'SUBJECT' AND REFERENT TRACKING: ARGUMENTS FOR A DISCOURSE-BASED GRAMMAR OF CHINESE*

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0. Introduction Eleven years ago, The Symposium on Discourse and Syntax was held at UCLA. In the preface to the volume of papers from that symposium (Givón 1979), Talmy Givón states that '... it has become obvious to a growing number of linguists that the study of the syntax of isolated sentences, extracted, without natural context from the purposeful constructions of speakers is a methodology that has outlived its usefulness.' (p. xiii). Based on the title of the present conference and the fact from which it arose, that isolated sentences are still the central focus of most syntactic research, it seems that Givón's 'growing number' has not yet reached critical mass. It is my hope that by showing the need for a discourse-based analysis of Chinese syntax, my paper will make some small contribution in this regard.

This paper is the second in a series arguing for a discourse-based analysis of grammatical relations in Chinese in which there is a direct mapping between semantic role and grammatical function, and there are no relation-changing lexical rules such as passivization that can change that mapping.[1] The correct assignment of semantic roles to the constituents of a discourse is done by the listener purely on the basis of the discourse structure and pragmatics (real world knowledge). Though grammatical analyses of certain constructions can be done on the sentence level, the sentence is generally not the central unit for understanding anaphora and grammatical relations in Chinese. Two related arguments are presented here: the question of 'subject' and the structure of discourse developed from an analysis of the nature of discourse referent tracking.

1.0 The Question of 'Subject' in Chinese Before I begin this section, I would first like to point out that I do not believe in any universal notion of 'subject' (cf. Van Valin 1977, 1981, Foley & Van Valin 1977, 1984), or that it is possible to discuss the notion of 'subject' outside of a particular grammatical theory. As Marantz has pointed out, 'There can be no right definition of "subject" ... only a correct (or better) syntactic theory.' (1984:3).[2] Givón 1984 defines 'subject' as a grammatical/syntactic category that codes discourse-pragmatics, specifically, the clausal topic. All languages code topics, so all languages can be said to have the pragmatic role of 'subject'. For Givón, then, 'subject' is the same as 'topic'. I will discuss this question below. For the purposes of this paper, I will assume that 'subject' is an NP that has special *grammaticalized* referential properties beyond the prominence that might be associated with its semantic role.

Li & Thompson (1974; 1976) argue persuasively for analyzing Chinese as a topic-prominant language. They also point out that '[t]here is simply no noun phrase in Mandarin sentences which has what E. L. Keenan [1976] has termed "subject properties"' (1976:479). Aside from this, though, they give only one explicit argument, that of 'pseudo-passives' (see §1.8 below), to support the idea that there is no identifiable subject. One purpose of this paper is to support Li & Thompson's subjectless analysis of Chinese by presenting further arguments.

Following the methodology used, for example, in Anderson 1976 and Van Valin 1981, we will examine relativization, *bi* comparatives, cross-clause co-

reference, clefting, WH-question formation, raising to 'subject', indispensability, and pseudo-passives to determine which argument of the verb, if any, figures as the syntactic pivot[3] in these various constructions that define pivots. Paul Schachter (1977) has shown that a distinction must be made between the semantic role-related properties and the reference-related properties of what we call 'subjects' in Indo-European languages. Dixon (1979) also points out that what he terms 'universal syntactic phenomena' (imperatives, jussive complements, etc.) are of no use in determining grammatical relations. I therefore will not discuss reflexivization, imperatives, or any other role-related grammatical structures. Through the study of the reference-related constructions we will see that there is no syntactic pivot in Chinese, so the concept of 'subject' as a grammatical function beyond semantic role does not exist.[4]

In discussing syntactic pivots, I will use the 'universal semantic-syntactic primitives'[5] (Dixon 1979:59) of transitive subject (A), intransitive subject (S)[6], and transitive object (O). In a given language, if S and O function in the same way in a particular syntactic construction, and differently from A, then we can say that there is a neutralization of the distinction between S and O, and so the syntactic pivot for that construction is [S,O]. If on the other hand S and A function in the same way in a particular syntactic construction, and differently from O, then we can say the syntactic pivot for that construction is [S,A]. In a language where all or most of the constructions in a language have [S,O] pivots, [S,O] can be said to be the subject of that language, and the language can be said to be syntactically ergative. If, on the other hand, [S,A] is the major pivot pattern for all or most of the syntactic constructions of the language, then that grouping can be said to be the subject, and the language can be said to be syntactically accusative. If no consistent pattern emerges, then that language has no syntactic pivot, and it makes no sense to talk of grammatical subjects, ergativity or accusativity.[7]

1.1 Cross-clause Coreference In the following three examples, the zero anaphor in the second clause is subcategorized for by the verb in both clauses:

(1) Wǒ ná le tā de qián, jiù _____ rēng _____ le.
I pick-up ASP he GEN money then throw ASP
I picked up his money and threw it.

(2) Yì zhī xiǎo-jīr bú jiàn le, lǎoyīng zhuā zǒu le ____.
one CLASS chick not see ASP eagle grab go ASP
One chick disappeared, an eagle carried it away.

(3) Nèi ge rén ná-zhe gùnzi _____ pǎo le.
that CLASS person holding stick run ASP
That person ran, holding a stick.

In examples (1)-(3), we have A=A (and O=O) coreference, S=O coreference, and A=S coreference respectively. No consistent pattern emerges, so we can say there is no syntactic pivot for cross-clause coreference.

In introducing the examples above, I specified that the zero anaphor was subcategorized for by both verbs. This is not always the case. As shown in Li & Thompson 1976 and 1979, and Tao 1986, it is the topic of the sentence/discourse, not the 'subject', that controls coreference in cross-clause deletion; the deleted element need not even be subcategorized for by the verb in the first clause. Li & Thompson (1976:469-470) give the following three examples:[8]

(4) Nèi ke shù yèzi dà, suǒyǐ wǒ bù xǐhuān _____.
that CLASS tree leaves big so I not like
That tree (topic), the leaves are big, so I don't like it (the tree).

(5) Nèi kuài tián dàozi zhǎngde hěn dà, suǒyǐ _____ hěn zhíqián.
that CLASS field rice grow very big, so very valuable
That field(topic), rice grows very big, so it (the land) is very valuable.

(6) Nèi chǎng huǒ xiāofángduì láide zǎo, *(suǒyǐ _____ hěn lèi).
that CLASS fire fire brigade came early, so very tired
That fire (topic), the fire brigade came early, so they're very tired.

In examples (4) and (5), the zero anaphor in the second clause corefers with the topic of the first clause, and not the 'subject'. In example (6) the zero anaphor cannot corefer with *fire brigade*, as the fire brigade is not the primary topic of the clause, even though it is the 'subject' of the verb in the first clause and a logical candidate for subject of the second clause. The zero anaphor also cannot corefer with the topic because of the inanimacy of the topic. The evidence in these examples is consonant with Givón's statement that 'the main behavioral manifestation of important topics in discourse is continuity, as expressed by frequency of occurrence' and participation in equi-topic chains (1984:138), but as the topic that is participating in the cross-clause coreference is not subcategorized for, no argument can be made for subject control of cross-clause coreference, and the idea that 'subject' and 'topic' are one and the same is then questionable.

1.2 Relativization In Chinese any NP can be relativized upon:

(7) a. Wǒ de péngyǒu zài nèi ge shítáng chī fàn.
I GEN friend LOC that CLASS cafeteria eat rice
My friend eats (rice) in that cafeteria.

b. Wǒ zài nèi ge shítáng chī fàn de péngyǒu mǎi le shū.
I LOC that CLASS cafeteria eat rice REL friend buy ASP book
My friend who eats in that cafeteria bought some/a book(s).

c. Gāngcái bù shūfu de nèi ge rén zǒu le.
just-now not comfortable REL that CLASS person go ASP
The person who was not well just now left.

d. Wǒ tǎoyàn wǒ péngyǒu zài nèi ge shítáng chī de fàn.
I dislike I friend LOC that CLASS cafeteria eat REL rice
I dislike the rice my friend eats in that cafeteria.

e. Wǒ bù xiǎng zài wǒ péngyǒu chī fàn de nèi ge shítáng chī fàn.
I not want LOC I friend eat rice REL that CLASS caf. eat rice
I don't want to eat at the cafeteria where my friend eats.

f. Wǒ mǎi píngguǒ gěi tā de nèi ge péngyǒu lái le.
I buy apples give he REL that CLASS friend come ASP
The friend I bought the apples for came.

g. Wǒ yòng lái xiě zì de máobǐ bú jiàn le.
I use come write characters REL brush not see ASP
The brush(es) I use to write characters disappeared

h. Xiāofángduì láide zǎo de nèi chǎng huǒ sǔnshī bú dà.
fire-brigade came early REL that CLASS fire loss not big
There was not much loss from the fire the fire brigade came early to.

i. Wǒ gěi shū de nèi ge rén yǐjīng zǒu le.
I give book REL that CLASS person already go ASP
The person I gave the books to already left.

From these examples we can see that it is possible not only to relativize on A (7b), S (7c), and O (7d), it is also possible to relativize on the locative NP (7e), the beneficiary (7f), the instrument[9] (7g), and even a topic (uncategorized for or not) (7h).[10]

In example (7f) there is a pronoun retained in the restrictive clause. Keenan & Comrie (1979:334) claim that in all but subject and object relativizations, a pronoun must be retained. We can see from examples (7e) and (7g) that this is not the case. A pronoun is usually retained in any indirect object construction because the verb involved is a three argument verb. When, as in (7f), the direct object position is filled only with a zero pronoun (the NP having been fronted to preverbal position), the indirect object generally is retained to avoid the confusion that would result if there were more than one postverbal zero pronoun. In cases such as (7i), where the direct object is not a zero pronoun, no indirect object pronoun need be retained.

As relativization is referential by definition, a language that has no grammatical encoding of pragmatic referentiality should be free of restrictions on relativization (Foley & Van Valin 1977). We can see that this is in fact the situation in Chinese.

1.3 WH-Question Formation There is no movement in WH-question formation in Chinese, and any constituent can be questioned:

(8) a. Shéi gěi wǒ mǎi yīfu?
who give I buy clothes
Who bought clothes for me?
b. Wǒ děi gěi shéi mǎi yīfu?
I must give who buy clothes
Who must I buy clothes for?
c. Wǒ děi gěi Zhāngsān mǎi shénme dōngxi?
I must give buy what thing
What do I have to buy for Zhangsan?
d. Tā zài nǎlǐ mǎi zhè ge dōngxi?
He LOC where buy this CLASS thing
Where did he buy this thing?

We can see that there are no limitations on what constituent of a sentence can be questioned in Chinese, so wh-question formation is another syntactic construction that has no syntactic pivot.

1.4 Clefting One of the arguments used by Tan Fu (1988 and her paper for this conference) for seeing the sentence-inital NP of a sentence such as (9a) (below) as a grammatical subject is that of clefting (using the copula *shi*, glossed SHI, following Tan's usage). She gives examples of clefting of the effector, the time phrase, and the location of the action, but claims that clefting cannot apply to objects (she cites Teng 1979 for this restriction). She gives the sentences in (9) as examples (her (12), p. 7 — all glosses, and the star on (9b'), are hers):

(9) a. Lǐsì yā-shāng le.
Lisi hit-injured ASP
Lisi was hit to injury.

b. Mǎ qī-lèi le.
horse ride-tired ASP
The horse was ridden to to tiredness.

c. Mǎ wǒ qī-lèi le.
horse I ride-tired ASP
As for the horse, I rode it tired.

a'. Shì Lǐsì yā-shāng le.
SHI Lisi hit-injured ASP
It was Lisi who was hit to injury.

b'. Shì mǎ qī-lèi le.
SHI horse ride-tired ASP
It was the horse that was ridden tiredness.

c'. *Shì mǎ wǒ qī-lèi le.
SHI horse I ride-tired ASP

In LaPolla 1988, I analysed (as did Li & Thompson 1976, 1981) sentences such as (9a) not as passives, as Tan Fu would have them, but as topicalized constructions with the agent/effector unexpressed. That is, for me, the verbs in (9b) and (9c) have the same valence; they are really the same sentence, except that wǒ 'I' is not expressed in (9b). In (9a'-c') the application of clefting is not to the 'subject', but to the 'object'. The problem with the starred sentence is that it is out of context ((9a' & b' would actually be equally strange out of context). In a context where what needs to be highlighted is the fact that it is *the horse*, and not, for example, *the mule* that I 'rode to tiredness', (9c') is fine. Another example would be (10 -10'):

(10) Wǒ méi mǎi cài.
I did-not buy vegetables
I didn't buy veg.

(10') Shì cài wǒ méi mǎi.
SHI veg. I did-not buy
It was veg. that I didn't buy.

In this example clefting applies to the object without any problem. The one restriction there is on clefting is not on objects per se, but on non-discourse-active post-verbal objects. The restriction is not on the 'objectness' of this type of constituent, but on its non-activeness. As we see in (10'), clefting can even apply to some indefinite post-verbal objects, though for (10') to be grammatical, it would have to be accessible from the discourse situation, such as in a contrastive-focus situation where someone asked me if it was *meat* that I didn't buy. Then I could say, 'No, it was *vegetables* that I didn't buy.' The same pragmatic constraint holds in English. We can see from all this that clefting is of no use in establishing a subject for Chinese.

1.5 Comparatives Descriptions of the structure of the *bǐ* comparative in Chinese (see (11) below) often refer to 'subject'. For example, Li & Thompson (1981) state that the item being compared '... must be the subject or the topic ... of the verb phrase that expresses the dimension' (p.569). McCawley (1988) criticizes the inclusion of topics in their analysis because sentences with comparison of a fronted object, as in (12a-b), are ungrammatical. Yet there are examples where the topic can be compared. Li & Thompson give sentence (13):

(11) Wǒ bǐ John gāo.
I compared-to John tall
I am taller than John.

(12) a. *Gǒu bǐ māo wǒ xǐhuān.
dog compared-to cat I like

b. *Gǒu wǒ bǐ māo xǐhuān.
dog I compared-to cat like

(13) Xiàng bǐ xióng bízi cháng.
elephant comp-to bear nose long
Elephants have longer noses than bears.

It seems from these examples that compared topics are acceptable when the topics are not subcategorized by the verb.

Hashimoto (1971) says that compared constituents 'need not be subject NP's ...; they may be NP's dominated by Time or Place expressions or prepositional phrases; however, they cannot be the object NP's' (p.34).

In Chinese the problem is that the constituent that expresses the dimension is a single argument *verb*, unlike English, where the constituent expressing the dimension is an *adverb*. Because of this, to compare two objects of a verb such as *xǐhuān* 'like', the whole clause must be repeated, with the comparative *bǐ* coming between the two clauses, as in (14).

(14) Wǒ xǐhuān tā bǐ wǒ xǐhuān nǐ duō.
I like he compared-to I like you more
I like him more than I like you.

As *duō* is a single argument verb, the structure of a sentence that compares objects must be the same as one that compares subjects, i.e. X PP VP, where X is the constituent being compared (a simple NP or a nominalized clause), and PP includes *bǐ* and the constituent X is being compared to. The restriction on comparatives in Chinese then is not a function of 'subject' control, but is due to the nature of the class of verbs used in comparatives: a one argument verb can take only one argument, so it is irrelevant to talk of 'subject' vs. 'non-subject'.

1.6 Raising to 'Subject' In English and many other languages, only the subject of an embedded clause can be 'raised' to the subject of a verb such as *seem* (15). In Chinese, though, the equivalent of (15c) (as well as of (15a-b)), with the 'object' raised, is perfectly acceptable. Once again, no pattern for identifying a 'subject' can be found.

(15) a. It seems Paul bought the car.
b. Paul seems to have bought the car.
c. *The car seems Paul to have bought.

(16) Chēzi hǎoxiàng Paul mǎi le.
car seems buy ASP

1.7 Indispensability Keenan (1976) gives indispensability as a one of the properties of his Subject Properties List. He says, 'A non-subject may often simply be eliminated from a sentence with the result still being a complete sentence. But this is usually not true of b[asic]-subjects' (p.313). In Chinese the verb phrase alone can be a complete sentence, as in (17). There is then no indispensible NP in the Chinese clause, and no evidence for a 'subject'.

(17) Chī le.
eat ASP
I/you/he/she ate.

1.8 Pseudo-passives A common sentence type in Mandarin is where there is no agent, and the theme/patient is in initial position, as in (20):

(18) Jiǔ hē le.
wine drink ASP
The wine was drunk; I/you/he/she drank the wine.

These are often called passives by those wishing to establish grammatical relations for Chinese (cf. Tan 1988 and her paper for this conference), and the initial NP is seen as the subject. In LaPolla 1988 I pointed out that these 'passives' only work when the 'subject' is clearly not the agent, such as when the context disambiguates it or when it is inanimate; if there is an animate 'subject' that is a possible agent, it is naturally seen as the agent, and the clause is then clearly transitive. A good example to show that this type of construction is not passive is (19), which could be said if two old friends pass in the street and one doesn't notice the other.

(19) Eh, Lao pengyou bu renshi!?
Hey old friend not recognize/know
Hey, (You) don't recognize your old friend!?

To read this as a passive sentence would be inappropriate to the situation, as the emphasis is on the person addressed not recognizing the speaker rather than it being on the speaker not being recognized by someone.

Looking at (20), we can see another problem with the 'passive' analysis, pointed out by Zhu Dexi (1986):

(20) a. Wǒ bù hē jiǔ, yì dī yě bù hē.
I not drink wine one drop even not drink
I don't drink wine, not even one drop.
b. (Nǐ) bié guǎn wǒ, nǐ shéi yě bié guǎn.
(you) don't pay-attention I you who also don't pay-attention
Don't pay attention to me, don't pay attention to anyone.

If the first clause of (20a) is active, but the second clause is passive, then the parallelism is thrown off. In (20b) the topic is animate, and so the agent must be expressed in the second clause. Comparing the two examples, we can see that they are both meant to be parallel structures, and both clauses of both sentences are active.

One last argument we can make involves this type of topicalization. Givón (1984:145) states that 'one may ... view the grammar of subjectization as, in large part, the grammar of differentiating the subject from the direct object case-role.' If we look at the example below, we can see that as there are two topic positions in Chinese, sentence initial and post-agent[11], a sentence can be ambiguous when the actor and undergoer are not clearly differentiated semantically; one cannot tell what is the 'subject' and what is the 'object'/topic. This ambiguity usually disappears when the sentence occurs in a larger context. If we accept Givón's statement, then since 'subject' and 'object' are not differentiated by the grammar, no subjectization has taken place.

(21) Zhāngsān Lǐsì bú rènshi.
Zhangsan Lisi not know
Zhangsan, Lisi doesn't know him / Lisi, Zhangsan doesn't know.

To summarize briefly, we have looked at cross-clause coreference, relativization, wh-question formation, clefting, bi comparatives, raising to 'subject', indispensability, and pseudo-passives, and have found no discernable pattern in any of these constructions that would support the recognition of a 'subject' in Chinese.

2. Referent Tracking and the Organization of Discourse Related to the above is the question of referent tracking. Of the four types of referent tracking used in the world's languages (switch-function, switch-reference, gender/number/noun class marking, and inference — see Van Valin 1987 for details), Chinese exclusively uses inference (cf. Li & Thompson 1979 and Cheng 1988). Huang 1984 makes an important distinction between 'discourse-oriented' and 'sentence-oriented' languages, but where Huang points out that pragmatics can 'override' the grammatical rules he had worked out for the interpretation of zero anaphora, I feel that it is pragmatics that should be seen as primary, not sentence-based rules constructed, as he says, 'in contexts in which pragmatic or discoursal factors are reduced to the minimum' (Huang 1984:539). Referent tracking in Chinese does not make reference to grammatical function. Referent tracking is not, and cannot be, for example, from 'subject' to 'subject', as there is no 'subject' (see §1 above). It is only the discourse or sentence topic that is important in the determination of zero anaphora.

Chinese is a case of what Foley & Van Valin (1977) refer to as a 'role dominated' language, one where 'the organization of clause level grammar is controlled by semantic roles and their interactions' (p.298).[12] For Chinese this must be taken one step further and carried to the discourse level. Because there is no morphological marking of syntactic case role, and no indispensable referential subject, the semantic role of a constituent in Chinese can only be understood in the discourse and real world context in which it is used.[13] Neither morphology or word order supply this information,[14] as there is no verbal or nominal inflection, and preverbal constituents can be either 'subjects' or 'objects'. Let us look at the structure of discourse to see what it can tell us about anaphora.

Quite a few linguists have argued for units of discourse structure larger than sentences (see, for example, Longacre 1979, Hinds 1979, Fox 1987). James H-Y. Tai (1978) was possibly the first to argue for enlarging the scope of Chinese syntactic studies to the discourse level and to attempt to lay out a structure for Chinese discourse. Basically following the work of John Hinds, he analysed discourse into paragraphs built of coordinately or subordinately conjoined groups of sentences called 'segments'.[15] C. C. Cheng (1988) improved on this idea by showing that it is the discourse topic that is the basic element that holds the discourse together, and by giving a more hierarchical structure to discourse. What Cheng calls the 'discourse continuity' (huàfi yánxù) of a discourse topic and its 'explanation' (shuōmíng) (development in later sentences) can be diagramed in a type of top to bottom, left to right tree structure/flow chart (see (24) below). A single such topic-explanation structure often has subordinate discourse continuity structures and may also include sub-structures that are 'interruptions' (dǎchà). The following is an example of narative discourse, from Cheng (1988:2-3):

(22) Dīng lǎoshī dài wǒmen qù jiāoyóu, zǒu guò yī shān yòu yī shān,
Ding teacher lead we go picnic go ASP one mountain also one mount.
Mr. Ding took us on a picnic, (we - incl. Ding) passed mount. after mount.,

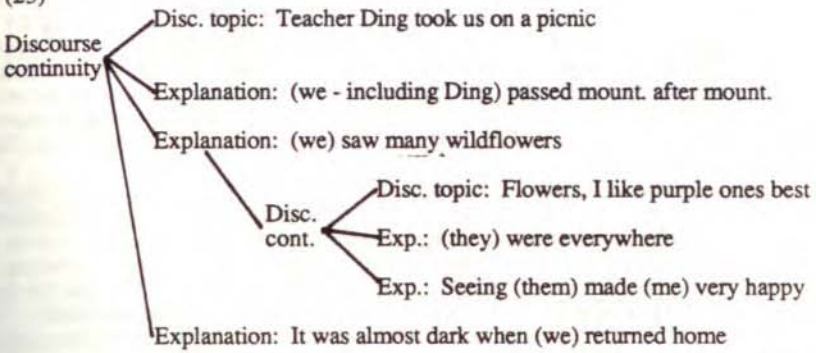
kàn dào xǔduō yěhuā. Huā wǒ zuì xǐhuān zǐsè de,
see ASP many wildflowers flowers I most like purple REL
(and) saw many wildflowers. Flowers, I like purple ones best,

dàochù dōu shì, kàn de gāoxìng jíle. Tiān kuài hēi cái huí jiā.
everywhere all is see PART happy very sky soon black then return home
(they) were everywhere. Seeing (them) made (me) very happy. It was almost dark when (we) returned home.

We can see that the entire first clause is the discourse topic for the rest of the narrative, and contains the antecedent that controls the zero anaphor in the second, third, and last clauses. In these later clauses the agent of each action is represented by a zero anaphor, yet even if we believed that there was such a thing as a 'subject' in Chinese, we could not say that this is subject control, as the antecedent that controls these zeros is not the agent of the first clause, but is a combination of the agent and patient. After the third clause there is a second discourse topic, the fourth clause. The controlers of the zero anaphors in the fifth and sixth clauses are contained in this clause. The sentence topic in the fourth clause, *huā* 'flowers', does not control the anaphor in either of the following clauses; the zero in the fifth clause refers to *purple* flowers, not flowers in general, and the two zeros in the sixth clause refer to *wǒ* 'I' and *zǐsè de huā* "purple flowers' respectively. What determines this last fact is simply the semantics of the predications, not any structural considerations. Of the three major participants in the discourse (*wǒmen, wǒ,* and *huā*), only *wǒ* had any predication about liking flowers, and is animate, so is able to be happy. The discourse topic sentence sets up the possible antecedents, but which argument controls which zero anaphor is determined by the semantics of the predication (sometimes it is actually the entire propositional content of the clause that controls the zero anaphor in a subsequent clause). Because of these facts, a Chinese speaker will always be able to identify *wǒ* as the first zero argument in the second to last clause.

It is examples such as the above that lead Cheng to the conclusion that the 'discourse topic' (huàfi) and the 'sentence topic' (zhǔfi) are two separate entities (though of course there are situations where they coincide), a distinction not made by other linguists working on Chinese. This is similar, though, to Givón's discussion of the hierarchical structure of discourse, where he posits two functionally and syntactically distinct structures: thematic structure and topic maintanance structure.[16] We can see from all of this that the structure and semantics of the narrative as a whole, and not the structure of the individual sentences, are the main determining factors in referent tracking. This structure can be diagramed in (23) (adapted from Cheng 1988:5). Within the larger discourse continuity structure there is an identifiable sub-structure with its own discourse topic sentence and explanations. The fact that this is identifiable as a sub-structure is what allows the zero anaphor in the last clause to be recognized as coreferring with a referent in the first clause, even though it follows the second discourse topic sentence in linear order.

(23)



We can see that Cheng's discourse diagram is very similar to the diagram given in Hopper 1979 (p. 214) for distinguishing foreground from background information. There is in fact a strong correlation between discourse continuity sub-structures and the foreground-background distinction (cf. Li & Thompson 1979): the major structure is the foreground, and the substructures are background. We then can use the explications of the properties of foregrounding and backgrounding given in Hopper 1979 and Hopper & Thompson 1980 to aid us in analyzing discourse structure.

In the example given above, Cheng's discourse topic is similar to what Lambrecht (1987:375; see also Lambrecht 1986 for a fuller explanation) refers to as a 'sentence focus structure' or 'thetic sentence', which he distinguishes from topics in 'predicate-focus structures' where there is a topic and a comment about that topic. A 'sentence focus structure' is a sentence 'in which the subject is not a topic[17], and in which moreover the predicate does not express "old information", i.e. is not pragmatically presupposed'. These sentences are presentational in nature, that is, their discourse function is to present or introduce (make accessible) referents which can then be commented on using topic-comment structures ('predicate focus structures'). These sentence-focus structures are marked structures, both in terms of frequency of occurrance and in terms of morphology, and simply by the fact that they usually contain full noun phrases (cf. Fox 1987). The sentences marked as 'discourse topics' in Cheng's diagram then are sentence-focus structures, while the sentences of the 'explanations' are predicate-focus structures. This distinction is not recognized in Chen 1987, so there is a problem with examples such as (24) (his (14), p.366; (T) = topic, (C) = comment):

(24) A: (T) Wǒ (C) kànjiàn dàxiōngdī le
I look-see older brother ASP
I saw older brother
B: (T) Tā (C) zài nǎr?
He LOC where
Where is he?
A: (T) Tā (C) zài cūnxītóu de shàimàicháng shàng.
He LOC village-west GEN wheat-sunning-ground on
He's on the wheat-sunning-ground

Chen has *wǒ* 'I' marked as a topic, yet it is actually a sentence-focus structure and not a predicate-focus structure (see fn. 16). This can be seen by the fact that if *tā* 'he' were not used in B's response, the zero anaphor would refer to the entire proposition; it would mean 'Where did you see him?'. If A's response to this also did not include *tā* , then the topic of this clause would also be the entire first clause, not *wǒ* or *dàxiōngdì*. That is, B's use of the 3rd person pronoun forces the choice of *dàxiōngdì* as the topic instead of the entire proposition 'I saw older brother'.

In Chen 1987 (and Liu 1984), the number of subject, object and indirect object zero anaphors out of a sample of 57 clauses that contained zero anaphors is given, but no definition of 'subject' etc. is given other than to say that the arguments were assigned grammatical functions based on prototype sentences. In fact there is a statement to the effect that the subject position is where the topic usually is, so usually the topic is put in subject position (Chen 1987:369). This being the definition of 'subject', it is small wonder that 75.4% of the zero anaphors in this sample are 'subjects'.

Returning to Cheng's analysis, one small problem is the question of linear order vs. hierarchical structure. As mentioned earlier, he includes interruptions within the hierarchical structure of the discourse, so that a remark made to a third participant, unrelated to the discourse between the first and second participants would be given a node on the flow chart in its discourse continuity structure. The example Cheng gives is the equivalent of the narrator of the example given above saying 'Little brother, stop making so much noise! We're talking' between the second to last and last clauses. My view is that this is actually a separate discourse, and so should not be diagramed within the structure of the main discourse That is, linear order must be kept distinct from discourse structure.

Another minor problem is that Cheng criticises Li & Thompson 1979 by say that that paper 'over and over emphasizes that deletion of pronouns in discourse has no relationship to the grammatical structure of discourse' (p.11). He corrects (rightly) a misanalysis of some of Li & Thompson's data to show that their analysis of complete reliance on pragmatics is wrong. The problem is how do we define 'grammatical structure'? What Li & Thompson actually said was that 'zero-pronouns can occur in any grammatical slot on the basis of coreferentiality with an antecedent that itself may be in any grammatical slot, at some distance, or not even present. The fundamental strategy in the interpretation of zero-pronouns in Chinese discourse, then, is inference *on the basis of pragmatic information provided by the discourse* and our knowledge of the world' (1979:320 — emphasis mine). The fact that grammatical *relations* are not of prime importance does not mean grammatical *structure* is not important. The italicized part of the quote above can refer to the different encodings given to foreground vs. background clauses, and the difference in structure between sentence-focus structures and predicate-focus structures (see above). In fact Li & Thompson's principle of conjoinability of clauses makes reference to 'the *syntactic* and semantic properties of those clauses' (1979:330 — emphasis mine).

3.0 Conclusion Given the evidence above, any analysis of Chinese syntax must therefore include, and possibly be based on, the discourse level. One final point is that it is often assumed that some historical accident or strange quirk of the Chinese language or people is responsible for the fact that there is no morphological marking of pragmatic case roles, but I would like to argue that it is precisely because there are no grammaticalized syntactic case roles that there is no morphological marking.

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[1]The question of lexical passives and pseudo-passives was delt with in detail in LaPolla 1988.

[2]See also a similar argument, from the perspective of relational grammar, in Johnson 1977.

[3] This concept is from Dixon 1979, but see also Foley & Van Valin 1984:107-124 for a discussion of the nature of pivots and the distinction between Pragmatic Pivots and Semantic Pivots. For Dixon, pivots are a surface phenomenon, as there is a deep universal subject. Foley & Van Valin's Role and Reference Grammar is a mono-stratal theory, and what Dixon calls deep subject properties, F&VV analyze as role-related properties different from the reference-related properties that define pragmatic pivots.

[4]Y. R. Chao (1968) spoke of 'subjects', but loosely defined them as whatever came first in the sentence, and understood them more as topics than as what are normally called 'subjects'.

[5]See Du Bois 1985 for arguments why A, S & O are not universal or primitives. Nonetheless, I will use them here, as Du Bois does, because they are useful heuristic notions.

[6]Intransitive subjects can also be split into agentive and non-agentive subjects, but this distinction is not important for this discussion.

[7]This paragraph adapted from Van Valin 1981:362. There are also two other possible configurations: an active-inactive split, as in Acehnese (Durie 1987); and a situation such as in Takelma, where S, A and O each pattern distictively (see Fillmore 1968, from Sapir 1917).

[8]I have slightly modified the glossing of the second example.

[9]As James D.. McCawley has pointed out (p.c.): 'Since it's hard to tell which uses of *yòng* are verbs and which are instrumental prepositions, it isn't completely clear that the relativized NP in (7g) is an instrument in the syntactic sense.' This being the case, my remarks are limited to the semantic sense.

[10]This can even be extended to include genitives and objects of comparison (Maxwell 1979).

[11]That is, the fronted 'object' can occur in initial or second position in the sentence. The case I am speaking of here is when both the agent and a fronted object appear in preverbal position — ignoring here the question of the *ba*-construction, etc.

[12]The idea that it is semantic role that is primary in Chinese is not new; see for example, Wang 1956 and Gao 1956.

[13]This is not to say that there has been no grammaticalization of pragmatics in Chinese. One clear case is the specialization of word order, with the topic early in the sentence and the focus at the end of the sentence. I will deal with this question in the third paper of this series.

[14]Contrary to Yang (1980:1), which states, 'Semantic functions of linguistic units can be conveyed only through syntactic means ...'

[15]Similar to the 'paragraph topic → segment' structure given in Hinds 1979.

[16]This is my evaluation. Cheng criticises Chen 1984 (cited as Chen's 1983 UCLA M.A. thesis) for distinguishing between topic continuity and semantic continuity, a distinction that parallels Givón's, so Cheng may not agree with this evaluation. For him 'the discourse continuity is only the hierarchical structure of sentences in a discourse, and is not a semantic structure' (p. 12).

[17]The fact that the topic sentence includes a pronoun, which is usually an unmarked topic, does not necessarily mean that that pronoun is a topic. In the case here, its activation state would be what Lambrecht calls 'unused', that is, it is accessible, but not activated in the discourse. There is a clear distinction between 1st & 2nd person pronouns vs. 3rd person pronouns in this regard. These remarks are also relavant to the discussion of ex. (24).

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