然只能吞下半杯（約五十毫升）糖水或米湯、菜汁，每十天熬一小片人參湯吞服，仍不能吞嚥稀飯、麵條、鷄蛋花之類食物，葡萄糖液也有一個多月沒有打了。

面對這奇迹，有人稱小熊是“生物人”，甚至說什麼“仙女下凡”。熊再定則說，是黨和政府的關懷，是熱心人的幫助，使她增強了生活的勇氣。幾年來，她先後收到由山西、河南、吉林、遼寧、安徽、湖北、香港等地寄來的近千封信件。她希望能繼續上學念書，成為一名自食其力的勞動者。

（毛德望）



圖為熊再定在走路。

李義剛攝

[D3]

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奮 進 向 上 的 旋 律

許可二胡獨奏音樂會側記

劉小奇

舉辦個人民樂獨奏音樂會談何容易！中國這麼多民樂演奏人才，搞過這種活動的屈指可數。它不但需要藝術上的實力，也需要相當的經濟實力。過去僅有個別馳名中外的老藝術家敢於問津，但近年來，有些“初生牛犢不畏虎”式的年輕人斗膽涉足這個領域了。

去年金秋，青年二胡演奏家許可獨奏音樂會在北京音樂廳拉開了帷幕。許可身着一套黑色西裝，在觀眾熱情的掌聲中登上舞台。好一個許可，三首不同風格的大型二胡協奏曲，他演奏得淋漓酣暢。青年指揮家閻惠昌為許可而作的《幻》，是一首採

用了近現代作曲手法及部分流行音樂節奏的二胡協奏曲，大段十六分音符快速移動、大跳，令人眼花繚亂，人們不得不為演奏者高超的技巧而讚嘆；劉文金的《長城隨想》是當代二胡曲目的一個代表作，在一九八四年全國第三屆民族器樂比賽獲獎作品音樂會上，許可的演奏受到好評。五首

小型獨奏曲也各有千秋，尤其是《秦腔主題隨想曲》，連地道的陝西人閻惠昌也為之叫好。

許可原係中央民族樂團演奏員，當過二胡聲部首席，擔任過獨奏、領奏，可算躊躇滿志了！偏偏女朋友在深圳，“半邊天”的吸引力促使他一九八五年調入深圳特區樂團。有人說一個好女人是一所學校，這話不假。許可過去生活上粗心大意，好像讀不懂別人臉上的表情語言，這次回京與中央民族樂團合作，顯得謙虛謹慎，看來是“學校畢業”了！

許可出生在江蘇南京市，小時候調皮透了，成天不安生。為了拴住他，叔叔許阮凌教了他兩手兒京二胡，他天天拉啊拉啊，倒是給大人省了不少心。一九六八年，許可就憑着這點“絕技”，進入了南京當時名噪一時的小紅花藝術團。老師讓他練三弦，出人意料，才學了兩個多星期，他居然把二十幾首曲目全彈下來了，一時傳為佳話。

上中學後，許可隨司馬文蘭先生學習鋼琴，這為他奠定了堅實的音樂基礎。司馬文蘭老師又介紹許可拜馬友德先生為師，這位許可的二胡啟蒙老師，教學有方、注重基本功，使許可受益匪淺。考入中央音樂學院後，許可如魚得水，刻苦練鋼琴，天天聽西洋樂隊唱片，以至有人誤會了他的專業。許可就是有福氣，他的二胡指導教師藍玉崧先生深諳“功夫在詩外”這一至理，他不但鼓勵許可廣泛涉獵西洋音樂，而且教許可學習書法、繪畫，要知道藍玉崧還是當代有影響的一位書法家呢！藍老師還參考小提琴的演奏技巧，來訓練許可二胡的把位和音準。大學四年，許可的收穫是多方面的，他不僅掌握了二胡的演奏技巧，而且使自己有了較為寬廣的藝術視野和敏銳的藝術感受力。

人生就是一部樂曲。正如閻惠昌的《幻》所表達的那樣：理想、夢幻、現實、探索、失敗、成功交織在一起，充滿了人的一生。許可的演奏比之閻惠芬、王國潼等成熟的二胡藝術家，當然還欠“火候”，但他的演奏自有一種奮進向上的力量，表現了我國青年一代民樂藝術家的實力和氣魄。祝願他再接再厲，譜寫出一首青春常駐的人生樂曲！

[D4]

模範體育家庭 出資四萬餘元 農民林克修自辦業餘訓練館

掖縣萊州鎮西關村農民林克修自辦的家庭體育訓練館，吸引着許多愛好體育的城裏幹部、工人和鄉親。每到夜晚，訓練館燈光通明，男女老少數十人聚集在這裏舉槓鈴、練單槓、踢腿習武……

“讓大家都有一個活動的地方，是我的夙願”，身材不高卻很精幹的林克修對我們說。前幾年他是生產隊長，因為集體不富裕，沒有實現他的願望。農村經濟放開搞活後，林克修自己辦起了建築隊、商店和機械零件加工廠，成為縣裏“掛號”的個體戶。腰包鼓了，他建了

一座二層小樓，樓下六間房子和一個寬敞的大院，便成了人們的體育活動場所。

今年四十五歲的林克修，自幼拜名師習武，學得不少套路，許多青年想跟他“學一手”。一九八一年春，他聘請四名教師，組建了全縣第一個業餘武術訓練隊，當時報名參加的竟有二百多人。

林克修還酷愛舉重。他曾是省舉重隊的運動員，並取得過好成績，可惜“文革”浩劫，舉重隊解散，打破了他的“冠軍夢”。

一九八二年，他免費招收三十名男女學員，建立舉重隊。他對他們進行嚴格的訓練。在一九八六年全國女子浪潮杯舉重比賽中，這支農民舉重隊捧回了團體總分第六名的獎杯，在掖縣城引起轟動。縣體委以這個隊為基礎組建了縣隊。林克修仍然關心着這支年輕隊伍，一有空就去當義務教練。每年還拿出七千元為他們購買訓練器材。

去年夏天，林克修拿出四千元，派人到廣州學習能治病健身的動靜氣功，並聘請二名鄉村醫生，辦了氣功輔導站。現在每天來練氣功的有五十多人。一位在縣土產公司工作的中年婦女興奮地對記者說：“我患關節炎二十多年，腿疼得不敢打彎，練氣功後腿已經不疼了。”縣委宣傳部的一位幹部帶了妻子、女兒、岳母一起來練氣功。他指着正在院子裏“發功”的妻子說：“她有腰腿病，以前整日沒精打采的。現在病好了，人也變精神了！”

有人算了一筆賬，八年來，林克修辦家庭業餘體育訓練館的費用共達四點二萬元，先後接收了五百六十名學員，其中有四十人成為當地群眾體育活動的教練，二百多人成了體育活動的骨幹，還向國家輸送了五名運動員。去年，有關部門授予他家“模範體育家庭”稱號。

[D5]

為鄉梓興旺盡力

——記香港永春同鄉會理事長顏彬聲

吳惠聰 劉永樂

香港永春同鄉會理事長顏彬聲先生，多年來為家鄉福建省永春縣的興旺發達盡力，博得鄉親稱讚。

愛鄉親

那是一九八五年初春的事。永春山鄉幾十戶人家，打點行裝，携兒帶女，來到千里之外的深圳南頭區，從事農耕，掛起“南春公司”招牌。

南頭區正待開發。一百二十多人辛勤經營，可是收穫甚微，公司辦不下去了。有的人打回老家，更多的人手脚無措，進退維谷，淚濕青衫。

顏彬聲先生得知這一消息，毅然投下四十七萬港元，在南頭區大磡村租了二百多畝土地，成立永發果農場，把這批進退維谷的七十多位鄉親安排到場裏做工。山坡上種下二百二十畝柑橘和二十多畝荔枝、龍眼、香蕉以及六萬株菠蘿。僅香蕉、菠蘿一項，去年就收入二萬多元。

顏先生還投下四百萬港元，在這裏建起五千平方米的生產生活設施，辦起深圳南春(香港萬利聯)製衣廠和適安家俬廠，既從家鄉永春、南安吸收三百個勞動力進廠做工，又用工廠的盈利彌補果農場的虧損。

兩年的苦心經營，由農、工、商組成的深圳南春經濟貿易公司，以勃勃生機在荒蕪土地上崛起。山坡上荔枝、柑橘、菠蘿匯成一個綠色海洋。車間裏，一百五十架嶄新的電動縫紉機發出“嗒嗒嗒”的旋律，來自家鄉的一百多名山村姑娘熟練地縫製外銷的牛仔褲。現在，在果農場和工廠做工的永春人已有三百多人。顏彬聲先生為鄉親做了一件大好事。

愛家鄉

顏彬聲近幾年數度返里，每次都為家鄉的建設做出貢獻。他看到家鄉社山村小學破舊不堪，便捐資十二萬元，建起一幢

一千平方米、二層樓的新校舍，並送來彩電和一百套嶄新的課桌椅。

他捐贈三百張病牀給永春醫院，用來解救鄉親病痛，給蓬壺衛生院送來了救護車，方便鄉親看病。

捐資一百萬元人民幣設立永春縣“科技教育基金會”。他主張把這筆錢用來發展生產，用所得利潤獎勵有成就的科技工作者和品學兼優的莘莘學子。

想到家鄉後代子孫的身心健康，捐資興建兒童公園。他知道惠安縣張坂鄉錦溪小學校舍破損，也解囊資助。給泉州黎明大學一次就資助二十萬元。

愛國家

不久前，顏彬聲先生看到國家公佈海南島要建省，開闢為經濟特區，心中便繪製了一幅美好的藍圖。去年十二月的一天，他從香港來到海南島，去海口，上通什，勘察地形，選擇場地，制訂在這裏投資一千萬元的開發方案：在海口建公用大倉庫，在通什開辦幾百畝牧場，引進牛羊優良品種來飼養。雖然他已年屆古稀，卻不辭勞苦，連續奔波了五天。他說：“國家一公佈，外國人都動起來了，我們中國人還能無動於衷嗎？”

他深明大義，為國分憂，哈爾濱亞麻廠失火，大興安嶺森林火災，使他憂心忡忡，毅然捐獻巨資救援。他說：“從國家來說，我這點錢算不了什麼，但是大家都來支援，國家的困難就會少一些。”這就是他行動的準則。他還贈給三家亞麻廠織布機共一百三十八台。

他曾出資四百萬港元，在山東省拍攝了取材於《水滸傳》的《浪子燕青》彩色故事片。並繼續拍攝反映祖國雜技藝術的影片。

顏彬聲先生五十年前隻身到了香港，歷盡艱辛。他當過夥計，打過雜，養過豬。後來逐漸成為香港、美國工商界的知名人士。他點點滴滴積攢了一些資財。他認為，錢應該用到對國家和人民有利的地方。

顏彬聲先生德高望重，一九八四年香港永春同鄉會成立，眾鄉親推選他為理事長。一九八七年春，福建省政協吸收他為委員。

[D6]

圍棋名人戰再度爆出冷門

馬曉春中盤負於楊晉華六段

華對弈，角逐爭奪名人桂冠的資格。

至此，參加名人戰的四名九段和六名八段高手，除六連勝、率先獲得爭奪權的劉小光八段外，已全部被淘汰。其中有二名九段、二名八段棋手敗在楊晉華手下。這也是三十六歲的楊晉華從弈以來最為輝煌的戰績。四年前離開國家隊的楊晉華只在七十年代的一次全國比賽中打進過前六名，他現任北京女隊教練。

本報北京一月二十七日訊 記者繆魯、陳昭報道：今天，首屆中國圍棋名人戰再次爆出冷門，馬曉春九段只用了三分之一的規定時間便敗下陣來，中盤負於前國手楊晉華六段，從而失去了爭奪名人桂冠的機會。

在今天的比賽中，馬曉春一味求穩，大失水準，從佈局到中盤，行棋投子一錯再錯。先是他在角上當飛不飛，被楊晉華在四路邊上連壓數手，得不償失；接着，他又在關鍵處脫先，貿然擠入對方勢力圈內，勞而無功。行至五十九、六十一着時，馬曉春判斷有誤，過早放出勝負手，再吃大虧。而楊晉華趁機補過薄弱點，把左下角偌大地盤完全據為己有後，已穩操勝券。據行家介紹，馬曉春自成名以來，還不曾下過如此糟糕的棋。

在今天進行的另一盤比賽中，馬曉春的浙江同鄉俞斌七段，執白中盤戰勝氣勢咄咄逼人的前國手程曉流六段。二十九日，俞斌將同楊晉

[D7]

著名企業家李光前

夏樺



李光前（一八九三年—一九六七年）是新、馬甚至是東南亞地區的著名企業家和華人領袖之一。

他原籍福建省南安縣，家境貧寒。十歲那年，隨父“過番”，到了新加坡。在那裏，他接受了中、英文教育。一九〇八年回國升學，兩年後以名列全班第一的優異成績畢業於南京暨南學堂。接着，入北京清華高等學堂，爾後轉往交通大學的前身——唐山路礦專門學堂就讀。一九一二年，他結束了在中國將近四年的學習生活，重赴新加坡謀生。他白天

在華校教書，晚上在報館兼電訊翻譯員。工餘他仍孜孜不倦於學業，同時修讀美國一間大學的函授土木工程科，進一步接受了西方現代科學教育。

在談到自己成功的秘訣時，他說過這樣的話：“一半靠勤勞及健身，一半靠幸運（即機會）。”

一九一四年，莊希泉與朋友合資經營中華國貨公司，李光前受聘負責該公司的英文文書和對外交涉事務。一九一六年，李光前經莊希泉的推薦，為陳嘉庚聘用。陳嘉庚頗為欣賞李光前的能力和才華，不久就擢升他為經理。並且招他為婿。李光前在陳嘉庚的公司裏任職達十一年之久。在這十一年裏，陳嘉庚公司的業務蒸蒸日上，李光前也在工作中積累了商業經營的知識和經驗。

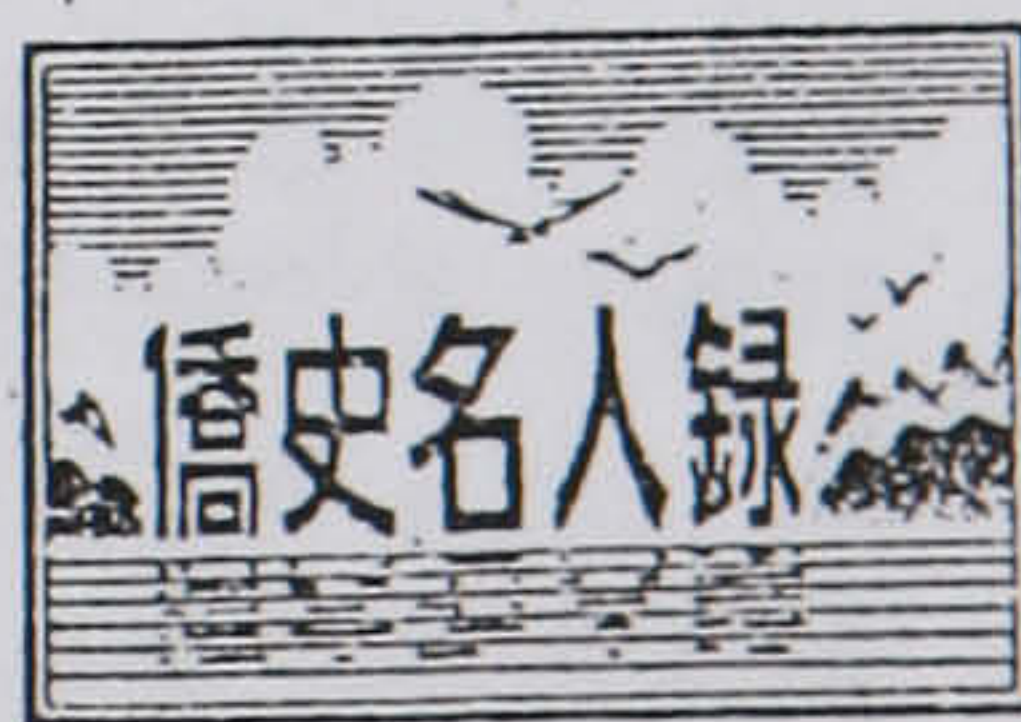
一九二七年，李光前開始創自己的事業。橡膠業是李光前投資的重心，僅次於此的是銀行業。三十年代是李光前的企業迅速發展的時期，和同時代的東南亞華僑企業家相比，李光前的文化教育水平是最高的，他通曉中、英文，學貫中西。他給李氏家族

企業注入了西方現代管理原則。此外，他生活簡樸，家庭生活融洽，也善與人相處，這些都是為人所稱道的。

李光前也和他岳父陳嘉庚一樣，堅持“取諸社會，用諸社會”，不遺餘力地為社會文化的進步作奉獻。

一九五二年，李光前撥出資產的一部分設立“李氏基金會”，贊助社會福利和文教科學事業的發展。如英國著名學者李約瑟的巨著《中國科學技術史》就是在基金會的捐助下在五十年代出版問世的。李光前最熱心的是興辦教育事業。新加坡的馬來亞大學、南洋大學，都得到他的巨款捐助。一九五二年他捐巨款為故鄉建“梅山學村”，該學村的建築總面積達七萬多平方米，是一個從幼兒園到中學包括水廠、電廠、醫院、影劇院、植物園、體育館的綜合文教區。

一九六七年六月二日，李光前死於肝癌。人們高度評價他，認為“他對社會所作的貢獻是千年萬代不能泯滅的。”



[D9]

抗日“文告”是誰起草的

抗日戰爭時期，蔣介石發表了一篇題為《告全國國民書》的文告。文章措詞鏗鏘，情真意切，感人肺腑，其中的幾句話：“地無分南北東西，人無分男女老幼，一致團結起來抗戰……”曾廣為流傳。當時，全國人民看到“文告”這樣慷慨激昂，一認為蔣介石大有轉變。但這篇“文告”是誰起草的呢？他出自著名畫家傅抱石的手筆。

一九三八年三月，郭沫若出任國民政府軍事委員會政治部第三廳廳長，起用了一大批文化名人，如陽翰笙、田漢、胡愈之，還有冼星海、張曙、洪深等。所以，當時武漢的《大公報》曾載文稱“郭沫若是官梯”，“只要找到郭沫若就可以做官”。實際上，郭沫若的官梯是人才的“官梯”，是愛國者的“官梯”，不是一般庸俗之輩的“官梯”。據記載，張群曾介紹一個親戚到三廳工作，郭沫若以“無缺”拒之。傅抱石初來

三廳時，定員也早已滿了，但郭沫若考慮到傅抱石是才學之士，對抗戰是大有派用場的，並且早就寫信邀請過他。他輾轉來遲，現在不用殊覺可惜，於是以前“額外人員”之名安了一個上校秘書之職。

一次，郭沫若來找傅抱石，要他寫個“文告”，說是蔣介石

要的，限兩三天內交卷。“文告”的題目是《告全國國民書》。限於時間，傅抱石只好熬夜趕寫，顧不得蚊蟲叮咬之苦，一個夜晚如期完成了文稿。那份載入抗日戰爭史的著名“文告”終於問世。

[D8]

美籍女強人與潘虹相會

華子

由美國政府授予的美國國際親善大使、美國ELILILLY企業（禮來企業）繼承人、美國傑出的企業家和政治家余麗雲，一月二十四日晚在紐約奧道爾夫大酒店與中國大陸影后潘虹親切會晤，暢叙友情，商計發展美中影業合作大計，促進中美間的友誼。

美籍華人余麗雲和美國不少大財團有着密切的關係。她不僅在企業經營中做出了驚人的成就，同時還積極從事各種慈善活動和政治活動。聯合國、美國政府曾向她頒發金質獎章、和平紀念獎章，以表彰她的卓越貢獻。余麗雲在美國經濟界和政壇上都有一定影響，但她仍有一顆中國心。在開創美中友好關係的乒乓外交中，余麗雲承擔了接待中國乒乓球隊的重任。十多年來，她一直在辛勤地、默默地溝通中美兩國，以及東西方的關係，被人們讚譽為是“溝通東西方的大使”。她的足迹遍及海峽兩岸和世界各國，海峽兩岸的領導人與她均有很好的關係。

余麗雲應邀出席了在華盛頓舉行的布什總統就職典禮，她是典禮中少數幾個共同主席之一。在隆重的慶典活動之後，她欣聞中國大陸影后潘虹來美參加中國大陸第一部在美國拍攝的故事片《最後的貴族》，百忙之中，她連夜趕到紐約與潘虹會面。

余麗雲和潘虹真是一見如故，相互稱姐道妹。當她得知一月十八日法國專門為潘虹在蒙比利爾市舉辦“潘虹影展”，潘虹

主演的七部中國故事片轟動了法國後，更是連連稱賀。余麗雲畢業於南加州大學藝術表演專業，酷愛表演藝術，特別推崇中國文化，曾主演過兩部反映中國文化的故事片，同時還是美國最年輕的電影製片家。余麗雲和潘虹商定立即着手拍製一部反映中美文化緊密相連的故事片，她倆將聯合主演。目前該劇本已由大陸赴美的一位作家寫出，爭取攝製成一部有很高藝術質量，同時又深受廣大觀眾歡迎的片子。美國幾位影星已欣然接受邀請，與她倆共同合作攝製該片。



學貫中西治心史

訪心理學大師高覺敷先生

永貞 施紅 曉明



高覺敷近照
老一輩心理學家。

漫漫人生薦西學

早在二十年代初，高覺敷在香港大學文學院教育系讀書期間，就對心理學產生了濃厚的興趣，開始鑽研麥獨孤的著作《社會心理學》，從此，他的一生便和心理學結下了不解之緣。

高老在六十多年的治學生涯裏，為傳播西方近代心理學作出了歷史性的貢獻。他是首批翻譯介紹西方心理學的學者之一。他為我國讀者介紹過西方近代心理學各種流派，從麥獨孤學派到行為主義、格式塔和精神分析等學派。他翻譯出版過弗洛伊德的重要著作《精神分析引論》、《精神分析引論新編》和揚琴巴爾的《社會心理學》，以及美國心理學家波林的重要著作《實驗心理學史》。這些重要著作的翻譯介紹，使中國心理學的理論能夠在吸取西方心理學精髓的基礎上，得到開拓性的建設和發展，從而離開古代哲學和醫學的懷抱，成長為一門獨立的科學。

[D10]

去年十一月四日，著名心理學家高覺敷教授在南京度過了九十一歲的生日。天氣已涼未寒時，我們在南京赤壁路一幢幽靜的小樓裏，拜訪了這位著名的

說起這些經歷，高老告訴我們，我國的心理學研究雖然時間比較短，但取得了可喜的成就，一些學術流派湧現出來，學術著作紛呈，一大批心理學研究人才嶄露頭角，各學派和團體之間開展了有益和健康的爭論，心理學界呈現了百花齊放的局面。

“但是”，高老話鋒一轉，“從總體上講，目前我國的心理學研究事業還比較落後，跟某些西方國家的水平有一段差距。現在我國正在走改革開放的道路，我認為，研究心理學，也應該走開放的道路，積極引進和借鑒西方心理學的最新科研成果。”

幾年前，高老主編了《西方近代心理學史》，這部書於一九八一年出版，是我國第一部全國統編的高等院校西方近代心理學的教科書，也是我國第一部西方近代心理學家的文選。由於高老在心理學史上造詣精深，他參加了《中國大百科全書·心理學》卷的編寫工作，主編《心理學史》一書。

不疑春色在鄰家

對中國歷史稍有瞭解的人知道，中國是世界上心理學思想發源最早、發展最豐富的泱泱大國之一。然而在“五四”運動之前，心理學在中國並未成爲一門獨立的學科。中國的心理學思想只是像青藤繞大樹一樣，寄身於中國哲學和中國醫學的土壤中。無疑，這些蘊藏着的心理學遺產是彌足珍貴的。

可是，長期以來，很少有人問津中國的心理學思想遺產，很少有人去發掘它，也很少有人去整理它。“蜂蝶紛紛過牆去，卻疑春色在鄰家”，這使高老十分痛心。

高覺敷教授十分重視研究祖國心理學的遺產，一九八三年，他和潘菽先生合編了《中國古代心理學思想研究》論文集，檢閱了一九四九年以來我國心理學工作者研究祖國遺產的成績。在他主編大百

科《心理學史》一書時，他就十分重視中國古代心理學思想，把中國的心理學思想史作爲一個重要部分，編進了《心理學史》一書中。

高老早就考慮要搞一本完整的《中國心理學史》。終於，機會來了。一九八三年，教育部委託潘菽先生爲顧問，高老爲主編，負責編寫《中國心理學史》。這是一項“艱巨”的工程，是前無古人的創舉。當時，高老不顧自己已是八十七高齡的人，毅然上陣，多方組織了三十多位專家學者，克服了重重困難，開始了工作。說起這個，他激動地對我們說：“中國的心理學史，中國人不搞誰搞？如果讓外國人先搞出來，豈不是中國心理學界的耻辱？”

一九八六年，《中國心理學史》付梓，世界心理學寶庫又增添了一朵寶貴的東方心理學之花。

莫道桑榆晚 爲霞尚滿天

用李商隱的這兩句詩形容高老，還是很恰當的。一九七八年，北京召開了全國科學大會，心理學研究事業的春天來到了。含冤二十載的高老也得到了新生，全身心投入到工作中去。

在九年時間裏，耄耋之年的高老每天清晨六時起牀，散步健身，然後伏案工作，一天工作好幾個小時。九本書稿一本接一本地從他的手中交到鉛字房，從《西方近代心理學史》到《西方心理學的新發展》，沒有間斷。“弗洛伊德”流行的那些時日，他正在重譯《精神分析引論》及《新編》，時間很緊，但還是抽出工夫去撰寫有關的評論文章，九年時間裏，他撰寫了十八篇論文。所有這些成果，是他以往任何時期都無法可比的。

“不過，時間浪費了二十年”，高老惋惜地說。從一九五七年到一九七六年，高老被剝奪了研究著述的權利。彈指二十年，時光白白地付諸東流。二十年，可以幹多少事情啊！他痛惜。進入耄耋之年後，高老愈覺得時間的珍貴。他的心願還沒有完全實現，他希望在有生之年爲建立具有中國特色、爲中國社會主義服務的心理學體系盡微薄之力。

“光是年紀大，身體健康，還不夠標準，還得做事。”這是分別時高老對我們說的話，也是他晚年生活的準則。

[D11]



自信的李小龍

本報記者 孟曉雲

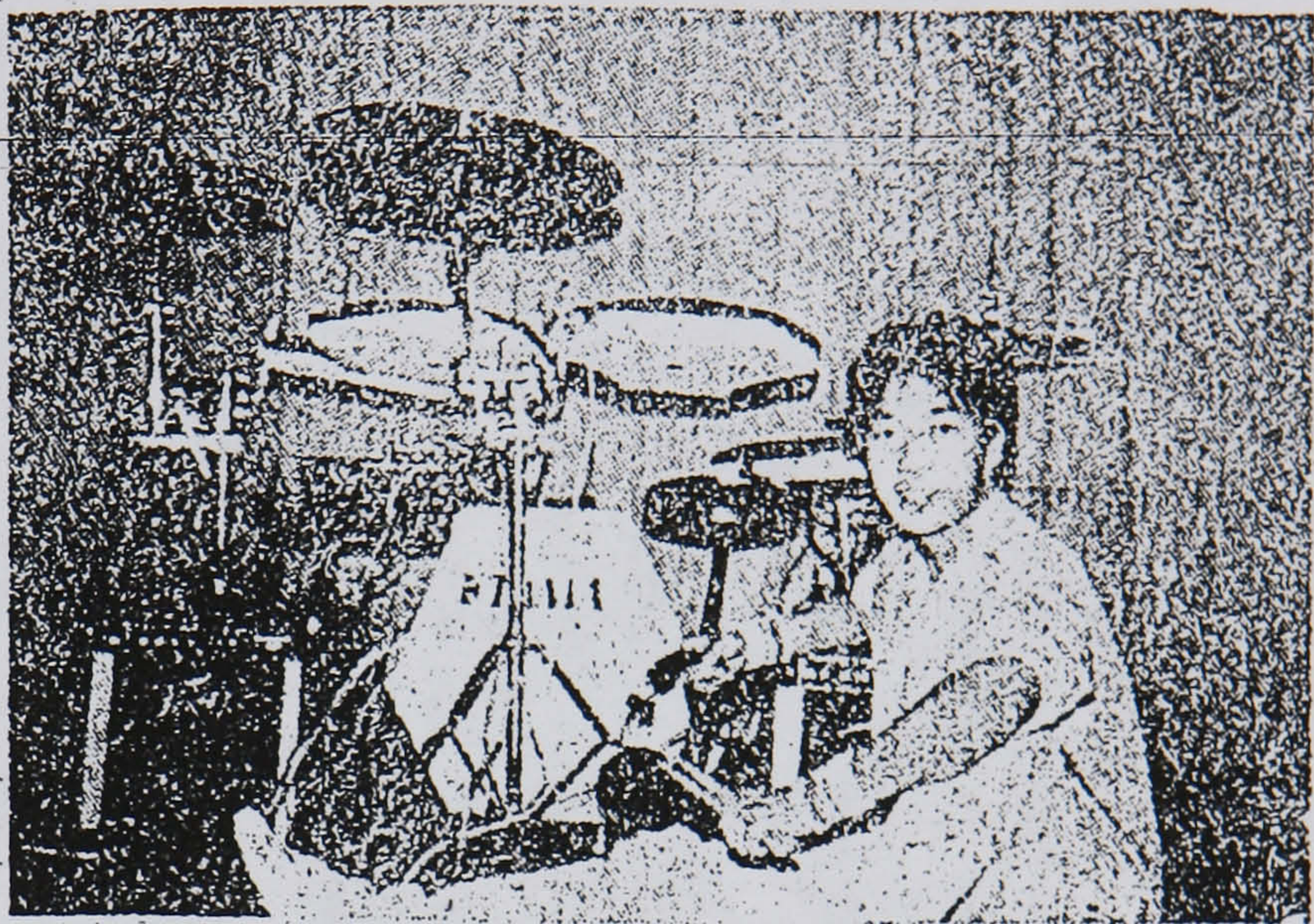
要不是天津市的霹靂舞大賽，人們也許永遠不會知道有個李小龍，你別瞧不起他那樣兒，個頭一米六五，其貌不揚，缺乏風度，可就是這個二十一歲的小伙兒，奪走了霹靂舞大賽的桂冠。

初賽時，他對記者說，霹靂舞之所以有魅力，是因為他可以通過這個舞蹈證明自己是勇敢者，是男子漢。他想拿第一，自信心極強。

李小龍有自己的優勢，天津音樂學院打擊樂系的學生，樂感強，從小練足球，又是學院裏的“球星”，身體素質好。他也有劣勢，身材短小，做起動作來不舒展。

分析了競爭對手和自己的優劣勢後，李小龍用紅色搖滾樂、瓦姆樂團吉他曲等五支曲子為自己剪接了獨特的音樂，並用銜接巧妙的技巧把觀眾的情緒推向高潮。於是，他以勝利者的姿態走上決賽的領獎台。

李小龍曾經自卑過，因為他個子矮小，人們看不起他。後來，他努力在多方面證實自己的實力，他學油畫，一幅《秋日思語》居然在某省的青年畫



展中獲獎。在家鄉藝術中心一次演出中，李小龍又意外地發現了自己的音樂才能，樂隊有位鼓手臨時生病不能上場，誰能代替呢？從未登過台的小龍一拍胸脯，說：“我來！”演出竟出人意料的成功。一年後，李小龍考上了天津音樂學院。

當自己的力量一次次被證實後，李小龍由自卑者升華為一個自信者。他相信人的力量能征服一切，他認為人生只是一瞬間，要不失時機在各個方面充分實現自己的價值。他不滿足於當球星，當擊鼓手，什麼都要試一試，於是，他玩兒命地練起霹靂舞。

李小龍的興趣十分廣泛，但最熱衷的還是現代音樂，尤其是搖滾樂，他崇拜的美國現代著名歌星有麥當娜、劉易斯、布魯斯、保羅揚。若問小龍大學畢業後做何打算，他會毫不猶豫地回答：出國留學，美國電影《霹靂舞》的片頭不是有這樣一段歌詞麼：“世界不大不小，我都想見識見識”。當然，除了長見識外，李小龍心中還埋着一個夢想，要研究東西方的打擊樂，非洲的、東南亞的，儘可能多地收集資料，回國後寫一部關於世界打擊樂的書。

祝你再次成功，李小龍！

和人民一起紀

周恩來同志離開我們已經十二個年頭了。今年三月五日，是他的九十誕辰。中共中央文獻研究室的同志要我為這本集子寫篇短文，作為序言。周恩來同志是我的老戰友、老領導，素來為我所敬重，我自然樂於接受這一任務。

周恩來同志是值得人們永遠懷念的堅貞的共產主義者。他從一九一九年參加著名的五四愛國運動開始，經歷了許多艱難複雜而又光榮偉大的鬥爭。中國共產黨成立，第一次國共合作，國民革命軍北伐，上海工人武裝鬥爭，南昌武裝起義，白色恐怖下的地下鬥爭，中央革命根據地反“圍剿”作戰，紅軍二萬五千里長征，促使西安事變和平解決，實現第二次國共合作，全民族抗戰，抗日大後方的統戰工作，日本投降後國共兩黨和平談判，人民解放戰爭直至打倒國民黨反動派，中華人民共和國成立，抗美援朝保家衛國，恢復國民經濟，進行第一個五年計劃建設，克服“大躍進”中的困難，進行三年經濟調整，而後就是“文化大革命”十年動亂。周恩來同志終因心力交瘁，病重不治，於一九七六年一月八日逝世。這長達半個多世紀的歲月，正是被剝削、被壓迫、被欺凌的中國人民進行翻天覆地鬥爭的年代，正是羸弱、貧窮、落後的中國開始走向強盛、富裕、文明的時代，周恩來同志不僅從未間斷地參加了由黨中央和毛澤東同志領導的這些偉大而艱難的鬥爭，而且毫無保留地把全部精力獻給了革命和建設的光榮事業，直到最後一息。

周恩來同志在長期鬥爭中，同黨內黨外的廣大幹部和人民群眾建立了親密的感情。尤其在十年動亂時期，環境複雜而又艱險，他如同“在荊棘中潛行，在泥濘中苦戰”，幾乎耗盡了所有精力，做一切力所能及的工作：減少政治損失，維持經濟生活，保護廣大幹部，支持正義群眾，改善對外關係，等等。周恩來同志這種為共產主義理想無私無畏的獻身精神，在廣大幹部和群眾中，以至在國際人士中，樹立了忠誠、親切、勤奮、堅毅、無私、無畏的崇高形象。當他逝世的消息傳出以後，數以億計的人痛哭失聲。在北京天安門廣場連續幾天自發出現前所未有的悼念人潮。一九七六年一月十五日，首都百萬以上的青年和老幼婦孺佇立在凜冽的寒風中幾個小時，向他們最敬愛的人的靈柩最後告別。有這麼多的人民群眾，自動走向街頭，以最深沉的悲痛，來悼念一位共產黨和國家的領導人，這是沒有先例的。

這不禁使我想到，對於一個政黨來說，人民群眾的信任和愛戴，才是遠比鋼鐵還堅固的基座。有無這樣的基座，關係着黨的興衰存亡。對無產階級革命家來說，也是如此。

在這篇短文中，沒有必要重複闡述周恩來同志對黨對祖國對人民作出的巨大貢獻，以及他作為無產階級政治家、軍事家、經濟建設領導人、外交家等在各個方面所建立的巨大功績。歷史將記載這些功績傳之後世。我在這裏只說幾點我的深切感受，也是值得我和大家一起學習的幾個方面。

周恩來同志是一位既有革命膽略又有求實精神的共產主義者。他在每一重大鬥爭中，善於把兩者結合起來。他是非常務實的人，時刻不忘實事求是這一原則，每件工作，他都要弄清實際情況，考慮到前後左右，正反兩面，以及當前和長遠、國內和國際的種種條件及實際效果。他考慮問題的周密和細緻是出了名的。我認為，作為一個國家領導人，處理重大問題，即使是自己負責的日常工作，謹慎一點，周到一點，多花些時間和精力作調查研究，反覆醞釀和討論，是必要和值得的。恩來同志的這種認真處事的踏實作風，來之於他對黨、國家、人民的事業絕對負責的態度。共產黨人，首先是領導者，對人民的事業要負責任，這是根本的一條。恩來同志的這種求實作風，與他的謙遜也有很大關係。即使在工作很順利很成功的時候，他也沒有一點驕氣。這確實不是容易做到的，有豐功偉績的偉大人物，也不是每個人都能做到的。現在，我們的任務更重了，工作更複雜了，也就更應像恩來同志那樣，堅持求實態度和謙虛謹慎的作風。

周恩來同志另一個突出的長處是善於團結人。他確實能夠做到團結一切應該團結和可以團結的人。他的這個特點，在黨內早被承認，在黨外更為著名。同他在一起工作，很自然有一種安定團結的親切氣氛。長期以來，他並不贊成那種事事鬥爭、處處鬥爭的“鬥爭哲學”，有時還加以抵制。當然，恩來同志所以團結最大多數，是為同極少數敵人作鬥爭，並以最小的代價取得勝利，因此這種團結是有原則的團結，有利於事業成功

念周恩來同志

的團結。而那種動不動就鬥爭、一鬥又無邊無沿擴大化的做法，則是無原則的鬥爭，有害的鬥爭，這種“鬥爭哲學”同馬克思主義的唯物辯證法毫無共同之點，是違背馬克思主義原理的。

我們黨和國民黨進行過兩次合作，又進行過兩次嚴重的武裝鬥爭，最後取得了勝利。在兩次合作中，特別是抗日戰爭時期，周恩來同志在執行黨的又聯合又鬥爭的策略中取得了傑出的成功。他那時獨當一面，在國民黨統治區團結了各黨各派和無黨無派的人士，包括國民黨中有若干民主進步思想的人士，以及贊成抗日的上層人物。同時，在青年學生、教師、工人、農民、商人等各個階層中，進行了深入的工作，影響、團結了大多數。這樣，使國民黨反動派積極反共、消極抗日的面目暴露無遺，在政治上陷於極其孤立的地步，喪失了全國的民心；與之相反，由於八路軍、新四軍積極同敵偽作戰，以及在抗日大後方的有效工作，我們黨則在全國人民中樹立了很高的威信，成爲以後解放戰爭迅速取得勝利的重要因素之一。

周恩來同志是一位具有高度民主精神的共產主義者。他在黨內活動中，在同黨外人士共處中，以至在對外交往中，都使人感到他能平等待人，有民主作風。他在工作中，樂於同大家商量，傾聽各種意見。他聽了與自己不同的意見，即使是普通幹部或群眾講的，都能認真考慮。對方的意見有錯誤，他也從不橫加指責，而是耐心聽完，然後循循善誘，用事實和道理闡明自己的觀點。對一個領導者來說，民主也就是多謀，多謀才能善斷，少謀易於武斷。這個道理，古人就常講。現在建設社會主義，實行改革、開放、搞活的政策，問題要複雜得多，重大的決策，多謀才能比較正確，少出差錯；出了差錯也能較快地發現和改正。在一定意義上，領導者多謀，才能調動廣大幹部和人民群眾的進取心和向心力。我們共產黨人是講原則的，但發揚民主作風，傾聽各種意見，集思廣益，對我們的事業總是有好處的。

周恩來同志勤奮刻苦的工作精神，達到了驚人的程度。在“文革”以前的幾十年中，他平時每天工作都在十二個小時以

上，有時每天只休息五六個小時，專心一意，日夜操勞。許多同志知道，在三年困難時期，爲了保證城市人民不斷糧，他時常要爲分配、調運、貯存糧食而工作到凌晨。他親自計算糧食庫存和調運、調出的數量，親自給省市的領導人通電話，不得到妥善處理就不休息。我們常說要全心全意爲人民服務，怎樣才是全心全意？我看周恩來同志是一個榜樣。到了“文革”時期，周恩來同志工作更辛苦，往往夜以繼日，

一天只能休息兩三個小時，有時連半個小時的休息也得不到。他後來得了重病，是同操勞過度和精神鬱悶分不開的。即使在重病期間，他仍念念不忘國家興旺、人民利益、幹部健康等大事，用各種形式抵制林彪、“四人幫”的破壞陰謀。周恩來同志要求自己，當天的事必須當天辦完，他數十年如一日，從未間斷。他時刻對工作傾注全部心力，是爲了他對黨和國家的事業具有高度的責任感，對人民群眾具有高度的熱愛。中國共產黨確實因爲有周恩來同志而增添了光榮，中國人民確實因爲有周恩來同志而增添了自豪感。

周恩來同志是一個嚴於律己的人。他對別人要求比較寬，對自己則很嚴，一言一行都考慮到對黨的影響，對國家的影響，力求不使黨和國家受到絲毫損害和玷污。他的嚴於律己，特別表現在對待錯誤的態度上。大一點的錯誤，他真心誠意，再三再四地作檢討，一遇到機會就作檢討。對小的失誤，他也認真檢查。他做自我批評，決不強調客觀原因，首先着重從自己的思想、作風，從立場、觀點、方法，去找根源。他所領導的工作有了問題，首先自己承擔責任，決不委過於人，而且幫助有關同志儘快彌補損失。他的這種時時刻刻注意自我批評的好作風，在我們黨內是很知名的，受到許多同志的讚揚，認爲是值得學習的榜樣。

林則徐有一副自勉的對聯：“海納百川，有容乃大；壁立千仞，無慾則剛”。這用在周恩來同志身上，雖不完全，但可代表他的主要特點。恩來同志確實胸如海洋，容量極大；他堅持原則立場，則如千仞高山。而所以能如此，因爲他胸中沒有私心，只有黨的利益，國家的利益，人民的利益，只有共產主義的偉大理想。

周恩來同志崇高的形象將永久銘記在中國人民的心中。

[D13]

寇振海從影前後

周描坤 趙京安

去年夏天，寇振海剛畢業於北京電影學院“明星班”，就匆匆“披甲上陣”，投入了電視連續劇《少帥春秋》的拍攝。

三十四歲的寇振海，十七歲進入黑龍江省綏化京劇團，走了一條很有趣的藝術道路。他不僅演過話劇、評劇、歌劇，也演過地方戲和曲藝，可以說是藝術上的一個“雜家”。雖然“雜七雜八”什麼都幹，但他酷愛的還是話劇這個“職業”。

一九七八年，上海電影製片廠拍攝《傲蕾·一蘭》，湯曉丹導演把他借調去演主角，這是他的一個機遇。在寇振海去東北拍外景戲路過哈爾濱時，長影廠演員劇團團長王延盛特地約他在哈市見了一次面。這次見面時間只有短短十來分鐘，但王團長對小寇的第一印象頗為滿意，當場挑明要小寇去長影廠。在此之前從未想過能進影視圈的寇振海，十分愉快地接受了王團長的邀請。

從一九七八年開始，寇振海先後參加了《夜上海》、《月亮灣的笑聲》、《愛情啊，你姓什麼》、《智鬥美女蛇》、《喬隆廳》、《夜行貨車》等影片。

一九八五年九月，他考入了北京電影學院“明星班”。兩年的理論、業務學習，寇振海的感受是“仿佛是換了一個腦子，由原來對電影藝術的模糊轉向了清楚，最大的收穫之一便是更新了電影的觀念”。

凡是電影所涉及的重要課程，“明星班”都得到“優待”，寇振海終於擺脫話劇的那種“舞台效果”，電影意識得到了強化。

這次他在《少帥春秋》中再次飾演張學良，可以說是對寇振海在“明星班”所學到的知識的一次最有說服力的檢驗。《少帥傳奇》主要以其中的故事情節為紐帶，觀眾對他的表演自然很少去挑剔；《少帥春秋》則是從真實歷史為紐帶，全靠思想感情來表現人物，觀眾對他的表演要求就較高。吳秋芳導演作了分析：在《傳奇》中，寇振海有許多地方顯得不很自然，而在《春秋》中的表演則相當漂亮，氣質很好，而且與少帥的年齡（三十一歲—三十六歲）也相符，加上他演得認真、嚴肅，有幾場哭的戲，小寇完全進入了角色，演得真切感人。

[D14]

司馬遷筆下的三女性

其三是，淮陰城下的漂母。
韓信“始為布衣時，貧無行，不得推擇為吏，又不能治生商賈，常從人寄食飲，人多厭之者……信釣於城下，諸母漂，有一母見信飢，飯信，竟數十日。信喜，謂漂母曰：‘吾必有以重報母。’母怒曰：‘大丈夫不能自食，吾哀王孫而進食，豈望報乎？’”（《淮陰侯列傳》）

幫助漢高祖打天下、善於用兵的韓信，青年時代是個流浪漢，多虧漂母的接濟，才生活得下來，又受其教誨，走上正路。歷史上一位赫赫有名的將軍的啓蒙者，竟是一位普通婦女。司馬遷不愧為文章大家，寥寥數語，在人們面前展現出一個光輝的形象。她心地善良，扶困救危；她對“貧無行”者懷有滿腔熱情，誨其上進；她推食於人而不望報，厭惡那種廣結善緣以圖後惠的小市民心態。這些，代表了我國婦女的傳統美德。由此想到了向張良贈書的黃石公。這位老人故意棄履圯下，叫素不相識的張良給他拾起鞋來穿在腳上；以後，才認為“孺子可教矣”；又經過三次相約的考驗，才放下心來。

（《留侯世家》）而漂母白白管了數十日飯，只是當韓信表示以後要報答她時，才勸其作為男子大丈夫應當自食其力。兩者相比，漂母在愛護青年人的自尊心和給以信任方面都勝過黃石公。如果我們的劇作家能夠就漂母與將軍的故事寫出一齣戲來，對於社會，對於從事勞教、工讀的人員，對於因為無知導致無行的青少年朋友，必將都會有所裨益。

鄧小平：集革命家政治家軍事家外交家於一身——

中國當代改革的總設計師鄧小平，今天在七屆人大一次會議上再度當選中華人民共和國中央軍事委員會主席，繼續統帥擁有三百多萬人的中國人民解放軍。

鄧小平也是中共中央軍事委員會主席。

一九八一年六月以來，他一直擔任這一重要職務。五個月前在中共「十三大」上，爲了推進領導層的年輕化，這位在黨內外有崇高威望的老革命家堅決要求退出黨的中央委員會和政治局，只接受了黨要他繼續擔任中央軍委主席的安排。

中國青年「最喜歡的在世名人」

鄧小平集革命家、政治家、軍事家和外交家於一身。他是中華人民共和國的開國元勳，是毛澤東、周恩來之後的中國主要領導人。他引導中國迅速地從十年「文化大革命」造成的深重災難中擺脫出來，穩步走上社會主義現代化建設的正確軌道，他發動和指導了中國的改革和對外開放，把中國帶進了一個新的歷史時期。

鄧小平在一九七八年、一九八五年兩次被美國《時代》週刊評爲當代對世界事務最有影響的風雲人物。他在一九八五年「國際千年盛世協會」評選的十位「最富鼓舞性人士」的名單中位居榜首。一九八六年北京社會調查所對八千份問卷統計表明，鄧小平在國內外政治家中和在中國政治家中得票最多，成爲中國青年「最喜歡的在世名人」。

在當代的政治家中，鄧小平的經歷堪稱有傳奇色彩。在六十多年波瀾壯闊的革命生涯中，他歷經風險無數，其中政治上因堅持正確主張就有過三次大落大起。

尤其他在一九六六—一九七六年的「文化大革命」中兩次遭迫害，是他革命生涯中最艱難、最曲折的時期。在這場浩劫的初期，擔任中共中央總書記的鄧小平和國家主席劉少奇一起被誣衊爲「黨內最大的走資派」而受到批判，被解除一切職務，下放到江西省的一個拖拉機廠勞動。他和經常患病的妻子及年邁的繼母相依爲命，在那裏度過了三年艱難的歲月。林彪集團反革命政變陰謀的失敗導致了鄧小平的復出。由於周恩來大力支持，他一九七三年恢復了副總理職務。周恩來病重住院後，一九七五年一月，他擔任中共中央副主席、國務院副總理、中央

軍委副主席、中國人民解放軍總參謀長，主持黨和國家的日常工作。

在江西工廠當鉗工的日子裏，鄧小平深深地思考着中國發生的一切和它未來的命運。在主持黨和國家的日常領導工作後，他立即着手糾正把國家引入歧途的「文化大革命」的錯誤，並對其造成的混亂進行大刀闊斧的整頓。鄧小平的決心和行動遭到了當時有很大權力的「四人幫」的激烈反對。一九七六年四月北京發生上百萬人悼念周恩來、反對「四人幫」、擁護鄧小平正確路線的「天安門事件」，他被誣陷爲這個事件的「總後台」，再一次被撤銷黨內外一切職務。

在難忘的一九七六年，新中國的三位主要締造者周恩來、朱德、毛澤東相繼逝世，禍國殃民的「四人幫」被粉碎。問題如山，國民經濟瀕臨崩潰的中國在未來的歲月裏向何處去，應該走什麼道路？成爲全國人民關心的大問題。

中國當代重大決策的主要設計師

一九七七年七月，鄧小平再次復出。他一出來工作，立刻表現出了作爲戰略家的膽略和智慧。

他高舉「實事求是」、「解放思想」的旗幟，用實踐是檢驗真理唯一標準這把鑰匙，撥開了人們長期僵化、禁錮的思想，在一九八一年中共十一屆六中全會上通過了他主持和指導下起草的《關於建國以來若干歷史問題的決議》，徹底否定了危害國家十年之久的「文化大革命」，糾正了毛澤東晚年的錯誤，並準確地充分地評價了毛澤東在中國革命中的偉大貢獻。

在處理這樣棘手的問題上，鄧小平表現了高超的政治藝術：既使國家走出了錯誤的泥潭，又避免了新的思想混亂和社會動蕩。

這次思想解放運動成爲一九七八年底著名的中共十一屆三中全會的先導。從那以後，鄧小平領導中國人民開闢了一條建設有中國特色的社會主義的新路。他是近十年來一切重大決策的主要設計師。

戎馬倥傯 成就卓著

一九〇四年八月二十二日，鄧小平生於四川省廣安縣農村。他原名鄧希賢，直到一九二七年國民黨把槍口轉向共產黨，迫

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使中共黨員轉入地下的時候，他才改名爲鄧小平。

一九二〇年，十六歲的鄧小平和一批中國學生抱着「工業救國」的思想離開祖國去法國勤工儉學。在那裏五年多，他成了革命者，一九二二年加入共青團，一九二四年轉爲中國共產黨黨員。在他的旅歐同學中有許多人後來成了中共的重要領導人，最有名的是周恩來。一九二六年初，鄧小平離法赴蘇，先在莫斯科東方大學，後在中山大學學習。他記得，他們年級中兩個最年輕的同學中的一個是統治台灣十二年之久的蔣經國先生。

一九二七年春鄧小平回到祖國。他在國內從事革命實踐活動的第一個場所，是馮玉祥國民聯軍總部下屬的西安中山軍政學校，他任政治處處長兼政治教官，並任該校中共黨組織書記。

在二十多年的戰爭中，鄧小平是一位叱咤風雲的將帥。

在一九二九年底和一九三〇年初，年輕的鄧小平以中央代表的身份在中國南部的廣西參加領導了百色起義和龍州起義，創建了紅七軍、紅八軍和左江、右江革命根據地。

他一九三四年十月至一九三五年十月參加了史詩般的二萬五千里長征，並以中共中央秘書長的身份參加了長征途中在貴州省遵義召開的歷史性的中央政治局擴大會議。

一九三八年，鄧小平由八路軍政治部副主任調任一二九師——八路軍三大主力之一——政委，劉伯承任師長。從此，他和劉伯承元帥在疆場上親密共事十三年。在八年抗戰期間，劉鄧部隊以華北太行山爲依托，建立根據地，打擊敵人。他們出色地指揮了許多重要的戰鬥、戰役，包括他們率領所部三十八個團參加的「百團大戰」。

一九四七年，赫赫有名的十二萬劉鄧大軍南渡黃河，挺進華中戰略要地大別山地區，開始了共產黨領導的人民解放軍對國民黨軍隊的全國性反攻。鄧小平作爲總前委書記，和劉伯承、陳毅元帥等一起指揮了一九四八年十一月開始的淮海戰役。這是解放戰爭中著名的三大戰役之一，六十五天中殲滅敵軍五十萬多人，給國民黨軍事力量以致命打擊。一九四九年四月，他們又指揮百萬雄師突破五百公里的沿江防綫，最後攻克了當時國民黨政府所在地南京。隨後，鄧小平又和劉伯承率部進軍大西南，直至一九五一年實現西藏和平解放。鄧小平在西南工作將近三年，任中共中央西南局書記、西南軍區政委和西南軍政委員會副主席。

毛澤東稱讚鄧小平「人才難得」

毛澤東會稱讚鄧小平「人才難得」。他長期擔任黨、政、軍要職。他從戰爭年代的野戰軍政委到建國後的國防委員會副主席、總參謀長、中央軍委副主席、主席。他一九四五年在黨的「七大」上被選爲中央委員，一九五五年被增選爲政治局委員，一九五六年「八大」上被選爲中共中央總書記，擔任此職達十年之久。一九七七年黨的「十一大」上再次當選爲中共中央副主席，一九八二年黨的「十二大」上被選爲中央政治局常委和中央顧問委員會主任。他從一九五二年到一九八〇年多次出任國務院副總理。一九八三年任全國政協主席。

鄧小平精通國際事務，是有世界眼光的國際活動家。他主持制定了中國獨立自主的和平外交政策。多年來，他以充沛的精力進行外事活動出訪許多國家，繁忙地接待外國元首和政府首腦以及工商界、文化界人士。

他在一九五六年至一九六三年間多次率領中共代表團同蘇共領導人談判。一九七四年他作爲中國政府代表團團長在聯大第六屆特別會議上發言，系統闡述了關於三個世界劃分的理論。

他用「一國兩制」的構想解決了歷史遺留下來的中英之間的香港問題和中葡之間的澳門問題；也爲解決台灣問題，實現祖國統一，提出了合情合理的方針。

「我是中國人民的兒子」

鄧小平絕少提到自己光輝的歷史。據他的女兒鄧林說，她爸爸的歷史她還是從「文革」中的小報上知道的。大眾傳播媒介報道鄧小平談自己僅見過兩次。一次當意大利女記者法拉奇問他怎麼評價自己時，鄧小平說：「我自己能夠對半開就不錯了。但有一點可以講，我一生問心無愧。」另一次，他得知英國培格曼出版公司要出《鄧小平文集》英文版時，他在序言中寫道：「我是中國人民的兒子。我深情地愛着我的祖國和人民。」

鄧小平有廣泛的愛好。他堅持每天散步。他是打橋牌的高手，又是游泳能手，在他八十高齡的時候還能在海中一氣游上幾十分鐘。他有吸煙的嗜好，又喜歡聽京劇，看足球賽。他對烹調也頗有興趣，有時親自動手作出純粹的濃辣的川菜。他的兒子鄧樸方說，他父親的烹調手藝比他母親還高。

鄧小平和卓琳女士在抗日戰爭中建立家庭。他們有兩個兒子、三個女兒。

（新華社北京四月八日電）

[D16]

王震：新任國家副主席—— 戰爭年代馳騁沙場功勳卓著 和平時期投身建設貢獻重大

原中共中央顧問委員會副主任王震今天在七屆全國人大一次會議上當選為中華人民共和國副主席。

王震一九〇八年生於湖南省瀏陽縣一個貧苦農民家庭，一九二二年當鐵路工人，一九二七年一月加入中國共產主義青年團，同年五月轉入中國共產黨。

一九二四年後，任粵漢鐵路長岳段工會執行委員及糾察隊長。一九二七年後，參加長沙工人暴動，後來做黨的交通工作和兵運工作，以後又擔任過從游擊隊隊長到軍團政委的職務，參加了紅二方面軍的長征。在抗日戰爭和解放戰爭的烽火中，他擔任過一二〇師著名的三五九旅的旅長兼政委，第一野戰軍第二縱隊司令員兼政委，第二軍軍長兼政委等職務。一九四九年後，任一兵團司令員兼政委，中共中央新疆分局書記兼新疆軍區代理司令員、政委。在幾十年的革命戰爭歲月裏，他率領部隊在大半個中國縱橫馳騁、功勳卓著。一九五五年任人民解放軍副總參謀長、國防委員會委員，被授予上將軍銜。

王震領導的三五九旅在抗日戰爭時期陝北革命根據地的大生產運動中寫下了光榮的篇章。他率部在南泥灣實行屯田政策，自力更生，艱苦奮鬥，使三五九旅成為全軍大生產運動的一面旗幟。建國後，王震是屯墾戍邊的熱情倡導者和實行者。他率部在新疆屯墾戍邊，認真執行民族政策，努力發展新疆生產，為加強新疆各族人民的團結，穩定和開發建設西北邊疆建立了功勞。一九五三

年，王震任解放軍鐵道兵司令員兼政委，率部以最快速度先後修建了鷹廈、黎湛、大興安嶺鐵路。一九五六年王震就任農墾部部長，他常年奔波於新疆、黑龍江、海南島等地，艱苦創業，勇於開拓，為發展中國的農墾事業和鞏固邊防作出了重大貢獻。

“文化大革命”中，王震與林彪、江青兩個反革命集團進行了堅決的鬥爭，保護了一批幹部和群眾。一九六八年至一九七二年，王震被下放到江西省紅星墾殖場勞動。一九七五年就任國務院副總理後，他積極支持主持中央日常工作的鄧小平進行全面整頓。粉碎江青反革命集團後，他對重新恢復鄧小平、陳雲等老一輩無產階級革命家主持黨和國家的的工作以及平反歷史上的冤假錯案作出了重要貢獻。

一九七九年，王震任國務院副總理時，曾帶領數名部長到深圳蛇口考察，研究開發蛇口經濟特區的工作。一九八四年，他與楊尚昆一道陪同鄧小平視察廣東、福建等沿海城市後，建議進一步解放思想、儘快解決鄧小平同志指出的開放得還不夠的問題。他對加快海南開發建設也提出了建議。

王震十分重視教育，珍惜人才。他非常尊重、關心和愛護知識分子，重視對他們的使用，許多知名學者、科學家、文學家、詩人、藝術家在政治上處於逆境時得到了他的保護和照顧。

一九八三年，王震任中日友協名譽會長，此後，又任中國國際友好聯絡會名譽會長，為加強中國人民與世界各國人

民的交往和團結做了大量的工作。

王震在一九四五年中共“七大”上當選為候補中央委員，以後又被選為第八至十二屆中央委員會委員，第十一、十二屆中央政治局委員。一九七八年後，還任中共中央軍委常委，中共中央黨校校長，中共中央整黨工作指導委員會顧問，中共中央顧問委員會副主任。王震是第一至五屆和第七屆全國人大代表。

（新華社北京四月八日電）

[D17]

萬里：新任人大常委會委員長——

加強民主和法制
作出新貢獻
接過權力接力棒
踏上新征程

多年來在政府裏作趙紫陽第一副手的萬里，今天在中國議會——全國人民代表大會上當選為人大常委會委員長。他是從八十六歲的老革命家彭真手裏接過這一重要的權力接力棒的。

萬里表示，他將為進一步加強社會主義民主和法制建設，更有效的發揮全國人民代表大會這個國家最高權力機關的作用，提高人大常委會的議事效率，發展同各友好國家議會的交往而努力。

七十一歲的萬里以十年前領導華東安徽省農民在全國率先打破人民公社的體制，實行以家庭為基礎的聯產承包責任制（即包產到戶）而聞名。這種承包責任制後來很快席捲全國，成為中國農村改革的主要標誌。差不多在同一時候，趙紫陽所領導的全國人口最多的四川省也實行了類似的改革，同樣獲得了成功。當時在農民中流傳着這樣一種說法：“要吃糧，找紫陽；要吃米，找萬里”，表達了農民對這兩位改革者的稱頌。

其實，在此之前萬里已為中國老百姓所熟知。一九七五年，萬里作為鐵道部長堅決地貫徹執行了鄧小平對受到“文革”災難性破壞的國民經濟實行“整頓”的方針。他頂着“四人幫”批判“唯生產力論”的逆流，發動和依靠鐵道部系統的幹部和群眾，批判極左思潮和無政府主義，清除在一些鐵路樞紐領導班子中搗亂的極左分子，從而使鐵路狀況很快好轉，火車正點，阻塞消除。人民群眾對他雷厲風行，敢作敢為的領導風格深表敬佩。但一九七六年四月當鄧小平再次受到無辜的迫害時，萬里也隨之被解職，受到批判。

萬里一九八〇年由安徽調到中央任國家農委主任，在全國範圍內推進農村的改革。他也是領導全國植樹造林工作的中央綠化委員會主任委員。他從一九八〇年起任國務院副總理，直到這次全國人代會之前。在趙紫陽總理出訪時，萬里曾任代總理。他在一九七七年黨的

“十一大”上當選為中央委員，一九八〇年十一屆五中全會上當選為中央書記處書記，一九八二年“十二大”當選為政治局委員、書記處書記，在去年的“十三大”上再次當選為政治局委員。

[D17]

建國後到一九六六年“文化大革命”開始時，萬里長期從事城市建設方面的領導工作，任過中央建築工程部副部長、中央城市建設部部長。一九五八年起任北京市副市長，仍分管市政建設。他協助已故周恩來總理領導了五十年代包括人民大會堂——中國的國會大廈——在內的著名的十大建築和首都其他重要建設項目的規劃與組織工作。由於這方面的經歷，萬里一九八四年被選為中國城市科學研究會名譽會長。

萬里一九一六年生於山東省東平縣一個貧苦農民的家裏。他的賢慧明達的母親為了讓自己唯一的兒子能識字斷文，含辛茹苦地供他上學。萬里畢業於孔子故鄉曲阜的一所有名的師範學校。

他一九三六年五月加入中國共產黨。抗日戰爭時期（一九三七—一九四五），任中共縣委書記、地委宣傳部長、組織部長等職。解放戰爭時期（一九四六—一九四九）任冀魯豫區黨委委員、秘書長。中共接管南京後，任南京市軍管會財委副主任、經濟部長、建設局長。

萬里是一位網球愛好者，他打球的歷史可追溯到少年時代。當時他學校所在的縣城裏的一個簡陋的網球場使十二三歲的萬里產生了濃烈的興趣。從那以後他就和這種運動結下了不解之緣。就在他上了年紀、且國事加身的情況下，每週仍要打上兩三次。一九八三年，他在一次友誼賽中擊敗了來自“網球之鄉”澳大利亞的駐華大使。澳大利亞新聞界得知後，在報上登了萬里的大幅照片，並著文報道中國副總理的球藝。一九八六年國際奧委會主席薩馬蘭奇把一枚奧林匹克金質勳章授予萬里，表彰他為發展中國體育運動作出的貢獻。世界上獲此殊榮的不過十五人，萬里是唯一的中國人。

萬里也是橋牌的愛好者，曾獲一九八四年世界最佳橋牌——所羅門獎。他現在是中國橋牌協會名譽主席。

（新華社北京四月八日電）

[D18]

趙紫陽：國家中央軍委副主席——

身兼軍界要職 肩負重大使命 統攬全局 致力貫徹基本路線

趙紫陽今天在七屆人大一次會議上被確定為中華人民共和國中央軍事委員會副主席，他將同另一位副主席楊尚昆一起協助主席鄧小平領導中國人民解放軍這支世界上人數最多的軍隊。

六十九歲的趙紫陽是在去年十一月初舉行的中共十三屆一中全會上當選總書記的。

作為中國共產黨最高領導人趙紫陽在黨的十三大後統攬全局，致力於貫徹黨的十三大確定的基本路線和各項任務，與其他領導人一起，指導、督促各方面深化改革、加快對外開放，採取一系列實際措施，推動黨內民主、社會主義民主和社會主義法制建設的進程。

在中央領導核心工作了近八年的趙紫陽，現在又身兼軍界要職，觀察家們用“任重道遠”四個字來形容他肩負使命的重大。

趙紫陽從十八歲起在豫北家鄉參加了共產黨領導的革命鬥爭，在一九三八年加入中國共產黨。

六十年代前期，他曾擔任中共廣東省委第一書記、中南局書記處書記。“文化大革命”中受迫害，一段時間在工廠勞動。

趙紫陽從一九七三年黨的第十次全國代表大會開始是歷屆中央委員，在一九七七年八月十一屆一中全會上被選為政治局候補委員，一九七九年十一屆四中全會上被選為政治局委員，一九八〇年十一屆五中全會上增選為政治局常委，一九八一年十一屆六中全會上被選為黨中央副主席，一九八二年十二屆一中全會上被選為中央政治局委員、常委，一九八七年一月代理總書記。趙紫陽從一九八〇年起擔任國務院

總理，成為黨和國家最高決策人之一。他曾兼任國家經濟體制改革委員會主任、中央財經領導小組組長。趙紫陽是在一九八六年底中國一些城市發生學潮後受命擔任代理總書記的。

趙紫陽擔任總理後多次出國訪問。一九八五年十月他在第四十屆聯合國大會上發表演說，闡述中國的獨立自主和平外交政策。西方新聞界以——“從容不迫”、“顯示了驚人的自信心”來形容趙紫陽在外交活動中的風度。

青年時代的趙紫陽和梁伯琪都參加過抗日戰爭。趙紫陽喜歡和兒女們一起圍桌吃飯，聽他們發表各種意見和議論社會上的種種事情。即使在吃飯時間，他也在瞭解民情。

（據新華社四月九日電）

[D19]

副總理 姚依林

中國資深的經濟管理家姚依林今天在七屆人大一次會議上再次被任命為國務院副總理，成為新總理李鵬的三位副手之一。

姚依林曾兩次出任國家計劃委員會主任，是公認的中國高級官員中一名當家理財的老手。他一九七八年出任副總理，一九八二年國務院進行改組，他是改組後僅有的兩名副總理之一。

去年十一月中共十三屆一中全會上，年已七十的姚依林引人注目地成為中共領導核心——中央政治局常務委員會的五名成員之一。當時輿論界認為，這一安排表明，他的經驗對正在深入進行的經濟體制改革是重要的。

長期以來，他的名字同中國的許多重要經濟活動聯繫在一起。從建國時起，他就從事商業和外貿工作，先後任對外貿易部副部長、商業部副部長，國務院財貿辦公室副主任。從一九六〇年起擔任商業部部長七年之久。他曾作為中國商務代表團團長，在一九五一年到莫斯科參加中蘇貿易談判。他參加了中國幾個五年經濟計劃的制訂。他治理經濟的能力在一九四九年——一九五二年的國民經濟恢復時期和六十年代三年災荒後的國民經濟調整時期都得到了顯示。一九七九年，他作為副總理和國務院財經委員會秘書長，再次參與了對膨脹過快的經濟作出調整。

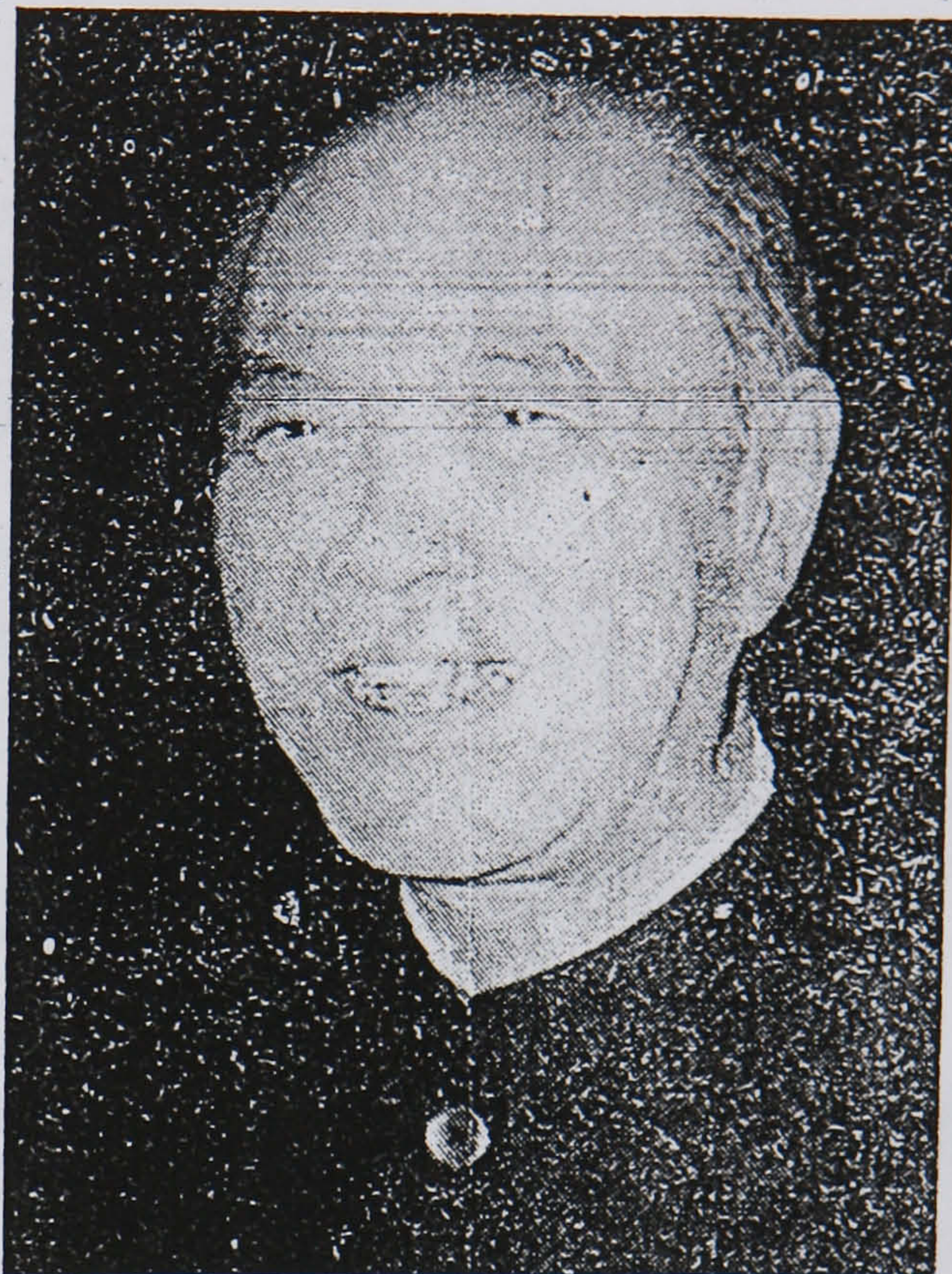
事實上，姚依林從事經濟管理的經歷可以追溯到戰爭年代。一九四六——一九四九年的解放戰爭時期，他就擔任了晉察冀邊區政府工業局長，財辦副主任和華北人民政府工商部長。

姚依林早在一九八〇年就比較系統地提出加快經濟管理體制改革進程的意見，包括在國營工業中全面推行擴大自主權，廣泛開展競爭，廣開商業流通渠道，銀行獨立經營，改革稅制，實行計劃指導下的市場調節。

姚依林一九一七年生於安徽省貴池縣；畢業於清華大學化學專業；一九三五年加入中國共產黨。作為北平市學聯黨團書記，他是三十年代中期北平抗日民主愛國學生運動的組織者之一。

一九三七年——一九四五年的抗日戰爭時期，他從事黨的地下工作，先後任中共天津市委書記、晉察冀中央局秘書長等職。他還參與領導了冀東武裝起義。

建國後在長期做經濟工作的同時，他間或也從事黨務工作。在一九七九年後的一段時間裏，他擔任過中共中央副秘書長和中共中央辦公廳主任。



[D20]

副總理 田紀雲

以財經管理見長的田紀雲，在今天產生的以李鵬為總理的新的一屆政府中繼續擔任副總理。同他一起出任的另外兩名副總理是經濟管理家姚依林和前外交部長吳學謙。

田紀雲在一九八三年六月第一次被任命為副總理。在那以前，大多數中國人對他的名字並不熟悉，因為他長期在西南的地方政府裏任職。出任副總理後，由於他活躍在中國經濟體制改革的舞台上，他的名字就常常和一些重要的經濟決策和經濟活動聯繫在一起。

田紀雲在執行趙紫陽總理倡導的利改稅的改革中起了重要作用，這項改革被證明對企業管理和國家財政收入產生了積極的影響。

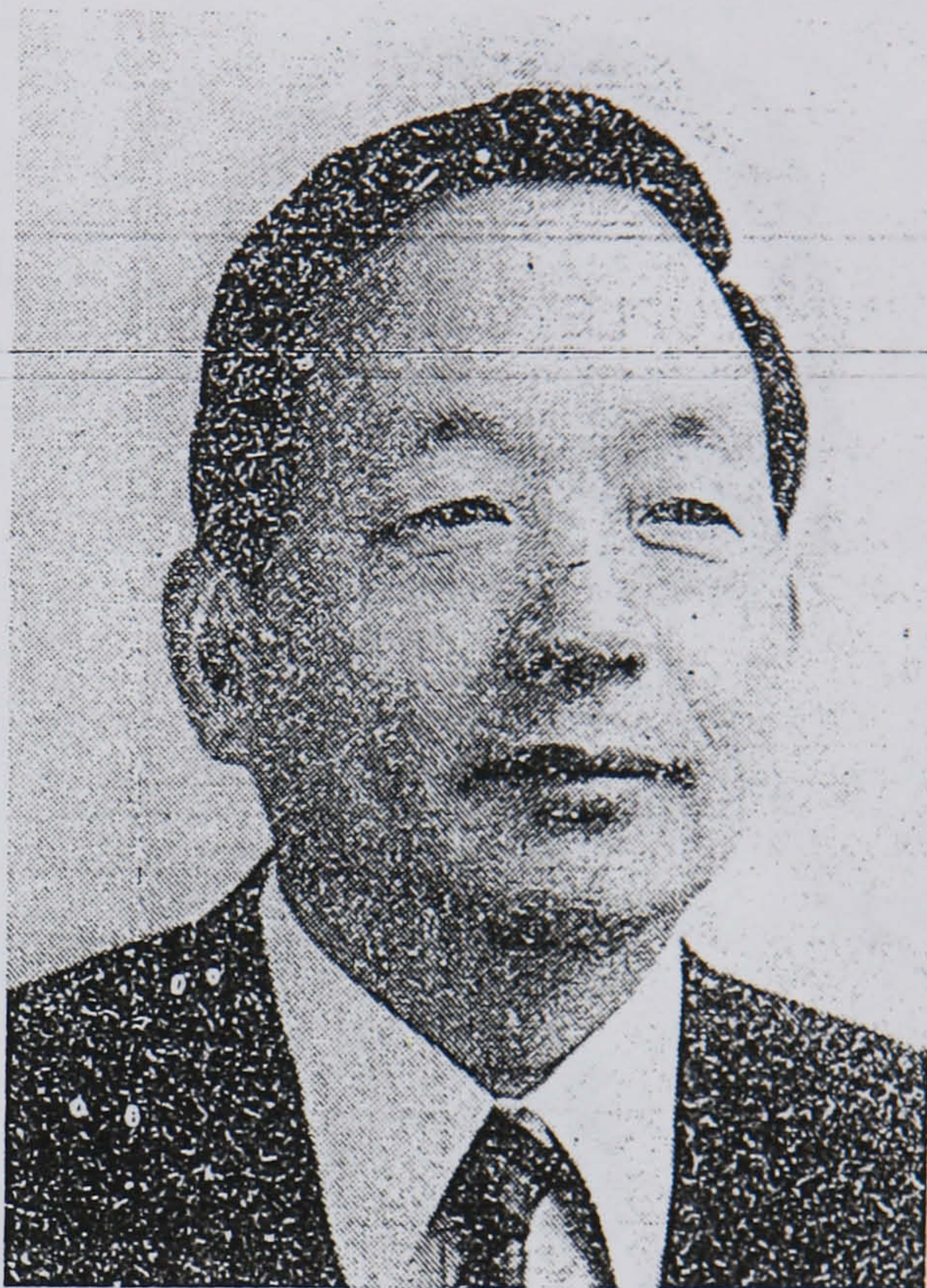
過去，中國的企業幾乎將它們全部的利潤都上繳給國家，需要錢再由國家批准撥給。虧損的企業可以不上交利潤，並且由國家為它們支付虧損額。這樣的體制不能區別對待成功的和不成功的企業。因此，企業和工人對生產失去了興趣。而改革後，國家只要求企業上繳稅款，企業取得的利潤越多，就可以留下更多的資金用於技術改造，擴大再生產、改善職工福利和發獎金。這個辦法調動了企業和職工的積極性。

他還參與物價改革和工資改革的領導工作。這是兩項極其重要而又極其複雜的工程，可以說是整個經濟體制改革的關鍵。

田紀雲重視貧窮地區農村經濟的發展。一九八六年五月國務院成立了貧困地區經濟發展小組，之後國務院決定從這年起連續五年每年向約八千萬人口的貧困地區增撥十億元的貼息貸款。但田紀雲在貧困地區巡視時總是強調，那些地區的政府和人民要努力探索適合自身發展的門徑，不斷增強自身的“造血機能”。

田紀雲一九二九年生於山東省肥城縣，十一歲在縣城當學徒。他一九四五年五月加入中國共產黨。一九四七年後參加過土改工作。一九四九年隨解放軍到達西南的貴州省，先在幹部培訓學校工作，一九五三年到六十年代初在貴州省財政廳工作，後來升為副廳長。之後，他被調到四川省工作，先後擔任過這個中國人口最多的省份的財政局（廳）副局長、局長。趙紫陽任中共四川省委第一書記時，在那裏着手進行經濟體制改革的試驗。田紀雲對於這項開創性的工作給予了有力的支持。

田紀雲一九八一年調到北京任國務院副秘書長。一九八二年的中共“十二大”上被選為中央委員，一九八五年被增選為中央政治局委員、書記處書記。一九八七年黨的十三大上當選為中央政治局委員。



[D21]

副總理 吳學謙

原國務委員兼外交部長吳學謙，今天在七屆人大一次會議上同經濟管理專家姚依林、田紀雲一起被任命為國務院副總理，成為新任總理李鵬在外事方面的助手。

他的外交部長職務由比他年輕六歲的副外長錢其琛接任。

可以預料，吳學謙今後將會減少在外交第一綫的活動，而在掌握外交政策和協調外事工作方面發揮更大的作用。

六十六歲的吳學謙是在一九八二年四月入主外交部的，至今整整六年。加上以前在共青團中央和中聯部的涉外工作經歷，他積累了三十多年的外事工作經驗。

吳學謙把外交視為國家政治活動的一個重要方面。他強調辦外交必須以正確的政策為指導，以強大的國力為後盾。他要求外交部努力發揮在外交方面作為黨中央和國務院的執行兼參謀機關的作用，並領導外交部堅決貫徹中央制定的獨立自主和平外交政策，積極開展外交活動，開創了新的局面。吳學謙強調，外交要為國內的改革和對外開放服務。近年來中國的“經濟外交”也取得了成效。

六年來，吳學謙外長開展了廣泛的外交活動。他先後訪問了五大洲的近七十個國家，包括東歐社會主義國家、西方發達國家和廣大第三世界國家，增進了中國同這些國家的相互瞭解和友好關係。他出席過五屆聯合國大會，並在去年八月參加了聯合國亞太經社理事會成立四十週年的慶祝大會。他在這些講壇上多次發表演說，介紹中國的情況，闡述中國對國際形勢和一系列國際問題的立場。他還利用這些多邊活動場所，會見了一大批外國領導人和外交部長。在一九八四年九月的第三十九屆聯大期間，吳學謙除參加大會外，每天會見七八位外國官員。有一天，他連續會見了十四位外長。他還廣泛接觸中外記者。

吳學謙把加強幹部隊伍建設作為辦好外交的一個重要環節。近幾年他領導外交部推行改革，重點是推進幹部的革命化、年輕化、知識化、專業化。吳學謙一九二一年生於上海，曾就讀於暨南大學外文系。自一九三八年起，他在中共上海地下黨的領導下從事學生運動工作，一九三九年入黨。一九四九年以後，吳學謙任共青團上海市工委秘書長、共青團中央駐世界青聯代表和團中央國際部副部長、部長。他在一九五八年調往中聯部工作，歷任局長、副部長。一九八二年他任外交部副部長，同年升任部長，次年被提升為國務委員兼外長。吳學謙是中共十二屆和十三屆中央委員，從一九八五年起當選為中央政治局委員。



[D22]



國務委員 李鐵映

五十一歲的李鐵映在今天人大會議上被任命為新的一屆國務院的國務委員兼國家教委主任這一重要職位。

李鐵映一九三六年生於中共領導的抗日根據地延安。父親李維漢是和毛澤東同時代的革命家。

一九六一年，李鐵映從捷克斯洛伐克留學回國後，長期在電子工業部門任職。一九八一年任中共瀋陽市委書記，兩年後任遼寧省委書記，成為國內最年輕的省委書記之一。

一九八二年中央“十二大”上，李鐵映被選為候補中央委員，一九八五年晉升為中央委員。一九八五年他調任電子工業部部長。一九八七年四月又被任命為國家經濟體制改革委員會主任。

[D23]



國務委員 秦基偉

長期任北京軍區司令員的秦基偉，今天被任命為國防部長，還接受了兩個重要職務：國務院的國務委員和中央軍事委員會委員。

秦基偉一九一四年生於華中湖北省紅安縣的一個貧苦農民家庭。他十五歲參加中國工農紅軍，一九三〇年加入中國共產黨。歷任排長、連長、團長、副旅長，軍分區司令員、太行軍區司令員、縱隊司令員。

一九五〇年，他擔任中國人民志願軍第十五軍軍長，參加抗美援朝戰爭。一九五五年被授予中將軍銜。在“文化大革命”中受到迫害。恢復名譽後，他被任命為成都軍區司令員。一九七五年調到北京軍區先後任第二政委、第一政委和司令員。

[D24]



國務委員 王丙乾

已擔任中國財政部長七年多的王丙乾，今天再次被任命擔任這一重要職務。

王丙乾一九二五年六月生於河北蠡縣，一九四〇年一月加入中國共產黨。他一九三九年後參加工作，在中共蠡縣縣委機關任刻寫員、秘書。一九四五年開始涉足財務工作，先後任冀中區審計委員會秘書、審計幹事，冀中行署財政廳審計科員，華北財政部審計處副科長。一九四九年建國後，歷任國家財政部主計處科長，預算司處長，預算司司長。一九七〇年後，任財政部副部長。一九八〇年八月被任命為財政部部長、一九八三年後任國務委員。他是中共第十二、十三屆中央委員。

[D25]

國務委員 宋健

中國著名的控制論專家宋健今天在全國人代會上再次被任命為國務委員兼國家科學技術委員會主任。

宋健一九三一年十二月生於山東榮成，一九四五年在抗日根據地膠東地區參加工作，一九四七年六月加入中國共產黨。

一九四八年後，好學的宋健被送到膠東區黨委幹校、山東工業幹部學校學習，建國後入哈爾濱工業大學、北京外國語學院學習。一九五三年後，在蘇聯莫斯科包曼工學院學習，獲副博士學位，任研究員兼職教授。一九六〇年回國後，長期在國防科研部門工作。一九八一年後，任北京信息控制研究所所長，七機部總工程師，七機部副部長，航天工業部副部長。



[D26]

國務委員 王 芳

去年被任命為公安部長的王芳，今天在人大會議上被任命在李鵬為總理的新一屆政府中繼續擔任原來的職務。同時，他今天還成為國務院的九名國務委員之一。

六十七歲的王芳自一九三七年在他的家鄉山東新泰縣參加八路軍後，他的大部分經歷是從事公安保衛工作。

一九三七年後，王芳歷任班長、排長、連長、旅保衛科科長，魯中軍區敵工科科長。一九四四年後，任魯中軍區保衛部部長，縱隊組織部部長兼保衛部部長，兵團保衛部部長。一九四九年後，任杭州市公安局局長，省公安廳廳長，副省長。一九八三年後，任浙江省委書記。



[D27]

國務委員 鄒家華

機械工程師鄒家華今天在七屆人大一次會議上被任命為新組建的機械電子工業部部長。他同時也是國務院的九名國務委員之一。

一九二六年十月生於上海的鄒家華，一九四八年在哈爾濱工業大學補習俄文後，赴蘇聯莫斯科包曼高等工業學院機械製造系學習。一九五五年回國後，任瀋陽第二機牀廠工程師、廠副總工程師、總工程師、廠長。一九六四年後，任一機部機牀研究所所長。一九七二年後，任一機部機械研究院革委會副主任，國務院國防工辦副主任。一九八二年後，任國防科工委副主任。一九八五年後，任兵器工業部部長。一九八六年後，任國家機械工業委員會主任。



[D28]



國務委員 李貴鮮

鮮為人知的電真空化學工程師李貴鮮今天被任命為國務委員兼中國人民銀行行長。

李貴鮮一九八五年任重工業基地遼寧省省委書記，一九八六年調任中共安徽省委書記，直到這次任命。

一九五九年，李貴鮮在中國科技大學學習。一九六〇年後，在蘇聯莫斯科門氏化工學院攻讀電真空化學專業。一九六五年回國後，在公安部的一個研究所工作。一九七七年後，任遼寧省錦州市電子工業局副局長、總工程師，遼寧省電子工業局副局長、總工程師。一九八二年，任遼寧省副省長兼省科委主任。一九八三年後，任遼寧省副省長。他是中共第十二、十三屆中央委員。

[D29]



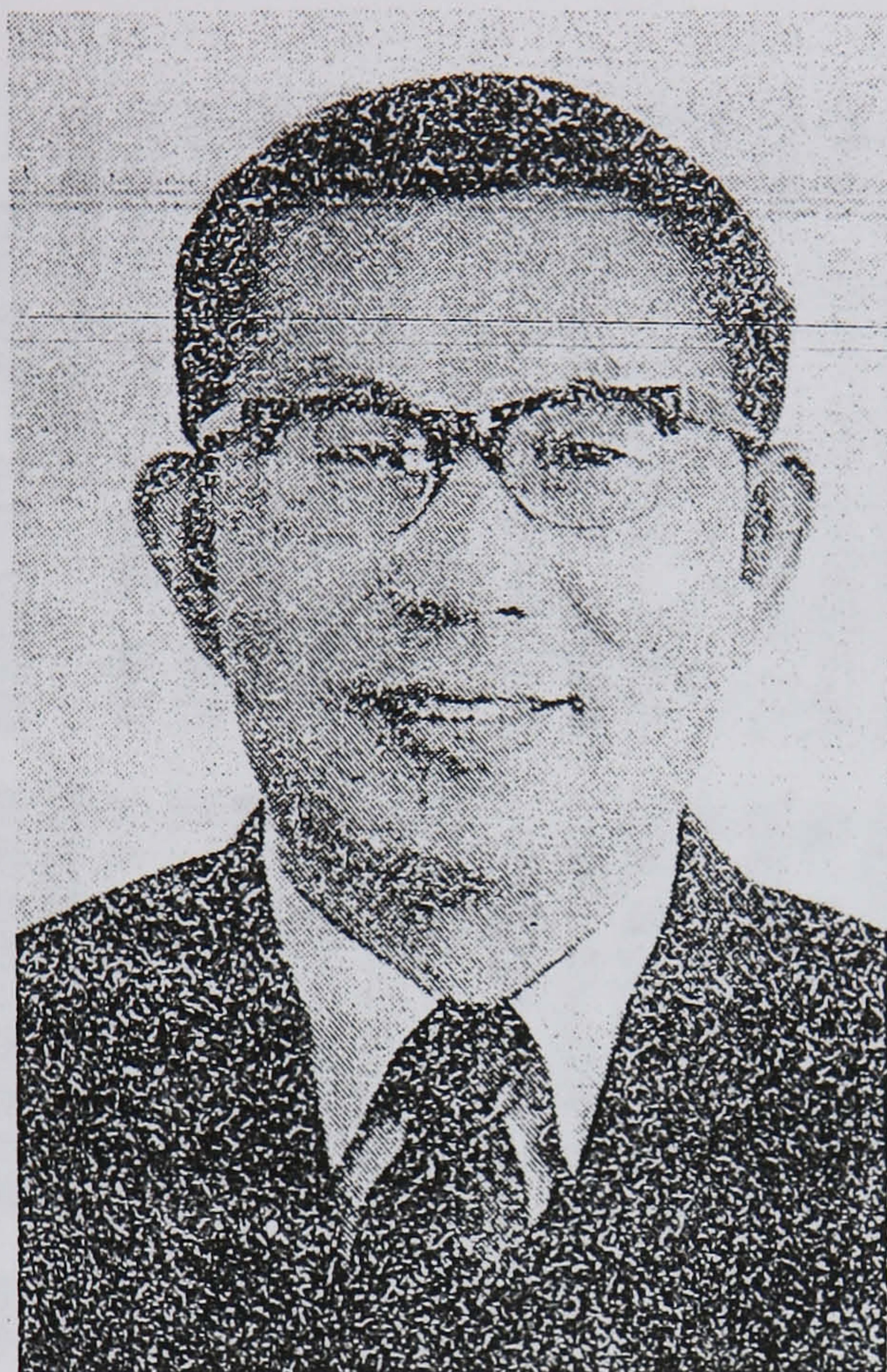
國務委員 陳希同

北京市市長陳希同在今天的人代會上被任命為國務委員。

此間觀察家認為，安排陳市長進入國務院可能是為了便於協調中央政府和北京市地方之間的關係。

五十八歲的陳希同是四川省安岳縣人，一九四八年就讀於北京大學中文系。一九四九年後，在北京市公安局一個分局任派出所副所長。一九五三年後任中共北京市委第二書記劉仁的秘書。一九六三年後，曾長期在北京郊區的昌平縣工作，曾任公社書記、縣委書記、縣革委會主任。一九七九年後，任北京市副市長、市委書記。一九八三年後，任北京市委書記、市長兼首都規劃建設委員會主任。一九八七年再次當選北京市市長。

[D30]



國務委員 陳俊生

陳俊生今天被任命為國務委員，並繼續兼任國務院秘書長。

六十一歲的陳俊生從一九四六年起長期在他的家鄉黑龍江省工作，曾先後在好幾個縣擔任過宣傳部長、組織部長、縣委書記。一九七三年後，任黑龍江省委政策研究室副主任、省委辦公廳主任、省委秘書長兼齊齊哈爾市委書記。一九八一年後，任黑龍江省委書記。

一九八四年後，陳俊生調到北京，任全國總工會副主席，中央書記處農村政策研究室副主任。一九八五年後，任國務院秘書長。他在中共“十三大”上當選為中央委員。

(據新華社北京四月十二日電)

吳天明與西影之崛起 (上)

蔡蔚 薛永民

萬一戲拍砸了，經濟損失可以壓到最低限度。結果，這部大膽觸及政治敏感點的影片，榮獲一九七九年中國文化部優秀故事片獎，給當時尚未甦醒的影壇來了第一次衝擊。

導演群體的形成抓起。

黃建新以前是西安市衛生局的宣傳幹事，曾在西北大學新聞班進修過。後來，他調入西影廠擔任場記。按照電影界的常規，黃建新就是再熬幾年，也挨不着導演的邊。吳天明發現黃建新具有不同一般的創新意識後，卻讓他一步登天，獨立執導《黑炮事件》。世界著名電影藝術家格列高里·派克看了黃建新執導的《黑炮事件》後說，其導演處理、構圖、表演等，都稱得上是世界第一流的。旋即，黃建新又拍了《黑》片的姊妹片《錯位》，又一次在國內外影壇叫響。張子恩，這位曾因擔任《生活的顫音》和《西安事變》等片的美工而嶄露頭角的中年男子，一旦認為自己的才華不只是限於美工時，吳天明便毫不猶豫地拍板予以跨行提拔。果然，張子恩不負眾望，首次執導就拿出了頗有特色的《默默的小理河》，接着又獻出了一九八七年“新時期十年電影獎”最佳導演提名的《神鞭》。

當西影廠的《老井》在第二屆東京國際電影節獲得故事片大獎和最佳男演員獎等四項獎項時，國內一位電影評論家撰文驚呼，說這是西影廠繼《生活的顫音》、《野山》和《人生》之後對中國影壇的第三次強力衝擊。此見話音未落，被稱為“影壇奇才”的張藝謀執導的故事片《紅高粱》又在第三十八屆西柏林國際電影節上壓倒群雄，捧回金熊獎杯。頓時，西影廠名聲大噪，萬眾矚目。此時此刻，細細品味一下那位評論家的所謂三次衝擊，就會覺得此論不無道理。

《老井》和《桃花扇》等寥寥幾部在全國有一定影響的片子。拍攝得少，自然也就培養不出導演，以致到了一九七八年，西影廠的田焯廠長手拿《生活的顫音》劇本，卻為廠裏沒有合適的導演而犯愁。命運，終於將滕文驥和吳天明這兩個一直渴望在電影天地裏一顯身手，而又苦於沒有機會的無名小卒推上了導演的寶座。這時，他倆都已近不惑之年。《生活的顫音》用大段的黑白片畫面，渲染了一九七六年那佈滿陰霾、令人窒息的時代氣氛；而偶爾閃現的、代表着光明的畫面卻與前者形成強烈反差，給廣大觀眾留下了深刻的印象。但與其說這是導演匠心獨具的藝術手法，倒不如說是歪打正着更合適。因為兩位導演被要求用百分之八十的黑白膠片拍戲，

西影廠是一九五八年建廠的，當時無論哪方面都遠不能與上影、北影、長影等幾家實力雄厚、群星璀璨的老字號製片廠相提並論。在建廠後的二十年中，西影廠只拍出了《火

吳天明與西影之崛起 (下)

蔡蔚 薛永民



西影廠導演黃建新近影

吳天明能大膽用人，更會用人。他為藝術家們創造寬鬆環境的方針是：「用人不疑。吳天明把劇本交給了導演，也交出了自己的信任和支持。不過，一副重擔同時就壓在了他們的肩上——首次執導非打響不可。於是，從影片一開拍，導演就沒有輕鬆的日子。審看樣片，是導演最惴惴不安的時刻。作為一個對影片有着“生殺予奪”大權的製片廠廠長，作為

一個享譽極高的導演，吳天明從不居高臨下，頤指氣使。與影片導演的觀點相悖時，他總是用協商的口氣談出自己的看法，供對方參考，採用與否，則請自便。一九八七年七月，英國《經濟學家》週刊刊登了一篇評論文章，其中寫道：“在八十年代的今天，中國電影處在一個轉折時期，湧現出一批年輕的電影導演和由他們執導的作品。人們把這批青年導演和他們的電影稱做‘新浪潮’派……”有趣的是，“新浪潮”電影大都不是出自那些實力雄厚的老廠，而是出自像西安電影製片廠這種地處邊遠省份的小廠和新廠。這是因為吳天明廠長採取了富有吸引力的政策，幾乎把全國年輕導演的精華都吸引到他的身邊，並在七十年代的末的《生活的顫音》是孤軍挺進影壇的話，那麼以顏學恕的《野山》和吳天明的《人生》為標誌的對影壇的第二次衝擊，則是一次集團式的密集

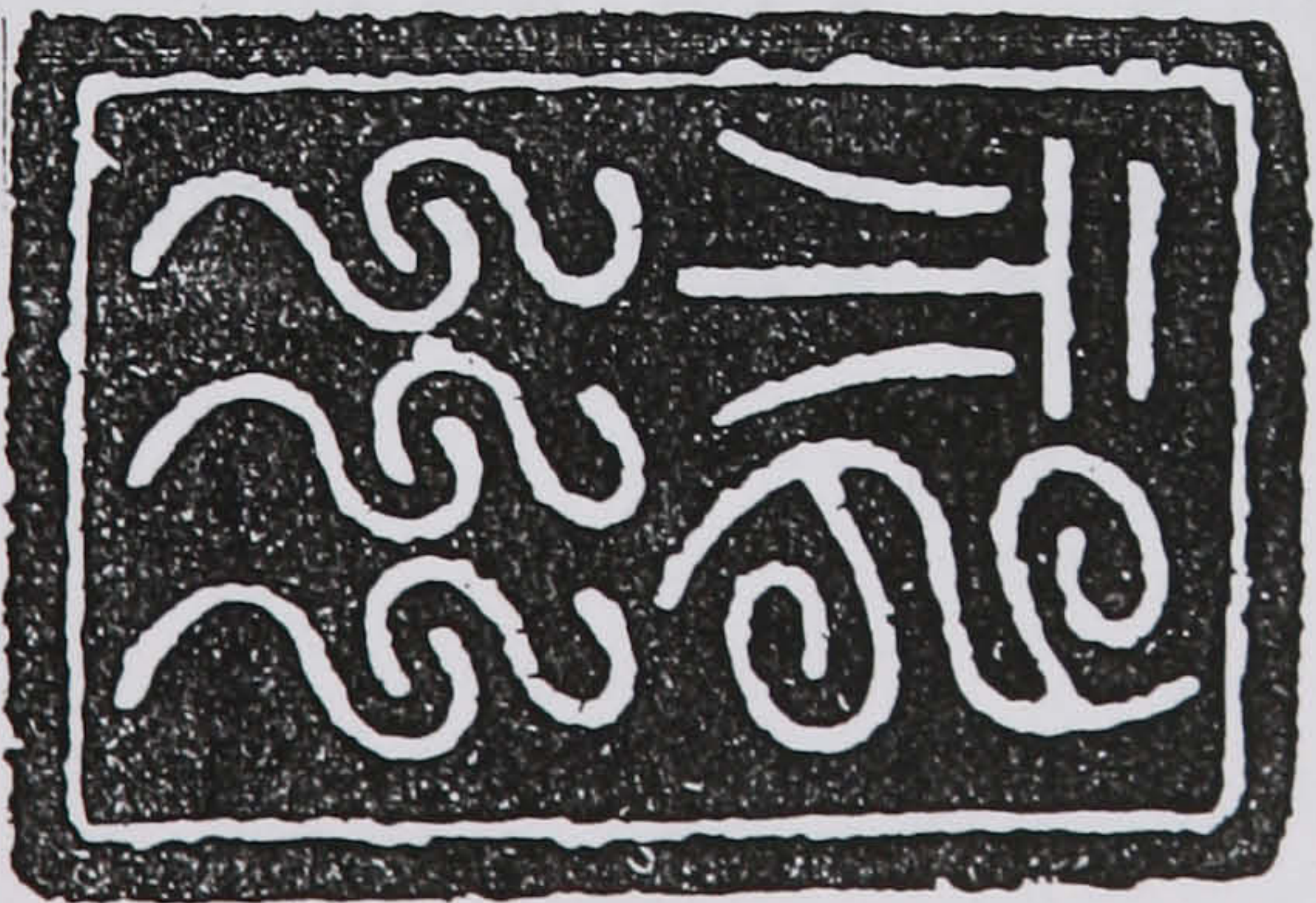
衝擊。至此，伴隨着這股猛烈的“中國西部片”旋風，西影廠在國內的一流地位已穩穩地確立。一批思維敏銳，閱歷豐富，具有強烈的民族憂患意識的中青年導演，已聚集在吳天明的麾下，形成了一個一流的導演群體。

電影製片廠是企業單位，凡事必須算經濟賬。這正是廠長的艱難之處——要講經濟效益，更要講社會效益。吳天明執導的《老井》，以其精湛的藝術質量和較高的票房價值，完成了對影壇的第三次衝擊，表明了他既是一個卓越的藝術家，又是一位精明的企業家，善於將經濟效益與社會效益合二為一。吳天明鼓勵才華橫溢的導演們去嘗試，去探索，去用新的藝術手法表現中華民族深層次的內涵，哪怕一部投資幾十萬元的探索片只賣出幾部拷貝或被暫緩發行。正因為有了這種企業家的魄力、藝術家的胸襟，西影廠推出了陳凱歌的《孩子王》，田壯壯的《盜馬

賊》等藝術探索片；也正因為如此，《紅高粱》劇本才在被別的製片廠回絕後，由至今全部人事關係還在廣西廠的張藝謀執導而為西影廠贏得了殊榮。當然，這一切並不妨礙西影廠拍出《最後的瘋狂》和《殺手情》以及一次賣出四百多個拷貝的《黃河大俠》等商業片。吳天明知道，沒有堅實的物質基礎做後盾，一切藝術都無從談起。

吳天明的用人之道是成功的。西影廠迅速崛起帶來的衝擊，帶給人們的思考，已遠遠超出了影壇。

謎底：擦邊、失手



週末版

[D33]

探 索 治 癌 新 途 徑

——記北京中醫醫院腫瘤科醫師楊治英

唐維紅 曹自強

癌症，這一人類健康的大敵，不僅折磨着眾多的癌症患者，同樣困擾着以救死扶傷為天職的白衣使者們。北京中醫醫院腫瘤科副主任醫師楊治英就是治癌大夫中的一員。與眾不同的是，她沒有把西醫同我國傳統醫學對立起來，而是走上了一條中西醫結合治癌的道路。

年過半百的楊治英畢業於山西醫學院醫療系。五年的專業學習使她具備了一名西醫所應有的知識和技能。工作後的第二年，她被派往北京中醫學校脫產學習。正是這三年的學習，使楊治英真正認識到了我國傳統醫學遺產的豐富和寶貴。

惡性腫瘤是危害人類生命的多發常見病。看着病人痛苦而憔悴的面容，楊治英的心收緊了——我為什麼不能用自己所掌握的中西醫知識探索一條中西醫結合治癌的新路呢？經過多年的實踐和研究，她終於掌握了一套比較完善的治癌理論和方法。

中醫對人體各臟腑功能的分析，對病因病理發展的認識，對各種藥物的運用都採用了陰陽五行生克制化學說。楊大夫認為，所謂中西醫結合治癌，就是要按照祖國醫學的理論體系辨證論治，掌握氣血陰陽平

衡，本標兼顧，攻補兼施。要針對患者肌體的總狀況，所生腫瘤之類型及其不同發展階段，採取不同手段與措施。它包括西醫的手術、放射治療、化療等，中醫的中藥內服外敷、針灸等。楊大夫把自己的理論命名為“滋陰法與反饋控制相結合的治療方法。”

腫瘤是肌體內部出現質變後發展起來的。質為有形之物，中醫認為它屬陰。楊大夫就採取滋陰法治腫瘤。但“陰陽互根”，故不能一味地滋陰，而要運用反饋控制原理，滋陰時還要補氣，以破壞腫瘤在人體內賴以發生的基礎，恢復肌體的陰陽平衡。癌症患者往往會繼發各種其它病症。例如，一般肺癌病人常繼發肺心病，結腸癌病人常會出現便血、腹脹等症狀。楊大夫根據中醫“上醫治未病”的理論，在臨證而未見證時，先為患者開下治療這些病症的藥物。用她自己的話說，就是“以藥物載荷信息來實現超前控制”，扼制病情惡化，並使患者肌體得到協調。

多年來，楊治英大夫中西醫結合治癌的方法在治療中取得了可喜的療效。

原唐山市話劇團導演李述，一九六四年因患肺癌在北京腫瘤醫院就醫。手術後，醫生預言他最多只能活三個月。

楊治英大夫檢查了他的病情後，認為他術後胸膜粘連，引起胸痛。根據中醫的理論，需要通氣、補氣、化痰，於是對症下藥。病人吃了兩個星期的中藥後，胸痛消失了。連續用藥三年後，病人已恢復健康，停止吃藥了。現在，六十一歲的李述來信告訴楊大夫，他身體健康狀況優於同齡人。

趙玉傑是黑龍江省北安市鐵東小學的教師。幾年前，她得了結腸癌，病情已到晚期。她在做了姑息性手術後，又向楊大夫求醫。趙玉傑吃了楊大夫給她開的中藥後，寫信告訴楊大夫，她的體重“增長了十多斤，吃飯正常，已經上班了。”

一位加拿大籍華裔，一九八四年患胃癌後，未做切除手術，僅做了姑息性處理，他服了楊治英大夫為他開的藥，療效顯著。返回加拿大後，他寫信感謝楊大夫。信中寫道：“加拿大醫生看到我的健康狀況，出乎他們的預料，嘆為奇蹟。”

目前，有四十多位病人在北京中醫醫院腫瘤科住院接受治療。山東、內蒙古、河北、山西、新疆、黑龍江、湖北等地的病人還不斷來京請楊治英大夫診治或寫信求醫。楊治英大夫深信“癌症決不是不治之症”。她仍在中西醫結合治療癌症的道路上探索着。

[D34]

一間富於中國氣派的“太湖酒家”今年元旦在澳大利亞墨爾本市開展營業。那晶瑩的水晶蝦仁、鮮美的清燉桂肉、讓當地居民品嚐到了中國江南佳餚。與此同時，在澳大利亞維多利亞湖畔，一個佔地六萬多畝的農牧場，又掛出了“中國太湖農場”的招牌。

爲什麼在澳大利亞同時出現了兩家以“太湖”命名的企業？因爲這兩家企業的主人，都是中國太湖之濱的農民。主管這兩家企業的，是年方三十九歲的無錫市郊河埭鄉農民許福民。他是河埭漁工商聯合企業的總經理。在澳大利亞的太湖酒家和太湖農場，是他主管的三十一個企業中的兩個新建單位。在太湖之濱，他主管的還有年產淡水魚約一百萬公斤的魚場，年產五十萬隻肉雞的機械化雞場；每天屠宰加工三千隻雞鴨的禽類加工冷凍廠；年產五千噸配合飼料的加工廠；八幢古典園林式的旅遊旅館；設在市中心的烤鴨館、食品店。此外，他還在上海等大城市開設公司和食品商店。

許福民是一名有文化的中國新農民。他從養魚起家。一九七六年，年方二十七歲的許福民由於在農村勞動出色，被委以重任，到太湖之濱的荒灘上參加開挖魚池。一千一百多

畝魚池挖成之後，他又被任命爲以這片魚池爲基礎的“河埭水產養殖場”的場長。開頭兩年，這個場單一養魚，連續虧損。以後，許福民銳意改革，變單一養魚爲魚畜禽綜合養殖，在養魚的同時養了成萬隻鴨，成千頭豬，成百條奶牛，使禽畜的糞尿成爲魚塘中浮游生物的養料，而浮游生物則又成爲魚的食料，從而降低了生產成本，扭轉了連年虧損的局面。

他飛向太平洋

——記無錫農民

企業家許福民

虞耀麟

接着，許福民又在禽類產品的深度加工上作文章，從養鴨致富。他把數以百萬計的鮮鴨或加工成包裝速凍鮮肉出口，或製作成鹽水鴨和烤鴨出售，還培育鴨肝肥遠銷歐洲，使鴨的身價成倍陡增。這給他的企業帶來了越來越多的收益。

在向生產的深度開發的同時，許福民又同他的農友們一起在經營上大顯身手。通過漁

工商聯合經營，他進城開食品店，開烤鴨館；他同外貿部門合辦禽類加工冷凍廠；他利用本場地處太湖風景區的優越條件，吸引外地資金建造旅遊設施……

一九八五年，澳大利亞華僑黃耀恂先生偶爾去到許福民的企業參觀，看後極爲讚賞，並熱情邀請許福民赴澳考察。在澳期間，許福民向黃先生傾訴胸懷，使黃先生決心同祖國的這位有志青年結成合作夥伴。這就是今年在澳先後出現“太湖酒家”和“太湖農場”的因緣。

許福民會同他的一位好友傾吐心聲。他說：“我是新中國的同齡人，是中國新一代農民的一員。中國農民應該同中國運動員一樣，衝出亞洲，走向世界。”他要把在澳大利亞的“太湖農場”辦成爲家鄉無錫的毛紡織業提供優質細羊毛的基地，使早已馳譽海外的無錫呢絨，更大量地向外出口。他希望自己能創辦中國第一家由農民自己出資和經營的跨國公司，到世界市場上一比高下。



[D35]

早期澳洲僑領——梅光達

夏 樺



在澳大利亞這個年輕國家的成長和發展歷程中，特別是在早年的開拓時期，華人曾經起過相當重要的作用。梅光達就是其中的佼佼者。

梅光達是廣東台山人，一八五〇年出生。梅光達九歲那年裹入了淘金的移民潮流，隨叔叔登上了去澳洲的旅途。

梅光達是位幸運兒。到澳洲時，正逢英國礦主打算在中國移民中物色一位年輕人學習英語，以充任譯員。年幼的梅光達被選中了。這對英國礦主夫婦待他不錯，甚至還分了一些股票給他。這不僅使梅光達有了較高的文化修養，而且擁有一定的財富，開創了自己的事業。一八七一年，梅光達加

僑史名人錄

入了澳洲國籍，並轉入了商業經營，在悉尼開了許多店舖，以茶葉貿易為主。

但是，梅光達並不僅僅是一個商人，而且還是一位出色的社會活動家、慈善家。他積極參加澳洲的社團活動，在其中擔任職務，捐款建造學校、教堂等公共建築物。當澳洲出現排華逆流，華工受到迫害時，他總是挺身而出，主持正義，為維護華人的正當權益向當局交涉。他還會針對華人社會中吸鴉片風日盛的狀況，刊印了一本題為《請立即禁止鴉片輸入》的小冊子，敦促澳洲政府嚴禁鴉片，以免敗壞社會風氣。

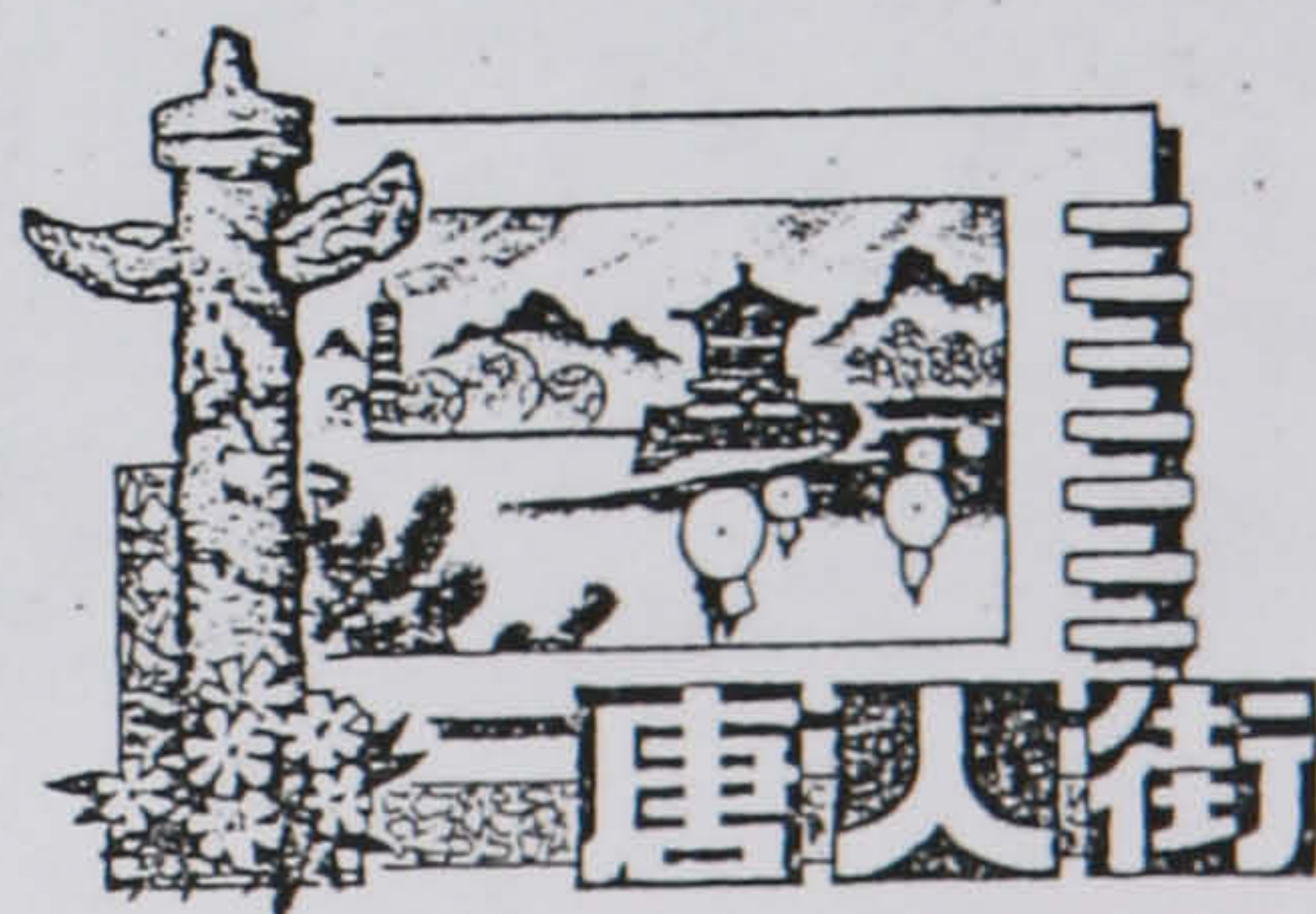
梅光達雖然少小離家，但始終不改對祖國的眷戀之情。他曾經在一八七二年，一八八八年和一八九四年三次回到中國。每次回來，除省視親友外，都要有針對性地向清政府提出建議。但並沒有被腐敗的清政府認真採納，這使他十分懊喪。

由於梅光達熱心公益，積極獻身澳洲社會，努力維護僑胞利益，他在澳洲社會中聲譽日隆，地位日益提高。清政府為表彰他不忘故國，維護僑胞利益，曾賞賜他“五品軍功”銜，並賞戴藍翎。當時中國沒向澳洲派駐領事，每有涉及華

僑的糾紛均由梅光達出面代表華僑去交涉解決。鑒於此，一九〇三年，駐悉尼的二十國領事簽署共同聲明，自動承認梅光達為事實上的中國領事。與此同時，以澳洲總理為首包括省長、大法官、市長、議員共二十四名官員聯名，確認他為澳洲華僑代表。悉尼市長還在市政廳舉行的一個盛大宴會上，代表各界贈給他一個銀盤和三百三十澳鎊，以表彰他在發展悉尼商業中所作出的貢獻。梅光達是獲此殊榮的第一個中國移民。

正當梅光達的商業經營日漸發達，清政府打算任命他為駐澳第一任使節時，不幸降臨了。一個搶劫犯用鐵棍打傷了他。因傷勢過重，醫治無效，於一九〇三年七月二十六日逝世，終年五十三歲。有二千餘人參加了他的葬禮，備極哀榮。

梅光達的生平事迹被收入《澳洲百科全書》及《澳洲人名大辭典》，名留史冊。



[D36]

爲人。審勢。務實

——記香港政協委員吳多泰

赫軍

香港國際鴻星投資集團董事長、海南同鄉會會長吳多泰，在政協會議期間告知筆者，近年來，他飛越太平洋在美國和加拿大各地聯絡華僑、拜訪同鄉，向他們報告國內建設和家鄉變化，要他們回來看看，爲家鄉建設謀劃。他津津樂道：“我擔當了義務宣傳員啦！”

吳多泰是一位樂觀、進取、幹練的長者。他在香港已有五十年從事房地產生意的歷史，在地產界有“開山鼻祖”之稱，然而五十年的風雨春秋他是怎樣走過來的呢？

他早年以卓越成績畢業於廣東省立大學工程系，後空囊去香港闖天下，在友人的協助下，他籌集一筆資金，成立了中國地產公司，苦心經營租賃樓宇的生意，賺了一筆錢，不料日本入侵，香港民族工商業摧殘怠盡，吳多泰自然在劫難逃，他苦心經營的地產公司倒閉了。日本投降後，他才重整旗鼓，再顯身手。四十年代末，香港移民激增，且急於租購居所。當時樓房多是整幢出售，而且價格昂貴。吳多泰想出分層出售的辦法。他通過律師向田土廳查詢有關地契條文，獲得法律依據。於是，吳多泰選購官地，設計興建大樓，計劃分層出售。急欲尋求居所的富商巨賈聞訊，紛紛向吳多泰探詢、預訂。結果設計圖紙尚未完成，“空中樓閣”已被搶購一空，成爲首創宅居分層出售的先例。

經營房地產，風險很大，戰後幾十年中，面對多次社會變動，吳多泰卻依然屹立不動，且生意越做越好，這立身社會的要領是什麼呢？吳多泰認爲，學做生意重要，學做人尤爲重要。生意成功，固然有多種因素，而爲人處世則爲第一着，利己害人之事絕不做，利人利己之事勇於做。審時度勢，努力良謀，務實求效，乃



吳多泰和他夫人在北京。

事半功倍。

吳多泰已逾古稀之年，而滿頭烏髮，精神矍鑠，健談，幽默，人稱“小吳先生”。他生活規律而有節奏。早上晨運在寓所的大廳裏步行三千步，天天如此，常年不懈。接着便要閱讀早晨新聞，每日瀏覽十多種報刊，汲取政治、經濟、國際金融行情的最新知識和信息。

這幾年，吳多泰對內地四化建設頗多關心，尤其對海南島的建設，熱情地提出多項方案。據知，這些建設海南的提案，已得到廣東省政府的重視。提案中關於建設碼頭、漁港、水泥廠等建議已納入規劃建設之中。成立海南省的決定，使他激動不已，他認爲這是當政者有眼光的表現。吳多泰語重心長地說：建設海南，切忌浮誇，務求扎實，決策要穩，執行要狠，乃良謀者所需。

[D37]

黃貽鈞與馬思聰的友誼

曹 畏

五月一日，香港舉辦了一場馬思聰作品音樂會，著名指揮家、上海交響樂團名譽音樂總監黃貽鈞指揮林克漢管弦樂團，演奏了馬思聰的《第一交響曲》、組曲《山林之歌》、管弦樂曲《思鄉曲》、《塞外舞曲》和小提琴曲《牧歌》、《迴旋曲》。

馬思聰年輕時在上海、重慶、香港等地從事過進步的音樂活動，演奏、作曲、指揮、教學無一不精。一九三五年，他在上海與百代唱片公司樂隊演奏員黃貽鈞相識，一見如故。抗戰勝利後，馬思聰來到上海，應邀指揮當時被稱為“遠東第一”的上海工部局交響樂隊，黃貽鈞在樂隊裏吹小號和圓號，兩位音樂家從此過從愈密。

建國後，馬思聰任中央音樂學院院長等職，黃貽鈞時為上海樂團團長兼首席指揮。合作，使他們的友誼更深了一層。四十年代，馬思聰在雲南昆明和廣東北部生活時，十分讚美西南和粵北的秀麗山河，即創作了洋溢着愛國熱情的《第一交響曲》和小提琴協奏曲。一九五三年，他又創作了以這次旅行的感受為內容的組曲《山林之歌》。黃貽鈞看完組曲總稿後，非常喜歡，認為這首組曲

有濃郁的民族特色，寄託了作者對祖國美好河山的真情實感，創作上有許多新穎獨到之處。他很快在上海排演了這部組曲。一九五六年在北京舉辦全國第一屆音樂週，黃貽鈞率團指揮演出了這部引人注目的作品。一九五八年十一月，黃貽鈞作為我國第一位到蘇聯指揮演出的指揮家，指揮蘇聯國家交響樂團和塔什干交響樂團演出了《山林之歌》，頗受歡迎。

馬思聰喜歡與黃貽鈞合作，常把自己的作品先交給黃貽鈞排演。在黃貽鈞主持和指揮下，團內多次排演了馬思聰的作品，除《山林之歌》、《第一交響曲》和小提琴協奏曲外，一九五七年三月排演了《思鄉曲》，一九五八年排演了《塞外舞曲》，一九六三年十一月排演了《第二交響曲》。黃貽鈞說：

“思聰先生的作品多數都有鮮明的思想內容：歌頌人民鬥爭，描繪祖國大好河山的，寄託眷戀鄉土之情，還有直抒美好胸臆的，技巧上也有很高造詣。他為人耿直坦蕩，有正直知識分子自愛、自重、自尊的品格。記得有次他到上海與我團舉辦獨奏音樂會，我們因樂曲處理產生了分歧意見，他並不因我

們是老朋友就隨便馬虎，而是爭到意見一致為止。”

十年動亂馬思聰被迫出走，移居美國，黃貽鈞當時也厄運臨頭，但仍為馬思聰的悲劇痛心疾首，深深懷念遠在大洋彼岸的老友。

一九八五年三月五日，中央音樂學院宣佈了為馬思聰徹底平反的決定；三月三十日晚黃貽鈞就在指揮紀念抗戰勝利四十週年音樂會中，排演了馬思聰的作品，重新向社會展現被禁錮了近二十年的馬思聰的作品光彩和價值。平反的決定和演出消息傳到美國，馬思聰甚為激奮，表示要回來看看祖國、看看老朋友們，還想在國內上演自己的新作。誰料此行未成，思聰先生卻於去年溘然長逝了。留下了一大堆遺憾。黃貽鈞黯然地說，“他的英名和作品將在我國現代音樂史上留下光輝的一頁。他曾在香港開展過音樂活動。我這次為紀念他逝世一週年，來香港演出他的部分代表作，相信港九聽眾會通過他的作品，充分認識他的高尚品質和藝術成就的。”

黃貽鈞面前攤開了馬思聰《第一交響曲》等樂曲的總譜，上面有他用紅鉛筆標明的排練和指揮的注意記號。這其中傾注了多少他欽佩和懷念老朋友的深情啊！

[D38]

1993年1月18日

星期一 第7版

人 民 日 报



侯跃华漫画 朱根华作

电视连续剧《编辑部的故事》里余德利的扮演者侯跃华，可真是“得利”了。霎时间，扬名神州，家喻户晓。

有人说，侯跃华的表演像侯宝林，此话有理。相声表演风格有所谓“帅”、“卖”、“怪”、“坏”，侯宝林占一“帅”。什么是“帅”呢？洒脱、飘逸、沉稳、含蓄，表演有气势，立舞台上分量。侯跃华呢，论形象，当与奶油小生无缘，倒有几分“猴相”，可不知怎么搞的，一旦进入表演，就有那么股子“帅”劲！一动一静，一言一笑，绝无哗众取宠之意，倒有自恃自重的风范。侯跃华的眼睛不算大，却有神。借助两道浓眉的上下耸动，那“会说话”的眼睛喷洒出无声的千言万语。他的台词得真传，见功夫。声音洪亮，吐字清晰，节奏鲜明，掷地有声。嘴皮子干净利落，从不拖泥带水挂零碎。有人把抖“包袱”叫做“摔哏”，侯跃华那叫会“摔”，不“摔”则已，“摔”必山响，难怪看了侯跃华的表演，自然而然想起了侯宝林。

又有人说：“侯跃华，活脱一个侯宝林”，“活脱”，失之太过，有真理向前跨越一步变成谬论的危险。如果侯跃华像从侯宝林的模子里磕出的，那么，时下恐怕不会有如此强烈的轰动效应。侯跃华大器晚成，自有他的三板“斧”，“板斧”之一，在“帅”的基础上掺进点“坏”，“帅”、“坏”融为一体。这里的“坏”当然不是万人嫌，而是聪慧机敏，人见人爱。有时候，大人面对孩子的良性的淘气行为，骂又不便

骂，夸又不便夸只好说声：真坏！人们夸侯跃华“一脸的故事，一肚的主意”，不正是“坏”的体现吗？《编辑部的故事》片头余德利的“亮相”，怎么瞧怎么“坏”，“坏”得招人喜欢。“板斧”之二，注意刻画人物。他塑造的余德利的形象基本上是带相声味的人物，而不是相声化的人物，更不是除了抓哏取笑，只剩一片空白。“板斧”之三，动作简练含蓄，节奏感强，绝少节外生枝，鸡零狗碎，给人以高雅的艺术享受。

如今说侯跃华的好话，正顺时情，然而，逆耳忠言不见得不是好话，也略说几句吧。电视连续剧《渴望》里的宋大成的扮演者李雪健，人称之为“千面演员”，当属极高的赞誉。反观侯跃华电视剧也演了几部，小品则更多些，却不曾留下“千面”的印象。退而求其次，哪怕“几面”也好吧。俗语说：一美遮百丑。侯跃华的三“板斧”掩盖了人物刻画方面的不足，一时还不致招来非议，但恐难以持久。何况那三“板斧”不见得都那么锐利，人物刻画就属于软“板斧”。为侯跃华计，扬“美”弃“丑”，一美变为多美，不仅是任重道远，而且应当是只争朝夕啊！

说说

侯跃华

汪景寿

[D39]

1993年1月27日 星期三 第7版



谢晋台湾行

郭伟成

谢晋从台湾回来了，掩饰不住内心的激动，思绪仍然长久地处于亢奋的状态。他几乎是欢呼地说：“这一步终于走到了。”

早在3年前，台湾电影导演协会就曾组团访问大陆。但是，大陆影人的访台愿望直到今次谢晋率团赴台才得以实现。谢晋原拟率团并携《芙蓉镇》、《过年》、《秋菊打官司》3部影片参加台湾电影“金马奖”的展映活动，结果终因台湾当局从中作梗而不得不推迟到“金马奖”活动后于去年12月17日赴台访问，其间又经历种种曲折。台湾《自由时报》12月18日报道说：“台北在上海的东边，航程不过1小时，（谢晋）这趟行程却向南向东又向北，整整走了3天。”

谢晋不愧是著名艺术家，在台北，他惊讶地发

现，连博物馆展出的兵马俑上都注明：系由西安出土，经由香港来到台湾。谢晋自嘲地说：“你瞧，连秦代的兵马俑都要经由香港入台，谢晋当然更要经由香港到台湾了。”

访台10天，自然有许多激动人心的场景。但是，谢晋说，最令人激动的还是抵台的当天，感受到台湾同胞的深情，梦想实现了。主人以金门高粱酒款待、洗尘。谢晋举杯说：“喝到金门高粱酒，我就想起了单日打炮、双日不打炮。”宾主都会心地放声大笑了。大家笑的当然不是炮轰金门，而是在金门炮战后，两岸同胞终于可以把酒言欢了。“相逢一笑泯恩仇，愿将杯酒释前嫌”，这一步来得殊实不易。

谢晋告诉我，短短10天，所带380张名片发得精光，还不得不写了许多“白条”。他交给我一个名片

册：“你瞧我们见了多少人，接触得多么广泛。”

在台期间，谢晋一行不仅进行了电影观摩、交流、探讨了两岸电影合作的意向，还参观了博物馆、名胜古迹，会晤了亲友、老同学。但是，有机会拜访张学良，却使每一个人都深感荣幸，难以忘怀。12月25日下午，谢晋、丁荫楠、王铁成、苏叔阳在台湾金马奖执委会主席李行陪同下前往张公馆。张将军虽然已经九秩有二，但是仍然精神很好。宾主围坐一起，相谈甚欢。谢晋告诉老人，东北当年“帅府”已修葺一新，东北乡亲都关心怀念“汉公与张夫人”。谢晋等人还情不自禁地哼起了《松花江上》。这时，张学良也动情地掏出了手帕……临别，他以自译的《相遇于骷髅地》相赠，并在每册书的扉页上郑重地签下了“张学良”三个遒劲有力的字。张夫人赵一荻女士也以数册丛书相赠。

在这次台湾之行中，谢晋终有机会与著名作家白先勇晤谈、商量电影合作。谢晋透露，他们已决定合作改编拍摄白先勇的《花桥荣记》。谢晋当年在国立剧专的同学，许多是台湾电影界的老人。

谢晋认为，大陆与台湾应当取长补短，拆除藩篱，携手合作，一定可以拍出真正打动两岸人心的电影，推动形成真正的中华电影文化。

[D40]

1993年2月19日 星期五 第7版

托 星 之 人

上海音乐学院钢琴系教授范大雷，不顾重病缠身来到

福州，亲自督阵自己的学生参赛。结果，他如愿以偿，他的学生周挺以娴熟而富于光彩的琴艺，荣膺了首届全国青少年钢琴比赛青年一组第一名。

当问到沉稳、文静的周挺，你的老师最大特点是什么，他不假思索地脱口而出：因材施教。能给学生这样的感受并不容易，一名好教师最可贵之处便是能使学生的天赋与个性获得最大程度的发挥。比如周挺，手上的技术很漂亮，范大雷便注重发挥他的特长，专门挑选一批曲目训练他，使周挺在钢琴演奏技术上，明显胜人一筹。

在福州短短的10天，范大雷去过几次医院，不得不靠换血来维持日常生活。病魔使刚过不惑之年的范大雷，面容土黄、憔悴。让人感慨的是，面对所患的不治之症，面对死神的威胁，他依旧谈

笑风生。学生的获奖，使他喜不自禁。有人问他，谁是中国目前最好的钢琴教师时，他底气十足地说：“我！”这不是一句戏言，钢琴界同行，都对他充满钦佩之情。

范大雷没有上过正规的音乐学院，小时候受到家庭熏陶，造就了他的艺术气质，也使他有机会受到了良好的基本训练。附中毕业时赶上了史无前例的运动，青春荒废了。噩梦过去后，已过了而立之年，他依靠自己一技之长，在音乐学院附中占领一席之地。

10年过去，他教育的学生，一位是已在国际乐坛叱咤风云的青年钢琴家孔祥东，另一位就是周挺。在培育周挺的6年里，他的病日见沉重。医院让他休病假，学院也劝他静心养病，但他却“一意孤行”，尽心竭力为周挺授课。范大雷培养两位尖子学生的教学成就，在音乐学院有目共睹，为此，他被破格授予教授头衔。

回到上海，等待范大雷的是吉凶未卜的大手术，别人都捏一把汗，他自己却相当从容，就像他叮嘱学生如何登上赛场一样。

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[D41]

前不久，在北京钓鱼台国宾馆，国家税务局副局长杨崇春，从联合国计划开发署首席代表赫尔康手中，郑重地接过了用于中国税制改革的103.5万美元赠款。宾主举杯庆贺中，不约而同把目光投向悄然站立一旁的一位中年男子。只见他身材颀长，儒雅中透出几分豪气。他就是赠款的牵线搭桥者、美籍华人顾衍时先生。

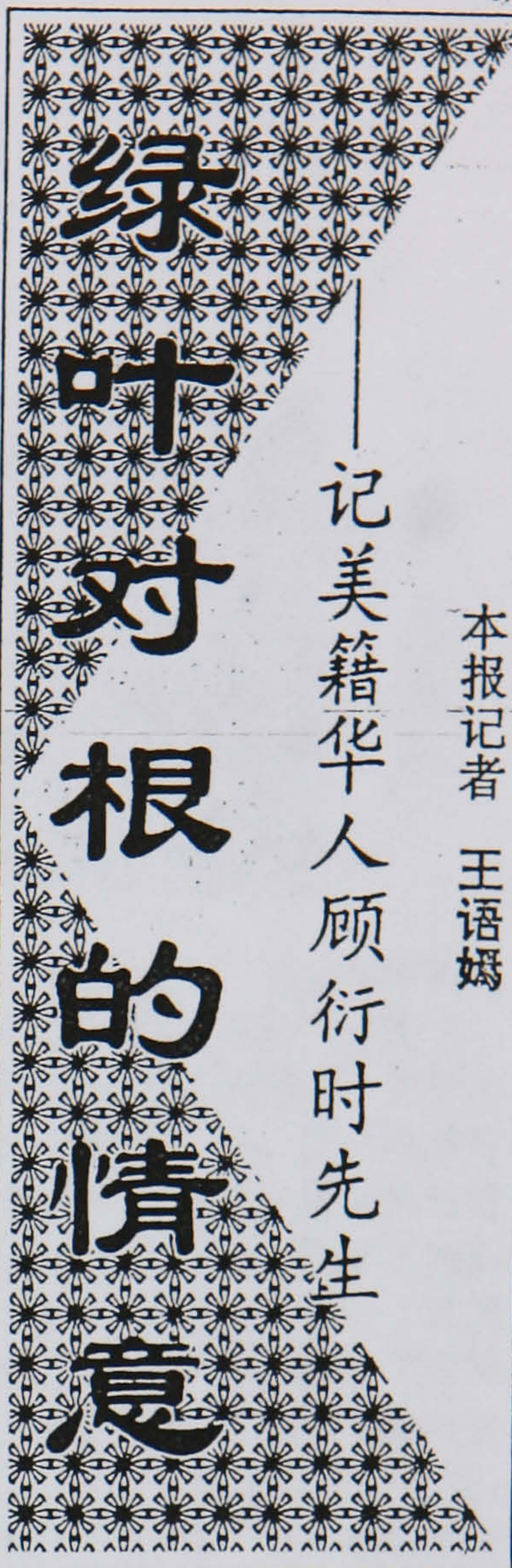
作为联合国长期聘用的财税专家，顾先生也是中国国税局聘请的税制改革项目顾问。他协助国税局多次赴欧美及亚洲一些国家，考察税务，访问世界银行、国际货币基金组织等，为促进中国与世界的交流与合作，做了许多有益的工作。

对于中国税制改革，顾衍时建议良多。他说，中国应该培养大批的高层次注册会计师，现有的1万名注册会计师远远满足不了需求。因为，中国发展市场经济，必须要有完善的财税制度，在保持自己特性的前提下，与国际通行惯例接轨，并取得和谐；而企业实行股份制，要有详细的财务报表，并做到合理化、正常化、透明化，使投资者欣然决策、股民们踊跃购股，等等。所有这些经济活动，离不开注册会计师的审核、监控与支持。

他认为，中国目前税收制度不完善，存在许多偷漏税现象；而税制的完善与实施，以及对经济的宏观调控和微观管理，都需要注册会计师的工作。注册会计师不仅为国家政府审计，也为企业社会提供服务，自身则承担着严格的法律责任。因此，实施注册会计师制度，提高和保证会计人员的专业素质和道德水准至关重要。

当顾先生得知中国决定实施注册会计师考试制度，并计划在2000年前培养出30万名注册会计师时，他欣慰地笑了。

为了培养中国财税人才，顾先生不辞劳苦，一次次地从大洋彼岸而来。一年365天，他有一半的时间是在空中和大陆度过的。中国财政部、经贸部、国税局举办的各类培训或讲座，他是



必邀的演讲者。从1985年起，他还担任了北京大学、复旦大学、浙江大学、安徽大学等高校的兼职教授或顾问，讲授世界经济、国际税法与审计学等。顾先生还创办了洛杉矶中美人才交流协会，先后组织千余名美国财经、医学、科技等方面的专家教授来华进行学术交流。

在讲台上，顾先生赢得了掌声和喝彩。在事业上，他更是脚踏实地，勇于开拓。他成功地创办了美国克勤会计师事务所，使之发展为全美华人最大的会计师事务所，其分所遍及美国主要城市及香港、台北等地。

克勤会计师事务所的旗号不久也将出现在中国上海。顾先生以独到的眼光看好上海，他非常乐观地说：“未来的上海将成为亚洲服务业的中心，是亚洲金融、法律、会计、保险等第三产业的窗口。”顾先生与复旦大学合资的上海克勤国际咨询公司已注册成立，只待今年4月份开张营业。顾先生踌躇满志，坚信“上海克勤”的美好未来不是梦。

顾衍时在中国身兼数职，忙得不亦乐乎。而在美国，他也是事务缠身。除了会计师事务所的日常业务，他还担任了美国共和党亚裔总会主席、中国城狮子会会长、华裔会计师协会会长等职务，并著有《美国税务》、《管理审计》、《改革中的苏联》、《龙的故乡》等畅销书。

谈到在中国的活动，顾先生微微一笑，沉吟道：“这不仅是专业的追求，更寄托了一种情怀，因为我身上流着的是华族的血、支撑挺立的是华族的魂。无论身居何处，何等的枝繁叶茂，对根的眷恋是永远不会断的！”

听到此，不由令人想起一首优美的歌，唱出了像顾先生这样的炎黄赤子的心声：“不要问我到哪里去，我的心依着你；不要问我到哪里去，我的情牵着你。我是你的一片绿叶，我的根在你的土地……这是绿叶对根的情意！”

[D42]

美国女强人 第一夫人希拉里

王德铭

在不少英国人心中，美国总统克林顿的夫人希拉里是个女强人。克林顿的当选，她立下了汗马功劳，在克林顿组阁期间，又展现了她的影响力。克林顿主政后不久，就给她委以重任，参与决策。这里舆论普遍认为，这位第一夫人将对克林顿总统的施政起不可小看的作用。《美国新闻与世界报道》周刊最新一期就克林顿任命希拉里为全国医疗保健总统特别委员会主席一事发表题为《共同总统克林顿？》一文，格外引人注目。

现年45岁的希拉里泼辣能干，思路敏捷，这是她多年当律师磨练出来的职业技能。希拉里在著名的卫斯理学院和耶鲁大学法学院就读时就是个拔尖学生。她与克林顿是耶鲁大学法学院同学，毕业后两人一起来到阿肯色州。她从事律师

行当，干得相当出色，于1988年和1991年曾被《全美法律杂志》评为美国最有影响力的100位律师之一。她婚后不冠夫姓，仍叫希拉里·罗德姆，以显示自己是个独立的现代女性。直到克林顿1980年竞选连任阿肯色州州长落选时，才改为希拉里·罗德姆·克林顿，她这样做以表明她对她的丈夫的支持，鼓励他东山再起。

克林顿从1978年至1980年和1982年至1992年担任了12年的阿肯色州州长。作为州长夫人的希拉里是个里里外外的一把手，她时而在幕后为克林顿出谋划策，时而走到前台负责阿肯色州教育制度改革工作，参与政策拟定。在去年大选期间，她马不停蹄地为克林顿竞选东奔西走和排难解纷。在克林顿绯闻满天飞的时候，希拉里挺身而出，说了一句“石破

天惊”的话：——过去的事情，她和克林顿该说的已经说了，现在他们俩已经修好，如果选民认为这还不够，那不选克林顿就算了！众多选民认为希拉里这话说得干脆，坚定了他们支持克林顿的初衷不变。这里舆论认为，是希拉里拉了克林顿一把，保住了克林顿的政治生命。现在克林顿的江山已定，希拉里这位第一夫人开始化暗为明，她的影响力已显而易见。

在组阁问题上，克林顿毫不忌讳地提及希拉里的作用。他说，“在这些决定上，她对我提供了意见，正像在过去20年里，她在别的决定上所做的一样。”克林顿的发言人斯特凡诺普洛斯对记者明确地说，希拉里将列席总统召开的高级幕僚会议。“她将在白宫扮演一个主要角色。”这就是说，她既是第一夫人，又是总统的重要政治顾问。众所周知，希拉里把她的好朋友威斯康星大学校长唐纳·沙拉拉推荐为卫生和公共服务部长。希拉里又是个善用心计的人，在她尚未被克林顿任命为全国医疗保健总统特别委员会主席之前，她在公共场合设法保持低姿态，因为她没有忘记竞选期间把她

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描绘成为渴求权力的那些批评者。不过据她的助理说，她私下里一直在细心策划和深思熟虑，并向许多朋友请教过，如何为一个没有宪法职责，然而可能是政府最有权力的职务定位。终于，克林顿“内举不避亲”，希拉里如愿以偿。

参与决策的希拉里，在白宫东、西厢都有办公室，在东厢时扮演传统的第一夫人角色，到西厢则主管健康保险改革工作。参加这项工作的有财政、国防、商务、卫生和公共服务、退伍军人事务五个部的部长以及预算局局长，共有100多名工作人员，挂帅的当然是第一夫人。据《华盛顿邮报》和美国广播公司最近进行的民意测验，64%受测者认可克林顿对希拉里的任命，只有26%的人表示不赞同。但也有人提出质疑，这种未经选举，不支薪水，只靠裙带关系来行使权力的安排是否妥当。不过总的看来民众的初步反应尚算良好，尽管如此，希拉里毕竟不是医疗保险问题的专家，何况这又是美国的一个老大难问题。克林顿政府既想减少美国社会的医疗费用，又想使穷人享受医疗保险。如何做到两全其美，难度很大。

希拉里现已正式开始进入角色。2月4日，她以特别委员会主席的身份走访国会，先与28名民主党参议员开会，征求他们对医疗保险制度改革的意见和建议，后又礼节性地拜会



了参议院共和党领袖多尔。《华盛顿邮报》就国会议员和白宫官员如何适应第一夫人问政问题发表文章指出，国会议员如何能坦诚直言，又能保持对第一夫人应有的尊重？跨部的全国医疗保健总统特别委员会的僚属以及白宫官员在第一夫人庞大影子下，能不能“知无不言，言无不尽”？他们有没有勇气直指第一夫人之非，或需要舆论媒介进行政策评论？这家报纸说，这些都是潜在的问题，如果希拉里主持的委员会能拟定出令各方满意的健康保险方案，那么这些问题就会烟散，否则克林顿这一招将成为

其四年任期内的。联社发表的一页是，克林顿由于子担当重任，因展现出一种新的向，“但这一险，因为在全之下，如果希那意味着克林威斯康星大学务学院公共·佩利说得“这是一个们是否准备一个真正的们得到了-承担总统

[D43]

第四届中国围棋棋王赛决战结束

马晓春卫冕成功

本报北京2月23日讯 记者郑红深报道：我国著名围棋选手马晓春九段，凭借其深厚的官子功力，今天在第四届“通润杯”中国围棋棋王赛第4场比赛中，执白中盘战胜了挑战者梁伟棠七段，从而以三

胜一负的战绩，蝉联棋王桂冠。

今天在中国棋院举行的这场比赛，对双方来讲都至关重要。去年年底双方在江苏常熟进行的前3场比赛中，马晓春以2：1领先于梁伟棠，拿下这场即大

功告成；而梁伟棠再扳一局，即可打平，25日就能向在位棋王马晓春发起最后冲击。今天伟棠也是很有机会的。开局时，梁伟棠借执黑先行之利，形势开始一直较好，即使白棋在中盘战斗时中腹成了五目的空，形势依然可以两分；但进入读秒后，伟棠有些发毛，忙中出错，因小失大，在官子阶段贪吃一子，落了后手。此时，马晓春抓住机会，攻击右上角一块黑棋。双方厮杀时，黑棋气不够，最终被全歼，只好投子认输。马晓春在棋王赛决战的3场胜利，有两场（第一场，第四场）是靠精确的官子计算而致胜的。

目前，马晓春九段仍然拥有棋王、名人、十强、CCTV快棋赛等4顶桂冠。第一、二届的棋王是钱宇平和聂卫平。

本届棋王赛是中国围棋协会、中国体育报和常熟千斤顶厂联合主办的。

[D44]

昔日“四大天王”硕果仅存 赵剑华力不从心改打混双

新华社北京2月24日电（记者梁金雄）羽毛球世界男单冠军、我国选手赵剑华，日前已决定放弃单打，改攻混合双打。

在巴塞罗那奥运会上，立志要夺得奥运会有史以来第一枚羽毛球男单金牌的赵剑华，在争进前4名时，意外地被从未战胜过自己的印尼选手蔡祥林淘汰。他在精神上和体力上一直未能调整过来。在此后参加的国际比赛中，他一次也没能打入决赛。今年已28岁的他，在其羽球生涯中因有两次大病而感到已力不从心，遂产生了挂拍之念。

日前，国家队针对赵剑华的实际情况，决定让他改打混

双，赵剑华接受队里决定。

赵剑华的教练、国家男队主教练侯加昌说：“我对他不再打单打感到很可惜”。

现已开始进行混双训练的赵剑华对自己改项不觉遗憾，他说：“我会在混双项目上认真训练，争取能参加5月在英国举行的世界锦标赛。”

目前，赵剑华还未选定自己的搭档。但据可靠消息，他很可能与世界女双冠军之一的农群华配对。

赵剑华是国际羽坛“四大天王”中唯一一位还活跃在当今羽坛的球手，近十年来，在他汗水浸洒的国际羽坛上，除奥运会金牌外，其它世界各项大赛的男单金牌尽收他的囊中。

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