

RELATIVIZATION IN ENGLISH AND CHINESE*

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1. Introduction

Relativization is a cross-linguistic phenomenon. That is, relativization is to be found in many of the world languages. It may, and does, take different surface forms in different (types of) languages. For example in English, which has the basic S V O order, relativization is postnominal; Chinese is the only S V O language that has the prenominal relativization; in German, it takes up two possible positions: postnominal and prenominal. The following examples are from Keenan (1987).

- (1) der Mann, der in seinem Buro arbeitet
the man who in his study works
'the man who is working in his study'
- (2) der in seinem Buro arbeitende Mann
the in his study working man
'the man who is working in his study'

And a third possibility is that the relativization is internal of the restricting clause, as the following example from Bambara (Bird 1966) shows.

- (3) a. ne ye so ye.
I past horse see
'I saw a horse.'
- b. ne ye so min ye.
I Past horse which see
'the horse that I saw'
- c. tye ye ne ye so min ye san.

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man Past I Past horse which see buy
'the man bought the horse that I saw.'

Japanese is a S O V language, in which relativization is prenominal. For example:

- (4) Kono kita Ano Hito wa Watasi no Ova Desi.
yesterday come that person AUX my aunt be
It is my aunt that came yesterday.

In the above, we have been trying to illustrate different forms that relativization may take in a few languages. The differences are in the positions of relativization in a sentence in a particular language. There are other differences as well, for example, case marking, agreement, retention and deletion of pronouns, etc. In this article, we will mainly discuss the similarities and differences of relativization in English and Chinese.

2. Definition

In this article, relativization envisages formation of relative clauses by which we mean the following types of clauses:

- (5) The *man (that)* you saw (ϕ) is Tom.
(6) This is the *dog which* bit him.
(7) John has found ϕ (what he was looking for).

and their Chinese counterparts:

- (8) ni kanjian de nage ren shi Tom.
you see RM that man be Tom.
(9) zhe shi yao le ta de nazhi gou. (RM = Relative Marker)
This is bit ASP him RM that dog.
(10) yuehan faxian le ta xunzhao de dongxi. (ASP = Aspect)
John find ASP he look for RM thing.

Traditionally, all the *wh*-and *that*-clauses in (5) through (7) above have also been termed attributive or adjective clauses, which headed by relative pronouns (*that*, *which*, *who(m)* *whose*) modify the noun head(s). The Chinese sentences (8) through (10) above have traditionally been called attributives which are marked by the relative marker *de* at the end of these attributives.

In this article, we refer to both English relative clauses and Chinese attributives as relative clauses (RC).

And instead of using the traditional definitions for the RC, we will follow Keenan and Comrie's concept of it: it is "any syntactic structure that designates an object (or set of objects) in a certain way, namely, by first specifying a larger domain of objects and then restricting it to a subset, perhaps a one member subset, of which a certain sentence, the *restricting* sentence, is true." (Keenan and Comrie 1977).

And along this line, we will examine similarities and differences between the

two types of RCs in both languages from the point of view of syntactic properties and on the basis of the Accessibility Hierarchy (Keenan and Comrie, 1977).

3. Syntactic properties of relativization in English

The English language has a complicated system of relativization:

- i. An RC in English is usually postnominal. In other words, it is placed to the right of and follows the noun head that it modifies. See (5) through (7) above.
- ii. It begins with a distinctive marker, either a relative pronoun (on proper occasions, this pronoun may be omitted) or a relative adverb or the relative conjunction *what*.

(11) through (15) are based on Quirk et al (1972:867):

- (11) The { man — who
 { table — that
 which } stayed in the new hotel

- (12) The { man — who(m)
 { table — that
 ϕ — which } { I saw
 I glanced at

- (13) The { man at whom
 { table at which } I glanced

- (14) The { place — where
 { time — at which
 that
 ϕ } { I tried out the new car
 when

- (15) The { reason — why
 { way — that
 ϕ } in which

- (16) *What* he does best is painting landscapes. (free rel. pro.)
(Celce-Murcia, M. and Larsen-Freeman 1983)

- iii. It has subject-verb agreement. For instance:

(17) The dictionary that is on the desk.

(18) The dictionaries that are on the desk.

iv. It contains a finite verb, as (11) through (15) above show.

v. Relativization may be formulated as (NP(s)) in syntax.

This means that with restrictive relative clauses, the embedding consists of a sentence embedded within an NP. In fact, in order to explain sentences embedded within NPs, the phrase structure rule has to be expanded for re-writing the NP to include: NP \rightarrow NP + S

4. Syntactic features of relativization in Chinese

The Chinese language has a system of relativization which is quite different from that of the English language.

i. Unlike in English, a relative clause in Chinese is always prenominal. It is placed to the left of and followed by the noun head it modifies. For instance:

(19) (wo dale (ta) de) neige ren laile.
I hit him RM that man came
'The man that I hit came.'

ii. It begins with zero marker, but ends always with the RM *de*.

(20) (Zuotian lai de) nage guniang shi wo meimei.
yesterday come RM that girl be my sister
The girl that/who came yesterday is my sister.

iii. It has no such agreement between subject and verb as in English:

(21) (Zhan zai men kouer de) nage ren ni renshi ma?
stand at doorway RM that person you know QM
(question marker)
Do you know the person who is standing at the door?

(22) (Zhan zai menkouer de) naxie ren ni renshi ma?
stand at doorway RM those people you know
Do you know the people who are standing at the door?

Obviously in (21) *nage ren* (that person) is modified by the proposed relative clause *zhan zai menkouer de* in which the verb *zhan* has no affix specially for the noun head *nage ren*. Similarly, in (22) the verb *zhan* in the relative clause has no special marker for the plural noun head *naxie ren* (those people). The verb never changes in form. In other words, subject-verb agreement is not required in Chinese relativization.

iv. Deletion of the relativized NP in Chinese applies only to subjects (obligatorily) and objects (optionally). See example (19) above and (23) in the following:

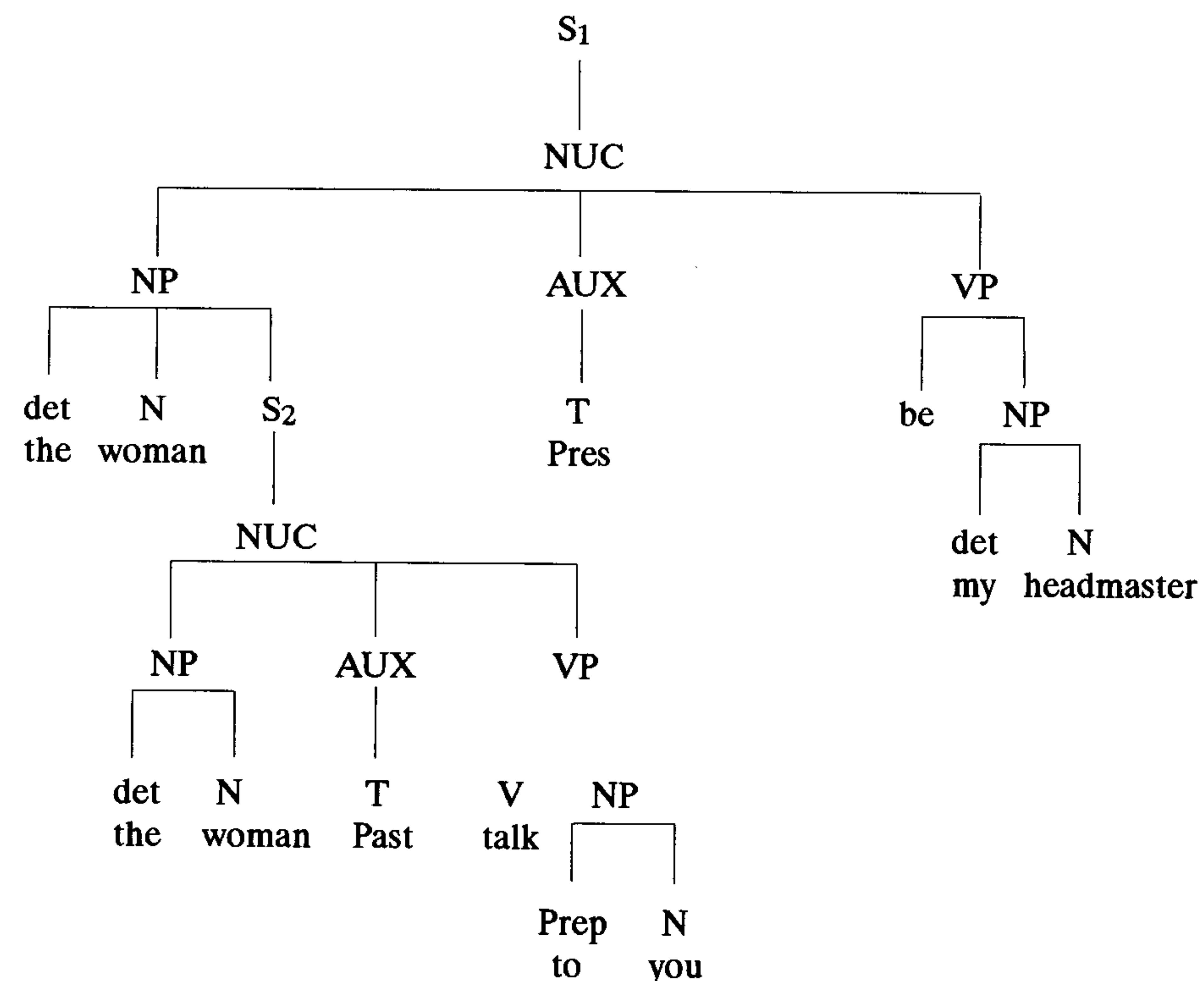
(23) (Qunian lai fang de) keren jinnian han yao lai.
last year come visit RM guest this year again want come.
The guests that came for a visit last year will come again.

v. Syntactically, relativization in Chinese may be formulated as follows: ((S) NP), or NP \rightarrow S + NP, or to quote Downing in Greenberg 1978: (S... (PRO...)) that N.

5. Underlying structures

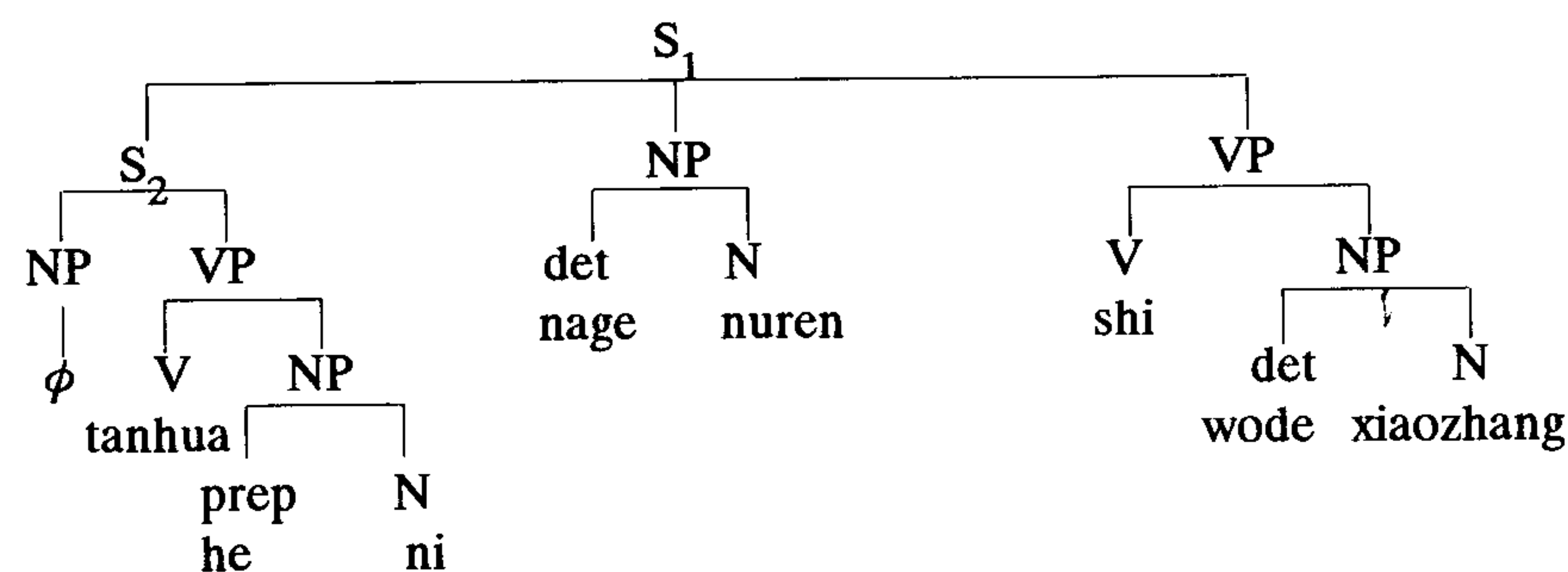
In section 3 and section 4, we have examined the syntactic features of relativization in English and Chinese, and therefore the syntactic differences between them have been brought to light. But those are surface differences. Actually, if we have a look at the underlying structures of both systems of relative clauses, we will be able to see the similarities between them. Take the sentence for example:

(24) The women (that/who talked to you) is my headmaster.



(25) will be the counterpart of (24) in Chinese:

(25) (He ni tanhua de) nage nuren shi wode xiaozhang.
to you talk RM that woman is my headmaster
(see diagram on the next page)



From the tree diagrams, we clearly see that in underlying structure there is almost no difference between (24) and (25) apart from the word order, in which the English relative clause is postnominal and forms part of the NP while the Chinese counterpart is prenominal and also forms part of the NP. In fact, part v in section 3 and 4 gives the syntactic formula (NP (S)) or NP → NP + S (English) and ((S) NP) or NP → S + NP (Chinese), which are already self-explanatory. Obviously there is no essential difference between the two systems. And semantically there is no difference at all. They are used to express the same meaning in both languages.

6. Further similarities

In this section, we will further examine the differences and similarities, especially the latter, between the two systems of relativization in the two languages, by looking at the degree to which both systems apply to the Accessibility Hierarchy (AH) advanced by Keenan and Comrie (1972 and 1977).

6.1. The AH: SU > DO > IO > OBL > GEN > OCOMP

This hierarchy "expresses the relative accessibility to relativization of NP positions in simplex main clauses" (Keenan and Comrie 1977). It lists the most accessible type of NP at the leftmost end and the least accessible type at the rightmost end. In the hierarchy, SU, DO, IO, OBL, GEN, OCOMP represent, respectively, subject, direct object, indirect object, major oblique case NP, genitive NP, and object of comparison. And the sign > stands for "is more accessible than". In other words, if the subject of a sentence in a language can be relativized, it does not mean that the direct object, the immediate next position on the hierarchy can necessarily be relativized.

On the other hand, if the OBL can be relativized in a language, all the positions higher than it on the hierarchy: SU, DO, and IO can definitely be relativized.

In this light, Keenan and Comrie (1987) give the Hierarchy Constraints (HCs):

1. A language must be able to relativize subject.
2. Any RC-forming strategy must apply to a continuous segment of the AH.
3. Strategies that apply at one point of the AH may in principle cease to apply at any lower point.

6.2. The degree of relativization of NP positions in English

Linguists have investigated this problem against the AH (Keenan and Comrie 1977, Kuno 1974, Stauble 1978, Ioup and Kruse 1977, Schumann 1978, Keenan and Hawkins 1987).

Keenan and Comrie (1977) investigated 50 languages and found that though the results were various, most of them conformed to the AH. There are languages in which only subjects of sentences can be relativized and if the NPs low on the AH can be relativized, then all the higher positions can be relativized. Keenan and Hawkins, in their article "The Psychological Validity of the Accessibility Hierarchy" (Keenan 1987), analyzed in detail their experiment "designed to test the hypothesis that mastery of relative clauses correlates with the position of the relative clause on the Accessibility Hierarchy of Keenan and Comrie (1977)." One of the results is reflected in one of their tables as follows:

Repetition Accuracy for Sentences Containing a Relative Clause

| | Relative Clause | | | | | | | | |
|----------|-----------------|-----|-----|-----|------|------|-------|-----|-------|
| | SU | DO | IO | OBL | GENS | GENO | OCOMP | DS | GENDS |
| Adults | 204 | 200 | 181 | 167 | 160 | 114 | 120 | 152 | 111 |
| Children | 202 | 164 | 161 | 112 | 67 | 57 | 115 | 139 | 84 |

The above table indicates that the AH is supported by the result of the experiment. Moreover, the difference in response accuracy across the different types of relative clause is significant for both adults and children. Both groups scored equally on the subject relatives, but children's scores began to drop off at the DO level, and fell faster than adults' while moving down the hierarchy.

Stauble (1978) investigated the frequency of four RC types: SS, OS, SO, and OO in samples of native speaker (of English) discourse. And she obtained the following table as the result:

| | Instances | Percentage |
|-------|-----------|------------|
| OS | 234 | 55% |
| OO | 108 | 25% |
| SS | 52 | 12% |
| SO | 30 | 7% |
| Total | 424 | |

Note: OS – The subject of the embedded clause is identical to the object of the main clause.

6.3. Empirical work of our own

We made 4 types of experiment in the form of tests with different types of classes. Class 1 consists of 13 people who have come from various kinds of work (clerks, shop assistants, primary school teachers, workers, etc.) and are learning English in the spare time meeting in the classroom twice a week. Now they are in their third year of English. None of them has gone to college before. Class 2

consists of 18 future engineers who have graduated from college in recent years, assigned to work in the Tianjin Steel Works and sent to The Foreign Languages Department of Nankai University to learn English since last year. All of them learned English in college, but their oral and aural abilities in English are mostly low. Class 3 consists of 17 student of English in the above Department. They are in their third year of study.

In accordance with their English level, the three classes may be termed primary, intermediate and advanced respectively.

Test 1

Each class was given a model English sentence against each element on the All and each student was asked to make 5 sentences with a relative clause for each of the first 5 positions on the AH for each model within 3 minutes for Class 1, and 4 minutes for Class 2 and 5 minutes for Class 3. (OCOMP has never been taught to them). Models are as follows:

- SU: 1. The girl who/that is standing there is my sister.
2. The girl who/that came here for a visit a couple of weeks ago will be here next spring.
- DO: 1. The boy who/that you saw is our monitor.
2. The problem that they talked about for a long time has been solved now.
- IO: 1. The student who/that I gave the book to liked it very much.
2. The person who/that you explained the accident to began to understand what had happened.
- OBL: 1. The pen that/which Tom writes with is a present from his sister.
2. The man who Bill wrote the story with is the author of many books.
- GEN: 1. The man whose house we bought has come to see us again.
2. The boy whose purse was lost reported the matter to the police.

All the 1 sentences above were for Class 1 and all the 2 sentences, for Class 2 and Class 3.

The results are shown in the following tables. The numbers in the left column refer to the participants and in each of the rest of columns there are two figures such as 5:3. The figure 5 refers to the number of sentences that a specific student made and the figure 3 refers to the number of correct sentences out of those s/he made (in this case, out of 5).

Table 1 (Class 1)

| student number | position of AH | | | | |
|----------------|----------------|-----|-----|-----|-----|
| | SU | DO | IO | OBL | GEN |
| 1 | 5:5 | 5:5 | 5:0 | 5:0 | 5:3 |
| 2 | 5:5 | 5:4 | 4:3 | 3:1 | 5:2 |
| 3 | 5:3 | 5:2 | 5:0 | 5:1 | 5:5 |
| 4 | 5:3 | 3:0 | 3:1 | 3:0 | 2:1 |

| | | | | | |
|-------|-------|-------|-------|------|-------|
| 5 | 5:2 | 5:5 | 5:0 | 5:0 | 5:0 |
| 6 | 4:2 | 5:4 | 4:2 | 3:0 | 3:3 |
| 7 | 5:4 | 5:4 | 4:2 | 5:1 | 5:2 |
| 8 | 4:1 | 4:3 | 5:3 | 4:1 | 4:1 |
| 9 | 5:3 | 5:4 | 4:3 | 3:1 | 5:2 |
| 10 | 3:2 | 4:3 | 4:0 | 4:0 | 4:2 |
| 11 | 5:5 | 5:4 | 5:4 | 5:1 | 5:5 |
| 12 | 5:5 | 5:5 | 5:0 | 5:0 | 5:5 |
| 13 | 5:3 | 5:3 | 4:3 | 4:2 | 5:3 |
| Total | 66:43 | 66:46 | 62:23 | 54:8 | 58:34 |

Table 2 (Class 2)

| student number | position of AH | | | | |
|----------------|----------------|-------|-------|-------|-------|
| | SU | DO | IO | OBL | GEN |
| 1 | 5:5 | 5:5 | 3:2 | 5:1 | 5:2 |
| 2 | 5:5 | 5:4 | 5:4 | 5:1 | 5:5 |
| 3 | 5:5 | 5:5 | 5:0 | 5:0 | 3:3 |
| 4 | 4:4 | 5:5 | 3:2 | 3:1 | 4:3 |
| 5 | 5:5 | 5:5 | 3:2 | 4:0 | 4:4 |
| 6 | 5:5 | 5:5 | 2:0 | 3:2 | 3:3 |
| 7 | 3:3 | 2:1 | 1:0 | 2:1 | 2:2 |
| 8 | 5:5 | 5:0 | 2:0 | 2:0 | 3:0 |
| 9 | 5:5 | 5:5 | 3:0 | 0:0 | 3:3 |
| 10 | 5:5 | 5:4 | 3:0 | 2:0 | 2:2 |
| 11 | 5:5 | 5:5 | 4:0 | 2:0 | 3:3 |
| 12 | 3:3 | 3:3 | 2:1 | 2:0 | 1:1 |
| 13 | 4:4 | 4:4 | 5:2 | 2:0 | 4:3 |
| 14 | 5:5 | 5:5 | 5:2 | 5:0 | 5:2 |
| 15 | 5:5 | 5:5 | 5:0 | 5:0 | 5:2 |
| 16 | 5:5 | 5:5 | 5:2 | 5:1 | 4:4 |
| 17 | 5:5 | 5:5 | 3:1 | 4:4 | 4:4 |
| 18 | 5:5 | 5:5 | 3:1 | 2:1 | 5:5 |
| Total | 85:79 | 84:76 | 62:19 | 58:12 | 65:54 |

Table 3 (Class 3)

| student number | position of AH | | | | |
|----------------|----------------|-----|-----|-----|-----|
| | SU | DO | IO | OBL | GEN |
| 1 | 5:5 | 5:5 | 5:3 | 5:2 | 5:5 |
| 2 | 5:5 | 5:5 | 5:5 | 5:0 | 5:5 |
| 3 | 5:5 | 5:5 | 5:2 | 4:2 | 4:4 |
| 4 | 5:5 | 5:5 | 4:3 | 5:3 | 5:5 |
| 5 | 5:5 | 5:4 | 5:2 | 3:3 | 4:4 |
| 6 | 5:5 | 5:5 | 5:5 | 5:5 | 5:5 |
| 7 | 5:5 | 5:4 | 5:0 | 5:1 | 5:5 |
| 8 | 5:4 | 5:4 | 4:0 | 4:1 | 5:4 |

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| 9 | 5:5 | 5:4 | 2:2 | 4:4 | 5:5 |
| 10 | 5:5 | 5:5 | 5:1 | 5:5 | 5:5 |
| 11 | 5:5 | 5:5 | 5:0 | 4:3 | 5:5 |
| 12 | 5:5 | 5:5 | 5:1 | 5:5 | 5:5 |
| 13 | 5:5 | 5:5 | 4:2 | 3:1 | 3:0 |
| 14 | 5:5 | 5:5 | 5:0 | 5:3 | 4:4 |
| 15 | 5:5 | 5:4 | 5:4 | 5:3 | 5:4 |
| 16 | 5:5 | 5:4 | 2:1 | 3:2 | 5:3 |
| 17 | 5:5 | 5:5 | 3:0 | 3:2 | 4:4 |
| Total | 85:84 | 85:79 | 74:31 | 73:45 | 79:72 |

Test 2

In this test, we gave the same questions to all the three classes in Chinese. Each student was asked to listen to the model sentence on the AH, which consisted of 16-18 syllables. And immediately he or she should write down a sentence of his/her own following the model. For example, when they heard the model:

Ni gangcai kanjian de nage ren shi wode yingwen laoshi. (The person you saw just now is my teacher of English.), they might write down a sentence like this: *Ta zuotian he ta tanhua de nage ren shi wo gege de pengyou.* (The person he talked to yesterday is a friend of my brother's). For each pair of sentences, the teacher and students were given 20 seconds. And each student had to listen to three models and make three of his own for each position of the AH. The results are represented in the following tables.

Table 4 (Class 1)

| student number | position of AH | | | | |
|----------------|----------------|-------|-------|-------|-------|
| | SU | DO | IO | OBL | GEN |
| 1 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| 2 | 3:3 | 3:3 | 3:2 | 3:2 | 3:3 |
| 3 | 3:3 | 3:3 | 3:3 | 2:2 | 3:3 |
| 4 | 3:2 | 3:2 | 3:2 | 2:2 | 2:2 |
| 5 | 3:3 | 3:3 | 3:3 | 2:2 | 3:3 |
| 6 | 2:2 | 2:2 | 2:1 | 2:1 | 3:2 |
| 7 | 3:3 | 3:3 | 3:3 | 3:2 | 3:2 |
| 8 | 3:2 | 3:2 | 2:2 | 2:2 | 2:2 |
| 9 | 3:3 | 3:3 | 3:2 | 3:2 | 3:3 |
| 10 | 2:2 | 2:2 | 2:1 | 2:1 | 2:2 |
| 11 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| 12 | 3:3 | 3:3 | 3:3 | 2:2 | 3:2 |
| 13 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| Total | 37:35 | 37:32 | 37:28 | 31:22 | 36:33 |

Table 5 (Class 2)

| student number | position of AH | | | | |
|----------------|----------------|-------|-------|-------|-------|
| | SU | DO | IO | OBL | GEN |
| 1 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 2 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| 3 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| 4 | 3:3 | 3:3 | 3:2 | 3:2 | 3:2 |
| 5 | 3:3 | 3:3 | 3:3 | 2:2 | 3:2 |
| 6 | 3:3 | 3:3 | 2:2 | 2:1 | 3:3 |
| 7 | 3:2 | 3:3 | 2:2 | 2:2 | 2:2 |
| 8 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 9 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 10 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| 11 | 3:2 | 3:2 | 3:2 | 3:2 | 3:2 |
| 12 | 3:3 | 3:2 | 2:2 | 2:2 | 3:2 |
| 13 | 3:3 | 3:2 | 3:2 | 3:3 | 3:3 |
| 14 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| 15 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| 16 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 17 | 3:2 | 2:2 | 2:2 | 2:2 | 3:2 |
| 18 | 3:3 | 3:3 | 3:2 | 3:2 | 3:3 |
| Total | 54:51 | 51:50 | 50:46 | 49:40 | 53:48 |

Table 6 (Class 3)

| student number | position of AH | | | | |
|----------------|----------------|-------|-------|-------|-------|
| | SU | DO | IO | OBL | GEN |
| 1 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 2 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 3 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 4 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 5 | 3:3 | 3:3 | 3:2 | 3:2 | 3:3 |
| 6 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 7 | 3:3 | 3:3 | 3:2 | 2:2 | 3:3 |
| 8 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| 9 | 3:3 | 3:3 | 3:2 | 2:2 | 3:2 |
| 10 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 11 | 3:3 | 3:3 | 3:2 | 3:2 | 3:3 |
| 12 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 13 | 3:3 | 3:3 | 3:3 | 3:2 | 3:3 |
| 14 | 3:3 | 3:3 | 2:2 | 3:2 | 3:3 |
| 15 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 16 | 3:3 | 3:3 | 3:2 | 3:2 | 3:2 |
| 17 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| Total | 51:51 | 51:51 | 50:45 | 49:45 | 51:49 |

Test 3

In this test, we experimented with a class of Americans who are studying Chinese in Nankai University for a year beginning in September 1992. We asked them to make 3 sentences in Chinese for each model we gave as we did in Test 1. For each group of the three sentences they were given 2 minutes.

SU: Ta jiu shi nage xiang jian ni de ren.

He is the one who wanted to see you.

DO: Wo gang huan de naben shu shi zhengtan xiaoshuo.

The book that I have just returned to the library is a detective story.

IO: Ta song li de ren dui ta hen manyi.

The man who he gave a present to was pleased with him.

OBL: Ta xiezi de gangbi hen hao.

The pen that he writes with is very nice.

GEN: Qianbao diule de xiaohaier ku le.

The boy whose purse was lost cried.

The results are shown in Table 7:

Table 7 (American students of Chinese)

| student number | position of AH | | | | |
|----------------|----------------|-------|------|------|------|
| | SU | DO | IO | OBL | GEN |
| 1 | 3:3 | 3:3 | 3:1 | 3:0 | 3:1 |
| 2 | 3:3 | 3:3 | 3:2 | 3:1 | 3:0 |
| 3 | 3:3 | 3:2 | 3:1 | 3:1 | 3:1 |
| 4 | 3:2 | 3:2 | 3:0 | 3:1 | 3:0 |
| 5 | 3:3 | 3:3 | 3:2 | 3:0 | 3:0 |
| 6 | 3:2 | 3:2 | 3:1 | 3:0 | 3:0 |
| 7 | 3:1 | 3:1 | 3:0 | 3:0 | 3:0 |
| 8 | 3:3 | 3:2 | 3:1 | 3:1 | 3:1 |
| 9 | 3:2 | 3:2 | 3:0 | 3:1 | 3:1 |
| Total | 27:22 | 27:20 | 27:8 | 27:5 | 27:4 |

Test 4

We gave a test similar to Test 2 above to the class of American students of Chinese in Nankai University. That is, they heard a stimulus sentence in English with a RC as model and had to write down an English sentence of his own following the model. 20 seconds were given for both the teacher's model and the students' sentence. All the first five positions on the AH were included in the test. For each of the positions, three models were given which elicited 3 sentences from the student. The results are represented in the following table.

Table 8 (the same group of American students as in Test 3)

| student number | position of AH | | | | |
|----------------|----------------|-------|-------|-------|-------|
| | SU | DO | IO | OBL | GEN |
| 1 | 3:3 | 3:3 | 3:3 | 3:3 | 3:3 |
| 2 | 3:3 | 3:3 | 3:2 | 3:1 | 3:1 |
| 3 | 3:3 | 3:3 | 3:2 | 3:2 | 3:1 |
| 4 | 3:3 | 3:2 | 3:1 | 3:1 | 3:1 |
| 5 | 3:3 | 3:3 | 3:2 | 3:2 | 3:1 |
| 6 | 3:3 | 3:3 | 3:3 | 3:1 | 3:1 |
| 7 | 3:2 | 3:3 | 3:2 | 3:2 | 3:2 |
| 8 | 3:3 | 3:2 | 3:2 | 3:2 | 3:1 |
| 9 | 3:3 | 3:2 | 3:1 | 3:1 | 3:0 |
| Total | 27:26 | 27:24 | 27:18 | 27:15 | 27:11 |

7. Analysis of the results in the 4 tests above

Table 1 through Table 3 show that Chinese students of English, whether they are at the primary, intermediate or advanced stage, find themselves less and less capable in dealing with the RCs while going down the AH. Take Class 1, for example. They made a total of 66 sentences both for SU and DO and more than 40 are correct out of the total. But with IO, they made a total of 62, out of which only 23 are correct. And with OBL, they made a total of 54, out of which only 8 are correct. With GEN, they seemed to be more capable than with IO and OBL, which is against the hypothesis of the AH. This may be because to the Chinese the English GEN is simpler than IO and OBL. IO and OBL in English have a complicated system of relative pronouns (which/that/who(m)), but GEN has just *whose* which is very close to the Chinese system of relativization in terms of the simplicity of relative pronouns. Chinese has no relative pronoun in the true sense of the phrase. The most important thing is the RM *de*. That is why Chinese learners find it less difficult with GEN than with IO and OBL in English.

Table 2 and Table 3 show the same tendency with regard to the AH. That is, they find it easier with SU and DO, but less and less easy with IO and OBL. But when they reach GEN, they find it easier again. The reason has been explained in the above.

However, we have found another fact which is noteworthy. The more advanced the students are in English, the more sentences they have made and the greater the proportion of correct sentences that they made will be. See Tables 1-3.

Table 4 through Table 6 show similar results as Table 1 through Table 3 do. In other words, as native speakers of Chinese, the students of English also find the RCs of SU and DO types easier to deal with than those of IO and then OBL. For the same reason that we have explained earlier, the Chinese students find the type of RCs on GEN less difficult than on IO or OBL.

Again, the more educated the students are, the better they do with regard to all the first five positions on the AH. See Tables 4-6.

Test 3 is similar to test 1 in nature. But the students are American and the language tested in Chinese (as a foreign language), As Table 7 shows, the results conform to the AH. The students did SU sentences better than when they moved down the AH. See Table 7.

Test 4 has been given to the same American students as Test 3. This time, they were tested in their own language English. They did much better than they had done in Test 3. They obtained good scores with every one of the positions on the AH. Nevertheless, what they did as a result still conforms to the AH. While they were moving downwards from SU all the way to GEN, they were less and less competent as Table 8 shows. See Table 8.

8. Conclusion and implications

In this paper, we have discussed the cross-linguistic phenomenon: relativization. However different relative clauses may appear from language to language, they are on the whole similar to one another in underlying structures. English and Chinese have been discussed as examples. The former has postmodifying RCs and a complicated system of relative pronouns while the latter has premodifying RCs only and the relative marker "de" at the end of the RC is essential. Such differences between the two, however, are superficial. After the analysis of the underlying structures of both in Section 5, we find there is no important difference between the two systems.

We have discussed further similarities between them on the basis of Keenan and Comrie's hypothesis of the Accessibility Hierarchy (AH). In other words, we have examined the degree of relativization of NP positions in English and Chinese, both as mother tongues and foreign languages.

For empirical work, we gave four tests to both Chinese students of English at three levels and a class of American students of Chinese. The results of all the tests support or confirm the AH on the whole.

SU > DO > IO > OBL > GEN

We think that there are important implications in this study of ours. First of all, the results of the study give support to Keenan and Comrie's AH hypothesis and therefore they may be considered a certain contribution to the universality of languages with regard to relativization, at least. Secondly, this article proves that the AH hypothesis is, on the whole, valid for English and Chinese not only as native languages but also as foreign languages. This fact will help language teachers, especially foreign language teachers to make better plans in teaching, since they know better which type of RCs is easy and which is difficult for their students, and what strategies or techniques to use in their work of teaching.

REFERENCES

- Allen, H.B. and Campbell, R.N. (eds). 1972. *Teaching English as a second language*. New York: McGraw Hill.
 Bolinger, D. 1975. *Aspects of language*. 2nd edition. New York: Harcourt Brace Jovanovich, Inc.

- Celce-Murcia, M. and Larsen-Freeman, D. 1983. *The grammar book*. Rowley: Newbury House Publishers, Inc.
 Danielson, D., and Hayden, R. 1973. *Using English: Your second language*. Englewood Cliffs, N. J.: Prentice-Hall.
 Jespersen, O. 1949. *A modern English grammar* Part VII. Copenhagen.
 Keenan, E. L. 1976. "Toward a universal definition of subject". In Li, C. N. (ed.). 1976. 305-333.
 Keenan, E. L. 1987. *Universal grammar*. London: Croom Helm.
 Keenan, E. and Comrie, B. 1977. "Noun phrase accessibility and universal grammar." *Linguistic Inquiry* 8. 63-99.
 Keenan, E. and Comrie, B. 1979. "Data on the noun phrase accessibility hierarchy." *Language* 55:2. 333-321.
 Krashen, S.D. and Scarcella, R.C. (eds). 1980. *Research in second language acquisition*. Rowley, Mass.: Newbury House.
 Kuno, S. 1974. "The position of relative clauses and conjunctions." *Linguistic Inquiry* 5. 117-136.
 Li, C.N. (ed.). 1976. *Subject and topic*. New York: Academic Press.
 Liu, Yinglin et al. 1987. *Hanyu sucheng: An intensive course of Chinese*. Beijing: Beijing Languages Institute Press.
 Liu, Yuehua et al. 1983. *Shiyong Xiandai Hanyu Yufa (A practical grammar of Modern Chinese)*. Beijing: Foreign Language Teaching and Research Press.
 Maxwell, D. N. 1979. "Strategies of relativization and NP accessibility." *Language* 55:2. 352-371.
 Quirk, R. et al. 1985 *A comprehensive grammar of the English language*. London: Longman.
 Rutherford, W. 1975. *Modern English* (2nd ed., vol.1). New York: Harcourt Brace Jovanovich.
 Schachter, P. 1972. "Transformational grammar and contrastive analysis." In Allen, H.B. and Campbell, R. N. (eds). 1972.
 Schumann, J. 1980. "The acquisition of English relative clauses by second language learners." In Krashen, S. D. and Scarcella, R. C. (eds). 1980. 118-131.
 Stauble, A. 1978. "A frequency study of restrictive relative clause types and relative pronoun usage in English." Unpublished paper, UCLA.
 Stockwell, R., Schachter, P. and Partee, B.. 1973. *The major syntactic structures of English*. New York: Holt, Rinehart and Winston.
 Tomlin, R. S. 1986. *Basic word order: Functional principles*. London: Croom Helm.