Arguments Against 'Subject' and 'Direct Object' as Viable Concepts in Chinese[*]

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1.0 INTRODUCTION

Thirty-one years ago Tsu-lin Mei (1961) argued against the traditional doctrine that saw the subject-predicate distinction in grammar as parallel to the particular-universal distinction in logic, as he said it was a reflex of an Indo-European bias, and could not be valid, as 'Chinese ... does not admit a distinction into subject and predicate' (p. 153). This has not stopped linguists working on Chinese from attempting to define 'subject' (and 'object') in Chinese. Though a number of linguists have lamented the difficulties in trying to define these concepts for Chinese (see below), most work done on Chinese still assumes that Chinese must have the same grammatical features as Indo-European, such as having a subject and a direct object, though no attempt is made to justify that view. This paper challenges that view and argues that there has been no grammaticalization of syntactic functions in Chinese. The correct assignment of semantic roles to the constituents of a discourse is done by the listener on the basis of the discourse structure and pragmatics (information flow, inference, relevance, and real world knowledge) (cf. Li & Thompson 1978, 1979; LaPolla 1990).

1.1 SYNTACTIC FUNCTIONS

Subject and direct object are generally refered to in the literature as 'grammatical relations'. I will break with tradition and use GRAMMATICAL RELATIONS to refer to all of the relational systems that might be involved in a grammar: syntactic relations, semantic relations, and pragmatic relations. In this paper I will be discussing syntactic relations, and I will use the term SYNTACTIC FUNCTION to refer to the concepts 'subject', 'direct object', and 'indirect object'. These terms represent particular restricted neutralizations of semantic roles in particular syntactic environments (see below). In order for us to say that a language has a 'subject', etc., we need to find that in most syntactic environments (i.e. in most constructions) in the language, there is such a restricted neutralization. In fact we need to find THE SAME restricted neutralization in all or most of the constructions in the language for the concept of, for example, 'subject' to make any sense. It is especially important when working with non-Indo-European languages that we not assume the

existence of particular grammatical categories, such as 'subject', 'object', 'definiteness', etc., in those languages without proper justification. Cumming puts it well in the following quote:

> ... if a number of independent properties converge on one construction or linguistic unit, then they can be said to define a category which is real for that language. Thus, the category 'subject' can be said to be a useful one for English, since the properties of preverbal position and government of verb agreement converge on the same NPs. However, if there is only one property (or a cluster of interdependent properties) which is unique to the construction or unit in question, then the use of a higher level term is not justified. Thus in a language in which preverbal NPs have no other unique properties, it is not useful to refer to these NPs as 'subject', since that term imputes properties which go beyond simple word order. (1984:365)[1]

As 'subject' is the most important syntactic function cross-linguistically, the lion's share of the discussion in this chapter will deal with determining if Chinese has grammaticalized this syntactic function.

Comrie, in beginning his discussion of 'subject' (1981, Chapter 5), lays down the following preliminaries, which apply equally well to the present work:

> First, we are not committed a priori to the view that subject is a necessary descriptive category in the grammar of every language: there may well be languages where it is not appropriate, though equally there are languages (including English) where it is appropriate. Secondly, we are not committed to the view that, even in a language where subject is generally valid, every sentence will have a subject. Thirdly, we are not committed to the view that the translation of a sentence from language X where a certain noun phrase is subject will necessarily have the same noun phrase as subject in language Y. (p. 100)

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[1]There are actually two parts to the question of 'subject':

> ... in order to say that a given grammatical relation exists in a given language this claim must be justified both language-internally and cross-linguistically. Language-internally, this means that a number of logically independent criteria must be established that serve to identify the grammatical relation in question as being syntactically significant in the language in question. Cross-linguistically, ... in assigning the same name to grammatical relations established independently in different languages, it must be the case that the relations in the two languages have a reasonable degree of overlap ...' (Comrie 1981:60)

In this paper we will be concerned only with the language-internal question of 'subject', etc., though the results of this study will be very relevant to any cross-linguistic conception of grammatical relations (see footnote 20).

There is no universal notion of 'subject' (Platt 1971; Johnson 1977, Van Valin 1977, 1981; Foley & Van Valin 1977, 1984; Gary & Keenan 1977; Comrie 1981); it is impossible 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). (See also Marantz 1982, 1984 for arguments why syntactic functions should not be seen as primitives or tied to semantic roles.) Sanders (1984:222) states it more generally: 'It is simply true in general that empirically significant concepts are inherently incompatible with rigorous definition, i.e. in terms of necessary and sufficient conditions, except within the specific context of a particular scientific theory'.

In this paper, I will define 'subject' as an NP that can be shown to have special GRAMMATICALIZED referential properties, beyond the prominence that might be associated with its semantic role, as evidenced by a restricted neutralization of semantic roles in various syntactic environments. With this as our definition of subject, we can say that subjects are not universal, as not all languages show this type of restricted neutralization (see S. Anderson 1976, Van Valin 1977, 1981, Faarlund 1989, and Bhat 1991).

In order to determine if a language has such a grammaticalized subject, we can follow the methodology used, for example, in S. Anderson 1976, Van Valin 1981, and Faarlund 1989, that of examining various constructions in the language to determine which argument of the verb, if any, figures as the syntactic pivot in each of the constructions. Essentially, a pivot is 'any NP type to which a particular grammatical process is sensitive, either as controller or target' (Foley & Van Valin 1985:305).[2] To determine if there is a pivot for a particular construction, we will look for restricted neutralizations among the semantic roles of the arguments of the verb. For ease of discussion, we will use what Dixon (1979:59) has called 'universal semantic-syntactic primitives' to refer to the three major types of argument. These are S, the single argument of an intransitive verb;[3] A, the argument which prototypically would be the agent of a transitive verb; and P, the argument which prototypically would be the patient of a transitive verb.[4] In a given language, if S

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[2] This concept is from Dixon 1979, but see also Foley & Van Valin 1984:107-124, 1985:304-306 for a discussion of the nature of pivots and the distinction between Pragmatic Pivots and Semantic Pivots. A Semantic Pivot is sensitive to semantic factors, while a Pragmatic Pivot is sensitive to the topicality of a referent. For Dixon, pivots are a surface phenomenon, as there is a deep universal subject. Foley & Van Valin's Role and Reference Grammar is a monostratal theory, and what Dixon calls deep subject properties, Foley & Van Valin analyze as role-related properties different from the reference-related properties that define pragmatic pivots. (The term 'pivot' goes back to Chao 1968, but there refers to the shared argument of a biclausal structure.)

[3] The single argument of intransitive verbs can also be agentive or non-agentive. This semantic distinction is significant in the determination of word order in presentative and other constructions in Chinese (see LaPolla 1990, Chapter 3), but it is not important for the discussion of pivots, as the question of which of two or more NPs is pivot is only relevant with transitive verbs.

[4] These 'primitives' are 'semantic-syntactic' in the sense that in terms of transitive verbs the distinction is semantic, while in terms of intransitive verbs, the neutralization of semantic roles is syntactic. See Du Bois 1985 for arguments why A, S, & P (his 'O') are not universal or primitives. Nonetheless, I will use them here, as Du Bois does, because they are useful heuristic

and P function in the same way in a particular syntactic construction, and differently from A (and any other possible roles), then we can say that there is a neutralization of the distinction between S and P, and so the syntactic pivot for that construction is [S,P]. If on the other hand S and A function in the same way in a particular syntactic construction, and differently from P (and any other possible roles), then we can say there is a neutralization of the distinction between S and A, and so the syntactic pivot for that construction is [S,A]. In a language where all or most of the constructions in a language have [S,P] pivots, [S,P] can be said to be the subject of that language, and the language can be said to be syntactically ergative (e.g. Dyrbal, which has an [S,P] pivot for all coordination and subordination, indispensability, and relative clauses).[5] 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 (e.g. English, which has an [S,A] pivot for coreferentiality between conjoined clauses, 'raising', and indispensability). If no consistent pattern emerges, then it is hard to say what the subject should be (e.g. Jaceltec, which has an [S,P] pivot for relativization, wh-question formation, and clefting, and an [S,A] pivot for cross-clause coreference). If there is no neutralization in any construction of the language, or unrestricted neutralization, then that language has no syntactic pivots, and it makes no sense to talk of grammatical subjects, ergativity or accusativity (e.g. Archi—see Kibrik 1979, Van Valin 1981).[6]

The question then is what constructions should we look at in determining whether or not there are pivots in Chinese? 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 syntactic relations. Therefore, I will not discuss imperatives, jussive complements, or other role-related grammatical structures. We will look only at reference-related constructions such as 'raising', cross-clause coreference, relative clauses, reflexives, and certain Chinese-specific constructions (Section 2).

1.2 SYNTACTIC FUNCTIONS IN CHINESE

We saw above that many scholars believe it is impossible to define 'subject' cross-linguistically (universally), but many do try to define subjects for individual languages. There have been many attempts to define a subject for Chinese, though no one has succeeded in this venture (see S. Lü

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notions. I am using 'P' instead of Dixon's (and Van Valin's) 'O' to refer to the patient of a prototypical transitive verb, following Comrie 1978, 1981. Dixon's use of 'O' stems from his positing of a level of 'deep' subject and object (see footnote 2). Though we are essentially talking about the same thing, I prefer not to use 'O' because of its association with 'object' and the confusion that might arise from this association.

[5]I want to emphasize that I am talking here about syntactic ergativity; morphological ergativity has no neccessary relationship to this syntactic type (Comrie 1981:65 ff.), though it so happens that Dyirbal is morphologically ergative (with a pattern split according to person) as well.

[6]This paragraph is partially adapted from Van Valin 1981:362; see also Van Valin 1977, Comrie 1981:64,118.

1979, Li & Thompson 1978, 1981, and L. Li 1985 on the difficulties of trying to define 'subject' for Chinese). In their attempts to define 'subject' in Chinese, scholars can be roughly divided into three camps: those who define 'subject' as the agent (possibly actor) (e.g. L. Wang 1956, T. Tang 1989), those who define it as the topic or whatever comes first in the sentence (e.g. Chao 1968), and those who believe both are right (S. Lü 1979, L. Li 1985). Several authors have also argued that though there is a 'subject' in Chinese, it does not play an important role in Chinese grammar (e.g. L. Li 1985, Li & Thompson 1981).

Those authors who define subjecthood simply on the basis of selectional restrictions vis-à-vis the verb are confusing semantics and syntax. They claim that subjects have such a selectional restriction, while topics do not. This definition would imply that subjects are not topics, though some that hold this view do say that the subject can also be a topic. That an NP has a selectional restriction vis-à-vis the verb simply means that that NP is an argument of the verb. This is a necessary condition for subjecthood, but not a sufficient one. Chinese syntax is sensitive to semantics in that the actor of a transitive verb will precede that verb, while an undergoer can either precede or follow the verb, depending on the pragmatic status (topicality) of the referent of the NP, but distinguishing actor from undergoer is not the same as distinguishing subject and object (cf. the comments to this regard by S. Lü (1979:72)). A simple intersection of actor and topic in a particular sentence also does not a subject make. In Chinese there is no restriction on what semantic role can be the topic, though as actors are cross-linguistically more often within the presupposition (and the speaker, possibly the most common actor, is ALWAYS within the presupposition), they are very often topics,[7] and this is what seems to have led to the confusion. Word order[8] is to the largest extent controlled by the nature of information flow (see LaPolla 1990, Chapter 3; 1993), and secondarily by semantics. Syntactic functions play no part in the determination of the order of consitutents in a sentence.

Shibatani (1988) claims that Chinese has an [S,A] 'subject', without giving much evidence. The methodology in that paper is flawed, in that Shibatani takes Japanese *wa* and *ga* marked NP's as prototypical topics and subjects, respectively, and uses the Japanese translations of sentences in other languages to determine whether that language has topics or subjects. Shibatani states that '[b]ecause of the merger between topic and subject in Western languages, the discussion of the grammatical subject in the West has been confounded by two basically distinct notions—an actor (or agent) and an entity which is being talked about' (1988:2). In Japanese, on the other hand, according to Shibatani, these two distinct notions have distinct markings, *ga* and *wa* respectively. It seems then that Shibatani is equating actor with subject.

Tan 1988 also argues for the existence of a grammatical subject in Chinese, but the argumentation is again quite flawed, in that Tan attempts to use an NP's ability to appear in cleft

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[7]See Silverstein 1981:243 on the speaker (and/or addressee) as the 'maximally presupposable entities' and the most 'natural' topics.

[8]I am dealing here only with the order of constituents in a sentence, not the order within constituents such as NPs. It might be said that the order of relative clause before head reflects information structure, but it is not clear how one could relate determiner-head order to pragmatic structure (though see Takashima 1985, 1987 for one attempt at this in the language of the Chinese oracle-bone inscriptions).

constructions or to be questioned, etc. as proof of subjecthood. The problem is that Tan is not trying to prove the clefted or questioned NP is a 'subject' as opposed to some other syntactic function, but as opposed to being a 'topic', i.e., she feels that simply showing some argument to not be a 'topic' will prove that it is a 'subject'. As the clefted or questioned NP is a focused constituent, of course it could not be a 'topic', but that does not automatically prove it is a 'subject' (a methodological error also made in Tsao 1979).

Those who define 'subject' as whatever NP is sentence-initial are making almost the opposite mistake. Topichood is a pragmatic relation, not a syntactic one. Though the subject in languages that have this syntactic function is often also a topic, it need not be, as can be seen in sentence focus sentences[9] in English with 'dummy' subjects, such as *It's raining*. On the view of those who define 'subject' as topic (e.g. S. Lü 1979, L. Li 1985), a patient NP becomes a subject anytime it appears before the agent. There are then no 'topicalized' structures, since the 'topicalized' NP becomes the subject, as in the following examples from L. Li 1985:70:

(2.1)   a. Wo yijing   zhidao zhe jian shi   le.
               1sg already know this CL affair ASP
               I already know about this affair.

          b. Zhe jian shi wo yijing zhidao le.
               this CL affair 1sg already know ASP
               This affair, I already know about.

On Li's analysis, in (2.1a) *zhe jian shi* 'this affair' is an object, while in (2.1b) it is a subject. At the same time, Li (following S. Lü 1979) says that 'subject' in Chinese has two natures: as the topic and as whatever role it is.[10] S. Lü's original idea (1979:72-73) was that since 'subject' and 'object' can both be filled by any semantic role, and are to a certain extent interchangeable, then we can say that subject is simply one of the objects of the verb that happens to be in topic position. One of the examples of what he means by 'interchangeable' is (2.2) (S. Lü 1979:73):

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[9]This term is from Lambrecht, to appear; roughly, a sentence-focus sentence is a sentence without a topical subject.

[10]Though in a later article L. Li (1986:349) claims that not only the syntactic function, but also the semantic role of a referent changes with a change in position in a sentence. Li claims that in (i) the referent of '1pl' is a patient, while in (ii) it is an agent:

(i)   Zhe yi   xia, jiu mang huai le women zhe xie ren.
          this one time then busy ruin ASP 1pl   this few people
          This time we really got busy.

(ii)   Women zhe xie ren   jiu mang huai le.
           1pl   this few people then busy ruin ASP
          We really got busy.

(2.2) a. Chuanghu yijing   hu   le   zhi.
           window   already paste ASP paper
           The window has already been pasted with paper.

       b. Zhi   yijing   hu   le chuanghu.
           paper already paste ASP window
           The paper has already been pasted on the window.

S. Lü gives the analogy of a committee where each member has his or her own duties, but each member can also take turns being chairperson of the committee. Some members will get to be chairman more than others, and some may never get to be chairman, but each has the possibility of filling both roles. This concept of the dual nature of 'subject' is S. Lü's (and L. Li's) solution to the problem of defining the concept of 'subject' in Chinese. It is clear that this definition does not give us a consistent definition for 'subject'; it simply states that the subject is the topic, and can be any semantic role.

In his monumental grammar, Y. R. Chao (1968) spoke of 'subjects', but not in the rigorous sense defined here. He loosely defined them as whatever came first in the sentence, and understood them more as topics than the kind of 'subjects' found for example in most Indo-European languages.

Li & Thompson (1974b, 1976a) argue persuasively for analyzing Chinese as a topic-prominent 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 §2.7 below), to support the idea that there is no identifiable subject. In their later *Mandarin Chinese: A Functional Grammar* (1981), they do recognize a 'subject' for Chinese, but it 'is not a structurally [i.e. syntactically—RJL] definable notion' (1981:19), and not very important structurally. For this reason they regard Chinese as a topic-prominent language rather than a subject-prominent language.

The 'subject' that Li & Thompson speak of is distinguished from 'topic' because it has a 'direct semantic relationship with the verb as the one that performs the action or exists in the state named by the verb' (p. 15), whereas the 'topic' need not necessarily have such a relationship with the verb. If this is the only criterion for determining a 'subject', though, then we are again simply substituting semantic relations for syntactic relations, and there is no subject that can be defined in syntactic terms.

In section 2, below, I will try to support Li & Thompson's earlier subjectless analysis of Chinese by presenting further arguments. Following the methodology outlined in §1.1, we will look at various reference-related constructions in Chinese with the intention of determining the pivot, if there is one, in each construction. We will see that there is no syntactic pivot in any of these constructions, so the concept of 'subject' as a syntactic function beyond semantic role simply does not exist in Chinese.

Section 3 deals with the question of whether there is a syntactic function 'direct object' in Chinese. As with the question of 'subject', there has been much discussion, but little resolution, often for the same reasons: confusion of semantics for syntax, or pragmatics for syntax. Again as

with 'subject', 'object' is not a universal phenomenon (see for example Gil 1984, Collinge 1984), so we need to find a restricted neutralization of semantic roles in terms of behavioral and coding properties in order to say there is a grammaticalized direct object in Chinese.

J. Anderson (1984:47) argues that the concept of 'object' is 'necessarily associated with subject-forming languages ... unless the notion can be generalized over all second-ranking derived relations, if any other such there be'. If this is the case, then showing that there has been no grammaticalization of 'subject' should obviate the need for a lengthy discussion of 'object', but as there are other opinions on the connection between 'subject' and 'object' (see for example S. Lü 1979:71, Gil 1984), and as the *ba* construction (see §3.2) figures crucially in many analyses of Chinese grammar, I will assume it is necessary to delineate the arguments against the syntactic function of 'object' in Chinese.

2.0 THE QUESTION OF 'SUBJECT' IN CHINESE

2.1 CROSS-CLAUSE COREFERENCE

Our first test for subjecthood is to determine whether there are any constraints on deletion and coreference in complex constructions in Chinese. In a language with an [S,A] pivot for coordination (the accusative pattern), such as English, an argument shared by two conjoined clauses can be represented by a zero pronoun in the second clause only if it is in the S or A role in both clauses, as in (2.3a).

(2.3) a. The man went downhill and Ø saw the dog.
       b. The dog went downhill and Ø was seen by the man.
       c. *The dog went downhill and the man saw Ø.

If instead the argument the two clauses have in common is in the P role in the second clause, in order for the two clauses to be conjoined, the representation of the argument (here the zero pronoun) must appear as the derived S of a PASSIVE construction, as in (2.3b). It is not possible to have the A role NP of the first clause coreferring with a zero pronoun in the O role of the second clause, as in (2.3c).

In a language with an [S,P] pivot for coordination (the ergative pattern), such as Dyirbal (Dixon 1980:461ff), a shared argument which appears as a zero pronoun in the second of two conjoined clauses must be in the S or P role in each clause, as in (2.4a). If the NP in the second clause is instead in the A role, in order for the two clauses to be conjoined and for the argument to appear as a zero pronoun in the second clause, the shared argument must appear as the derived S of an ANTIPASSIVE construction (2.4b). It is not possible to say the equivalent of (2.3a), with a transitive second verb and a zero anaphor referring to an A role argument not appearing as a derived S, as evidenced by (2.4c). (These examples are from Dixon 1980:461-2.)

(2.4) a. **bal an   guda   bu≥an   ba≥gul yara≥gu   buran**
    she+ABS dog+ABS descend+PAST he+ERG man+ERG see+PAST
    The dog went downhill and was seen by the man
    (Lit.: The dog went downhill and the man saw Ø.)

   b. **bayi   yara   bu≥an   bul ral ≥anyu   bagun gudagu**
    he+ABS man+ABS descend+PAST see+PAST+ANTI he+ABS dog+DAT
    The man went downhill and saw the dog (with antipassive indicator ≥**a-y** on the
    second verb).

   c. *****bayi   yara   bu≥an   buran ba≥gul guda**
    he+ABS man+ABS descend+PAST see+PAST he+ERG dog+ABS
    The man went downhill and saw the dog (with transitive verb and A argument
    (**yara≥gu**) unexpressed).

   In Chinese we don't find either the English or the Dyribal type of restriction on cross-clause coreference. In Chinese it is possible for the shared argument of a conjoined structure to appear as a zero pronoun regardless of whether it is in the A or P role; there is no need for a passive or antipassive construction:

(2.5) a. Xiao gou zou dao shan   dixia, nei ge   ren   jiu kanjian le.
    little dog walk to mountain bottom that CL person then saw   ASP
    The little dog went downhill and was seen by the man
    (Lit.: The little dog went downhill and the man saw Ø.)

   b. Nei ge   ren   zou dao shan   dixia, jiu kanjian le   xiao gou.
    that CL person walk to mountain bottom then saw   ASP little dog
    The man went downhill and saw the little dog.

In (2.5a) the shared argument of the two conjoined clauses appears as an S role NP in the first clause, and a P role NP (here a zero pronoun) in the second of the two clauses, without appearing in any type of passive construction (cf.(2.3c)). In (2.5b) the shared argument of the two conjoined clauses appears as an S role NP in the first clause and an A role NP in the second clause, without appearing in any type of anti-passive construction (cf.(2.4c)).

   Comrie (1988:191) points out that '[i]n any given language, there is necessarily interplay between the strictly grammatical factors and the extralinguistic (world knowledge) factors that help in determining anaphoric relations', but then goes on (p. 193) to show how, in English, grammatical constraints on the control of anaphor can force a particular interpretation of a sentence, even though the result is nonsensical, as in (2.6):

(2.6)   The man dropped the melon and burst.

Because of the grammatical constraints on conjunction reduction in English, this sentence has to be interpreted as saying that the man burst after dropping the melon. In Chinese there are no such grammatical constraints, so the Chinese equivalent of (2.6) would be interpreted as saying that the melon burst after the man dropped it:

(2.7) Nei ge ren ba   xigua   diao zai dishang,   sui   le.
that CL person BA watermelon drop LOC ground broke-to-pieces ASP
That man dropped the watermelon on the ground, (and it) burst.

The same structure, but with different semantics, yields different results:

(2.8) Nei ge ren ba   xigua   diao zai dishang, huang   le.
that CL person BA watermelon drop LOC ground   get-flustered ASP
That man dropped the watermelon on the ground, (and he) got flustered.

It is semantics (real world knowledge) that determines coreference in these examples, not syntactic function.

Coreference in Chinese is in fact quite free. In the following three examples we have A=A (and P=P) coreference, S=P coreference, and A=S coreference respectively:

(2.9) Wo na   le ta de qian, Ø jiu reng Ø le.
1sg pick-up ASP 3sg GEN money   then throw ASP
I picked up his money and threw it.

(2.10) Yì zhi xiao-jir bu jian le, laoying zhua zou le Ø.
one CL chick   not see ASP eagle grab go ASP
One chick disappeared, an eagle carried it away.

(2.11) Nei ge ren   na-zhe gunzi Ø pao le.
that CL person holding stick   run ASP
That person ran away, holding a stick.

We see no restricted neutralization of argument type which would allow us to identify a pivot in any of these examples. Similar examples can be found in any Chinese discourse or text.

In the examples above, the referent of the zero anaphor was an argument of both of the verbs in each example sentence, but this is not always the case. As shown in Li & Thompson 1976a, 1979, and 1981, and Tao 1986, it is generally the topic of the sentence or discourse, not the 'subject', that controls cross-clause coreference; the coreferent constituent need not even be an argument of the verb in the first clause. Li & Thompson (1976:469-470) give the following three examples ((2.12)-(2.14a)—(2.14b) is my own).

(2.12) Nei ke shu yezi   da, suoyi wo bu xihuan Ø.
   that CL tree leaves big so   1sg not like
   That tree (topic), the leaves are big, so I don't like it (the tree).

(2.13) Nei kuai tian daozi zhangde hen da, suoyi Ø hen zhiqian.
   that CL field rice grow   very big, so   very valuable
   That field(topic), rice grows very big, so it (the land) is very valuable.

(2.14) a. Nei chang huo xiaofangdui laide zao, *(suoyi Ø hen lei).
    that CL   fire fire brigade came early,   so   very tired
    That fire (topic), the fire brigade came early, so they're very tired.

   b. Nei chang huo xiaofangdui laide zao, suoyi sunshi bu da.
    that CL   fire fire brigade came early,   so   loss   not big
    That fire (topic), the fire brigade came early, so there wasn't
     much loss.

In examples (2.12) and (2.13), the zero anaphor in the second clause corefers with the topic of the first clause, and not what is usually referred to as the 'subject'. In example (2.14a) the zero anaphor cannot corefer with *fire brigade*, as the fire brigade is not the primary topic of the clause, even though it is what many linguists would call 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 the inanimacy of the topic is not compatible with the semantics of the verb *lei* 'tired'. Only in (2.14b) can we have the topic as the controller of the zero anaphor. 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 (1984a:138), but as the topic that is participating in the cross-clause coreference is not an argument of the verb, no argument can be made for subject control of cross-clause coreference, and the idea that 'subject' and 'topic' are one and the same (as argued, for example, in Givón 1984a) is also then questionable. To sum up, we can see from these examples that cross-clause coreference is dependent on a complex interplay of semantic and pragmatic factors, but does not depend on syntactic factors such as syntactic relations.

2.2 RELATIVIZATION

Keenan & Comrie (1979a) give the following hierarchy of accessibility to relativization (p. 650) and constraints on that accessibility (p. 653):

ACCESSIBILITY HIERARCHY (AH)

SU > DO >IO > OBL > GEN > OCOMP

ACCESSIBILITY HIERARCHY CONSTRAINT

      a. If a language can relativize any position on the AH with a primary strategy, then it can relativize all higher positions with that strategy.

      b. For each position on the AH, there are possible languages which can relativize that position with a primary strategy, but cannot relativize any lower position with that strategy.

      By 'primary strategy' is meant the 'unmarked' type of relative, the type where no pronoun is retained (if there are both types). The basic import of these constraints is that if a language has a primary form of relativization, it will relativize subjects, as 'in absolute terms Subjects are the most relativizable of NP's . . . Subject is . . . the most relativizable position on the AH' (p. 653). We can then use this hierarchy in our search for a subject in Chinese. If only one NP type is relativizable, then based on Keenan and Comrie's generalizations, that NP will be a subject. Keenan and Comrie 1979b presents data from a number of languages, such as Aoban(Melanesian) and Arabic, showing a strict [S,A] pivot for relativization. That is, only S and A can be relativized on without a pronoun being retained.

      In a language with an [S,P] pivot for relativization, such as Dyirbal, an NP to be relativized on must be in the S (naturally or derived by antipassivization) or P role in the subordinate clause (Dixon 1980:463). In Yidiny, another Australian language, the NP must be in the S (again, either naturally or derived by antipassivization) or P role in both the subordinate and the matrix clause (Dixon 1980:462). (2.15) is an example of a Yidiny relative construction (from Dixon 1980:459):

(2.15) **waguj a≥gu bunya   wawal   gudaga≥gu baj al nyum.**
       man+ERG woman+ABS see+PRES dog+ERG   bite+CAUS-SUBORD
       The man is looking at the woman who had been bitten by the dog.

The two clauses of this sentence share the absolute argument *bunya* 'the woman'. If instead we wanted to say the equivalent of 'The man is looking at the dog which had bitten the woman', then the relative clause must first be antipassivized, so that the A role NP appears in the absolutive (derived-S) case (from Dixon 1980:463):

(2.16) **waguj a≥gu gudaaga wawal   baj aaj i nyum   bunyaanda.**
       man+ERG   dog+ABS see+PRES bite+ANTIPASS+TNS woman+DAT
       The man is looking at the dog which had bitten the woman.

      In Chinese, though, we find that an NP in any semantic role can be relativized upon. Consider the following examples (see the explanations of relevant semantic roles below; exx. (2.17i) and (2.17m) are adapted from Shi 1989:246-47; the indexed zero in each example indicates the position the referent would have in a comparable non-relative clause structure):

(2.17) a. Wo Ø$_i$ zai nei ge shitang chi fan de pengyou$_j$ mai le shu.
       1sg   LOC that CL cafeteria eat rice REL friend   buy ASP book
       My friend who eats in that cafeteria bought some/a book(s).

    b. Gangcai Ø$_i$ bu shufu   de nei ge ren$_i$ zou le.
       just-now   not comfortable REL that CL person go ASP
       The person who was not well just now left.

    c. Wo taoyan wo pengyou zai nei ge shitang chi Ø$_i$ de fan$_i$.
       1sg dislike 1sg friend   LOC that CL cafeteria eat   REL rice
       I dislike the rice my friend eats in that cafeteria.

    d. Wo bu xiang zai wo pengyou Ø$_i$ chi fan de nei ge shitang$_i$
       1sg not want LOC 1sg   friend   eat rice REL that CL cafeteria

       chi fan.
       eat rice
      I don't want to eat at the cafeteria where my friend eats.

    e. Wo mai pingguo gei ta$_i$ de nei ge pengyou$_i$ lai   le.
       1sg buy apples give 3sg REL that CL friend   come ASP
       The friend I bought the apples for came.

    f. Ta gei Ø$_i$ A+ de xuesheng$_i$ bu duo.
       3sg give   A+ REL student(s) not many
       He does not give A+ to many students.

    g. Wo gei Ø$_i$ bang mang de nei ge ren$_i$ yijing zou   le.
       1sg give   help busy REL that CL person already leave ASP
       The person I helped already left.

    h. Wo yong Ø$_i$ lai xie   zi   de maobi$_i$ bu jian le.
       1sg use   come write characters REL brush   not see ASP
       The brush(es) I use to write characters disappeared

    i. Wo renshi Ø$_i$ baba xie guo hen duo shu   de nei ge ren$_i$.
       1sg know   father write ASP very many book(s) REL that CL person
       I know that man whose father wrote many books.

    j. Ø$_i$ Bi   wo gao de nei ge ren$_i$ zou le.
       compared-to 1sg tall REL that CL person leave ASP
       That person who is taller than me left.

k. Wo   bi   ta$_i$ gao de nei ge ren$_i$ zou   le.
   1sg compared-to 3sg tall REL that CL person leave ASP
   That person that I am taller than just left.

l. Xiaofangdui lai   de zao de nei chang huo$_i$ sunshi bu da.
    fire-brigade come CD early REL that CL fire loss not big
   The loss from the fire that the fire brigade came early to was not big.

m. Lisi cai gu   lai Ø$_i$ Ø$_i$ zhi gan   le   ji   tian jiu bei ta
   Lisi just hire come   only work ASP several day then BEI 3sg

   baba kaichu de nei ge ren$_i$ you lai   le.
   father dismiss REL that CL person again come ASP
   The man whom Lisi had just hired and who worked for only a few days, and was fired
   by his (Lisi's) father has come again.

From these examples we can see that it is possible not only to relativize on A (2.17a), S (2.17b), and P (2.17c), it is also possible to relativize on a locative NP (2.17d), a goal (2.17e, f), a benefative (2.17g), an instrument (2.17h), a possessor (2.17i), either argument in a comparative structure (2.17j, k), and a topic (whether an argument of the verb or not) (2.17l). It is even possible for the referent to fill two different semantic roles (P and S) within the same relative clause, as in (2.17m).

      Keenan & Comrie (1979b:334) claim (citing Harlow 1973) that in all but subject and object relativizations in Chinese a pronoun must be retained in the relativized clause. If we compare (2.17e), (2.17g), and (2.17f), we can see that only in (2.17e) is the pronoun retained, possibly because of the nature of this particular serial verb construction: the verb *mai* 'buy' in Chinese is not ditransitive, so if there is a goal argument it must be coded in a serial construction with the verb *gei* 'give'. In (2.17k) there is also a pronoun, for the same reason: to express the 'object' of comparison, the verb/preposition *bi* 'compared-to' must be added to a topic-plus-stative verb construction (see §2.2.3, below, for details). In both of these constructions, the secondary verb (*gei* or *bi*) would not be added unless it was needed to add an argument, and this is probably why they require the pronoun when the arguments they are adding are relativized.[11] In (2.17f,g) the goal/beneficiary does not require an overt pronoun, as *gei* here is the main verb; in fact (2.17f) would be less acceptable with the plural pronoun added. This question is secondary, though, as there is clearly no restriction on the neutralization of semantic roles such that we could determine a single pivot for this construction.

      As relativization is referential by definition, a language that has no grammatical encoding of pragmatic referentiality (i.e., has no syntactic functions) should be free of restrictions on

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[11]Tsao (1990:430-32) gives arguments to show that the degree of topicality of the relativized NP is directly correlated to the naturalness of it being relativized upon. In the case of (2.17k), the NP involved is not highly topical, and so not as relativizable.

relativization (Foley & Van Valin 1977). We can see from the above that this is in fact the situation in Chinese.

2.3 COMPARATIVES

Descriptions of the structure of the *bi* comparative in Chinese (see ex. (2.18) below) often refer to the '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 [comparative] dimension' (p. 569). McCawley (1989) criticizes the inclusion of topics in Li & Thompson's analysis because sentences with comparison of a fronted object, as in (2.19a,b), are ungrammatical. Yet there are examples where the topic can be compared. Li & Thompson give sentence (2.20):

(2.18) Wo   bi   John gao.
       1sg compared-to John be-tall
       I am taller than John.

(2.19) a. *Gou bi   mao wo xihuan.
        dog compared-to cat   1sg like

       b. *Gou wo   bi   mao xihuan.
         dog   1sg compared-to cat like

(2.20) Xiang   bi   xiong bizi chang.
       elephant comp-to bear   nose be-long
       Elephants have longer noses than bears.

There is a very real difference between the topic-comment structure of (2.20), which is a 'double nominative' (Teng 1974) structure, and a structure such as that in (2.19). In the former, the nominal *bizi* 'nose' is part of the predication, whereas in the latter, *wo* '1sg' is not part of the predication. In the comparative construction there is always a topic about which a comment is being made, but there can only be one (this does not include the 'object' of the comparative verb/preposition *bi*). The examples in (2.19) are bad because there are two topics outside the predication.

A. Y. 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).

Tsao (1990:278ff) argues that 'direct objects' can be compared, as long as they appear in the secondary topic position (following the primary topic) or the tertiary topic position (following the secondary topic), and the comparison is done on two NPs at the same level of topicality, either both secondary or both tertiary topics. For him (2.19) would not be completely ungrammatical as long as *wo* '1sg' appears before the items being compared:

(2.19′) a. ?Wo gou   bi   mao xihuan.
              1sg dog compared-to cat   like
              I like cats more than (I do) dogs.[12]

In general, though, in Chinese the problem is that the constituent that expresses the comparative dimension is an INHERENTLY comparative[13] single argument PREDICATION (stative verb)*,* unlike English, where the constituent expressing the comparative dimension is a 'gradable' ADJECTIVE or ADVERB (Leech & Svartvik 1975). Because of this, to compare two 'objects' of a verb such as *xihuan* 'like', the whole clause must be repeated, with the comparative *bi* coming between the two clauses, as in (2.21):

(2.21) Wo xihuan ta   bi   wo xihuan ni   duo.
         1sg   like   3sg compared-to 1sg   like   2sg be-more
         I like him more than I like you.

Duo is a single argument verb, so 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 whole clause, as in (2.21)), and PP includes *bi* and the constituent X is being compared to. The X constituent is the topic about which an assertion as being made. The restriction on comparatives in Chinese then is not a function of 'subject' control, but is due to the nature of information structure and the class of verbs used in comparatives: a one argument verb, such as a verb used in a comparative construction, can take only one argument (the topic), so it is irrelevant to talk of 'subject' vs. 'non-subject'. A second factor is that the items being compared must be topical at the same level (i.e. must both be primary, secondary, or tertiary topics).

2.4 RAISING TO SUBJECT

Raising is seen by many (e.g. Chomsky 1981, Bresnan 1982) as a subject controlled construction, that is, only the subject of an embedded clause can be 'raised' to the subject of a verb such as *seem* (2.22):

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[12]This structure is much more acceptable when the items being compared are inanimate, as in (i):

(i)   wo daishu   bi   jihe   xihuan.
        1sg algebra compared-to geometry like
        I like algebra more than (I do) geometry.

This possiblity is not available at all when the 'objects' are human, as in (2.21), below.

[13]Unmodified Mandarin Chinese stative verbs, such as *gao* 'tall' are INHERENTLY comparative because a clause without the comparative PP is still comparative (Light 1989). For example, if there were two people standing in front of me and I said *John gao* (Lit. 'John tall'), it would mean 'John is taller (than the other person)', not 'John is tall'. To say the latter, the stative verb must be modified by *hen* 'very' or some other adverb.

(2.22) a.   It seems Paul bought the car.
      b.   Paul seems to have bought the car.
      c.   *The car seems Paul to have bought.
      d.   It seems Paul is happy.
      e.   Paul seems to be happy.
      f.   The car seems to have been bought by Paul.

There is no problem 'raising' the A role or the S role NP of an embedded clause, as in (2.22b) and (2.22e), but 'raising' the P role NP results in the ungrammatical (2.22c). For the P role NP to be raised, it must first be passivized, and thereby become a derived-S, as in (2.22f). English then has an [S,A] pivot for this construction.

I was unable to find an example of 'raising' in any clearly ergative language (that is, a language where I would expect to find an [S,P] pivot for 'raising'), though as mentioned earlier, Dyirbal has an [S,P] pivot for all constructions involving subordinate clauses (see Dixon 1972, 1980).

If we are to find a pivot for this construction in Chinese, we would need to find either an [S,A] or [S,P] restriction, yet in Chinese the equivalents of (2.22c), with the P role NP raised, and (2.22b), with the A role NP raised, are both perfectly acceptable:

(2.22) a´. Haoxiang Paul mai   le   chezi.
             seem   buy ASP vehicle
             It seems Paul bought the car.

      b´. Paul haoxiang mai   le   chezi.
              seem   buy ASP vehicle
           Paul seems to have bought the car.

      c´. Chezi haoxiang Paul mai   le.
         vehicle seem   buy ASP
         The car seems Paul to have bought.

As we can see from these examples, either of the referential constituents, or neither, can appear before *haoxiang* 'seem' in Chinese, no matter what the semantic role, and there is no need for any passive construction.[14] As there is no restriction on the semantic roles which can be involved in raising, no evidence can be found for identifying a pivot for this construction, and thus there is no evidence from raising for establishing a subject in Chinese.

2.5 INDISPENSABILITY
Keenan (1976) gives indispensability as 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

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[14]See Tsao 1990:378ff for other examples of 'raising' in Chinese showing the possibility of all arguments being 'raised'.

complete sentence. But this is usually not true of b[asic]-subjects' (p. 313). Connolly (1989:1) also defines 'subject' as 'a NP which is required in (almost) every sentence and is somehow distinguished from all other NPs'. In terms of looking for a restricted neutralization, if we found one NP type which could not be eliminated in the clause without the clause being incomplete, we would have possible evidence of a subject. For example, consider the following sentences:

(2.23) a. Mark eats pizza when he is happy.
     b. Mark eats when he is happy.
     c. *Eats when he is happy.

In (2.23b) the P role NP can be deleted without affecting the acceptability of the sentence, though (2.23c), with the A role NP deleted, is unacceptable. It is also the case that the single NP of intransitive clauses is also indispensable:

(2.24) a. Mark is sleeping.
     b. *Is sleeping.

There is then an [S,A] pivot for indispensability in English. In Dyirbal, ellipsis is quite common, though according to Dixon (1972:70) every sentence must contain an NP in the absolutive[15] case. As the absolutive case is the unmarked case for the P role NP in a transitive sentence, in what Dixon calls a 'simple' sentence (i.e., one where there is unmarked case assigment) the A role NP (for which the unmarked form is the ergative case) can be left unspecified ((2.25b)), but not the P role NP ((2.25c)) (examples from Dixon 1972:59,70):

(2.25) a. **bal an   dugumbi l   ba≥gul yara≥gu   bal gan.**
          she+ABS woman+ABS he+ERG man+ERG   hit
          Man is hitting woman.

     b. **bal an   dugumbi l   bal gan.**
          she+ABS woman+ABS hit
          woman is being hit [by someone].

     c. *__ba≥gul yara≥gu   bal gan.__
           he+ERG man+ERG   hit

The verb in these examples is not inflected to agree with either NP, and though Dixon uses a passive to translate (2.25b), the verb form is the same in both (2.25a) and (2.25b). Absolutive is

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[15]In Dixon 1972, the absolutive case is referred to as the 'nominative' case; I am here using 'absolutive' to conform with the examples cited above from Dixon 1980.

also the case of the single direct argument of intransitive clauses ((2.26a)), and this argument cannot be ellided ((2.26b)):[16]

(2.26) a. **bal an   dugumbi l   bani ̄u.**
            she+ABS woman+ABS come
            Woman is coming.

     b. ***bani ̄u.**
              come

We then have a clear [S,P] pivot pattern for indispensability in Dyirbal. In Chinese, on the other hand, the verb phrase alone can be a complete sentence, as in (2.27):

(2.27) Chi le.
        eat ASP
        I/you/he/she ate.

There are also no 'dummy' subjects in Chinese, as are found for example in English sentences dealing with weather phenomena such as *It's raining*:

(2.28) Xia yu   le.
        fall rain ASP
        (It's) raining.

In discussing 'subjectless' verbal expressions, Chao (1968:61) states that '[a]lthough it is possible to supply subjects to such verbal expresions ... they should be regarded as sufficient by themselves, because (a) there is not always one specific form of a subject that can be supplied, and (b) sometimes no subject can be supplied.'

We can see from this that there is no indispensable NP in the Chinese clause, and therefore indispensability also can not be evidence for a 'subject' in Chinese.

2.6 REFLEXIVES

The control of reflexives is often said to be a property of subjects (Tan 1988, C. Tang 1989). C. Tang (1989:99) formalizes this for Chinese with a categorical rule that states that 'The antecedent

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[16]It is possible for the absolutive marked NP to not include a lexical noun, but there must at least be a noun class marker, and so there is still an overt absolutive NP, as in (i):

(i)   **bayi   bani ̄u.**
         he+ABS come
         (Man) is coming.

of a reflexive must be a subject'. As the following examples show, this is not descriptively adequate ((2.29a) is from Sun 1989):

(2.29) a.   Mama bu neng yongyuan ti   ni$_i$ zhaogu (ni)ziji$_i$.
            Mom   not able forever   for you look-after yourself
            Mom won't be able to look after you (lit. '(your)self') forever.

      b.   Wo$_i$ zhen fan,   buguan   wo$_i$ zai   nali,   zong   you   ren   lai
            1sg very annoy not-matter 1sg LOC where always have people come

          ganshe   ziji$_i$ de shi.
            interfere self GEN affair
            I'm really annoyed, no matter where I am, someone always interferes with what I am doing (Lit.: '... interferes with self's business').

      c.   You ren   lai jinggao Zhu Laoban$_i$ shuo ziji$_i$ de erzi
            have person come warn   Zhu   boss   say   self GEN son

          zai tou dongxi.
            DUR steal thing(s)
            Someone came to warn Boss Zhu that his (Zhu's) son was stealing things.

      d.   Wo jintian gei ni$_i$ pai le hao duo   ren   de zhaopian, xianzai
            1sg today give 2sg hit ASP very many people GEN   photo   now

          gei   ni$_i$ pai ziji$_i$ de.
            give 2sg hit self GEN
            I took pictures of a lot of people for you today, now I'll take your picture (Lit.: '... take self's picture').

In none of the above cases could the antecedent of *ziji* 'self' be said to be in an immediately preceding 'subject' slot.

In general, reflexives in Chinese are pragmatically or semantically controlled. That is, the nature of the discourse situation, the semantics of the verb used, the topicality/referentiality of the participants, or the psychological perspective will determine the antecedent of the reflexive pronoun.[17] The topicality of the controller of the reflexive anaphor seems to be the key factor; the concept of psychological perspective is from Zubin, Chun, & Li 1990 and Li & Zubin 1990; it refers to the degree of access to the perceptual thought processes of the character in the text under

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[17]The nature and use of *ziji* 'self' in Chinese is actually quite complex. See J. Sun 1989 and Zubin, Chun, & Li 1990 for more complete discussions. See Li 1990 for a more complete discussion of psychological perspective framing, and Yan Huang 1989 for a thorough refutation of the Government-Binding analysis of reflexives and discussion of a possible Gricean analysis.

examination. This is comparable to Kuno's (1976, 1987) 'empathy' hierarchies, which Van Valin (1990:212) reduces to a single principle 'E(more topical NP) > E(less topical NP)', i.e., empathy is with the more topical NP.

The influence of context is especially clear from a comparison of (2.30a) and (2.30b), below, in which the clause containing *ziji* (*Lao Zhang . . . gaosu Lao Wang ziji de erzi zai tou dongxi)* is the same in both examples, but the antecedent which controls *ziji* is different because of the different contexts:

(2.30) a. Lao Zhang mingming zhidao Wang Huan (Lao Wang   de erzi)
old Zhang   clearly   know Wang Huan old   Wang GEN son

      ba neixie lingjian   nazoule, keshi yao zugou   de zhengju
      BA those spare-parts take:leave but want sufficient REL proof

      cai neng gaosu Lao Wang$_i$ ziji$_i$ de erzi zai   tou   dongxi.
      then can   tell   old Wang self GEN son DUR steal thing(s)

Old Zhang clearly knew that Wang Huan (Old Wang's son) took those spare parts, but he needed sufficient proof before he could tell Old Wang that self's (Old Wang's) son was stealing things.

    b. Lao Zhang$_i$ mingming zhidao ta   erzi ba neixie lingjian   nazoule,
old Zhang   clearly   know 3sg son BA those spare-parts take:go

      keshi gaosu Lao Wang ziji$_i$ de erzi zai   tou   dongxi,
      but   tell   old Wang self GEN son DUR steal thing(s)

      Lao Zhang ye   daomei   le.
      old Zhang also in-trouble ASP.
Old Zhang clearly knew his son took those spare parts, but (if he) told Old Wang that self's (Old Zhang's) son was stealing things, he would also be in trouble.

In the two examples, *ziji* refers to either Lao Wang (2.30a) or Lao Zhang (2.30b) because it is known from the respective preceding contexts whose son is doing the stealing. The antecedent of *ziji* is determined by the semantics of the whole utterance, not the syntactic function of the antecedent or its position in the sentence. This being the case, reflexives also give us no evidence for establishing a subject in Chinese.

2.7 PSEUDO-PASSIVES
A common sentence type in Mandarin is where no A role is expressed, and the P role NP is in initial position, as in (2.31):

(2.31) Jiu   he   le.
      wine drink ASP
      I/you/he/she drank the wine.

These are often called passives and given passive translations in English (e.g., (2.31) would be translated as 'The wine was drunk') by those wishing to establish syntactic relations for Chinese (e.g. Tan 1988), and the initial NP is seen as the subject. This type of passive is only felicitous with inanimate patients; as there is no passive morphology, an animate noun in preverbal position would have to be interpreted as the agent of the verb unless intonation or some other clue informs the listener that it is the patient of the verb (cf. Teng 1975). An example of when it is logically clear that the sentence initial animate NP could not possibly be the agent is (2.32) (unless the individual involved was a surgeon) (from L. Li 1986:347):

(2.32) Ta qiechu le   liuzi   le.
      3sg cut-out ASP tumor ASP
      S/he's cut out (his/her) tumor. (i.e., S/he's had his/her tumor cut out.)

An ambiguous case would be (2.33), the meaning of which only becomes clear when we know that Michael is only six years old.

(2.33) Michael zuijin   mei qu zhao-xiang.
      M.   recently N-A go take-pictures
      a. Michael hasn't taken pictures recently.
      b. Michael hasn't had his picture taken recently.

      It is clear from this that there really is no innate passive sense to the verb in this type of construction, and that in (2.31), *Jiu he le*, *jiu* cannot be a subject. It must then be a topical theme in an active sentence without an agent. A similar analysis is given in Li & Thompson 1976:479-450, and Li & Thompson 1981:498-499.
      A good example to show that this type of construction is not passive is (2.34), which could be said if two old friends pass in the street and one doesn't notice the other. The person who was not noticed could call out

(2.34) Eh, Lao pengyou dou bu renshi   la!?
      hey old friend   all not recognize/know SFP
      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.
      Another example is the first two parts of the famous saying in (2.35), below, which would not make sense if considered to be passivized.

(2.35) Tian   bu pa, di   bu pa (zhi   pa Guangdongren shuo Guanhua).
heaven not fear, earth not fear (only fear Cantonese   speak Mandarin)
(I'm) not afraid of heaven or earth, (just afraid of a Cantonese speaking Mandarin).

Looking at (2.36), below, we can see another problem with the 'passive' analysis, pointed out by Lü Shuxiang (1986:340):

(2.36) a. Wo bu he jiu, yi di   ye   bu he.
           1sg not drink wine one drop even not drink
           I don't drink wine, not even one drop.

    b. (Ni) bie   guan   wo, ni shei ye bie   guan.
           (2sg) don't pay-attention 1sg 2sg who also don't pay-attention
           Don't pay attention to me, don't pay attention to anyone.

If we were to say that the first clause of (2.36a) is active, but the second clause is passive because the P role NP occurs in initial position, then the parallelism is thrown off. In (2.36b) the topic is animate, and so the actor (*ni*) must be expressed in the second clause or *shei* 'anyone' would be seen as the actor, and the meaning would be 'Don't anyone bother me' (or 'Nobody bother me'). Comparing the two examples, we can see that they are both meant to be parallel structures, and both clauses of both sentences are active. The preverbal position of the P role NP is obligatory with *ye* 'also; even' (Derek Herforth, p.c.), and not related to any optional 'repackaging' (Foley & Van Valin 1985) strategy such as passivization.

One last argument against establishing a subject in Chinese also involves this type of topic-comment structure. Givón (1984a: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.'[18] If we look at the example below, we can see that as there are two topic positions in Chinese, first and second (after the A-role NP) position in the sentence.[19] The A and P roles are differentiated solely on the basis of semantics; there is no marking for which NP is the 'subject' and which is the 'object'.

(2.37) a. Zhangsan fan dou chi le.
           Zhangsan rice all eat ASP
           Zhangsan ate all the rice.

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[18]Though see Hopper & Thompson 1980 for arguments on why P case marking should be seen as 'functionally motivated by the Transitivity of the clause as a whole, rather than by the need to distinguish subject from P' (p. 292).

[19]The case I am speaking of here is when there is both an A role NP and a P role NP in preverbal position—ignoring for the time being the question of the *ba*-construction (see §3.2) and preverbal temporal and locational phrases.

  b. Fan Zhangsan dou chi le.
    rice Zhangsan all eat ASP
    Zhangsan ate all the rice.

  Y. R. Chao (1968:325) gives the following ambiguous example:

(2.38) Zhe ge   ren shei dou bu rende.
   this CL man who all   not know
   a. Nobody knows this man.
   b. This man doesn't know anybody.

If we accept Givón's statement, then since 'subject' and 'object' are not differentiated by the grammar, no subjectization has taken place.

  To summarize this section briefly, we have looked at cross-clause coreference, relativization, *bi* comparatives, raising to subject, indispensability, reflexives, and pseudo-passives, and have found no restricted neutralizations of semantic roles in any of these constructions that would support the recognition of a subject in Chinese.

3.0 THE QUESTION OF 'DIRECT OBJECT'
As with the question of 'subject', we would need to find restricted neutralizations in behavior or marking of semantic roles for us to be able to say there is a syntactic direct object in Chinese.

3.1 BEHAVIORAL PROPERTIES
In terms of behavioral properties, many of the same tests we used for 'subject' above, such as relativization and indispensability, apply equally well to the question of 'object'. As we found no restricted neutralizations in any of the constructions considered above, such as relativization, we have no behavioral evidence from those tests for a direct object in Chinese. One type of behavioral property unique to grammaticalized objects is what is known as 'dative shifting' ('promotion to direct object'), a construction with marked (as in 'less usual') assigment of direct object status, that is, where an otherwise non-cannonical direct object argument of a three argument verb is marked or behaves as (is 'promoted' to) a direct object (Givón 1984b). The contrast between marked and unmarked assignment of direct object status can be seen from the examples in (2.39):

(2.39) a. John gave a dog to the boy.
   b. John gave the boy a dog.

In (2.39a) the NP in the immediate post-verbal direct object position is the theme *a dog*, and this is the unmarked assigment to direct object. In (2.39b) it is the recepient *the boy* which is the immediate post-verbal direct object position, and this is a marked assignment of direct object position. These two possibilities are referred to as 'alternate syntactic frames' in Dixon 1989. Chinese does not allow such alternate syntactic frames, as is pointed out by Dixon (1989:99).

With a small number of ditransitive verbs (those expressing 'giving' or 'sending'), it is possible to have the goal argument in other than immediate post-verbal position by putting it in a second clause with *gei* 'give', but this breaks the sending and giving into two clauses/actions:

(2.40) a.   Wo song haizi shu.
        1sg send child book(s)
        I sent the child(ren) (a) book(s).

       b.   Wo song shu   gei   haizi le.
        1sg send book(s) give   child ASP
        I sent (a) book(s) to the child(ren).

This alternate form is not possible with ditransitives where there is no actual giving, and is not possible with *gei* 'to give' itself:

(2.41) a.   *Wo gaosu yi jian shi   gei   ni.
         1sg tell one CL affair give you
        (I'll tell you about something.)

       b.   *Wo gei   yi zhi gou gei haizi.
         1sg give one CL dog give child(ren)
        (I gave a dog to the child(ren)).

There is also an alternant where the *gei* clause is placed before the verb, and this can be done with a wider range of verbs, but in this case the reading is a benefactive one:

(2.42) Wo gei   haizi   song shu.
        1sg give child(ren) send book(s)
        I sent (a) book(s) for the children.

In each of these cases the goal or beneficiary remains in immediate post-verbal (including *gei* as a verb) position, and does not take on the position (or markings) of a direct object.

       A second behavioral property claimed for 'objects' in Chinese is inability to appear in the *shi … (de)* cleft construction. T-C. Tang (1983:190) claims that objects, whether direct or indirect, cannot be clefted, that is, they 'cannot alone become the informational focus' (see also Teng 1979:105). Examples of the *shi … (de)* cleft construction are given in (2.43b,c):

(2.43) a.   Ta   ji   gei wo liwu.
        3sg mail give 1sg present
        He sent me a present.

b. Ta *shi*   ji gei wo liwu   *de*.
   3sg COP mail give 1sg present NOM
   He SENT me a present.

c. *Shi* ta ji   gei wo liwu   *(de)*.
   COP 3sg mail give 1sg present NOM
   HE sent me a present.

This construction places a focal NP in the immediate post-copula focus position and nominalizes the main verb. As evidence that objects cannot become the informational focus, Tang (p. 190) gives the following sentences:

(2.44) a. *Ta ji gei wo *shi* liwu *de*.
       b. *Ta ji *shi* gei wo liwu *de*.
       c. *Ta ji gei *shi* wo liwu *de*.

All grammatical examples of the *shi … (de)* cleft construction have the verb within the *shi … (de)* phrase. As the function of *de*, when it appears, is to nominalize the verb, of course the verb must be within the nominalized phrase, and this excludes post-verbal arguments if the copula *shi* is to appear before *de*. The restriction then is not on 'objects' per se, or on any particular semantic role, but on post-verbal position. This can be seen from the fact that post-verbal arguments other than 'objects' and 'indirect objects' are also barred from appearing in this construction, such as the locative argument in (2.45):

(2.45) a. Wo ba nei ben shu fang zai zhuozi shang.
           1sg BA that CL book place LOC table on
           I put that book on the table.

       b. *Wo ba nei ben shu fang *shi* zai zhuozi shang *de*.

Other evidence that it is position and not semantic role that is the limiting factor is the fact that a 'fronted' P role NP CAN be the informational focus in a cleft construction, as in (2.46):

(2.46) *Shi*   pingguo wo mei mai.
       COP apples   1sg N-A buy
       It was APPLES I didn't buy.

There is also an alternate cleft construction, what Tang (1983) refers to as a 'changed cleft' construction, which CAN take post-verbal arguments, as the linear order of *shi* and *de* is reversed, avoiding the problem mentioned above:

(2.47) a. Wo mei mai *de   shi* pingguo.
            1sg N-A buy NOM COP apples
            What I didn't buy was APPLES.

       We can see from the above that the restrictions on clefting are not related to semantic role, and so do not point to a restricted neutralization of semantic roles that we might identify as a 'direct object' in Chinese.

3.2 MARKING PROPERTIES

In terms of marking properties, as undergoers (P role and non-actor S role agruments) can occur either preverbally or postverbally, and there is no agreement of any argument with the verb, to prove the grammaticalization of a direct object, we would need to find some type of unique marking that distinguishes the argument said to be the direct object. It is often considered that the *ba* construction in Mandarin provides just this type of unique marking (see for example Sun & Givón 1985, in which *ba* is referred to as the OM ('object marker')). In the *ba* construction, the particle *ba* occurs between two NPs and (most often) before a resultative verb complex:

(2.48) NP$_1$ *ba* NP$_2$ V$_1$ (V$_2$) *le*

In this construction, V$_1$ is most often transitive, and V$_2$ is always intransitive or a movement/locative verb. NP$_2$ is then said to be the direct object of V$_1$ or the complex verb made up of V$_1$ and V$_2$ if there is a resultative complement, as in (2.49):

(2.49) Zhangsan ba   yifu   xi   huai   le.
        Zhangsan BA clothes wash broken ASP
        Zhangsan ruined the clothes washing them.

In this case, *yifu* 'clothes' is the P of the verb *xi* 'wash', and is the S of the stative verb *huai* 'broken'. This configuration is said to have developed out of a serial verb construction where the first verb (*ba*—which meant 'hold' when it functioned as a full verb) grammaticalized into a direct object-marking preposition or particle (Y.C. Li 1974; Li & Thompson 1974a, 1974c, 1976b, 1981; Peyraube 1987, 1989). We need to look more carefully, though, at the grammatical and semantic relations that hold between the constituents of a *ba* construction.

       As has been pointed out elsewhere (Zhan 1983, Z. Ma 1985), the post-*ba* position can be filled not only by a patient, but also by an agent, a locative, an instrument, or an NP that has no selectional relation to the verb, but is involved in the action. Consider the examples below (from X. Ma 1987:428-29):

(2.50) a. Luobo ba   dao qie dun le.
            radish BA knife cut dull ASP
            The radish made the knife dull (when I/you/he cut it).

b. Ta ba   bi xie   tu   le.
   3sg BA pen(cil) write blunt ASP
   He made the pen(cil) blunt from writing with it.

c. Zhe bao   yishang ba wo xi   lei   le.
   this package clothes BA 1sg wash tired ASP
   Washing this pack of clothes has made me tired.

d. Zhe xie shi   ba toufa chou   bai   le.
   this few affair BA hair worry white ASP
   Worrying about these affairs has made (my/yours/his /her) hair turn white.

e. Xiao Wang ba   haizi dong bing le.
   Little Wang BA child freeze sick ASP
   Little Wang (did something such that his) child got sick from being too cold.

The examples above show several different possible relationships between the constituents of the *ba* construction: (2.50a) has the P of V_1 in initial position, the S of V_2 in the post-*ba* position, and no A argument specified; (2.50b) has the A of V_1 in initial position, the instrument of V_1, which is also the S of V_2, in post-*ba* position, and no P argument specified; (2.50c) has the P of V_1 in initial position, and the A of V_1, which is also the S of V_2, in post-*ba* position; (2.50d) has a non-argument topic in initial position, the S of V_2 in post-*ba* position, and no core argument of V_1 anywhere in the sentence; (2.50e) has the possessor of the S of both V_1 and V_2 in initial position and the S of both verbs in post-*ba* position.

As can be seen from these examples, there is no consistent relationship between the post-*ba* NP and the P of V_1. The only consistent relationship holding in these *ba* constructions is that between the post-*ba* argument and the S of V_2.

It might be argued that these verb complexes should be treated as single verbs, so the post-*ba* argument would then be the object of that single complex verb. That this would be incorrect can be seen from the fact that there cannot be, for example, a complex verb *xi-lei* 'to wash-tired', with clothes as the subject and a person as the object, as would have to be the case in (2.50c).

A second point is that the relationship between the post-*ba* NP and the S of V_2 only holds when there IS a V_2. In the following examples there is no V_2:

(2.51) a. Wo ba ni   de   qian mai le   shu   le.
          1sg BA 2sg GEN money buy ASP book ASP
          I bought books with your money.

b. Ta ba diren   dang pengyou.
   3sg BA enemy act-as friend
   He takes enemies to be friends.

In each of these examples there is only one verb, and there is no regularity to the semantics of the post-*ba* NP: in (2.51a), the post-*ba* NP is an instrument; in (2.51b), the post-*ba* NP is a locative. The use of *ba* in (2.51b) changes a non-causative verb into a causative one by adding an extra argument to an otherwise equational construction. (See also exx. (2.55a,b) for similar semantics.)

This lack of relationship with a specific semantic role is in concord with Tsao's (1987) analysis of the post-*ba* NP as a 'secondary topic', and with one of the functions of *ba* itself as clarifying the transitivity relation between the primary topic (the clause-initial NP) and this secondary topic (cf. Chao 1968:702). I believe Thompson (1973) is correct in being more explicit about the transitivizing function of the *ba* construction. She does call the post-*ba* NP the 'direct object', but of the whole sentence, not the verb, a somewhat broader notion of direct object (see also L. Li 1986:352 for a similar argument). Her 'semantic condition' on the use of *ba* is that '[a] NP$_i$ may be fronted with *ba* if the rest of the sentence answers the question, "What did the agent do to NP$_i$?", that is, if it is semantically the "direct object" of the sentence' (p. 220). We can see from the examples above that the pre-*ba* NP is not always an agent, so this condition does not always hold in *ba* constructions. In other words, it would be more correct to say that something affects something else, with no reference to semantic role or grammatical function. This transitivizing function is clear in examples such as the following ((2.52a) is from a love song; (2.52b) is from Li & Thompson 1981:469, their (27)):

(2.52) a. Wo shou zai   Xishan   ba lang deng.
         1sg stay LOC West-Mountain BA man wait
         I stay at West Mountain and wait for (my) man.

     b. Ta ba xiao mao ai   de yao si.
        3sg BA small cat love CD want die
        S/He loves the kitten very much (i.e. 'so much s/he could die').

Generally 'wait' and 'love' are not verbs of high transitivity, but to emphasize how much energy the woman/child is putting into waiting/loving, the *ba* construction is used. Li & Thompson (1981:469) offer the explanation that sentence (2.52b) 'hyperbolically creates an image that such intense love must have some effect on the "small cat"'. From this example, though, we can see that *ba* here is intensifying the transitivity, but not intensifying the affectedness of the undergoer, as can be seen from the fact that the complement of result refers to the actor of the loving, not the undergoer. That the cat is not necessarily affected by the loving can be seen in the fact that the same sentence could be used about a fan loving a movie star that s/he had never met. Likewise, in the following example, it is the one doing the loving, not the one loved who can't sleep:

(2.53) Ta ba ni   ai   de shui bu liao jiao.
      3sg BA 2sg love CD sleep not able sleep(n.)
      She loves you so much she can't sleep.

As pointed out by McCawley (1989:31), it is also possible to have ambiguity as to who is being affected in a sentence of this type, as in (2.54):

(2.54) Ta ba wo xiang si   le.
      3sg BA 1sg think die ASP
      a. He misses me so much he could die.
      b. He makes me miss him so much I could die.

Another argument against seeing the *ba* construction as marking a direct object is that of the 'retained' object (a post-verbal object in a *ba* or *bei* constructuion—see Thompson 1973). Consider the examples below, both from Li & Thompson 1981:471:

(2.55) a. Wo ba ta erzi huan   le xingming.
          1sg BA 3sg son change ASP name
          I changed his/her son's name.

      b. Ta ba huo jia   le yi-dian you.
          3sg BA fire add ASP a-little   oil.
          S/He added a little oil to the fire.

In no sense could we say that *ta erzi* 'his/her son' is the direct object of *huan* 'change', or that *huo* 'fire' is the direct object of *jia* 'add'; (2.55a) is a case of possessor raising (Fox 1981), and there is no grammatical non-fronted form for (2.55b) without *ba* or *gei* to allow an added argument.

As we have found no consistency in the use of *ba* for marking a P role argument or any other type of argument, it cannot be used as evidence for the grammaticalization of the syntactic function 'direct object' in Chinese. We have, then, found neither behavioral or coding properties that could justify establishing the syntactic function 'direct object' in Chinese.

4.0 CONCLUSION

In this paper we have looked at various constructions in Chinese to see if there are any restricted neutralizations of semantic roles that would point to a grammatically viable category of either 'subject' or 'direct object' in that language. We have found none. We have also compared the classic accusative and ergative syntactic patterns and found Chinese to differ from them both. My conclusion is that Chinese has not grammaticalized either an accusative or an ergative pattern, and so the syntactic categories 'subject' and 'direct object' simply do not exist in Chinese.[20]

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[20]For those whose theoretical orientation would preclude them from accepting my conclusion, the fact remains that the differences in syntactic patterning presented here are very real; a theory that assumes 'subject' and 'direct object' as universals must be able to explain how these categories can evince such radically different behavior in different languages.

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