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Two Types of Relative Clauses in Finnish

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1. Introduction

Recent studies on relative clauses in various languages such as Keenan & Comrie (1977) and Downing (1978) show that relative clauses, if defined semantically, are found under different syntactic guises practically in all languages.¹⁾ Whether they precede or follow the head NPs gives two major types of relative clauses: prenominal and postnominal. English and Japanese are typical examples of languages making exclusive use of postnominal and pre-

1) For our purposes the following definition of relative clauses will do :
"We consider any syntactic object to be an RC [relative clause - K. M.] if it specifies a set of objects (perhaps a one-member set) in two steps: a larger set is specified, called the *domain* of relativization, and then restricted to some subset of which a certain sentence, the *restricting* sentence, is true. The domain of relativization is expressed in surface structure by the *head NP*, and the restricting sentence by the *restricting clause*, which may look more or less like a surface sentence depending on the language" (Keenan & Comrie 1977 : 63-64). Following the traditional terminology I will call the restricting clause simply the *relative clause*. The NP in the restricting sentence that is coreferential with the head NP will be referred to as the *relativized NP*. With reference to the relation between the relative clause and the relativized NP I will also say that the former *relativizes* the latter. No distinction will be made between restrictive and non-restrictive relative clauses in this paper because Finnish does not distinguish between them syntactically.

nominal relative clauses, respectively. German can be regarded as a language which uses both prenominal and postnominal relative clauses, the former type being called *erweitertes Partizipialattribut* or extended participial attribute :

(1)

- a) Das Bild ist auf der Dresdner Kunstaussstellung wegen seiner Maltechnik von vielen Betrachtern immer wieder gelobt worden.²⁾

‘The picture was praised over and over by many viewers in the Dresden Art Exhibition because of its drawing technique.’

- b) das Bild, *das auf der Dresdner Kunstaussstellung wegen seiner Maltechnik von vielen Betrachtern immer wieder gelobt worden ist*

‘the picture which was praised over and over by many viewers in the Dresden Art Exhibition because of its drawing technique’

- c) *das auf der Dresdner Kunstaussstellung wegen seiner Maltechnik von vielen Betrachtern immer wieder gelobte* Bild

‘same as (1b)’

Like German, Finnish makes use of prenominal as well as postnominal relative clauses, and the former type has been traditionally called *partisiippiattribuutti* or participial attribute :

(2)

- a) Itävaltalainen tutkimusmatkailija kirjoitti kirjeen
Austrian explorer wrote letter-ACC

2) The three German examples cited here are taken from Helbig & Buscha (1976 : 237). For the topic in general, see Weber (1971).

Jäämeren saarella yli sata vuotta sitten.³⁾
 Arctic Ocean-GEN island-ADE over hundred year-PAR ago

'An Austrian explorer wrote a letter on an island in the Arctic Ocean more than a hundred years ago.'

- b) kirje, s[jonka itävaltalainen tutkimusmatkailija kirjoitti
 letter which-ACC Austrian explorer wrote

Jäämeren saarella yli sata vuotta sitten]_s
 Arctic Ocean-GEN island-ADE over hundred year-PAR ago

'a letter which an Austrian explorer wrote on an island in the Arctic Ocean more than a hundred years ago'

- c) s[itävaltalaisen tutkimusmatkailijan Jäämeren
 Austrian-GEN explorer-GEN Arctic Ocean-GEN

saarella yli sata vuotta sitten kirjoittama]_s kirje
 island-ADE over hundred year-PAR ago write-AP letter
 (HS)

'same as (2b)'

Prenominal relative clauses are frequently used especially in newspapers. As (3a) and (4a) show, a prenominal relative clause may occur embedded in a larger prenominal relative clause:

3) Finnish examples will be given together with word-for-word glosses and English translation. The glosses do not necessarily reflect the morpho-semantic structure of the Finnish original. Here is the list of abbreviations employed in this paper: ACC(usative) = direct object case; ADE(ssive) = "on" case; ALL(ative) = "onto" case; AP = agent participle; ELA(tive) = "out of" case; ESS(ive) = "as" case (regarded *as* a teacher); GEN(itive) = possessive case; ILL(ative) = "into" case (go *into* the room); INE(ssive) = "in" case; PAR(titive) = "of" case (there are ten *of* us), used also as another direct object case; PL(ural) = plural. Those examples which are marked by (HS) are taken from Finland's leading daily *Helsingin Sanomat*. The others, unless otherwise indicated, are either modifications of *Helsingin Sanomat* examples or of my own composition. I thank Leena Tikkanen for working as an informant.

(3)

- a) s[s[ihmisoikeuksien toteutumista ja rikkomisia
human rights-GEN realization-PAR and violations-PAR
tarkkailevan]s Amnesty International-järjestön viime
watching-GEN organization-GEN last
vuoden lopulla Neuvostoliiton presidentille
year-GEN end-ADE Soviet Union-GEN president-ALL
lähettämä]s vetoomus (HS)
send-AP appeal

'the appeal which Amnesty International, which keeps an eye on realization and violations of human rights, sent to the president of the Soviet Union at the end of last year'

- b) vetoomus, s[jonka Amnesty International -järjestö,
appeal which-ACC organization
s[joka tarkkailee ihmisoikeuksien toteutumista ja
which watches human rights-GEN realization-PAR and
rikkomisia,]s lähetti Neuvostoliiton presidentille viime
violations-PAR sent Soviet Union-GEN president-ALL last
vuoden lopulla]s
year-GEN end-ADE

'same as (3a)'

(4)

- a) s[s[kuulon puuttumisen asettamissa]s rajoissa
hearing-GEN lacking-GEM set-AP-PL-INE limits-INE
normaalia elämää yhteiskunnan täysivaltaisena
normal-PAR life-PAR society-GEN fully authorized-ESS
jäsenenä viettämään kykenevä]s ihminen (HS)
member-ESS spending-ILL being capable person

'a (handicapped) person who is capable of living a normal life as a full member of the society with certain restrictions

imposed by the lack of hearing'

- b) ihminen, s[joka kykenee yhteiskunnan täysivaltaisena
 person who is capable society-GEN fully authorized-ESS
 jäsenenä viettämään normaalia elämää niissä
 member-ESS spending-ILL normal-PAR life-PAR those-INE
 rajoissa, s[jotka kuulon puuttuminen asettaa]s
 limits-INE which-PL-ACC hearing-GEN lacking sets
 'same as (4a)'

Relative clauses may occur without a head NP. Such relative clauses, sometime called free relatives, are not uncommon in English:

- (5) When people say that they know what they like, they really mean that they like *what they know*.

As is expected, Finnish has two types of free relatives corresponding to the two relative clause types with a head NP: (6) shows the postnominal type and (7) the prenominal type:

- (6) Haastattelija kysyi eikö television pidä antaa
 interviewer asked whether not television-GEN should give
 kansalle NP[s[mitä kansa haluaa]s]NP (HS)
 people-ALL what-PAR people wants
 'The interviewer asked whether the television should not give people what they want.'
- (7) NP[s[Kauppa- ja teollisuusministeri Ulf Sundqvistin aiemmin
 trade and industry minister -GEN earlier
 keväällä kertoman]s]NP mukaan päätös uudesta
 spring-ADE tell-AP-GEN according to decision new-ELA
 tuhannen megawatin voimalasta syntynee
 thousand-GEN megawatt-GEN power station-ELA may be born
 parin vuoden päästä. (HS)
 pair-GEN year-GEN after

'According to what Trade and Industry Minister Ulf Sundqvist told earlier in the spring, the decision on a new one-thousand-megawatt power station may be made in a couple of years.'

2. Comparison of the Two Types

Besides its position with respect to the head NP, the prenominal relative construction differs from the postnominal construction in a number of ways. In the first place, the scope of prenominal relativization is restricted to subject and (direct) object NPs, whereas postnominal relative clauses can relativize any NP:⁴⁾

- (8) Poika osti Joenpellon kirjan isälleen
 son bought Joenpelto-GEN book-ACC his father-ALL
 kirjakaupasta.
 bookstore-ELA

'The son bought a book by Joenpelto for his father at a bookstore.'

- (9)
 a) poika, s[joka osti Joenpellon kirjan isälleen
 son who bought Joenpelto-GEN book-ACC his father-ALL
 kirjakaupasta]s
 bookstore-ELA

4) Readers' familiarity with the Keenan-Comrie Accessibility Hierarchy (Keenan & Comrie 1977: 66) is taken for granted here. The object of comparison in Finnish can be expressed in two ways: either by an NP in the partitive or by using the conjunction *kuin*. Postnominal relativization is possible only in the former case: *sen toimikunta ja kirjoittajisto koostuu ihmisitä s[joita asiantuntevampia tässä maassa ei ole]s* (HS) 'its editorial staff and contributors consist of people who no one in this country is better-informed than'. Only very rarely is an NP other than a subject and a (direct) object relativized by the prenominal procedure: *lähes kaikki pääsevät haluamalleen kurssille* (HS) 'almost all (applicants) will be allowed to take the course they wish to'.

'the son who bought a book by Joenpelto for his father at a bookstore'

- b) s[kirjakaupasta isälleen Joenpellon kirjan
bookstore-ELA his father-ALL Joenpelto-GEN book-ACC

ostanut]_s poika
bought son

'same as (9a)'

(10)

- a) kirja, s[jonka poika osti isälleen kirjakaupasta]_s
book which-ACC son bought his father-ALL bookstore-ELA

'the book which the son bought for his father at a bookstore'

- b) s[pojan kirjakaupasta isälleen ostama]_s kirja
son-GEN bookstore-ELA his father-ALL buy-AP book

'same as (10a)'

(11)

- a) isä, s[jolle poika osti Joenpellon kirjan
father who-ALL son bought Joenpelto-GEN book-ACC

kirjakaupasta]_s
bookstore-ELA

'the father for whom the son bought a book by Joenpelto at a bookstore'

- b) *_s[pojan kirjakaupasta Joenpellon kirjan ostama]_s
son-GEN bookstore-ELA Joenpelto-GEN book-ACC buy-AP

isä
father

~~'same as (11a)'~~

(12)

- a) kirjakauppa, s[josta poika osti Joenpellon
bookstore which-ELA boy bought Joenpelto-GEN

kirjan isälleen]_s
 book-ACC his father-ALL

'the bookstore where the son bought a book by Joenpelto
 for his father'

- b) *_s[pojan isälleen Joenpellon kirjan ostama]_s
 son-GEN his father-ALL Joenpelto-GEN book-ACC buy-AP

kirjakauppa
 bookstore

(13)

- a) kirjailija, _s[jonka kirjan poika osti isälleen
 writer who-GEN book-ACC son bought his father-ALL

kirjakaupasta]_s
 bookstore-ELA

'the writer whose book the son bought for his father at a
 bookstore'

- b) *_s[pojan kirjakaupasta isälleen kirjan ostama]_s
 son-GEN bookstore-ELA his father-ALL book-ACC buy-AP

kirjailija
 writer

Secondly, prenominal relativization obligatorily deletes the relativized NP, but postnominal relativization uses a relative pronoun which replaces the relativized NP, inherits its case and number and is moved into the clause-initial (COMP) position :

(14) Poika osti *Joenpellon kirjan* isälleen kirjakaupasta. (= (8))

(15)

- a) kirja, _s[*jonka* poika osti ____ isälleen kirjakaupasta]_s (cf. (10a))

- b) _s[pojan kirjakaupasta isälleen ∅ ostama]_s kirja (cf. (10b))

In the third place, the predicate verb of a prenominal relative

clause is always in a non-finite or participial form,⁵⁾ whereas that of a postnominal relative clause is always in a finite form. Consequently, due to the very simple structure of tenses, aspects, and moods that the system of participles has, almost all the tenses, aspects, and moods for which Finnish has distinct finite forms are neutralized in prenominal relative clauses. For instance:

(16)

- a) Tunsin japanilaisen, s[joka *oli asunut* Suomessa jo
I knew Japanese-ACC who was lived Finland-INE already
kuusi vuotta]_s
six year-PAR

‘I knew a Japanese who had already been living in Finland for six years.’

- b) Tunnen japanilaisen s[joka *asui* Suomessa kuusi vuotta
I know Japanese-ACC who lived Finland-INE six year-PAR
sitten]_s
ago

‘I know a Japanese who lived in Finland six years ago.’

- c) Tunnen japanilaisen s[joka *on asunut* Suomessa jo
I know Japanese-ACC who is lived Finland-INE already

5) I assume that prenominal relative clauses continue to be dominated by an S node throughout syntactic derivation, although there is no direct evidence for it. One very important phenomenon that suggests their S character is that the accusative object in a prenominal relative clause is always in the long form: [*kirjan* (**kirja*) *ostanut*] *poika* ‘the boy who bought a book’ (cf. *tilaisuus* _{VP}[*ostaa kirja* (**kirjan*)]_{VP} ‘an opportunity to buy a book’). Hakulinen & Karlsson (1979: 373), on the other hand, assumes that prenominal relative clauses lose their S status in the course of the preposing transformation and become AP_S. Their argument, however, is based entirely on the fact that participles behave like adjectives as far as their morphology is concerned, and is not concerned with the form of accusative objects. I will not pursue this matter further, because I do not think this problem affects the general line of argument in this paper in a crucial manner.

kuusi vuotta]_s
 six year-PAR

'I know a Japanese who has already been living in Finland
 for six years.'

(17)

a) Tunsin s[jo kuusi vuotta Suomessa *asuneen*]_s
 I knew already six year-PAR Finland-INE lived-ACC
 japanilaisen.
 Japanese-ACC
 'same as (16a)'

b) Tunnen s[kuusi vuotta sitten Suomessa *asuneen*]_s
 I know six year-PAR ago Finland-INE lived-ACC
 japanilaisen.
 Japanese-ACC
 'same as (16b)'

c) Tunnen s[jo kuusi vuotta Suomessa *asuneen*]_s
 I know already six year-PAR Finland-INE lived-ACC
 japanilaisen.
 Japanese-ACC
 'same as (16c)'

In (17) one finds one and the same participle *asunut* (acc. *asuneen*) where three different forms are used in (16): pluperfect *oli asunut*, simple past *asui*, and present perfect *on asunut*.

Fourthly, the order of major constituents in prenominal relative clauses is verb-final or OV, whereas their order in postnominal relative clauses is by and large the same as in the (non-embedded) simple sentence, i. e., VO. This contrast is amply illustrated by many of the preceding examples, esp. (9) - (13). It should be noted that the verb-final word order is strictly observed in prenominal relative clauses (see Matsumura 1980).

Although there are still other differences between the two con-

structions, I think these four, which exhaust the most important ones, are enough for present purposes.

3. Where Do Prenominal Relative Clauses Come From ?

Finnish linguist Fred Karlsson has claimed prenominal relative clauses to be derived transformationally from the same postnominal structure as underlies postnominal relative clauses (Karlsson 1972, 1973; Hakulinen & Karlsson 1979). Since the prenominal construction differs considerably from the postnominal one in surface structure, his transformational analysis needs at least five distinct operations listed below :

(18)

a) RELATIVIZED NP DELETION

b) PARTICIPLE FORMATION

The predicate verb of the embedded S is changed into a participle.

c) GENITIVE MARKING⁶⁾

The subject NP of the embedded S is changed into the

6) According to Hakulinen & Karlsson (1979 : 377), the subject of the embedded S is changed *either* into the genitive from ("Genitivization") or into a possessive suffix ("Pronominalization"). Such cannot be the case, because there are cases to which *both* "Genitivization" and "Pronominalization" must apply. Compare *tämä on HÄNEN viime vuonna kirjoittamansa kirja* 'this is the book which he wrote last year' on one hand and **tämä on Ø viime vuonna kirjoittamansa kirja* and **tämä on HÄNEN viime vuonna kirjoittama-Ø kirja* on the other (that the last one may be acceptable in the spoken language is another matter). I would like to argue that the only operation relevant here is "Genitivization" or Genitive Marking. "Pronominalization" or Possessive Suffix Attachment is an independently motivated rule (cf. *hänen kirjansa* 'his book') and is automatically triggered by the presence of a genitive personal pronoun. The possible absence in surface structure of the genitive pronoun that has triggered Possessive Suffix Attachment can be explained by deletion rules, obligatory and optional.

genitive form, and if it is a personal pronoun, a possessive suffix agreeing with it in person and number is attached to the participle.

d) RELATIVE CLAUSE PREPOSING

e) WORD ORDER PERMUTATION

The order of major constituents of the embedded S is changed into a verb-final one.

None of the operations in (18) are explicitly formulated by Karlsson, nor is it sufficiently clear in what order they are to be carried out. However, judging from the relevant section in Hakulinen & Karlsson (1979),⁷⁾ he appears to be assuming that they are carried out in the order in which I cited them in (18). Thus (19 b), for example, will be derived in the way shown in (20) from (20a), which also underlies (19 a):

(19)

a) kirje s[jonka hän kirjoitti eilen]_s
letter which-ACC he wrote yesterday

'the letter which he wrote yesterday'

b) s[hänen eilen kirjoittamansa]_s kirje
he-GEN yesterday write-AP-his letter

'same as (19a)'

(20)

a) kirje s[hän kirjoitti kirjeen eilen]_s
letter he wrote letter-ACC yesterday

b) kirje s[hän kirjoitti \emptyset eilen]_s (by (18a))

c) kirje s[hän kirjoitta-ma eilen]_s (by (18b))
write-AP

7) The preface of Hakulinen & Karlsson (1979) says that Karlsson is responsible for Section 14.7., in which prenominal relativization is discussed.

- d) kirje s[hän-en kirjoitta-ma-nsa eilen]_s (by (18c))
 he-GEN write-AP-his
- e) s[hän-en kirjoitta-ma-nsa eilen]_s kirje (by (18d))
- f) s[hän-en eilen kirjoitta-ma-nsa]_s kirje (by (18e))

Since Karlsson's own presentation of his analysis is not explicit enough, I assume in this paper that my interpretation just presented is not very different from what he conceives.

4. Two Serious Problems with the Preposing Analysis

The only argument Karlsson gives for his analysis is not very convincing: if prenominal and postnominal relative clauses are related in terms of transformations, then certain selection restrictions need not be mentioned twice in the grammar of Finnish. Since the prenominal constructions is felt intuitively by the native speakers to be secondary to the postnominal construction, the former should be derived from the latter. Such an argument would have certainly been sufficient for some early transformationalist to assure himself of the well-motivatedness of his analysis. Nowadays things are getting hard for transformationalists. They are not allowed to feel easy until they are sure the transformational approach is better than any other possible analysis they can think of in the generativist framework. Under such circumstances Karlsson's argument can be considered virtually irrelevant to the point at issue. However, Karlsson's is, as far as I am aware, the only analysis proposed to date concerning Finnish prenominal relative clauses. It is yet to be examined whether it works as Karlsson programmed it to.

4.1. Relative Clause Preposing

Needless to say, the preposing analysis presupposes the feasibility of Relative Clause Preposing as a transformation. Since only a relatively small subset of the set of all the postnominal relative

clauses have their prenominal counterparts (see (9) – (13)), Karlsson has attempted to define that subset in terms of structural conditions that have to be met by the input to the preposing transformation. He claims to have found a condition which he calls the “first sentence down” principle (Karlsson 1972 : 109ff. and 1973 : 221ff.) :

(21) The “First Sentence Down” Principle (FSDP)

Given an underlying structure

$$s_2[\dots X s_1[\dots Y \dots]_{s_1} \dots]_{s_2}$$

where X and Y are NPs, the structure cannot undergo prenominal relativization involving X and Y as the head NP and the relativized NP, if there exists an S node dominated by S_1 and dominating Y.

Karlsson (1973) claims that the FSDP explains three different cases of impossible prenominal relativization : (22b), (24b), and (25b). That the FSDP is relevant to the ungrammaticality of (22 b) is apparent because (23b) is grammatical :

(22)

- a) kalakukko s [jonka aioin syödä] s
 ‘kalakukko’ which-ACC I intended eat
 ‘the *kalakukko* (Finnish bread with pork and *muiikku* fish cooked inside) which I intended to eat’
- b) * s [syödä aikomani] s kalakukko
 eat intend-AP-my ‘kalakukko’
- c) [kalakukko] $_{NPX}$ s_1 [minä aioin s_0 [minä syö-
 ‘kalakukko’ I I intended I eat
 [kalakukko] $_{NPY}$] s_0] s_1
 ‘kalakukko’

(23)

- a) poika s [joka aikoo syödä kalakukon] s
 boy who intends eat ‘kalakukko’-ACC
 ‘the boy who intends to eat the *kalakukko*’

- b) s [kalakukon syödä aikova] s poika
 'kalakukko'-ACC eat intending boy
 'same as (23a)'

- c) [poika] $_{NP_X}$ S_1 [[poika] $_{NP_Y}$ aikoo S_0 [poika syö- kalakukko] $_{S_0}$] S_1
 boy boy intends boy eat 'kalakukko'

If (22c) and (23c) are respective underlying structures for (22b) and (23b), one can easily see that only in (22c) there is an S node dominated by S_1 and dominating NP_Y , i. e., S_0 .⁸⁾ As for (24 b), the relevance of the FSDP is possible, but indeterminable:

(24)

- a) kirja s [joka minun täytyy ostaa] s
 book which-ACC I-GEN must buy
 'the book which I must buy'
- b) * s [ostaa täytymäni] s kirja
 buy must-AP-my book
- c) [kirja] $_{NP_X}$ S_1 [NP [S_0 [minä osta- [kirja] $_{NP_Y}$] S_0] NP täytyy] S_1

If (24c) is the underlying structure for (24a) and (24b), then (24a) cannot be grammatical, either, because the relativized NP is in a sentential subject (cf. Ross 1967).⁹⁾ Since S_0 in (24c) need be "decomposed" somehow prior to relativization, (24) should not be used as evidence for the FSDP before we decide what kind of derived structure is the direct input to relativization (I assume that the input to prenominal relativization is the same as that to postnominal relativization). The relevance of the FSDP to the ungrammaticality of (25b) is unlikely because (26b) is ungrammatical, either:

8) A possible objection to the application of the FSDP here is the likelihood of S_0 being pruned prior to relativization (its subject must be deleted by Equi NP Deletion) (cf. Ota & Kajita 1974 : 535 ff.).

9) * s [täytymäni ostaa] s kirja (Karlsson 1973 : (47)) is automatically ruled out as ungrammatical because it violates the strict verb-final word order that a prenominal relative clause must observe.

(25)

- a) kansanvene _s[jonka näin purjehtivan]_s
 folk boat which-ACC I saw sailing-ACC
 'the folk boat which I saw sailing'
- b) *_s[purjehtivan näkemäni]_s kansanvene
 sailing-ACC see-AP-my folk boat
- c) [kansanvene]_{NP_X} _{s₁}[minä näin _{s₀}[[kansanvene]_{NP_Y} purjehti-]_{s₀}]_{s₁}
 folk boat I I saw folk boat sail

(26)

- a) mies _s[joka näki Mattin tulevan]_s
 man who saw Matti-GEN coming-ACC
 'the man who saw Matti coming'
- b) *_s[Mattin tulevan nähnyt]_s mies
 Matti-GEN coming-ACC seen man
- c) [mies]_{NP_X} _{s₁}[[mies]_{NP_Y} näki _{s₀}[Matti tule-]_{s₀}]_{s₁}
 man man saw Matti come

The only possible explanation I can think of for (26b)'s ungrammaticality is that reporting participial clauses (*referatiivinen lauseenvastike*) are avoided in prenominal relative clauses.

Therefore, the power of the FSDP is actually much weaker than Karlsson expected, and there remain a lot of cases for which no structural conditions are likely to be formulated.

4.2. Word Order Permutation

Karlsson seems to be little concerned about the formulation of Word Order Permutation. In Karlsson (1972 : 102), the 'rule' is as simple as (27), and Hakulinen & Karlsson (1979 : 374) does not show much improvement (cf. (28)):

- (27) The order of the relative clause constituents must be permuted : 1 2 3 \Rightarrow 3 2 1

- (28) When the preposing rule applies, the modifiers of the participle are generally put in front of the participle with their order reversed, even if they may follow the verb in deep structure and in the corresponding [postnominal] relative clause. [...] All these changes can be regarded as being caused by the preposing rule in question.

One serious problem with this idea is that one cannot tell in principle how many and what kinds of constituents a relative clause to be preposed can contain in deep structure. This means that the only recourse is to use variables in the structural description, but by doing so one loses the possibility of referring exactly to those constituents whose order is to be permuted. Moreover, even if this paradox were to be overcome somehow, the transformation of Word Order Permutation cannot be formulated unless the term "relative clause constituent" or, what amounts to the same in (28), "modifier of participle" (*partisiipin määrite*) is defined in an unambiguous way. Assuming that Finnish has PS rules like (29a) and (29b), Karlsson might be able to define it to be any immediate constituent of the VP that is a daughter of that S which is to become a relative clause in surface structure.

- (29) a) $S \rightarrow NP VP$
 b) $VP \rightarrow V (NP) (NP) \dots$

This definition seems to work well as far as cases like those mentioned in Hakulinen & Karlsson (1979: 374) are concerned:

- (30)
- | | | | |
|----|--|-----------------|------------------|
| | 1 | 2 | 3 |
| a) | Rekonen osoittaa mieltään | | Tiedonantajalle |
| | Rekonen shows | opinion-PAR-his | Tiedonantaja-ALL |
| | 'Rekonen expresses his opinion to the Tiedonantaja (a communist newspaper).' | | |
-
- | | | | |
|----|-------------------|-----------------|---------------------|
| | 3 | 2 | 1 |
| b) | s[Tiedonantajalle | mieltään | osoittava]s Rekonen |
| | Tiedonantaja-ALL | opinion-PAR-his | showing Rekonen |

'Rekonen, who expresses his opinion to the Tiedonantaja'

However, there are cases in which even the internal word order of a relative clause constituent must be reversed :

- (31)
- | | | | |
|----|----------------------------|----------------|-------------|
| | | 1 | 2 |
| a) | neuvostojoukot s[jotka | valmistautuvat | jäämään |
| | Soviet troops which-PL | get ready | staying-ILL |
| | 3 | 4 | |
| | pysyvästi Afganistaniin]s | | |
| | permanently Afganistan-ILL | | |
- 'the Soviet troops which are getting ready to remain in Afganistan permanently'
- b) ??neuvostojoukot s[jotka
- | | | | |
|--|------------------------------|-----------|----------------|
| | | 1 | 4 |
| | valmistautuvat Afganistaniin | | |
| | Soviet troops which-PL | get ready | Afganistan-ILL |
| | 3 | 2 | |
| | pysyvästi jäämään]s | | |
| | permanently staying-ILL | | |
- (32)
- | | | | | |
|----------------|----------------|---------------|------------------|---------------|
| | 2 | 3 | 4 | 1 |
| a) ??s[jäämään | pysyvästi | Afganistaniin | valmistautuvat]s | |
| | staying-ILL | permanently | Afganistan-ILL | getting ready |
| | neuvostojoukot | | | |
| | Soviet troops | | | |
- | | | | | |
|--------------------|----------------|-------------|------------------|---------------|
| | 4 | 3 | 2 | 1 |
| b) s[Afganistaniin | pysyvästi | jäämään | valmistautuvat]s | |
| | Afganistan-ILL | permanently | staying-ILL | getting ready |
| | neuvostojoukot | | | |
| | Soviet troops | | | |

In (31) and (32) *jäämään pysyvästi Afganistaniin* (or *Afganistaniin pysyvästi jäämään*) as a whole is a relative clause constituent as defined above. However, that (32b) is more natural than (32a) whereas (31a) is more natural than (31b) clearly indicates that not only the order of relative clause constituents but also the inner word order of some relative clause constituents must be reversed in

prenominal relativization.

5. In Place of a Conclusion

I pointed out in the preceding section two serious problems that Karlsson-type preposing analysis encounters: (i) it is unlikely that the set of structures transformable into prenominal relative clauses can be defined in structural terms; and (ii) the operation of Word Order Permutation can hardly be formulated as a transformation. These two serious problems do not necessarily imply that the preposing analysis should be abandoned, because it is possible that they will be overcome if more study is carried out on Finnish prenominal relative clauses. I myself, however, am inclined to assume that my argument in the previous section was strong enough for us to be doubtful of the preposing analysis, and discuss in this section what I consider to be the implication of the fact that Finnish prenominal relative clauses resist the preposing analysis.

From recent studies in syntactic typology such as Greenberg (1963) and Lehmann (1973), we know that certain word order patterns tend to occur together:

- | | |
|--------------------------------|--------------------------------|
| (33) | (34) |
| a) Verb-Object (VO) | a) Object-Verb (OV) |
| b) Preposition-Noun (PrepN) | b) Noun-Postposition (NPostp) |
| c) Noun-Relative Clause (NRel) | c) Relative Clause-Noun (RelN) |
| d) Noun-Adjective (NA) | d) Adjective-Noun (AN) |
| e) Noun-Genitive (NG) | e) Genitive-Noun (GN) |

We can expect that each word order pattern in (33) is more likely to occur with word order patterns in (33) than with those in (34), and vice versa. If we call any set of word order patterns a *word order*, then (33) and (34) can be regarded as *consistent* word orders. It is usually assumed that "ideal" VO and OV languages have respectively (33) and (34) as their word order.

Although there is reason to assume (33) and (34) are the “most natural” word orders that human languages can have, few languages are actually consistent in their word order. A very plausible explanation of how inconsistent word order patterns can possibly coexist in one and the same language is to attribute such inconsistency to the historical change that the language has undergone or is undergoing in its typology. For example, the AN order in English, a VO language, can be regarded as a relic of its early OV typology. Finnish is very interesting in this respect. We might be able to say that it is a typological hybrid. In spite of the VO order it shows in the arrangement of major constituents, it shows more of the word order patterns in (34) than of those in (33):

(35) Finnish Word Order Patterns

- | | |
|-------------------------|-------------------|
| a) VO | OV ¹⁰⁾ |
| b) PrepN ¹¹⁾ | NPostp |
| c) NRel | RelN |
| d) - | AN |
| e) - | GN |

In Matsumura (1980) I argued that variations of internal word order Finnish shows in certain constructions can be explained if we assume not only that Finnish as a whole has been undergoing a typological change from an OV type language to a VO type language, but also that different parts of its grammar has been assimilating themselves to this typological change with *different* degrees of susceptibility. In a similar vein, the existence of both prenominal relative clauses with an OV order and postnominal relative clauses with a VO order can be explained easily once we regard the postnominal

10) The OV order occurs in prenominal relative clauses.

11) Finnish does have a few prepositions: *ennen* ‘before’, *ilman* ‘without’, *vaiilla* ‘without’, *yli* ‘over’, etc. Many of them are also used, though less frequently, as postpositions.

relative clause as a later innovation and the prenominal one as a relic of an earlier stage when Finnish was a verb-final language. This hypothesis does not contradict the well-known fact that many Finno-Ugric languages do not have relative clauses in the sense in which they are usually understood by traditional linguists. In Matsumura (1981) I showed that Mari (Cheremis), a Volga-Finnic language, does have a prenominal relative clause system which is very similar to the Finnish prenominal one, but differs from the latter in that the Mari system can relativize NPs lower than the direct object NP on the Accessibility Hierarchy. This fact can be interpreted as indirectly supporting the hypothesis concerning the history of Finnish relative clause system mentioned above: the Finnish prenominal relative clause has "shrunk" in its relativizing capacity in the course of the typological change from an OV language to a VO language.

Under this hypothesis it is very easy to understand why the preposing analysis does not work very well in connection with Finnish relative clauses. The two relative clause types are probably unrelated not only historically but also synchronically, and thus should be treated independently in the grammar.¹²⁾ In other words, I am suggesting that a language can have a base component which generates elements in two "contradicting" orders in such a way that one of the two orders is restricted to a subsystem of the grammar. This claim may sound bold and defiant of the orthodoxy, but in so

12) The rule of Adjective Shift (or Modifier Shift - see Baker 1978, for example) in the standard analysis of English suggests that English prenominal adjectives need not be treated like Finnish prenominal relative clauses. This is probably because the typological change English has undergone is so thorough that the AN order it has as a relic of its earlier OV typology can be explained synchronically as a surface structure phenomenon in which word order consistency in the base component is "distorted" by a movement transformation. I thank Takane Itoh for giving me a detailed account of how reduced relative clauses are treated in the standard analysis of English.

far as it is unlikely that the typology of a language changes abruptly without any intermediate stages, it is a type of hypothesis that should be seriously taken into consideration.

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