

References

- BROWN, R. AND A. GILMAN. 1977. "The Pronouns of Power and Solidarity", in *Language and Social Context*, Peter Paolo Giglioli (ed), Hamondsworth, Middlesex: Penguin. pp. 252-282.
- HARADA, S.I. 1976. "Honorifics", in *Syntax and Semantics Vol. 5, Japanese Generative Grammar*, Masayoshi Shibatani (ed), New York: Academic Press. pp. 499-561.
- HINDS, JOHN. 1987. "Anaphora in Japanese Conversation", in *Anaphora in Discourse*, John Hinds (ed), Edmonton, Canada: Linguistic Research, Inc. pp. 136-179.
- HINDS, JOHN. 1986. *Japanese*, London: Croom Helm.
- IDE, SACHIKO. 1979. "Nihango ni okeru Seibetsu to Ninshoo-daimeishi -Yooji no Baai-", ("Gender Difference and Personal Pronouns in Japanese-Case Study of Children"), in *Hattatsu to Shuutoku ni okeru Gengo-koodoo* (Linguistic Activities in Development and Learning), F.C. Peng and Motoko Hori (eds), Hiroshima: Bunka Hyooran Publishing Co. pp.41-67.
- KOKUGOGAKKAI (JAPANESE LANGUAGE SOCIETY) ed. 1957. *Kokugogakujiten* (Dictionary of Japanese Linguistics), Tokyo: Tokyodoo.
- LEVINSON, STEPHEN C. 1984. *Pragmatics*, Cambridge: Cambridge University Press.
- MINAMI, FUJIO. 1987. *Keigo* (Deferentials), Tokyo: Iwanamishinsho.
- OKUAKI, YOSHINOBU. 1988. *Nihongo yo Doko e Iku* (Where is Japanese Going?), Tokyo: Futamishoboo.
- ONO, SUSUMU. 1982. *Nihongo no Bunpo o Kangaeru* (Study of Japanese Grammar) Tokyo: Iwanamishinsho.
- SHIBAMOTO, JANET S. 1985. *Japanese Women's Language*, New York: Academic Press.
- SHIBATANI, MASAYOSHI. 1990. *The Languages of Japan*, New York: Cambridge University Press.
- SUZUKI, TAKAO. 1988. *Kotoba to Bunka* (Japanese Grammar), Tokyo: Iwanamishinsho.
- TOKIEDA, MOTOKI. 1967. *Nihon Bunpo* (Japanese Grammar), Tokyo: Iwanamizensho.

REFERENCE-TRACKING SYSTEM AND ANAPHORA
IN MANDARIN CHINESE CONVERSATIONAL DISCOURSE

LIANG TAO

I. Introduction

This study is an examination of the function of anaphora as a reference-tracking device in Mandarin Chinese conversational discourse. By examining the data of natural conversation in Mandarin Chinese, the study proposes certain norms depicting the choice among full noun phrases, pronominal references and zero anaphora. Based on the study, the paper proposes the theory of Emergent Semantics on the cognitive strategies in processing Mandarin Chinese discourse.

Reference-tracking is a very important aspect in forming discourse cohesion. In their typological study on discourse structures, Foley and Van Valin (1984) divide the world's languages into four general types based on the four reference-tracking mechanisms: switch function, switch reference, gender and inference systems.

Foley and Van Valin claim that languages with switch function systems track a particular referent across clauses with verb morphology, as is exemplified in 1 and 2 below (F. & V. 1984:322). In 1, the sentence subject 'Fred' functions as the agent of both verbs 'to want' and 'to see'; in 2, 'Fred' is the agent of the verb 'to want', but the patient of the verb 'to see'.

1. Fred wants to see Marsha.
2. Fred wants to be seen by Marsha.

In the switch reference system, the verb morphology indicates whether a particular NP in the first clause is coreferential with a particular NP in the second clause. In languages with gender systems, NPs are assigned overt morphological codings. English provides a simple version of this system with a three-way classification of nouns based on animacy and sex, e.g. the full NPs 'men, trees' and the pronouns 'he, she, it, they' and so forth.

The inference system is exemplified mostly by Southeast and East Asian languages like Thai, Japanese and Chinese. These languages do not have any of the features presented in the first three systems, yet they share a distinctive feature of heavy use of zero anaphora and, according to Foley and Van Valin, the coreference in these languages is not directly signaled in the linguistic form but is determined by the 'subtle use' of sociolinguistic variables.

For the first three reference-tracking systems, Foley and Van Valin present an elaborated discussion, but for the fourth system the authors don't seem to have much to offer except to admit that these languages have raised the use of inference in assigning coreference among NPs 'to the status of a fine art'.

It is to provide an empirical as well as theoretical explanation of this 'fine art' that I have conducted this case study on the anaphoric devices used in conversational discourse structure of Mandarin Chinese (henceforth MC).

The study is based on a model developed by Fox (1987) in analyzing anaphora in English conversation (see Sect. II). Unlike MC, English utilizes switch function and gender systems as its reference-tracking mechanisms in the discourse structure. The reason for adopting this model for my study is the assumption that the choice of anaphoric devices reflects native speakers' cognitive skills of understanding the rules in speech interaction. Even though the syntactic structure and the anaphoric forms in MC and in English are different, I assume that there are a set of rules or norms within human cognition which guide human interaction, and the choice of the use of anaphora is thus made on the basis of pre-supposition of shared knowledge on the rules guiding our conversation. Any difference in the choice of anaphoric devices in these two languages will then be attributed to the limitation of linguistic (and maybe extralinguistic as well) devices provided by each language. Therefore, by comparing the two languages, I hope to come out with a somewhat detailed explanation of the unique functions of anaphora in MC, so as to contribute to the understanding of the languages characteristic of the inference system.

As opposed to the two anaphoric devices (full noun phrases and pronouns) in English, there are three anaphoric devices in MC, i.e., full noun phrases (henceforth NP), pronominals (henceforth PA for pronominal anaphora) and zero pronouns (henceforth ZA or zero anaphora). The overall findings of this study are twofold, namely that the three devices in MC all have certain basic functions in the discourse structure, which, by adopting Fox's definition, is defined as the unmarked use of anaphors. In addition to the unmarked use, some anaphoric devices have certain 'marked' functions. This is true of the anaphoric functions in English as well. (In this paper, the mention of the languages MC and English is an economical expression of 'in the conversational discourse' of those languages.)

The brief sketch of the unmarked functions of the three anaphoric devices is as follows. Similar to those in English, NPs in MC generally act as the topic of part or whole of a conversation; therefore NPs are almost always the device to use as the first mention at the start of a first pair-part of a sequence in the conversation. The functions of pronouns in English are shared by PA and ZA in MC, and it is the choice of the two in MC that casts a major linguistic difference between the two languages. While the difference is depicted in Section IV, the basic use of ZA is in the subsequent clauses and sentences to indicate coreference to the NP first mentioned at the beginning of a sequence. PA is used to refer to the topic NP when there is the need (see II. A. for the specific needs of its use).

When people want to bring back into the current conversation some events mentioned previously in the conversation, it is NP that is mostly used as a switching signal. PA can be used under certain conditions but the use of ZA for this purpose is similar to that in English (see 'return pops' in Section. II. B).

With the unmarked use of the three anaphoric devices in mind, any use other than those will be the marked use of them. Generally speaking, marked use of anaphora is the excessive use of NPs or PAs when normally the use of ZA suffices. Here the NP or PA represent a salient referent, hence something extralinguistic is conveyed. The marked use of these anaphors is extremely context-dependent. I discuss it in detail in Section IV.

The major difference between MC and English is in the choice and function of ZA, a feature specific to languages with inference systems, as is claimed by Foley and Van Valin. The function of ZA will be explained in detail in Section IV. B.

The plan of this paper is as follows. Section II is mainly a review of the current theories related to this study. Section II. A is the review of the theories on the choice of the three anaphoric devices; and Section II. B is a brief summary of Fox's model on anaphoric choices in English conversation. Section III is the method section. Section IV is the bulk of this study in which I discuss in detail the functions of the three anaphoric devices with a comparison to those proposed for anaphora in English. In Section IV. A, some statistical analysis is provided on the general use of the three anaphoric devices in my data. Section IV.B1-3 are the discussions of the individual functions by each of the three anaphoric devices. Section IV.C discusses the marked use of anaphor; Section V discusses some general finding about the inference system; and Section VI is the conclusion of this study. Here, some suggestions for further study on this topic are provided.

II. Current theories related to the study

A. Anaphora in MC

MC is an isolating language with few grammatical morphemes, and the syntactic relationship in MC is mainly realized by word order. Consequently, the grammatical role of an NP (or PA, ZA) is indicated by the SVO word order. (There are some word order variations due to certain VP constructions. See Li and Thompson, 1981.)

According to Li and Thompson (1981), the anaphoric choice is along the following general lines.

- a. NP is mentioned in the first clause in a sequence, and ZA is used as a subject or, occasionally, as an object coreferential to this NP.
- b. PA and ZA are interchangeable in MC discourse. Although there is no syntactic constraint conditioning the choice between the two, pragmatically, it follows that ZA occurs to refer to a referent that is first mentioned in the same sequence; and PA is used when there is a need to 'highlight' certain changes in the discourse.

These two points are exemplified in (1)* (L&T. 1981:663).

- (1) Bai Xiansheng zai keting li deng Lisi,
Bai Mr. at livingroom in wait Lisi
- O dai zhe yanjing, O zai nar kan baozhi,
wear Du glasses at there read newspaper
- O haoxiang you dian bu naifan, ta shuo: '...'
seem have a-bit Neg patient he say...

*ABBREVIATIONS

| | | | | | |
|-----|--------------------------|-----|-------------------------------|----|---------------------|
| Ad | Adverbial Particle | Int | Interjection | PA | Pronominal Anaphora |
| Cl | Classifier | Neg | Negative Particle | Pf | Perfective Aspect |
| Co | Coverb | NOM | Nominalizer | Q | Question Particle |
| Dur | Durative Aspect Particle | NP | Noun Phrase/ Noun Anaphora | ZA | Zero Anaphora |

Mr. Bai was waiting for Lisi in the livingroom.
(He) was wearing glasses and reading a newspaper there. (He)
seemed to be a bit impatient. He said: '...'

According to Li and Thompson, all of the clauses following the first clause in (1), describe the appearance of Mr. Bai, with the last clause as an exception in which the description 'switches' from 'appearance' to 'action'. The PA used in the last clause signals the switch while informing the reader that the referent is not changed.

Tao (1986) notices that ZA is not constrained to be a referent of the subject of the first clause. It can refer to the object of the previous clause as well as to the subject of that clause at the same time, and the means of differentiating the two zero referents is the semantic encoding of the predicate verbs in the subsequent clauses. Example (2) is an illustration of this phenomenon.

- (2) ...
- (a) Dui zhexie xiaoxi¹
to these news
- (b) ta² gaoxing ne,
he happy Int
- (c) O² jiu xiang yi xiang O¹,
then think one think
- (d) O² bu gaoxing ne,
Neg happy Int
- (e) O¹ jiu you zuo er jin lai,
then from left ear enter come
- (f) O¹ you er chu qu
right ear out go

(a) As for this kind of news, (b) if he happened to be happy, (c) then he would give it a thought; (d) if he was not pleased at the moment, (e) then it would enter from his left ear (f) and exit from the right one...

In (2), the two references are introduced by a prepositional phrase in (a) and as the subject in (b). Then they both occur as ZAs, and the means to distinguish which one of the two referents is referred to is only the semantic encodings of individual verbs and the discourse context. For instance, in (d), since the predicate 'to be happy' requires an animate subject, he is the right choice to refer to; and in (e), when only an inanimate object can perform the type of action indicated by the verb 'to enter (one's ear)', news is chosen as the referent.

Chen (1986) has done a systematic study on the choice of anaphoric devices in written and oral narratives in MC. He first postulates two discourse parameters, distance (number of clauses between an anaphor and its referent) and interference (NPs or PAs intervening between the anaphor and its referent). With the help of the two parameters, Chen makes a general claim on anaphoric choice in MC narratives (1986:139).

- A. Less Referential Distance/Less Intervening Referents >
More Referential Distance/More Intervening Referents
- B. Zero > Pronominal > Nominal

Chen suggests that the higher up the referent in hierarchy A, the more likely this referent is encoded by the anaphor higher in hierarchy B. Here A and B are the only part of Chen's diagram which are related to our study. This general claim of Chen's appears to be supportive of this study for part of the unmarked use of the anaphoric forms. A brief comparison of narrative and conversational discourse will be provided in Section B.3.

The above theories explain the choice of the anaphoric devices within a narrative sequence. There seems no theory yet to describe the use of anaphors in a turn-taking conversation.

B. Theoretical Model on Discourse Anaphora in English

The functions of anaphora in English discourse, according to Fox (1987), can be divided into two major parts, the 'unmarked' use vs. the 'marked' use of it.

The unmarked use of anaphora in English conversation serves mainly as a 'reference tracking' device, and its functions are summarized as follows. (Fox, 1987:16)

- 1a. Anaphoric form X is the 'unmarked' form for a context like the one the participant is in now.
- b. By using anaphoric form X, the participant displays a belief that the context is of a particular sort.
- c. If the participant displays a belief that the context is of a particular sort, then the other parties may change their beliefs about the nature of the context to be in accord with the belief displayed.

In this way, the anaphoric choice 'is determined by and itself determines the structure of the talk'.

The basic pattern for the choice between a full NP and anaphora in the conversational discourse in English is formed with three components,

- 2a. The first mention of a referent in a sequence is done with full NP.
- b. After the first mention of a referent, a pronoun is needed to display an understanding of the sequence as not yet closed.
- c. A full NP is used to display an understanding of the preceding sequence containing other mentions of the same referent as closed.

The major function of anaphora is to display that a sequence is not closed. This includes the occurrence of pronouns in the middle of an adjacency pair (eg. answer to a question); in 'turn expansion' (following a possible completion of a description); and as a means to 'tie up' adjacency pairs. The last function includes:

- 3a. Series, in which an adjacency pair is meant to be of the same type as some preceding pair;
- b. Post-elaboration, in which one pair provides a piece of information, and a subsequent pair gives or seeks details about that information;
- c. Return-pop, which ties up already separated pairs in a sequence to 'return' to the previously mentioned referent, so as to continue the discussion of the referent.

The 'marked' use of anaphora refers to the use of full NPs in the position which would normally require the use of a pronoun. Fox argues that the use of full NPs instead of pronouns signals that the speaker is manipulating it to accomplish certain instructional tasks, such as disagreement, overt recognition, assessment and demarcation of a new unit.

The choice of anaphora is also related to gender difference. For same gender referents, sometimes certain key words, in addition to anaphora, are repeated for long-distance 'return-pop' so as to make a clear situation signalling the speaker's understanding of the continuation of the talk.

I will present examples illustrating Fox's claims 1-3 in Sect. IV. B-D so as to provide a close comparison of the two languages.

III. Data and Method of the Study

1. Subjects

The subjects are native speakers of Beijing dialect, a major component of MC. They include,

- A. a female college graduate student
- B. a male retired clerk in his 70s
- C. a middle-aged male government employee
- D. a male factory worker in his late 20s
- E. a male college student who has just graduated
- F. a female shop-assistant in her late 20s
- G. a 22-month-old baby
- X. a female retired editor
- Y. a female worker

The subject, except C and G, are all born and raised in Beijing, and they all speak nothing but 'standard' local dialect. Subject C has lived in Beijing for more than thirty years, who also speaks the local dialect with some slight southern accent.

2. Data

The data is a one-hour and twenty-five (+/-) minutes audiotape of spontaneous, natural conversations recorded in Beijing and Changsha, Hunan, during the summer of 1987. The one-hour conversation in Beijing was carried out by two or more participants each time, and the topics of the conversation shift all the time; therefore the tape consists of not one whole conversation by all the subjects spontaneously, but several dual or multi-party interactions in a sequence. The twenty-five minutes conversation is between two people only. All the conversations are face-to-face.

The data are transcribed in the standard spelling system (Pinyin) which is currently in use in PRC, and sometimes certain phonetic variations are indicated if they carry specific features of the speech. Words are marked according to their standard tonal pronunciations in this study, though pitch variation and tonal change due to context influence (morphophonemic change) are marked in the transcription for later use. Pause and aspiration are not indicated unless they serve a significant semantic function, but stress is always marked.

3. Method of Analysis

The analysis is carried out in comparison with Fox's model as being cited in II. B. The data are sub-divided according to topics of the conversation. Connection between adjacent topics is indicated in case there is a chance for the participants to 'return' to the previous discussion.

The scope of this study is limited to third person or objects as referents in the conversations. The reason is that, during face-to-face conversations, first and second person, sometimes even objects in sight, may lead to the use of deictic functions of PA and ZA, which will open an entirely different instructional scheme. Following is an example of deictic use of ZAs as first mentions at the beginning of a sequence (P. 136).

- (3) D: O dai ta shang nar la?
 take he go where Q
- F: O dai ta shang nimen jia qu le.
 take he go your home go PeA
- D: Where did (you) take him?
 F: (I) took him to your (parents') home.

Here the two ZAs are both first mentions in the first and second pair-parts of a sequence. Since the two referents are face-to-face, the deictic function of the two ZAs brings in some extra-linguistic interaction which is not part of this study. I therefore exclude first and second persons in my analysis.

The data are first entered into a computer program D-baseIII for detailed statistical analysis, the result of which is the substance of what follows in the next section.

IV. Anaphora in MC Conversation

A. General Distribution of Anaphora

The general distribution of anaphoric devices in the data is tabulated quantitatively and the result is in Table I.

Table I: GENERAL DISTRIBUTION OF ANAPHORA

| | First Mention | Subsequent Mention | Return-Pop | Total |
|-------|---------------|--------------------|--------------|-------|
| NP | 58 (84%) | 62 (25%) | 18 (46%) | 138 |
| PA | 5 (7%) | 66 (27%) | 5 (13%) | 76 |
| ZA | 6 (9%) | 116 (48%) | 16 (41%) | 138 |
| TOTAL | 69 (100%) | 244 (100%) | 39 (100%) | 352 |

In Table I, subsequent mention includes mention of the referent in subsequent clauses after the first mention.

From Table I.B one can see that the first mention in MC conversation is mostly done by NP (84%). The function of return-pop is mainly divided by the choice between NP (46%) and ZA (41%). For the function of subsequent mention, ZA constitutes most of the cases (48%), whereas the choice between NP and PA seems a bit problematic with the chances being equal (25% vs 27%).

Table I shows an overall distribution of anaphoric devices in our data, and it includes both marked and unmarked functions of each anaphora. In the next section, I will first discuss the unmarked function of the three anaphoric devices.

Unmarked Function of Anaphora

1. First Mention

NP constitutes 84% of all the first mention cases in our data. This proves a strong enough support to the conclusion that similar to the function of NP in English conversation (cf. II.B. 2a.), the NP in MC conversation also functions to introduce new information as the first mention of a referent. Following is an example.

(4) E: zheici women xuexiao, zai women zou zhi qian,
this:time we school at we leave Nom before

diule si ba qiang na.
lose:Pf four Cl gun Int

A: shima?
really...

E: This time, before we left, there were four guns missing in our school.

A: Really?...

In this passage, the new information 'four guns' was introduced into the conversation by a full NP. New information introduced in the discourse is mostly done this way by the use of NPs.

But it is not sufficient to stop at this point, for we still have 16% of the first mentions done by PA (7%) and ZA (9%). The question we need to address is, is this 16% first mention by PA and ZA also under normal conditions, or is it done under specific conditions? If the use of PA and ZA as first mentions is restricted by specific conditions only, then we can safely conclude that the first mention introduced by NP is the only normal and unconditioned choice.

As it turns out, the choice of PA or ZA as first mentions is strictly constrained. Let's first look at the role of PA.

Fox notices in her data that there are instances of 'frame-evoked' pronoun first mention (P67). Here the exact referent is not important, and sometimes it is unidentifiable. Only the class of the referent can be identified. Instances of PA first mention in my data appear to be similar to Fox's finding. Here is an example.

(5)

C: ni neige yao zou ye: mashang jiu keyi zou a
you then want leave then right away then may leave Q

B: na kebushi. ((coughs)) ni:, deng ta ba,
that of course you wait he Int

ta zheige bujingqi de shihou//, maimai yaoshi
he Neg:good Nom time business if

bujingqi de shihou ni yao zou ta lede ne.
Neg:good Nom time you want leave he happy Int

C: Could you leave right away whenever you wanted to?
B: Of course. You wait for the occasion. When he was not making money, when (his) business was not good, he was happy if you wanted to leave.

In this example, B describes his experience quitting his old jobs to get better paid new ones due to family need. The PA he (ta) as first mention is associated with the frame of business and the persons who permit B to quit; therefore he can only refer to the class of business owners. The identity of the business owner is unimportant, and only the part that B was able to quit the old jobs is the focus of the conversation.

The first mention done by PAs in my data is generally 'frame-evoked' as example (5) illustrates; therefore, this function of PA in MC is a conditioned phenomenon.

The use of ZA as first mention is also conditioned. Here the referent of ZA is understood through contextually defined inference. Following is an example.

(6) (p143)

C: nei shi na yi nian?
that be which one year

B: yijushi//si nian: di:
nineteen forty-four year end

C: sisi nian,
forty-four year

C: a:, na O jiu kuai wanle.
yes that then soon lose: Pf

C: Which year was that?

B: The end of nineteen forty-four.

C: Forty-four,

C: Then (Japan) was going to lose (the war) soon.

Before C asked which year, the conversation was about a Japanese airport near Beijing being bombed during the Japanese occupation. Nowhere was the name Japan nor were the Japanese troops mentioned, and the first mention of this referent (Japan) is done by ZA. Yet this did not cause any confusion because the referent is clearly defined in the same set-up by the predicate was going to lose soon, and by the common knowledge in China that the Japanese lost the war in 1945.

A different instance of ZA first mention is when ZA functions in a subordinate clause which immediately precedes the main clause. Here the main clause following the subordinate one almost always contains a full NP coreferential to the ZA (sort of like an infinitive or gerundive clause preceding a main one in English). Chen calls this the negligibility of ZA, yet I find it to be a syntactically constrained phenomenon in MC, which is not restricted in discourse only. Example (7) presents an illustration of this syntactic phenomenon.

(7) (P86)

E: O¹ yi shu shaole si ba O², neibang laoshi¹
once count short: Pf four Cl that group teacher

xiade lian dou baile, yige yige de.
scare: Ad face even white one: Cl one: Cl Nom

E: As soon as (they) finished counting and realized that there were four guns missing that group of teachers turned all white, every one of them.

Here E tells an event that happened in his university, in which there were four guns missing. In this passage, O¹ and that group of teachers are coreferential, and if we exchange the positions between the two, there will be no difference in the structure (except that certain extra-linguistic messages will be changed).

As to phenomena like this, I would rather not count them as first mentions; for with ZA and the NP coreferential to it occur actually in the same sentence. In this case, if

we eliminate the NP from the subordinate clause, ZA cannot stand alone in this structure as first mention.

Examples 2 and 3 demonstrate that the use of PA or ZA as first mention is possible, but this use has to be strictly conditioned.

Contrary to the conditioned use of PA and ZA, NP can function freely as first mention; I therefore conclude that first mention in MC conversation is normally done by NP. This is in line with Fox's finding.

B.2 Subsequent Mention

In Fox's model, a pronoun is used after first mention to display an understanding that the sequence is not yet closed.

As has been discussed in II. A, Chinese has two anaphoric devices (PA and ZA) as opposed to pronouns only in English.

This study finds that in conversational discourse, PA and ZA together perform the function that is displayed by pronouns alone in English, while the functional difference between the two devices in MC written and narrative discourse are preserved (II. A).

In their general discussion of the functional difference between PA and ZA, Li and Thompson and Chen concluded that the choice of ZA is under the condition of topic continuity, and the use of PA is to 'highlight' an event. In other words, ZA is used when an event is continuous, and PA functions when there is a discontinuity or change of event under the same topic.

Here I would like to modify this conclusion. Instead of saying that topic continuity is the condition for the choice of ZA, I would like to propose that ZA signals (topic) continuity, and that ZA, as an anaphoric device in prominent use in MC, serves to form continuity. In MC conversations, the occurrence of ZA signals topic and event continuity, and once ZA is in use, the participants in a conversation understand that there is a continuation of an event, so they use ZA also to help form continuity while tracking the referents represented by ZA through semantic encoding of predicates.

With this slight modification, I would like to propose some general norms on the functions of the three anaphoric devices in MC conversation.

I. General Function of Anaphor

- ZA signals and helps form topic/event continuity;
- PA serves to signal event shift (discontinuity);
- NP is used when other devices are not sufficient.

Here the choice for both PA and ZA reflect speakers' understanding that the sequence is not closed.

B.2.1 This study finds that ZA is used in the middle of an adjacency pair and in subsequent discussions. This use of ZA displays the speakers' understanding that the sequence

is not closed, and that the sequence is about a continuous event. Here are some examples illustrating this function of ZA.

(8) (P73)

B: ni ma mei lai ne, shi ma?
you mother Neg come Int be Q

A: O mei lai ne, mei dir zhu, ta.
Neg come Int Neg place live she

B: Your mother hasn't come yet, right?

A: (She) hasn't come yet. She doesn't have a place to stay.

In this adjacency pair, ZA is used as the answer to the question to demonstrate the opening and continuation of a sequence.

(9) (PP74-5)

1 B: eih, neige shei ne, Lin Bo laile ma?
that who Lin Bo come: Pf Q

2 A: Lin Bo hai mei lai ne =
L B yet Neg come Dur

3 B: =a:o

4 A: ta dagai, jiu zhei libai ba.
he maybe right this week Int

5 B: m.

6 A: ta ba jiao gei, neige, kele.
he Co foot for injure: Pf

7 E: O zenme nong de?
how make Q

8 A: O chuqu wan, wanshang, O qi che,
out-go play night ride bike

B: eh, About that one, has Lin Bo come yet?

A: Lin Bo hasn't come yet.

B: Oh.

A: He (is) probably (coming) this week.

B: M.

A: He injured his foot.

E: How did (he) do that?

A: (He) went out to seek some friends at night. O rode a bike.

In this passage, PA is used twice before ZA comes into function. This is because, by using PA the speaker demonstrates that there is not a continuous event in the conversation yet. Line 4 presents additional information to Lin's coming, whereas Line 6 starts a new event about the same referent Lin.

In Lines 7 and 8, however, ZA comes into full use by both speakers A and E. The function of ZA here is two-fold. By using ZA, both speakers demonstrate an understanding that the sequence is open (not closed). In addition, the use of ZA also signals that there is a continuous event about the referent Lin.

In Line 8, ZA also signals that the adjacency pair is meant to be of the same type as the preceding pair. Here speaker A uses ZA to 'tie' the subsequent conversation up to the preceding one (cf. II. B 3a).

The NP used in Line 2 constitutes a special phenomenon which I will discuss in Section IV C.

To sum up, the functional difference between ZA and PA is still mainly the difference along the line of topic/event continuity. While ZA serves to demonstrate the speaker's understanding that there is a continuation of the event under the same topic/referent, PA functions to signal discontinuity or change of event under the same topic. Both anaphoric devices are used to display the speaker's understanding that the sequence is not closed.

B.2.2 In addition to signaling certain changes, PA also serves to 'tie up' adjacency pairs. NP has this function, too. Here both PA and NP may appear in 'possessive' form.

While it is difficult to draw a definite line on the choice between the two, it generally follows that PA is normally used to 'tie up' adjacency pairs when there are no intervening referents, and NP is used for the same function when some distinction has to be made clear. Following are some examples.

(10) (P16)

1 Y: Zhang Li jing ban zhaxie hunzhang shi a.
Zhang Li always make these nasty thing Int

2 X: m. zuijin laoganbu youshihou bande, youshihou
lately old-cadre sometimes make:AD sometimes

3 dengyu qiang fangzi, shiba.
equal snatch-by-force house right

4 Y: jiushi a. ta dangshi nayang jiushi qiang.
right Int he that-time that-form right-be snatch-by-force

5 X: m. ta erzi xifu you bushi zheige
he son daughter-in-law even Neg:be this

6 danwei de ren.
working-unit Nom people

Y: Zhang Li always makes this kind of nasty trouble.

X: Yes. Lately veteran cadres sometimes were almost like snatching housing by force, right?

Y: Right. The way he performed at that time is just snatching housing by force.

X: m, and his son and daughter-in-law even do not work in this place.

Here the two speakers were talking about a person who tried to take away an apartment which was assigned to somebody else. The reason for this person (Zhang Li) do so was that his son was going to get married and they did not have a place of their own. Line 4 presents a possible closure to the event, but in Line 5, the possessive use of PA ties up the following adjacency pair to Line 4, thus expanding the sequence by adding more information/comments. This type of the function of PA is an example of post-elaboration. (In China, housing is normally assigned by the working unit one works in. Since Zhang's children do not belong to Zhang's working unit, they should have no right to demand housing there).

(11) (PP48-9)

1 E: Lin Bo shenme shihou lai a?
Lin Bo what time come Q

2 A: Lin Bo kuai le ba.
Lin Bo soon Pf Int

3 D: na tamen de hukou quan banhao
then they Nom residence-registration all arrange

4 le ma?
Pf Q

5 A: eih, Lin Bo de O hai mei banhao,
Lin Bo Nom still Neg arrange-well

((clears throat))

6 D: nei Wugufu he nei Wugu na?
then fifth-uncle and fifth-aunt A

7 A: tamen de O yiyuefer jiu shanghai le...
they Nom January already register-well

E: When is Lin Bo coming?

A: Lin Bo (is) probably (coming) soon.

D: Then has their residence registration been arranged yet?

A: Lin Bo's hasn't been arranged,

D: Then how about the fifth uncle and aunt's?

A: Theirs was done in January.

This passage presents us with four instances of anaphoric functions. In Line 3, the they (tamen) is actually first mentioned. Here this PA is not a deictic use but it refers to a specific group of people, the Lin's.

The PA used in Line 3 functions to tie up the adjacency pairs. By means of PA in its possessive form, the speaker ties Line 3 up to the first adjacency pair, and this demonstrates that, a., the sequence is being expanded, and, b., the speaker seeks additional information on the same topic.

In Line 5, a specific NP is used as the possessor 'tie'. This is for the purpose of contrasting Lin's residence registration with somebody else's. In this situation, only NP can make a clear distinction of the two referents (Lin vs somebody else).

In Line 6, however, PA is used as the possessor. This is because the referent of PA is not in a contrastive state.

The choice between PA and NP in this example reflects a tendency that PA is generally the first choice as a means to tie up adjacency pairs; NP serves the same function but is only chosen when there is a need to clarify contrasting referents.

In summary, NP and PA both serve as subsequent mention to 'tie up' adjacency pairs. The primary choice between the two is PA, and NP is used when there is no other sufficient devices available.

In my data, there are about equal instances of NP (9) and PA(10) serving as adjacency pair 'tie', and the major difference on the choice of one over the other is along the general tendency stated above.

B.2.3 At the beginning of Section IV.B.2, I postulated a general norm on the functions of the three anaphoric devices. This general norm is repeated here.

I. General function of Anaphor

- ZA signals and helps form topic/event continuity;
- PA serves to signal event shift (discontinuity);
- NP is used when other devices are not sufficient.

I would like to add here that the choice among the three anaphoric devices is not restrained to single referent only.

All three devices can function when there are more than one referents interacting at the same time, and the anaphoric choice in this situation still follows the general norm proposed in B.2.I.

This phenomenon is exemplified below. The function of ZA is illustrated first.

(12) (P1-2)

1 X: na maol pu na dengezi², ni kanjianle ma?
that cat jump-at that light-moth you look-see Q

2 Y: mei kanjian.
Neg look-see

3 X: neige, waibiar feijinlai zhengme da ge ezi²,
that outside fly-enter-come this big Cl moth

4 tal jiu cuanshang cuanxia, O¹ cuan neme laogao
he then jump-up jump-down jump that high

5 tal zhuozhu ta², neige, O¹ warwarwar O²
it catch-stop it then play-play-play

6 O¹ war O² fei le. tal jiu tiaode dishang lai
 play fly Pf it then jump-to ground come

7 O² daodi gei ta zhuazhu le.
 after-all Co it catch-stop Pf

X: Did you see the cat catching a light moth?

Y: No, (I) did not see (it).

X: There was a huge moth that flew in from outside.

It then jumped up and down. (It) jumped up this high. It caught it. Then (it) played and played with (the moth). (It) played and caused (the moth) to fly away. It then jumped onto the ground. (The moth) was finally caught by it. ...

In this passage there are two referents, a cat and a moth. The sequence consists of several continuous events about the cat trying to catch and play with the moth. Here unless there is a need to signal/highlight the event (or shift of event), in which case PA is used, ZA is in prominent use to represent both referents.

Lines 1 and 3 introduce the two referents. Line 4 starts the event of cat chasing the moth. In line 5, however, PA is used to signal a shift in the event (from chasing the moth into playing with it).

In the second clause of Line 5 and in Line 6, both referents (cat and moth) appear as ZAs, and the only means to distinguish the two is the semantic encoding of the verb 'to play'. Here with the help of the verb plus a pre-set frame (cat caught moth), one can infer that it is the cat that is playing with the moth, not vice versa. Also, one can infer by common knowledge that it is the moth that can fly, not the cat. With similar method, one can see that in Line 7, it is the moth that was caught by the cat.

In this passage, both referents are in ZA form whenever an event continues. Here the mechanisms that speakers have to rely on to track the two referents are the semantic encodings of the predicates within certain pre-set frames.

The next example illustrates two referents represented by PA.

(13) (PP61-3)

1 B: ... tal shuo zai, tal zhe shuo zai xian
 3sg say again 3sg this say again salty

2 jiu chibude le, ta² jiu yong Yingwen de:
 then eat:Neg:able Pf 3sg then use English Nom

3 C: m

4 B: zheige, zheige 'esteemed'
 this that esteemed

5 B: a, eih: 'esteem' ne, ta² yong zhei xieyin,
 lat 3sg use this homonym

6 C: ao,

7 A: a,

8 B: 'esteem' ta² yong 'steam'
 3sg use

9 A: ao.

10 B: a. tal zheijiu zaixian wo jiu chibude la,
 3sg this-then too-salty I then eat:Neg:able Int

11 C: zaixian // ao:
 too-salty

12 B: tal zhei fan zenme fan de?
 3sg this translate how translate Q
 'There is enough steam to cook my meal.'

B: He says that if it's too salty, then I can't eat it.
 She then used the English,

C: m:

B: The word 'esteemed',

B: eh, for the word 'esteem', she used the homonym.

C: mhm

A: OK.

B: Yes. He says that I won't be able to eat (it) if it's too salty,

C: too salty, yes,

B: How did she translate this?

B: (She translated it into) 'There is enough steam to cook my meal....'

...

This passage is part of a conversation about how an American student (female) manipulated English homonyms to replace the comic use of homonyms in Chinese while translating a traditional Beijing opera into English.

Even though this passage is also a discussion of one event (translation), PA is used instead of ZA because, in the conversation, there are actually two parallel events, one providing background information while the other discusses the translation; therefore there is event discontinuity in the conversation.

The he (ta¹) is actually a role in the opera, and what he says are the lines in the play, which are background information to the translation.

The she (ta²) represents the American student who did the translation.

It is most likely that the occurrence of two ta's signals a constant 'shift' of events (from background information to foreground description of the translation) that only PA, not ZA is used in the speech.

Notice that though the two referents differ in gender, in MC gender difference is not encoded in the phonetic forms of pronominals, and third person singular pronouns (male, female, animals and objects) all share the same phonological form. Therefore, in the conversation, the two referents appear in the same ta form, and the only means to track each referent is through the repeated key words associated with each referent (eg, ta¹ is associated with the verb 'say', and ta² is accompanied by the verb 'use', and 'translate').

The next example presents the function of NP.

(14) (PP95-6)

1 E: qian ji tian deng neige, Meiguo zhongxuesheng
before some day print that US high-school-student

2 he zhongguo zhongxuesheng bijiao ma,
with China high-school-student compare Int

3 A: M,

4 E: Q doushi gaozhong de jianzi xuesheng bijiao,
all-be senior-high Nom top student compare

5 A: ao.

E: jieguo fer, tamen pubian de be Zhongguo xuesheng
result grade they general Nom than China student
di yibaiduo fer.
low one-hundred-more point

A: m,

E: nansheng di yibaiduo fer,
male-student low one-hundred-more point

nusheng di yibaiduo fer ((hhh))
female-student low one-hundred-more point

A: m,

E: jiushi shuo, shuo Meiguo xuesheng hai buru
then-be say say American student even Neg-than

Zhongguo xuesheng yonggong na.
China student study-hard Int

E: Several days ago it was printed (in a paper) that there was a comparison between American and Chinese high school students.

A: Mhm.

E: (They) were all top students who were compared.

A: mhm,

E: It turned out that in terms of grades they were generally more than one hundred points lower than the Chinese students.

A: mhm,

E: Male students were over a hundred points lower, and female students were more than a hundred points lower.

A: mhm,

E: Which means that American students do not study as hard as Chinese students do.

There is an excessive use of NPs in this example (Lines 1, 2, 4, 6, 9, 10, 12 and 13). This use is constrained by the nature of this piece of conversation, which is mainly a comparison of two referents, American and Chinese high school students.

When two referents are in contrast in the same event, NP is the best candidate to track the referents, which is exactly what the NPs are for. Notice here that whenever possible, PA and ZA are still in use.

The two referents are introduced in Lines 1 and 2 as first mention. Additional information about both referents is provided in Line 4. Here ZA is used to signal continuation of the introduction while referring to both referents (so it signals that there is no contrast needed).

In Line 6, PA is used to represent one referent, and this is made possible only by the use of full NP for the contrasting referent, hence the contrast preserves.

In Line 9, generic forms of NP are chosen (male and female students). The referents of these forms are clearly encoded in the predicate lower (di). This means that the semantic encoding of the predicate can help reduce NP forms (cf. male students vs top male students from the American high school).

In Lines 12 and 13, full NPs are chosen for the conclusive comparison.

This passage (Example 14) demonstrates that in situations of comparison, NPs have to function when other anaphoric devices are not sufficient to track the contrastive referents, which supports the claim restated at the beginning of this section.

Examples 5, 6 and 7 reflect the fact that claim I, postulated on the general tendency of the functions of the three anaphoric devices provides a correct explanation on the choice of anaphora as subsequent mention.

In addition to the functions postulated in I, there are certain grammatical constraints that require the occurrence of overt grammatical elements in MC. In this situation, only PA or NP can be used. These constraints mostly require the use of NP or PA as objects of coverbs or certain transitive verbs, or after the copular 'shi' (to be). Since these are grammatical constraints that are not restricted to discourse only, I choose not to discuss them here.

Table II is a summary of anaphoric functions as subsequent mention from my data.

Table II: SUBSEQUENT MENTION

| | NP | PA | ZA |
|------------------------|----|----|-----|
| TOPIC/EVENT CONTINUITY | 0 | 0 | 116 |
| NEW EVENT | 0 | 12 | 0 |
| DISCONTINUOUS EVENT | 0 | 10 | 0 |
| CONTRASTIVE REFERENTS | 23 | 6 | 0 |
| TIE (POSSESSOR) | 9 | 10 | 0 |
| OBLIGATORY OBJECT | 18 | 15 | 0 |
| OTHER | 12 | 13 | 0 |
| TOTAL | 62 | 66 | 116 |

In Table II, the PA is listed as contrastive referent when the other referent is clearly stated (cf. the they 'tamen' in Line 6, example 7).

The instances listed under OTHER include the marked use of anaphor, and some other cases that I am unable to explain so far.

Table II presents a picture of the general distribution of anaphoric devices as subsequent mention. It is not meant for a statistical analysis of the data, for the choice of the three anaphoric devices for each function (NEW EVENT, etc.) is solely determined by the nature and content of conversations; therefore statistical significance is not my concern here.

B.3 Return-Pop

Return-pop is a long-distance anaphoric tie that connects coreferential referents which are separated by other topics/referents. In English, return-pop is realized by PA and NP both. Fox finds that people tend to use pronominals to form this 'tie', and NP is chosen only when no other anaphoric devices are available (cf. II. B.3.c).

Return-pop is also found in my data, and similar to those in English, in MC this phenomenon is realized in all three forms of anaphora. Here ZA is often used, and NP is used when it is absolutely necessary (for the number of occurrence of return-pop, see Table I).

I have shown in B.1 that when referents can be inferred through other means, PA and ZA can also function as first mention. Similarly, PA and ZA can function as return-pop when associated with certain information, and this information is crucial for speakers to track the referents of these anaphoric devices. This phenomenon is similar to the return-pop by PA in English same-gender situations.

Following is an example in English (Fox, 1987:52).

(15)

1 H: And there wz a ledder fr'm Da:ve.

... ..

22 H: He s: (y'know) had two days of cla:sses'n he says he's already behi:nd.

In this example, there are two more male referents introduced between lines 1 and 22, yet none of them was associated with sending a message; therefore by using the key word says, PA can only be 'tied' to the first referent.

A similar phenomenon occurs in MC conversations, and the major mechanisms in tying a return-pop and its referent in MC include repetition of key words by means of,

- II. a. Nominalizing information to be associated with ZA (by means of a relative clause plus ZA); and
- b. Using crucial words as predicates.

(16) (PP140-1)

1 B: neige, Guomindang feiji lai yi, yi zha,
that GMT plane come once bomb

2 A: m,

3 B: nei, na dagai yeyou, ... nai litou yeyou diebaode.
that that maybe also-have that in have spy

4 ni suan nei Riben nei feijichang litou,
you think that Japan that airport in

5 C: a,

6 B: jilegalar de feiji shi yijia meisheng, quan gei
everywhere Nom plane be one:Cl Neg:save all for

7 ta zhazhao le.
he bomb:hit Pf

8 B: ni: suan, zheige, zhei, yaoshi meiyou ren de hua,
you think that if Neg:have spy Nom case

9 C: dui: // dui,
yes yes

10 B: ta zenme, ta zenme neng zhidao nei jilegalar //
he how he how can know that 4-corner

11 ner you feiji?
there have plane

B: Then GMT planes came to bomb,

A: yes,

B: There must be secret agents there (in the Japanese airport).
Think about it, in the Japanese airport

A: mhm,

B: The planes hidden in all corners were all destroyed

A: Oh,

B: Think about it, if there had been no spies,

B: How could he (they) know there were planes hidden everywhere?

In this passage, the PA used in Line 10 refers to the GMT planes that found and destroyed the Japanese planes in the airport. Here he (ta) is used to refer to the class of referent (aeroplane pilots). The referent is indefinite, but is specific in the sense that he refers to the group of people who were mentioned in Line 1. The means to tie this PA to Line 1 but not to the immediately preceding referent 'spy' (people ren) in Line 8 is the crucial phrase 'to know there were planes'. In this instance, PA can function as return-pop only because it is associated with certain information which people can rely on to track the inference.

(17) (PP71-6)

1 A: nimen juti gao- de shi shenme, biye sheji?
you:pl specific make Nom be what graduate design

2 B: wo, gaole yi mazui qiang.
I make:PF one anesthesia gun

(17 lines of questions and answers about the gun, then four people's conversation about three different topics, about four pages of transcripts)

3 A: ao, na ni gao neige O jiushi
then you make that:CI just-be

A: What exactly did you do for your graduation research?
E: I designed an anesthesia gun.

... ..

A: OK, then the (gun) that you designed is just...

In this passage, after talking about three different topics, speaker A tied the conversation back to the referent first mentioned in Line 2 (the anesthesia gun). The means that the speaker used is the relative clause 'the ___ that you designed'.

(18) (PP111-118)

B: ai, zheige:, youpiao:, ...
this stamp

(discussion of background information about stamps in China, one page of transcript)

B: zhe donxi:, fangzheng zai:, shiniandongluan de
this stuff anyway at ten-year-turmoil Nom

shihou, eh:, quandou quandou huile.
time all all destroy:PF

(discussion of kinds of stamps and why B couldn't keep them, four pages of transcription)

4 B: ...neihurde:, wen, wode wenping a, bushi jiaole ma,
...that-time I:Poss diploma Int be turn-in Int

(discussing diplomas, one page of transcript)

5 E: nin xianzai yao liuzhe O a, nin jiu facai la.
you now if keep Int you then be-rich Int

6 C: faci dao fabuliao cai, fangzheng wenping,
be-rich after all be:Neg:able rich after all diploma

7 zhengming ma,
certificate Int

8 E: nei jizhang youpiao, ...
that several:CI stamp

B: The stamps, ...

... ..

B: the stuff was completely destroyed during the period of the ten-year-turmoil.

... ..

B: At that time, my diplomas, ... I turned all of them in.

... ..

E: If you had saved (them), then you would have become rich.

C: One won't become rich that way. After all, diplomas are mere certificates.

E: Those stamps, ...

In this example, two referents, stamps and diplomas, are both discussed. None of the two objects was saved after the ten-year-turmoil (the Chinese official term for the Cultural-Revolution, the reason for which was part of the discussion). In Line 5, speaker E tried to use ZA to tie the discussion back up to the first referent, the stamps. The crucial word associated with ZA that E chose was to save (liuzhe). Yet since the second referent, the diplomas, were not saved either, speaker C traced the referent of ZA up to the closer one, the second referent, instead of the first one.

This use of ZA has obviously caused some misunderstanding, and the only means sufficient to clarify E's intention is the use of NP, thus in Line 8 E had to use a full NP to 'repair' the conversation.

The three examples (16-18) present us with two mechanisms that MC speakers use to associate crucial information with PA or ZA as return-pop. Using crucial words as predicates (ex. 16, 17) is similar to the way that English speakers use to form return-pop in the situation of same-gender referents.

To sum up, return-pop is a phenomenon in MC conversation also. ZA and PA can both function as return-pop when they are accompanied by crucial information. NP is used when other sufficient devices are not available.

I would like to make a general summary of the three anaphors as subsequent mention and as return-pop.

It has been shown in B1-3 that whenever possible, speakers try to use ZA and PA, and the use of NP seems to be the last resort. This tendency is also found in Fox's study. While the exact answer to this phenomenon is still unclear, I feel that speakers generally choose not to repeat full NPs. This could be the preference over not making conversations redundant.

Based on the discussion in B1-2, the functions of ZA and PA appear to help form local discourse cohesion, for both devices function to signal either continuation or discontinuation of an event locally. As opposed to these two devices, NP can occur wherever needed (when other devices are not available, cf. I in B.1); therefore NP helps form global cohesion. This distribution of anaphoric devices as elements forming local vs global coherence is in line with Chen's hierarchy on the choice of anaphora in MC narrative discourse (cf. II.A).

Chen finds in his data that the choice of ZA is when referential distance and intervening referents are both less (than when the choice is between PA and NP). This finding appears to be similar to the function of ZA as subsequent mention (forming local event continuity). But his hierarchy becomes problematic when encountered with instances of return-pop performed by ZA. In my data, the longest separation between ZA and its referent is twenty-nine full clauses with six intervening referents. Return-pop is thus highly likely to be a specific/unique feature in conversational discourse. The implication of return-pop will be discussed in Section V.

C. Marked use of anaphor

Marked use of anaphors in English, according to Fox, is mainly the excessive use of NP when PA normally suffices. This is a skill of anaphoric manipulation. In my data, the marked use of anaphora includes excessive use of PA and NP when normally ZA and/or PA are used respectively.

Marked use of anaphora in English encodes speaker's extra-linguistic message, e.g. disagreement, assessment, etc. I did not find too many cases of marked anaphoric functions, and the ones that appear in my data do not seem to match any cases in Fox's model. This could be due to the nature and participants in the conversations. Further study on this topic is certainly a must before any specific norms can be generalized on how people manipulate these anaphoric devices in conversation.

The examples that I could explain in my data are of two types:

- a. NP is used instead of PA or ZA to signal that the speaker recognizes a topic shift;
- b. NP or PA is used to add certain extra-linguistic messages to the conversation.

Examples demonstrating these phenomena are given below:

(19) (cf. B.2.1.ex.2)

B: ... Lin Bo laile ma?
Lin Bo come: Pf Q

A: Lin Bo hai mei lai ne.
Lin Bo till Neg come Int

B: Has Lin Bo come yet?
A: Lin Bo hasn't come yet.

(20) (cf. B.2.2.ex.11)

E: Lin Bo shenme shihou lai a?
Lin Bo what time come Q

A: Lin Bo kuai le ba.
Lin Bo soon Pf Int

E: When is Lin Bo coming?
A: Lin Bo (is) probably (coming) soon.

In both 19 and 20, there are full NPs repeated in the second pair-part (answer to a question). Both examples were in a situation in which speaker A was involved in conversations on other topics. By repeating the NP, the speaker probably signals that his attention is already shifted to the current topic. Furthermore, the speaker could be readjusting his own attention to the new referent by repetition of this referent in full NPs.

(21) (P17)

1 Y: Zhang Shen fanzheng yuanyi zuo zheige renqing.
Zhang Shen of-course willing do this:C1 favor

2 ta fanzheng jiu yao zou le.
he anyway soon leave Int

3 X: jiushi. Zhang Shen cai (...)
right-be Zhang Shen

Y: Zhang Shen is of course willing to do this favor. He is leaving soon anyway.

X: Right. Zhang Shen of course (...)

There is a scornful tone in this passage which reflects the speaker's contempt for the referent. The tone is brought about by the use of PA plus the adverb 'anyway' in Line 2. PA here functions to single out the referent to state the fact that since Zhang (he, ta) was leaving soon, it wouldn't do him any harm by helping somebody at other people's cost. Here ZA is normally used in the position of PA, yet the scornful tone would be eliminated if the speaker used ZA. The NP in line 3 is a repetition of the name, which serves the same function as the PA does in line 2.

D. Interim Summary

In this section, general functions of each anaphoric device are discussed. Of the three anaphoric devices, NP works normally as first mention. PA and ZA can also introduce new referents, but they have to function under strictly defined or pre-set context.

In subsequent mention, ZA and PA are preferred, NP is used only when there are no other sufficient devices available.

The choice between ZA and PA is along the line of topic/event continuity. ZA functions to signal continuation of an event, and PA serves to signal a shift of the event under the same topic/referent.

All three devices can form return-pop. The anaphoric choice between ZA and PA on the one hand, and NP on the other, is similar to those norms summarized for first mention and as the general function of anaphora (B.1. 1), viz, the use of ZA and PA has to be associated with crucial words/information, and NP is used when no other sufficient devices are available.

In terms of discourse cohesion, ZA and PA normally form local coherence, while NP contributes to global cohesion.

About the Inference System

Foley and Van Valin describe languages using inference to do reference tracking as having two features,

- a. heavy use of ZA;
- b. coreference signaled by subtle use of sociolinguistic variables.

I would like to propose that the two features stated above are actually due to the nature of ZA in these languages, and the nature of ZA that I would like to claim is semantic dependency. In addition, I would also postulate that processing of discourse with heavy use of ZA involves Emergent Semantics, i.e. the semantics that people rely on to track the referents of ZA emerges as MC discourse is processed.

As has been shown throughout this study, ZA is a morphologically and syntactically empty element, and the reason that this empty element enables speakers to correctly track referent is only because of the semantic encodings of predicates or preset frames, hence the dependent nature of ZA.

Since ZA constitutes a syntactically empty slot, its occurrence forces people to track referents through means of other non-empty grammatical categories, mostly the predicate (being the nucleus of a clause). Therefore, it is very likely that speakers of languages with heavy use of ZA possess a cognitive system different from speakers of other types of languages (eg. English vs MC).

Thus I claim here that the cognitive system associated with languages with heavy use of ZA (pro-drop languages) is typical of cognitive processes which conduct reference-tracking through semantic encodings of non-anaphoric grammatical categories. To make it short, to speakers of MC, reference-tracking is achieved by means of semantic encodings of non-referents.

This specific type of cognitive process is molded by the nature of ZA.

ZA's semantic dependent nature is reflected throughout this study.

In terms of first mention, ZA can introduce a new and definite referent when there is a pre-defined context and/or crucial words (IV.B1).

In terms of subsequent mention, two ZAs may interact without causing any confusion or ambiguity. This is also because of the pre-defined context plus semantic encodings of predicates (IV.2).

In terms of return-pop, ZA can function as a long-distance referent-tie to re-connect separated coreferentials (IV.B.3). This is made feasible only by the association of crucial words to ZA.

To sum up, the nature of semantic dependency enables ZA to function as an anaphoric device, and heavy use of ZA molds a specific type of reference-tracking mechanism in cognitive processes, namely Emergent Semantics. The reason that MC speakers do not feel the syntactic 'hole' created by ZA is just because of their specific cognitive processes. And the reason that ZA can be separated by as much as twenty-nine full clauses and six intervening referents without creating any misunderstanding in my data is also due to the nature of speakers' cognitive processes. For once cognition is focused on

crucial semantic encodings, the empty hole of ZA probably does not interfere with language processing.

I have to add here that using non-anaphoric devices to help track referents is not a phenomenon unique to MC. English speakers also use this structural device to form return-pop for instances of same-gender referents. It is the heavy use of ZA (uncoded anywhere in the syntactic structure) in a language that signals a difference in cognitive processes. In this sense, ZA could serve as a parameter in determining cognitive processes relevant to reference-tracking.

VI. Conclusion

This is a pilot study on the functions of anaphoric devices in MC conversational discourse. The results of this study are two-fold.

On the unmarked use of anaphora, speakers of English and MC follow general norms postulated by Fox (II.B).

Return-pop is a phenomenon manipulated by speakers of both languages in conversational discourse (most likely in interactional conversation only). The skills in using pronominals (English) and PA and ZA (MC) as return-pop reflect speaker's cognitive ability of conducting reference-tracking through means of non-anaphoric devices.

The difference between the two languages lies in the heavy use of ZA in MC.

The semantic dependent nature of ZA molds in MC speakers a type of cognitive processes different from those possessed by English speakers.

Further study on the different cognitive processes between speakers of English and MC may contribute to the explanation of the two cognitive processes. For instance, a two-by-two test on speakers of the two languages may help clarify certain mechanical differences between the two cognitive processes, i.e. whether their attention is focused on semantic encodings of predicates or completed syntactic structure, etc.

Explanation of the two systems of cognitive processes may contribute to language teaching as well as language learning. It may also contribute to the general understanding of peoples speaking different languages.

References

- CHEN, PING. 1986. Reference Introducing and Tracking in Chinese Narratives. Ph.D Dissertation UCLA.
- FOLEY, WILLIAM A. AND ROBERT VAN VALIN, JR. 1984. Functional Syntax and Universal Grammar. Cambridge: Cambridge University Press.
- LI, CHARLES AND SANDRA A. THOMPSON. 1981. Mandarin Chinese: A Functional Reference Grammar Berkeley: University of California Press

Colorado Research in Linguistics 11

ABSTRACTS