

SOME ASPECTS OF MALAY

RELATIVIZATION:

A Transformational Account

by Deletion.

BY

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THESIS SUBMITTED FOR

THE DEGREE OF DOCTOR

OF PHILOSOPHY

AT

THE SCHOOL OF ORIENTAL AND AFRICAN STUDIES,

UNIVERSITY OF LONDON.

1981

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ABSTRACT

The present study is an attempt to provide an explicit account of Malay relative clause formation using the transformational approach. It aims at providing an analysis which can characterize Malay relative clauses in the most adequate manner.

Various analyses which have been proposed for English are examined and their problems as applied to Malay discussed. It is found that there is no justification for assuming that yang, introducing relative clauses is a relative pronoun and I propose that this element be analyzed as a complementizer. The standard analysis of relative clause formation, ie the wh-movement analysis, is found to be inadequate for describing Malay relatives and as an alternative a deletion rule is proposed. It is shown, however, that only nominals in the left-most position of the embedded clause may be relativized (deleted) and it is argued that whenever the relativized element does not occupy this position, other rules such as Passives, Topic-alization, Tough Movement and Left-Dislocation have to apply prior to relativization process.

The proposed analysis is found to be capable of accounting not only for restrictive relatives but also for free relatives as well as non-restrictive relatives.

ACKNOWLEDGEMENTS

I wish to express my profound gratitude and appreciation to my supervisor, Dr. R. M. Kempson, for the kind guidance, valuable comments and constant encouragements she has given throughout the preparation of this thesis.

I am grateful to Universiti Sains Malaysia and Jabatan Perkhidmatan Awam Malaysia for granting me a fellowship under the University's Academic Staff Higher Education Scheme from 1977-1981. Without their generous financial support, this thesis would not have been made possible.

Throughout my academic programme I benefited greatly from the lectures I attended both in SOAS and in University College. To all the lecturers particularly Dr. G. Horrocks of SOAS and Dr. R. Borsley, Dr. G. Pullum, Dr. N. Smith and Dr. D. Wilson of University College, I am extremely grateful.

My special thanks go to Professor R. H. Robins, the Head of the Department of Phonetics and Linguistics, School of Oriental and African Studies for the assistance provided throughout the course of my academic programme.

To all my friends who have contributed in various ways in the preparation of this thesis, I would like to say thank you. In particular, I wish to thank John Saeed, who has read parts of this thesis, and Janig Stephens for their illuminating discussions and valuable suggestions.

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ABBREVIATIONS

Caus	causitive
Compl	completive
coef	coefficient
emph	emphatic marker
pass	passive
poss	possessive
prog	progressive

PRELIMINARY CHAPTER.

O. General Background

O.1 The Language

The Malay language is a member of the Western-Malayo-Polynesian family and is spoken predominantly in Indonesia, Brunei and Malaysia - a country which comprises Peninsular Malaysia (West Malaysia), Sabah (North Borneo) and Sarawak. Malay, which has a history that dated right back to the 7th. century and which flourished in the 14th century as a language of commerce, religion and literature for the Malay archipelago, is today the national and official language of Indonesia and Malaysia where there are officially known as Bahasa Indonesia (The language of Indonesia) and Bahasa Malaysia (The language of Malaysia) respectively. ¹

In Malaysia, Bahasa Malaysia is spoken by about two-third of the country's twelve million population (Government of Malaysia (1973) cited by Onn (1976)) and is the mother tongue of some five million people. Because the term Bahasa Malaysia is often associated with the standard variety of the language, i.e. the variety used in official and non-casual environments, for the purpose of this thesis the term Malay will simply be used to refer to the variety of Malay spoken in Malaysia and in particular the variety spoken in Peninsular Malaysia.

Malay is a SVO language. Some examples of the basic sentences in Malay are given in (1).

(1)a. S V O

Budak itu makan nasi

Child the eat rice.

"The child ate rice".

b. S V O

Saya memukul budak itu.

I hit child the.

"I hit the child".

c. S V O

Ahmad beli buku itu

Ahmad buy book the.

"Ahmad bought the book".

Though Malay has SVO as its unmarked word order, it permits other orders as well by fronting the elements which the speaker wishes to bring attention to. Corresponding to (1c), for instance, we have (2a) and (2b).

(2)a. Beli buku itu, Ahmad

b. Buku itu Ahmad beli.

In (2a), the whole VP beli buku itu is fronted while in (2b), only the object noun phrase buku itu is fronted. However not all elements may be fronted as evidenced from the ungrammaticality of the following sentences.

(3)a. *Beli Ahmad buku itu.

b. *Buku itu beli Ahmad.

An important point which needs to be mentioned here, which is

crucial to my argument later on, is the fact that when an NP gets fronted it normally leaves a pronominal copy nya in its original place as illustrated by examples (4) - (6). This matter will be taken up again in chapter 11 and 111.

- (4)a. Saya menolong budak itu.
I help child the.
"I help the child".
- b. Budak itu saya menolongnya.
Child the I help-him.
"The child, I helped him".
- c. *Budak itu saya menolong.
Child the I hit.
- d. Budak itu saya tolong. ²
Child the I help.
"The child, I help (him)".
- (5)a. Ibu budak itu telah meninggal.
Mother child the compl. die.
"The child's mother has passed away".
- b. Budak itu ibunya telah meninggal.
Child the mother-his compl. die.
- c. *Budak itu, ibu telah meninggal.
Child the mother compl. die.
- (6)a. Ada buaya di dalam tasik itu.
Have crocodile at in lake the.
"There are crocodiles in the lake".

- b. Tasik itu, di dalamnya ada buaya.
Lake the at in-it have crocodile.
"The lake, there are crocodiles in it".
- c. *Tasik itu, di dalam ada buaya.
Lake the at in have crocodile.

0.11 Dialectal Difference

Malay can be classified into 4 main regional dialects namely the Johor dialect, which is spoken in the southern part of the peninsular i.e. in the state of Johor, Malacca, Selangor, Central Perak and Pahang; the northern eastern group, spoken in Kelantan and Trengganu ³; the northern group, which covers the states of Perlis, Kedah, Penang and Northern Perak and the Negeri Sembilan dialect which is spoken predominantly in Negeri Sembilan and some parts of Malacca. These 4 main dialects may further be subdivided into smaller dialects.

The classification into the various dialects, however, is mainly based on phonological and morphological phenomena. To my knowledge there has been no systematic study based on syntax though it is generally claimed that the difference in this aspect is small (Omar 1977).

0.2 Purpose and Scope of Study

The present study is concerned with one aspect of the Malay grammar namely the relative clause constructions. It attempts to

provide an explicit account of the formation of the relative clauses in Malay, using the transformational generative approach which developed out of work by Noam Chomsky in the mid-fifties and which forms the basis for many of the important works in linguistics in the past twenty years or so. The framework used is that of the Extended Standard Theory - EST for short. The basic assumption of this approach is that a sentence has a deep structure which is generated by a set of rules called the Phrase Structure Rules. From this deep structure or initial phrase marker, a surface structure is derived by means of another set of rules called the transformational rules. Every fluent speaker of a language is said to have internalized these rules and this reconstruction of the knowledge of the speaker accounts for his ability to recognize sentences from non-sentences of his language and to produce or understand new sentences which he has never heard or uttered before.

Though some linguists (Bresnan 1977; Brame 1976) have argued against the existence of transformational rules such as passives, datives, raising and Equi, proposing that these constructions are generated direct by the base rules, there seems to be a general agreement among linguists that constructions such as relative clauses, questions and topicalized sentences are transformationally derived.

There are good reasons for assuming the existence of deep structure at least for constructions with unbounded dependancy such as relative clauses. Consider the following sentences.

- (7) Ahmad telah meminjamkan buku yang ia beli itu kepada
Ahmad compl lend book that he buy the to
saya.

I.

"Ahmad lent the book he bought to me".

- (8) Ahmad telah meminjamkan buku itu / ia beli buku itu /
kepada saya. ⁴

Our intuition tells us that ia beli buku itu is somehow related to buku yang ia beli itu. How can this relationship be accounted for? Obviously one way of explaining this is by assuming the existence of deep structure. By assigning (8) as the underlying structure of (7), we can easily show the syntactic relation which holds between the relative clause buku yang ia beli itu in (7) and the embedded sentence ia beli buku itu in (8).

The argument for maintaining the existence of an underlying deep structure for relative clauses is perhaps more compelling if we consider sentences like (9) where the embedded sentence and the head noun of the relative construction is separated by a long stretch of material.

- (9) Budak yang mengikut laporan polis masih belum
Child that follow report police still not yet
diketahui siapa ibu bapanya itu telah dibawa ke
pass-know who mother father-his the compl bring

rumah sakit.

hospital.

"The child whose parents, according to the police report, is still unknown, was brought to the hospital".

It is not difficult to add more intervening material to this sentence and theoretically this intervening string could be of an indefinite length. Without positing a deep structure for (9) and allowing transformational rule to operate on such a structure, how could such a sentence be generated? It is fairly obvious that a phrase structure rule will not be adequate enough to generate such sentences because it would require stating a dependency across an indefinite amount of material. How can we explain that the relationship that holds between Budak yang mengikut laporan polis masih belum diketahui siapa ibu bapanya itu and budak itu masih belum diketahui siapa ibu bapanya is the same as that which holds between budak yang masih belum diketahui siapa ibu bapanya and budak itu masih belum diketahui siapa ibu bapanya in (10)?

- (10) Budak yang masih belum diketahui siapa ibu bapanya itu
Child that still not yet pass-know who mother father-
telah dibawa ke rumah sakit.
his compl bring to hospital.
"The child whose parents are still unknown was brought
to the hospital".

This generalization cannot easily be captured otherwise. 5

Another reason why the transformational approach is chosen is because of its explicitness. Transformational grammar aims at providing an explicit characterization of the speaker-hearer's tacit knowledge. Because of its explicitness, the validity of a proposed grammar can easily be tested. By testing it against an increasingly wide range of relevant examples, a proposed grammar may be refuted, modified or improved upon and in this way it is hoped that a better grammar and hence a better theory of language can be arrived at.

In Malay, syntax has always been the most neglected field of study and the few which have been done so far are mostly based on the standard variety of the language (Payne 1970; Lewis 1969; Karim 1975). The standard variety, as mentioned earlier, is the form used in non-casual and official settings; it is the form used in public speeches and mass-media and it acts as a language of education. Standard Malay almost always has to be learned in school and thus in some sense is artificial. It represents a form which should be acquired and not what has already been acquired by a native speaker. For this reason standard Malay will not be the main focus of the present study.

This study is mainly based on the knowledge of the writer as a native speaker of Malay.⁶ Specifically it is based on the dialect that is spoken in the state of Pahang - a dialect which according to the above classification falls under the Johor main dialect. However, realizing the importance of the role of standard

Malay as the official and national language and also as the unifying factor of the country's plural society, it will not be ignored totally. Where there exist grammatical differences between the dialect under study and the standard form mention will be made.

The emphasis of this study is to find a method of analysis which may best explain the characteristics of Malay relative clauses. It aims at providing an analysis which can describe Malay relative clauses in the most adequate manner. This study will include examination of several analyses proposed for English relative clauses, focusing its attention to two. The two analyses which will be closely be examined are the wh-movement analysis .. for full relatives and the base-generated hypothesis (Bresnan and Grimshaw 1978) for free relatives. Problems which arise out of the respective analyses, particularly as applied to Malay, will be explored and discussed and consequently an alternative analysis offered.

The main burden of the study is the task of providing evidence to show that the alternative analysis proposed is more adequate than those rejected. ⁷ In most studies of this nature the alternative analyses may appear to account for the same set of .. data. In such a situation, criteria of economy and simplicity will be considered. The general principle is to explain by rule formulation rather than by large exception mechanisms. This is in line with the methodology used in other theoretical sciences.

Other things being equal, an analysis with less rules or one which is able to express significant generalizations will be preferred.

In conclusion the aim of this study is two-fold. Firstly, as has been reiterated, is to provide an analysis that can best account for the linguistic structure of Malay relatives as used by the native speaker of Malay. Secondly, assuming that facts from a single language can in fact provide substantial evidence for linguistic claims, particularly claims about the universality of certain phenomena or rules such as the existence of COMP and wh-movement, it is also hoped that this study would be able to contribute to the study of linguistics in general.

0.3 The Problem

In English it is almost generally accepted that relativization, at least for relative clauses in which the relative pronouns appear in the surface string, involves movement of wh-word to a clause initial position, though linguists differ in opinion as to the exact process involved. Chomsky, for example holds the view that wh-movement is a cyclic rule which moves the wh-word from its initial position by successive movements into a COMP position. Others like Bresnan challenge this position and contend that the movement is unbounded in that the wh-word may be moved over an infinitely long stretch of material without having to be moved into the intermediate COMP positions. These analyses will be discussed and their applicability to Malay carefully considered.

to who and which in English or is it the same yang introducing sentential complements such as (13)?

(13)a. Saya tidak tahu yang orang itu bapa Ahmad.

I not know that person the father Ahmad.

"I did not know that the man is Ahmad's father".

b. Yang rahsia itu telah diketahui musuh adalah jelas

That secret the compl pass-know enemy is clear
sekali.

very.

"That the secrets were already known to the enemy is
obvious".

0.4 Organization of the Thesis

Chapter 1 deals with the internal structure of Malay relative clause. Four analyses which have been proposed for English namely **NPS**, Det-S, Nom-S and the Conjoined Construction analyses will be examined in the light of Malay data and I will attempt to show that of the four, the Nom-S analysis is capable of explaining a much wider range of facts. In Chapter 11, I will argue that since there is no motivation to assume that yang introducing a relative clause in Malay is a relative pronoun and since it behaves in just the same way as yang in complement constructions, the grammar of relative clauses in Malay will be made a lot simpler by analyzing yang as a complementizer. I will further argue that relativization in Malay does not involve a movement rule but a deletion rule which

deletes the left-most nominal of an embedded sentence which is coreferential with a nominal in the matrix clause. The requirement that the relativized element be in the left-most position will automatically account for the ungrammaticality of (14) as the direct result of the ungrammaticality of (4c) repeated here for convenience.

(14) *Budak yang saya menolong itu menangis.

Child that I help the cry.

"The child that I helped cried".

(4)c. *Budak itu, saya menolong.

Chapter III will be devoted to discussing relative clause formation and NP fronting rules within the trace-theoretical framework. It will be argued that the presence of what Chomsky claims to be the characteristics of wh-movement in relative constructions does not constitute evidence for a wh-movement analysis in Malay since these characteristics are also present in all constructions resulting from rules that have the effect of fronting NPs into the clause initial positions. It is further argued that none of these rules involve wh-movement and that these rules apply prior to relativization whenever the relativized element is not in the clause initial positions. In Chapter IV, free relatives will be dealt with and an analysis similar to that of full relatives is proposed as an alternative to the base-generated hypothesis advanced by Bresnan and Grimshaw (1978). Chapter V deals with two seemingly disparate constructions namely the non-restrictive

and the NP-Complement constructions. I will attempt to show that there is no motivation for deriving non-restrictive relatives from a different source from that of restrictive relatives and that an NP-Complement is an instance of relativization. I propose these constructions be derived by the same rule deriving restrictive relatives.

Notes to Preliminary Chapter

1. For discussion on the role of Malay, see Ruzui (1968).
2. The absence of nya following prefixless verbs will be discussed in Chapter 111, section 3.34.
3. Omar divides Malay into five dialects and classifies the Kelantan and Trengganu subdialects as two distinct dialects (Omar 1977).
4. The exact nature of the deep structure will be discussed in detail in Chapter 1.
5. A new approach to the PSR has recently been proposed by Gazdar (1980) which, it is claimed, is capable of accounting for unbounded dependency in constructions such as relative clauses as well as of accounting for whatever generalization there is to be captured between two (or more) constructions by means of meta-rules. Given complex symbols and meta-grammar, Gazdar argues that unbounded dependency can be accounted for adequately by PSR.

Within this revised PSR, relative clauses are introduced by a rule of the form (1),

$$(1) \quad 43, \quad \left[\begin{array}{c} \bar{N} \\ \bar{V}/\bar{N} \end{array} \right] \quad \dots$$

$R \left\{ \begin{array}{l} +wh \\ +Pro \end{array} \right\}$

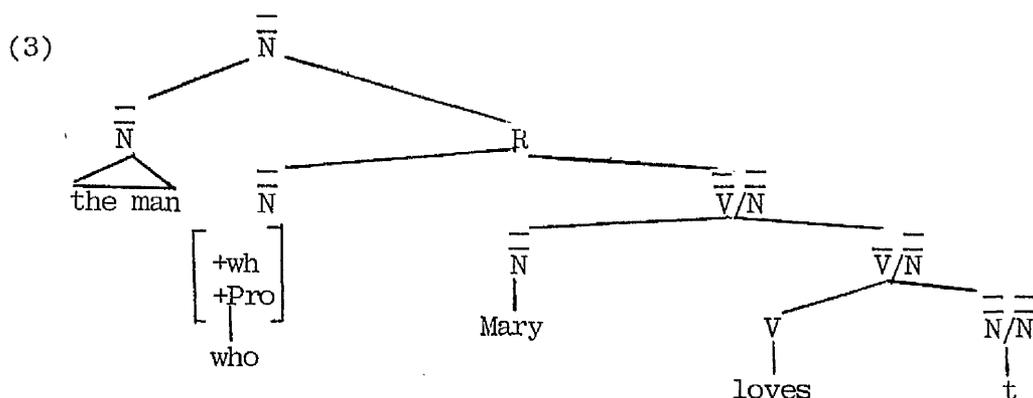
in which the number on the left represents the rule number, the

elements in the brackets the syntactic structure. The rule also includes the semantic representation, which in (1) is simply indicated by... \bar{V}/\bar{N} is a derived sentence which has a 'missing' \bar{N} in it. \bar{V}/\bar{N} is introduced by a linking rule of the form ϕ/β in which ϕ is any category that can dominate β , to indicate that somewhere down the tree there is a missing element of the type β . Another linking rule of the form β/β is introduced to eliminate the lowest derived constituent which in the case of relative clauses is \bar{N}/\bar{N} .

Let us take (2) to illustrate how relatives are analysed in this framework.

(2) The man who Mary loves...

(2) would be given the following structure :



Since the theory was not fully elaborated at the time this thesis was written, my understanding of this theory is necessarily limited, so it is not possible to base my analysis on this work.

6. Besides her own dialect, the writer is also fluent in standard Malay, which she acquired through her school education and also

through her experience in teaching the language.

7. A theory is said to be more adequate if it is capable of accounting for not only a given set of primary data but also for the speaker's intrinsic competence. For discussion on this, see Chomsky (1957; 1965; 1966; 1972 and 1975).

CHAPTER I

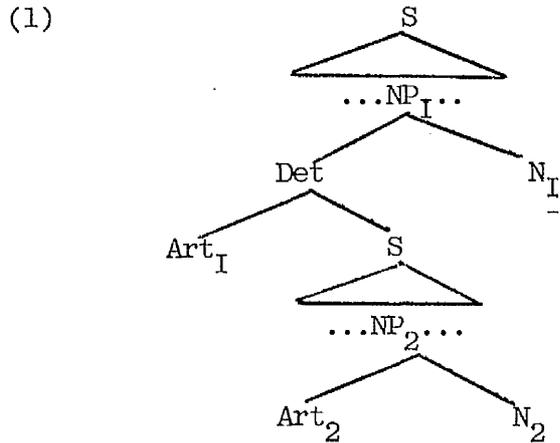
THE INTERNAL STRUCTURE OF A RELATIVE CLAUSE

1.0 A good deal of work has been done on the structure and formation of relative clauses in English and various other languages within transformational theory ¹. Though most people working in this aspect agree on the major issues, many of the details are still subject to much controversies. Most transformationalists, for instance, agree as to what constitute a relative clause ² but they differ in their opinion as to what the underlying structure looks like; that is the form of configuration in which the posited sentence appears and what precisely is the form of the sentence. Similarly though no one has ever argued against the identity condition needed between the relativized noun phrase and its antecedent in order for relativization to take place, they do not agree as to the exact nature of this condition. As a result of this, various analyses have been put forward. In this chapter, I will examine four of these analyses in the light of Malay data and will accordingly propose the analysis which correctly describes the structure of Malay relatives.

1.01 The Art-S Analysis

In the earlier analysis of relative clauses, the embedded sentence is analysed as part of the determiner constituent of the main sentence (Smith 1964; Chomsky 1965). This analysis is commonly referred to as the Art-S analysis. According to this

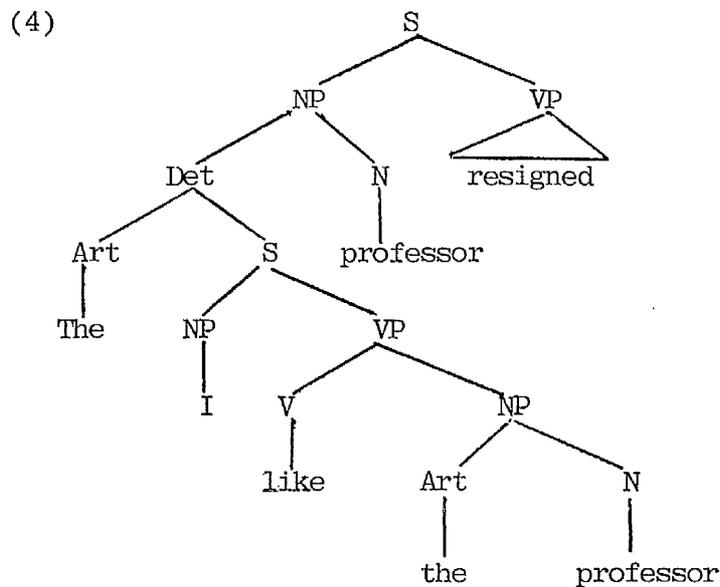
analysis the underlying structure of a relative clause is as represented in (1).



Sentence (2) is thus claimed to have been derived from (3) with (4) as its underlying phrase marker.

(2) The professor I like resigned.

(3) The (I like the professor) professor resigned.



One of the arguments put forward in support of this analysis is the interaction between the relative clause and the determiner of its head. In English, there is a class of words such as way, kind, manner, time and place which cannot occur at all unless there is either a relative clause or some kind of demonstrative pronoun. (5) and (6) illustrate this point.

- (5)a. *He did it in a / the way.
- b. He did it in a certain way.
- c. He did it in that way.
- d. He did it in the way I prescribed.

- (6)a. *He is a / the kind of person.
- b. He is that kind of person.
- c. He is the kind of person I admire.

Within this analysis it is possible to put a constraint on the insertion of such words namely that the determiner within them cannot consist solely of [-Dem] [+Art] . Moreover this constraint may be stated in a single constituent - the determiner.

The second argument in favour of this analysis is the inability of restrictive relatives to cooccur with genitive NP in the determiner, as illustrated by (7).

- (7) *John's book that you stole...

The determiner hypothesis predicts this ungrammaticality by claiming that when a determiner is already filled by an NP the expansion Art-S is unavailable. Stockwell et al (1973) discusses three problems faced by this analysis which then led to alternative analyses. The three problems can be subsumed under one main problem namely that of stating the identity conditions of the shared noun phrases. There are three possible ways in which the identity condition may be stated in a configuration such as (1). One is to state that the identity condition holds between N_1 and N_2 , another is to state that it holds between NP_1 NP_2 and finally, the identity condition may be stated to hold between Art_1 and N_1 on the one hand and Art_2 and N_2 on the other. In the first case, the problem of stacking or self-embedding will arise. There is no conceivable way of stopping sentences such as (8) from being generated without also excluding the grammatical ones such as (9).

(8) *The horse that that started late finished fast won the race.

(9) The fact that the evidence that Nick was guilty was interesting led to the wrong conclusion.

In the second case, no relativization can take place since the two noun phrases in question are not identical. NP_1 contains an embedded sentence while NP_2 does not, thus the condition for relativization is not met. This will leave us with the last option, which is probably the most satisfactory of all the three. By stating the identity condition between Art_1 and N_1 on the one hand and Art_2

and N_2 on the other, the problem of noun phrases not being identical is eliminated. However, recall that one of the arguments which is claimed to favour the Art-S analysis is that the constraint on the occurrence of certain words may be stated in a single constituent. Now if the identity condition were to be stated as to hold between $(Art_1 \text{ and } N_1)$ and $(Art_2 \text{ and } N_2)$, clearly the advantage of stating constraint within a single constituent cannot be maintained. As an illustration consider (10), which according to this hypothesis would have (11) as its underlying structure.

(10) The man who I hired had one eye.

(11) The (I hired the man) man had one eye.

Clearly in this case the identity condition has to be stated in term of discontinuous constituents as given in (12).

(12)	X	-	[Art	[X	[Art	-	N]	X]	N]	X		
			Det	S	NP.							
	1		2	3	4	5	6	7	8		⇒	
	1		2	3	WH		6	7	8			
			Condition: 4+5 = 2+7									

Finally this analysis is not able to handle sentences such as (13) whose underlying structure is presumably (14) and not (15).

(13) The car struck a child that ran into the street.

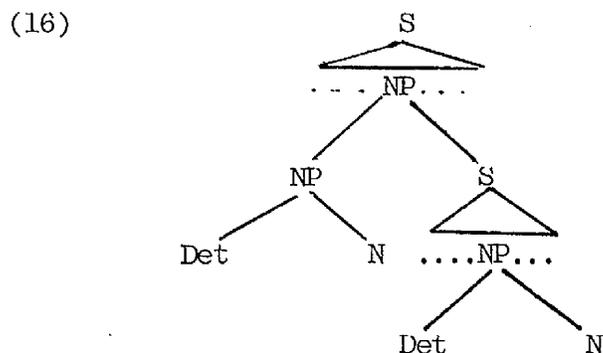
(14) The car struck a (the child ran into the street) child.

(15) The car struck a (a child ran into the street) child.

As we can see from (14), the article of the NP in the embedded sentence is not identical with the article in the head NP. The analysis would wrongly predict that relativization is not possible since the structure does not meet the structural description for relativization given in (12).

1.02 The NP-S Analysis

The NP-S analysis which was first proposed by Ross (1967) is the most widely assumed analysis of relative clauses today. According to this analysis the embedded sentence is dominated by the NP that dominates the antecedent NP. In other words the embedded sentence is sister-adjoined to the head NP in the matrix sentence. The phrase marker of a relative clause, according to this analysis is as given in (16).



Thus the underlying structure of (2) is (17) with (16) as its tree

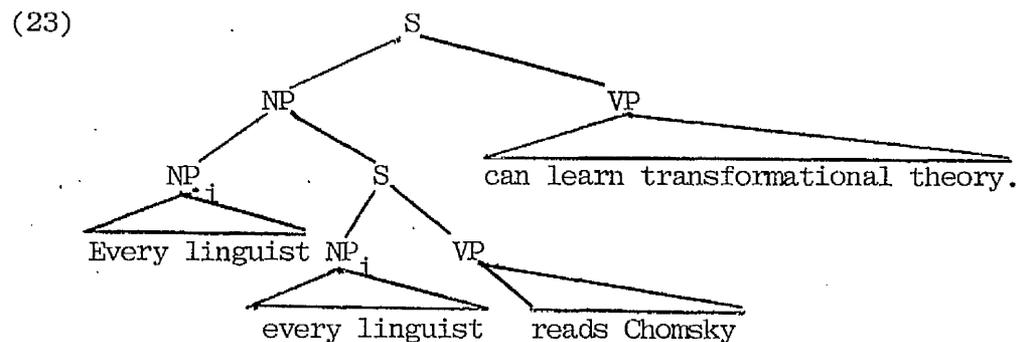
- (20) X - [NP [X - NP - X]] X
 1 2 3 4 5 6 ⇒
 1 2 3 WH 5 6
 Condition: 2 = 4

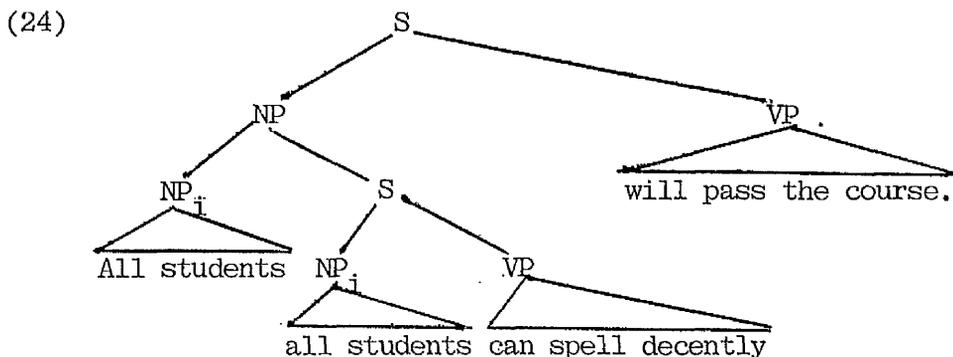
The requirement for coreferentiality of the identical NPs has however given rise to a number of problems. Consider (21) and (22).

- (21)a. Every linguist who reads Chomsky can learn about transformational theory.
 b. Every linguist reads Chomsky.

- (22)a. All students who can spell decently will pass the course.
 b. All students can spell decently.

According to the NP-S analysis (21) and (22) would be given underlying structures something like (23) and (24) respectively.





This is undesirable since the (a) sentences in both (21) and (22) do not entail the (b) sentences. It appears that the analysis is forced to either impose a constraint against the relativization of sentences with shared NPs involving universal quantifiers or to analyse sentences with such NPs by a different process.

One of the analyses which has been proposed is to derive relative clauses on NPs involving universal quantifiers from conditionals if ... then ... Sentences (21) and (22) are proposed to derive from structures corresponding to those of (25) and (26) respectively.

- (25)a. If he reads Chomsky, every linguist can learn about transformational theory.
- b. Every linguist can learn about transformational theory if he reads Chomsky.

- (26)a. If they can spell decently, all students can pass their course.
- b. All students can pass their course if they can spell decently.

The if... then... analysis, however, cannot account for quantifiers like few and each for the paraphrase relation does not hold when the if-clause is in the initial position. (27) and (28) are examples of such sentences.

- (27)a. Few scholars who ignore their predecessors do well.
- b. ?If they ignore their predecessors few scholars do well.
- c. Few scholars do well if they ignore their predecessors.

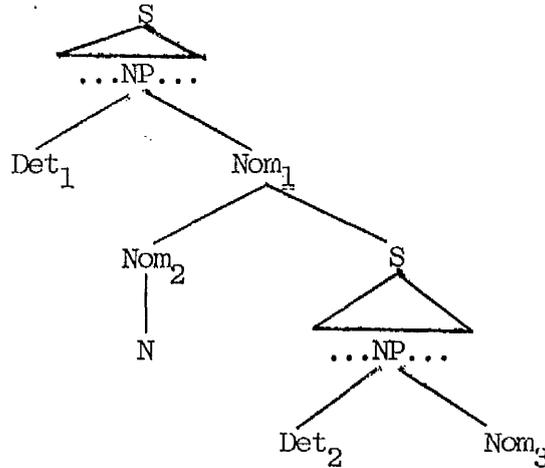
- (28)a. Each apple that falls from the tree is ripe.
- b. ?If it falls from the tree each apple is ripe.
- c. Each apple is ripe if it falls from the tree.

If, as proposed, sentences with quantified NPs are derived from the if... then... conditionals, then the (b) sentences of (27) and (28) should be alright under the required interpretation where the pronoun is bound by the quantified expression.

1.03 The Nom-S Analysis

The Nom-S analysis analyses relative clause as derived from the following structure.

(29)



The main argument in favour of this analysis is that a relative clause appears to modify the matrix noun and not the matrix noun phrase as a whole. The argument which was first suggested by Janet Dean (1967) cited by Stockwell et al is based on an entailment relation. By analysing relative clause as modifying the noun and not the noun phrase of the matrix sentence, we have a natural way of explaining why sentences involving quantified expressions such as (21a) and (22a) do not entail their (b) sentences. The problem of identity condition for relativization in sentences with quantified NPs such as those in (21) and (22) is eliminated because according to this analysis there is a single point at which the quantifier is generated, that is the top-most determiner. Within this analysis the identity condition is required between Nom₂ and Nom₃ of (29). This can be stated in the form of (30).

(30) X - Nom [X [X - Nom - X]] X

			S	NP				
1	2	3	4	5	6	7		
1	2	3	WH	5	6	7		⇒

Condition: 2 = 5

It is also proposed that Det_2 of (29) must be [-Def, +Spec, -WH] . This requirement is needed to explain a number of otherwise unexplained problems. It serves to block relativization on predicate nominals such as (31).

- (31)a. The man is a lawyer.
- b. *The lawyer that the man is leaves work early.
- c. The sun is the source of energy on earth.
- d. *The source of energy on earth that the sun is cannot be unexhaustible.

And finally the constraint imposed on the determiner of the NP in the embedded clause naturally explains why sentences such as (32a) is interpreted as (32b) and not (32c).

- (32)a. I know Mary Smith who plays bridge.
- b. A [certain - [+Spec]] Mary Smith plays bridge.
- c. Mary Smith plays bridge.

1.04 Deep Structure Conjunction Analysis

All the three analyses of relative clause outlined in 1.01, 1.02 and 1.03 above have one thing in common. All of them assume that the underlying structure of a relative clause contains a sentence embedded in an NP. Thompson (1971) takes a rather different view altogether. She proposes that the underlying structure for a relative clause is a conjunction. For her the following are indications that a conjunction source is correct (Thompson S. A. 'The

deep structure of relative clause'. In C. J. Fillmore and D. T. Langendoen (eds) Studies in Linguistic Semantics. p.79)

- a. To my knowledge, no arguments defending an embedding analysis against the conjunction analysis for relative clause sentences have even been presented either in the literature or informally.
- b. There is virtually no agreement among those who assume that relative clauses are underlying embedded as to what configuration of nodes is appropriate to represent the relationship between the two sentences...
- c. There is a significant but generally overlooked set of structural distinctions between relative clause sentences and those complex sentences which are clearly realizations of structures containing embedded sentences, namely those containing sentential subjects or objects,...

Following Thompson's conjunction analysis the underlying structure of (33) is (34).

(33) I met the girl who speaks Basque.

(34) (I met the girl) (girl speaks Basque).

The choice of clause to become the relative clause is claimed to correlate with a certain supposition on the part of the speaker as

to what is already known to the hearer and accordingly with the choice of the determiner. It is claimed that (35) and (36) are acceptable if the speaker presupposes that the hearer knows neither about his meeting a girl nor about a girl speaking Basque.

(35) I met a girl who speaks Basque.

(36) A girl I met speaks Basque.

If the speaker presupposes that there is a girl such that it is known by the hearer that he met her, the relative clause sentence corresponding to this presupposition will have the conjunct containing met as the relative clause and the head noun will be definite as in (37).

(37) The girl I met speaks Basque.

If, on the other hand, the speaker presupposes that his hearer knows about the girl who speaks Basque, the corresponding relative clause sentence will have the conjunct speaks Basque as the relative clause and again the head noun will be definite as shown in (33).

1.1. The Internal Structure of Malay Relatives

In the foregoing sections, I have outlined the four major analyses of relative clauses which have been proposed for English together with the arguments and problems for each. In this section I will examine these analyses in the light of Malay data.

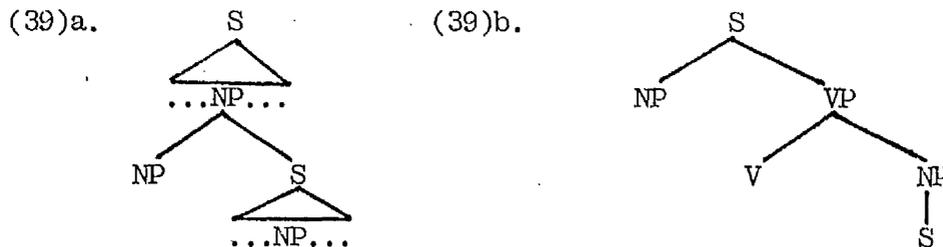
and will argue that the Nom-S analysis is preferred for the analysis of Malay relatives.

I do not propose to discuss Thompson's account of relative clauses at great length for since many of the details are not made explicit, the exact process is still unclear. She does not, for instance, even mention what sort of rules are needed to derive the surface strings from the underlying conjunctions. However, there are a couple of comments I would like to make. Firstly as pointed out by Werth (1976), the first two of what Thompson claims to be indications for conjunction source for relative clauses, have very little content. The fact that there have been no arguments defending the embedding analysis against the conjunction one is not in itself an indication that the conjunction analysis is correct, as she claims. Since the conjunction analysis came later, it is the burden of the proponents of this analysis to defend it against the embedding analysis and not the other way round. Similarly, the fact that there is no agreement, among those who assume embedding analysis, as to what constitutes the appropriate configuration of the underlying structure of relative clause does not provide evidence that relative clauses are derived from conjunctions. Her third argument (or rather implication) is concerned with the difference between relative clauses and the obvious cases of embeddings. She pointed out that there is a difference between the obvious case of embedding such as (38) and relative clause constructions and she claims that the difference can be captured by an analysis in which sentential subjects and objects are instances of underlying embeddings and relative clauses are only

superficially embedded.

- (38)a. That Frieda likes to cook is obvious to me. [1]
b. I think that Frieda likes to cook. [2]

I certainly agree with Thompson that the difference in behaviour between those two types of sentences can be accounted for if they were given different underlying structures. But even under the embedding analysis of the relative clause, as we can see from (39), the two constructions are given different underlying structures.³ This is sufficient to account for the different behaviour, such as the obligatoriness of the embedded sentences and the relation between the main verb and the type of clause that can occur with it in sentences like (38).



The second point I would like to make is the problem of determining which of the two conjuncts forms the matrix and which one forms the constituent sentence. Thompson claims that the choice of matrix and constituent sentences has nothing to do whatsoever with the structural property of the sentence but is determined by presupposition on the part of the speaker as to what the hearer has already known. Now consider the following sentences in Malay.

- (40) Ali mengemukakan masalah-masalah yang tidak terfikir
Ali bring up problem that not pass-think
oleh kita.
by we.
"Ali brings up problems which we never thought of".

- (41) Awak tentu tidak akan percaya cerita yang saya hendak
You sure not will believe story that I want
ceritakan ini.
tell this.
"You are definitely not going to believe the story I am
going to tell you".

Thompson's analysis is going to predict that in the case of (40) the speaker presupposes that there are some problems such that it is known to the hearer that both the hearer and the speaker have never thought of them. It is rather strange to me for a speaker to presuppose the existence of problems which they (the speaker and the hearer) have never thought of and further to presuppose the hearer has already known that they have never thought of those problems. In (41) it is fairly obvious that the speaker knows very well that the hearer has no idea that he is going to tell him a story, until he actually uttered this particular sentence. Clearly in both cases it is not presupposition which decides which of the two clauses forms the main clause and which of them forms the constituent clause.

1.10 Arguments for Nom-S Analysis

1.101 NP Heads Involving Universal Quantification

In section 1.02 we saw that one of problems which remains unsolved by the NP-S analysis which may be considered as the standard analysis today, is the problem presented by quantified noun phrases. The same problem is present in Malay. Consider the following sentences.

(42)a. Semua orang yang datang itu membawa hadiah.

All people that come the bring present.

"All the people who came brought presents".

b. Semua orang datang.

All people come.

"All the people come".

(43)a. Tiap-tiap orang yang kenal Ali mengatakan

Each people that know Ali say

Ali baik.

Ali good.

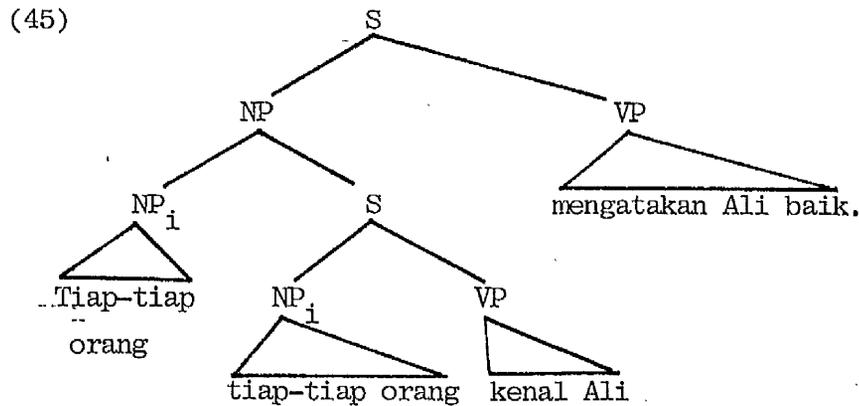
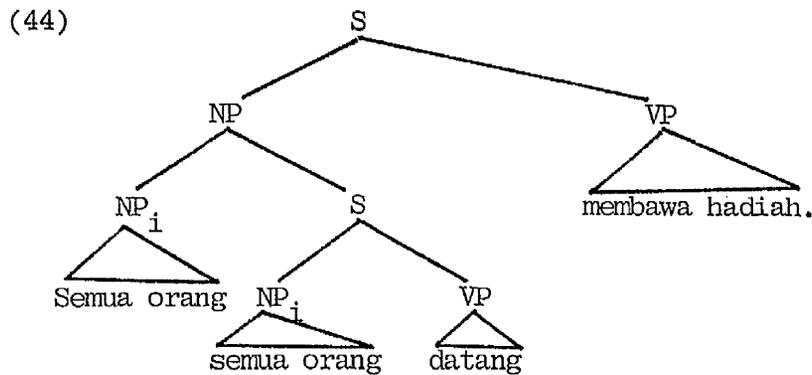
"Everyone who knows Ali says Ali is good".

b. Tiap-tiap orang kenal Ali.

"Everyone knows Ali".

Clearly the (a) sentences of (42) and (43) do not entail the (b) sentences. Therefore they could not possibly have been derived

from underlying structures such as (44) and (45) without seriously complicating the rules which relate syntactic structures to semantic interpretation. This is because within this framework, deletion rules necessitate deep structure interpretation and yet Quantifiers appear to demand surface structure interpretation.



One solution which has been put forward to solve this problem is to impose a constraint against relativization on quantified NPs by requiring that the noun phrase in the relative clause cannot be quantified even though the antecedent NP is quantified. However such a constraint would wrongly predict that sentences of the type

(46a) do not entail their corresponding (b) sentences.

- (46)a. Kedua-dua orang yang baru sampai itu menegur Ahmad.
Card - two people that just arrive the greet Ahmad.
"Both the men/women who had just arrived greeted Ahmad".
- b. Kedua-dua orang itu baru sampai.
"The two men/women had just arrived". ⁴

Another proposal was suggested by Carden (1967), who proposed that the noun phrase does not include the quantifiers at the time when the relevant identity condition is checked. To me, this can be taken as an argument for the Nom-S analysis for if the quantifier is excluded from the noun phrase, the remaining elements that will be relevant for checking the identity condition would be the string referred to as Nom. In other words the rule of relativization will operate when the Nom in the embedded clause is identical to the Nom in the matrix.

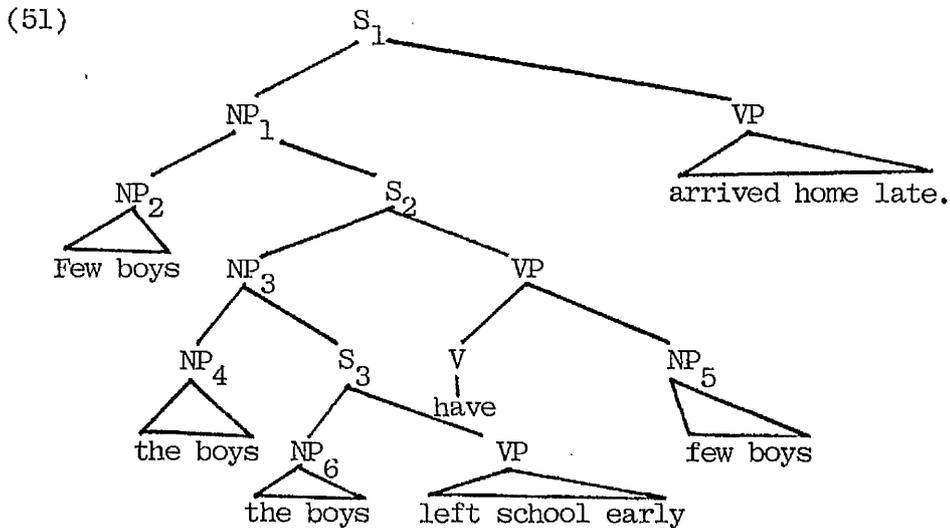
Yet another proposal was given by Lee (1971), who maintained that there is no quantifier in the embedded clause. Underlying (42a) and (43a), following Lee's hypothesis would be structures corresponding to those of (47) and (48) respectively.

- (47) Semua orang [orang datang] membawa hadiah.
All people people come bring present.
- (48) Tiap-tiap orang [orang kenal Ali] mengatakan Ali baik.
Each people people know Ali say Ali good.

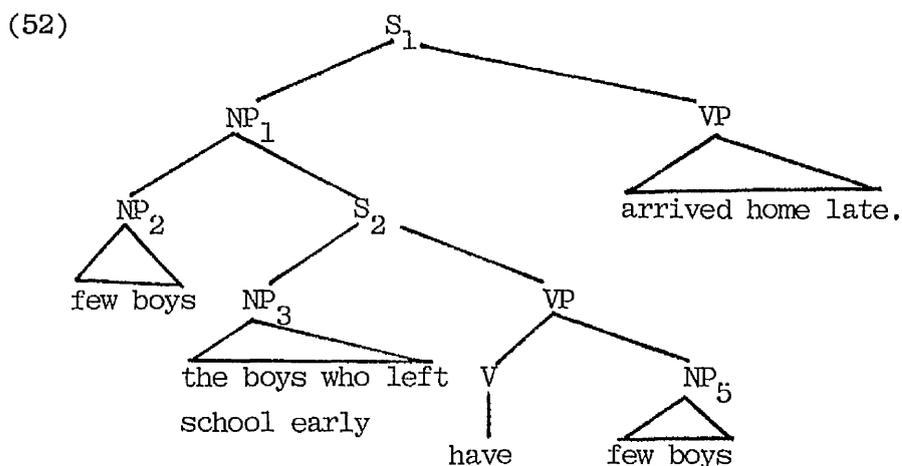
As we can see, these underlying structures as they are, will not allow relativization to take place because the noun phrases in question are neither identical nor coreferential. The only way to get identity is to remove the quantifier from the matrix noun phrase, that is to hypothesize that the quantifier is not present when relativization takes place. This is exactly what Lee did. He proposed that the quantifier is dominated by S and claimed that the of is closely related to possessive and has an internal structure of have. Sentence (49) is thus claimed to have been derived from (50) with (51) as its tree representation.

(49) Few boys who left school early arrived home late.

(50) Few boys of the boys who left school early arrived home late.



How the surface structure is arrived at is given as follows. First relativization applies on S₂ giving the intermediate structure (52).



Then relativization applies on S_1 producing (53).

(53) *The few boys which the boys who left school early
have arrived home late.

Then the of-have substitution will apply resulting in (54).

(54) The few boys of the boys who left school early arrived
home late.

Finally a deletion rule, the quantifier Equi-noun deletion as he called it, applies giving the surface structure (49). One problem with this analysis, apart from its highly complex derivation, is that it has to make the of-have substitution an obligatory rule so that (53) is blocked. This obligatoriness is necessary in order to make this particular analysis work. Of-have substitution in clear cases of possessive are not obligatory, as illustrated by (55) and (56).

(55) The house which the farmer has...

(56) The house of the farmer...

Another problem which Lee realizes himself is the question whether have which expresses set inclusion is related to identity of NP. In other words NP₅ in (51) which is a sub-set of NP₄ are identical nouns. Some kind of measure is needed in order to make sure that the NPs in question are identical before relativization takes place.

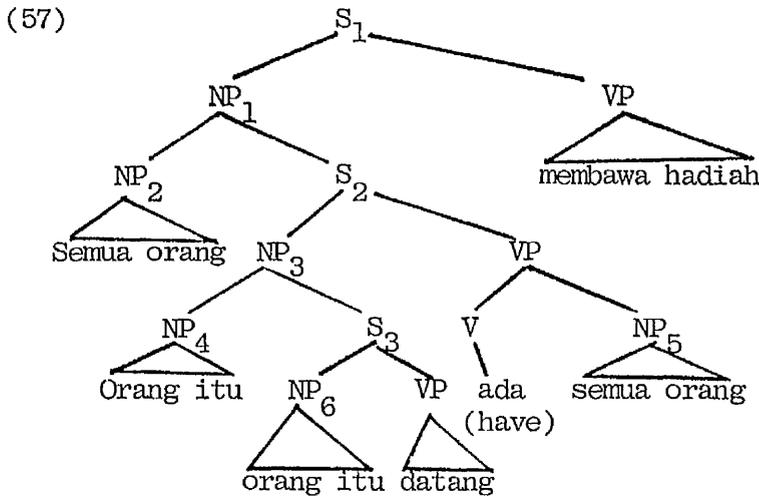
Selkirk (1977) argues against noun phrases like many objections, several workers, few men etc being derived from partitive in favour of a simple noun phrase analysis. She provides three arguments to support the simple noun phrase analysis. The arguments are based on the following facts. ⁵

- (i) the agreement in syntactic features between quantifier and the head noun,
- (ii) the number marking on verbs and relevant adverbials within relative clauses related to these nouns phrases and
- (iii) extraposition of PP complements to the head noun phrase.

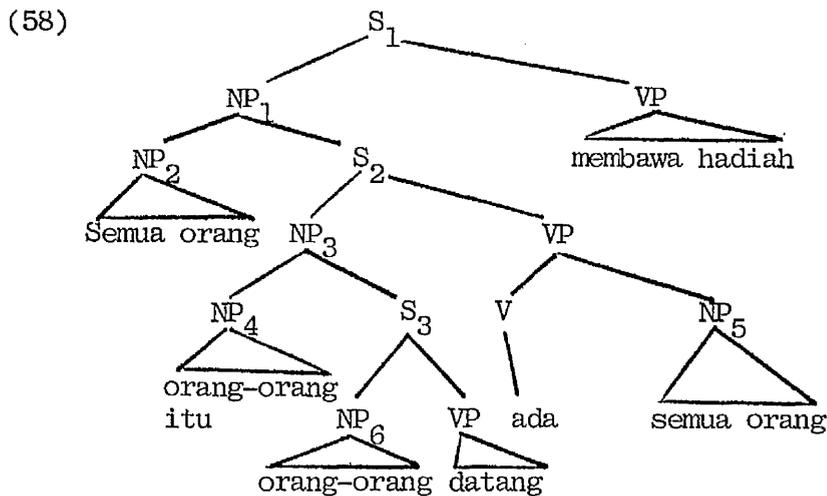
Since none of the arguments above seems to be applicable to Malay, let us then assume at least for the sake of argument that the partitive analysis is correct and see if this analysis may be applied to Malay. We will take (42a) to illustrate. Following this

hypothesis (42a) would be derived from a deep structure which might look like (57).

- (42)a. Semua orang yang datang itu membawa hadiah.
"All the people who came brought presents".



But it cannot be (57) since the string orang itu itself cannot be interpreted as plural and therefore orang itu ada semua orang is not possible. ⁶ An alternative is to give (42a) an underlying structure of (58).



Relativization will apply on S_2 producing an intermediate structure of (59).

- (59) Semua orang [orang-orang yang datang itu ada semua
All people people that come the have all
orang] membawa hadiah.
people bring present.
"All the people [the people who came have all the
people] brought presents.

Then relativization applies on S_1 cycle giving rise to (60).

- (60) Semua orang yang orang-orang yang datang ada, membawa
hadiah.
"All the people who the people who came have brought
presents".

Finally, a process which is parallel to the of-have substitution applies resulting in (61).

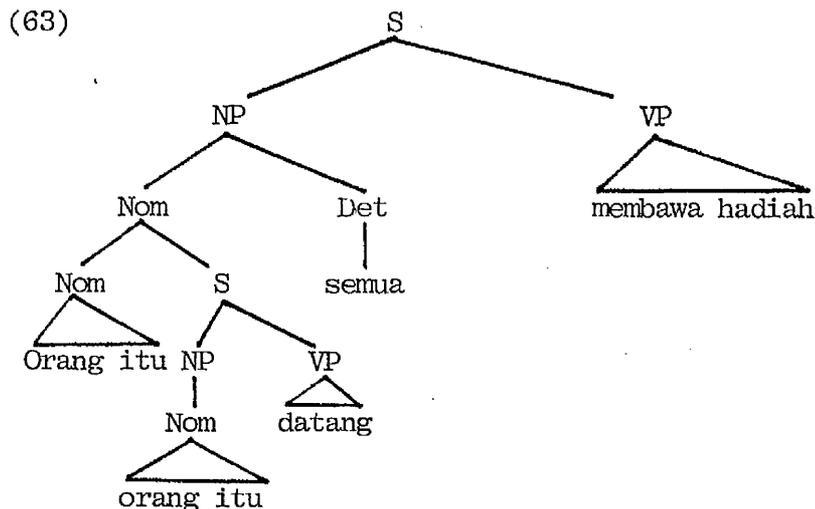
- (61) Semua orang orang-orang yang datang membawa hadiah.
"All the people (of) the people who came brought presents".

The problem now is the quantifier Equi-noun deletion. Lee did not give the formalization of the rule. I assume that the second noun gets deleted under identity with the preceding noun. But as we can see from (61) the nouns in question are not identical and therefore deletion cannot take place without further complicating the under-

lying structure. It is possible to say that the deep structure of semua orang is actually semua orang-orang. Then we need some other rule to make sure that the reduplicated form does not appear on the surface structure because strings such as (62) are ungrammatical.

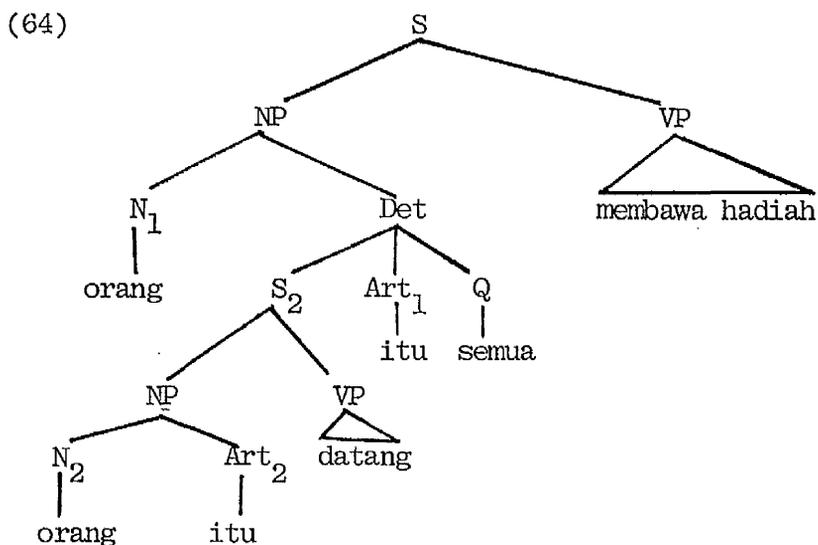
- (62)a. *Semua orang-orang...
- b. *Tiga buah buku-buku...

The whole complicated derivation is unnecessary if we were to adopt the Nom-S analysis since within this analysis quantifiers can only be generated at the top-most determiner node. The underlying structure of (42a) can be roughly represented by (63). The actual structure will be given in section 1.11.



A satisfactory solution to the problem of quantified noun phrase is not known and still remains as an unsolved problem for the NP-S analysis.

Quantified noun phrases not only pose problems for the NP-S analysis but also for the Art-S analysis. Within the latter, the underlying structure of sentence (42a) is presumably as given in (64) where the quantifier is generated as a sister to Art dominated by Det.



Given that $N_1 + Art_1$ is identical to $N_2 + Art_2$, relativization applies resulting in (65) which is a variant of (42a).

- (65) Orang yang datang itu semua membawa hadiah.
 People who come the all bring present.
 "The people who came all brought presents".

But notice that by giving (64) as the underlying structure we are claiming that Art_1 and the embedded sentence together with N_1 do not form a constituent. Assuming that only constituents may be deleted under identity with some nouns in the preceding clause it

can be shown that they do form a constituent since they may be deleted under identity with material in the preceding clause as shown in (66) and (67).

(66) Orang yang datang itu semua membawa hadiah, [orang
People that come the all bring present people
yang datang itu] tidak seorang pun tidak membawa
that come the not one-people emph. not bring
hadiah.

present.

"All the people who came brought presents, not even
one person did not bring present".

(67) Orang yang datang itu semua membawa hadiah, tidak
seorang pun tidak membawa hadiah.

The /___/ indicates the site where the identical material has been deleted. As we can see from (66) which is the string corresponding to the source for (67) the material which has been deleted is the string orang yang datang itu, that is N_1 , S_2 and Art_1 (64). In addition to that, in order to arrive at the surface structure (42a), we need some raising rule so that the quantifier can be attached to N_1 which is a node higher. I am not aware of any independent motivation for such a rule.

1.102 Noun Phrases with Prepositional Phrases

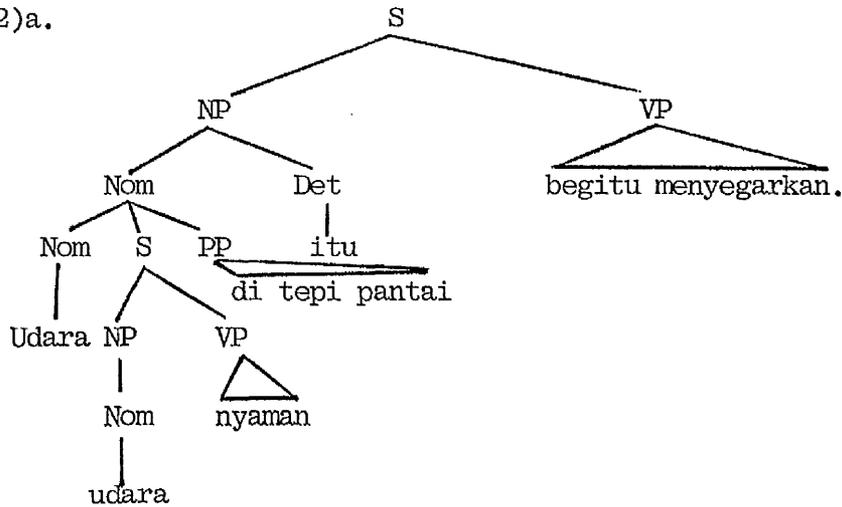
Another set of evidence which argues for the Nom-S analysis

is provided by sentences such as (68) and (69).

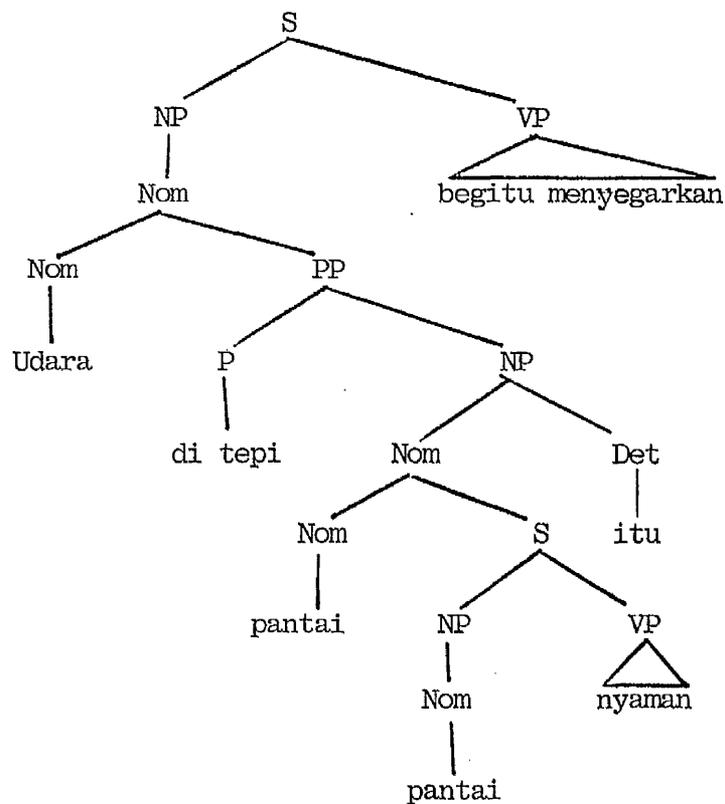
- (68)a. Udara yang nyaman di tepi pantai itu begitu menyegarkan.
Air which cool at edge beach the so refreshing.
"The cool air by the beach is so refreshing".
- b. *Udara di tepi pantai yang nyaman itu begitu menyegarkan.
Air at edge beach which cool the so refreshing.
"The air at the beach which is cool is so refreshing".
- (69)a. Rumah yang cantik di tepi pantai itu menarik perhatiannya.
House which beautiful at edge beach the attract attention-
his.
"The beautiful house at the beach attracts his attention".
- b. Rumah di tepi pantai yang cantik itu menarik perhatiannya.
House at edge beach which beautiful the attract attention-
his.
"The house at the beautiful beach attracts his attention".

Let us first consider (68). Within the NP-S analysis, given that the underlying structure of (68) is (70), two problems emerge. Firstly the analysis would wrongly predict that (68b) is grammatical on the reading that the air at the beach is cool, and secondly there is no way of generating (68a). The analysis is doing just the opposite of what it is supposed to do - generating sentences which should be excluded and unable to generate the grammatical ones.

(72)a.



(72)b.



If this is correct then there is no way in which the relative clause yang nyaman in (68b) may be interpreted as modifying the noun udara.

The analysis will also predict that (68b) is grammatical but

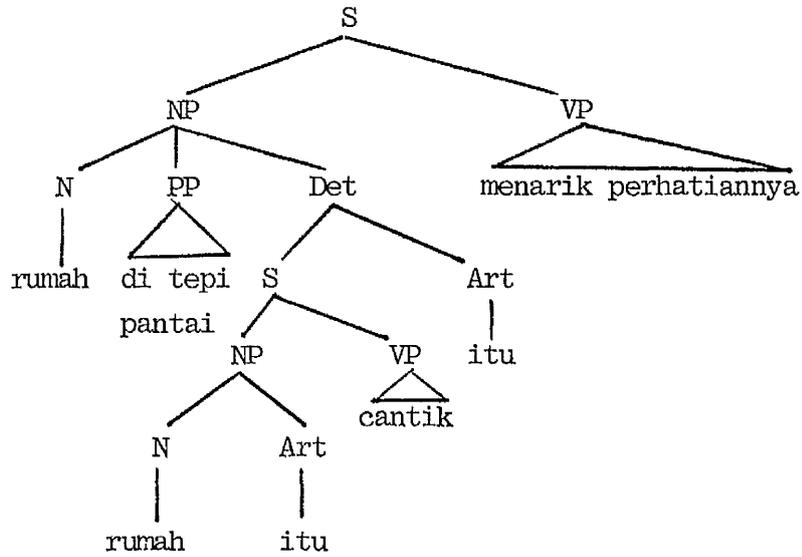
However, in (69b) the relative clause only has the second reading. In order for the relative clause to be interpreted as modifying the noun rumah, sentence (69a) is used. One could, of course, argue that the sentence such as (69b) are ambiguous between the two readings but the perceptual strategy which says interpret an expression as not discontinuous if possible excludes one at performance level (Grosu (1971)). This strategy would explain why the relative clause who is pregnant in (74a) and (74c) is understood as modifying a woman whereas in (74b) it is interpreted as modifying a girl.

- (74)a. A woman who was pregnant hit a girl.
- b. A woman hit a girl who was pregnant.
- c. A woman hit the curb who was pregnant.

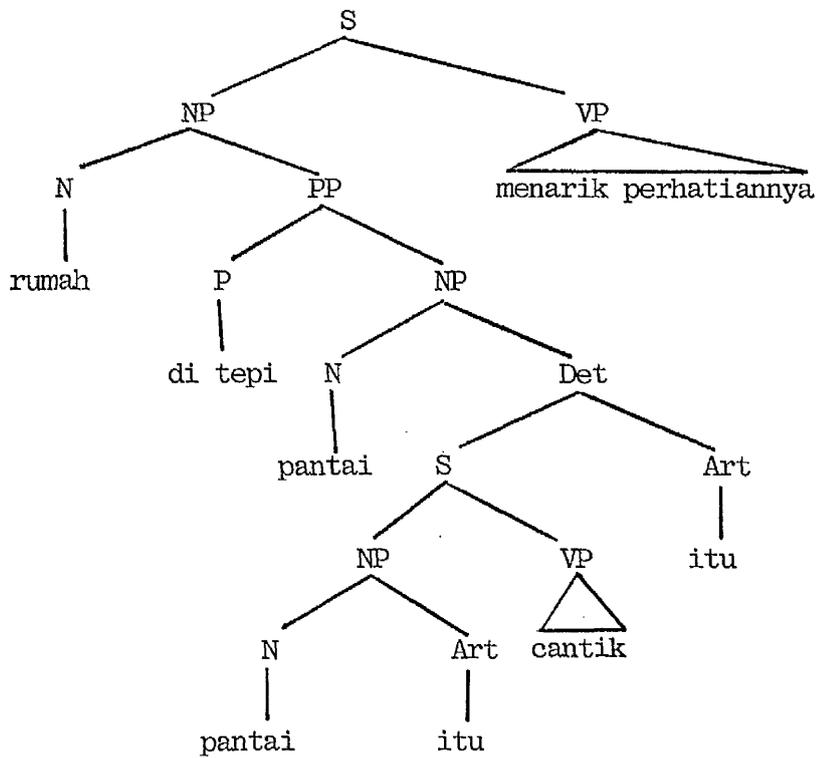
If it is true that the interpretation in which the relative clause yang cantik itu as modifying the noun rumah is excluded by such a perceptual strategy then we would expect in cases like (68b) where there is no possible noun that may be modified by the relative clause yang nyaman itu intervening between the NP udara and the relative clause, the sentence would be alright. But as we have already seen (68b) is unacceptable.

The same problem is faced by the Art-S analysis. According to this analysis, there are two possible underlying structures for (69b). They are as given in (75a) and (75b).

(75)a.



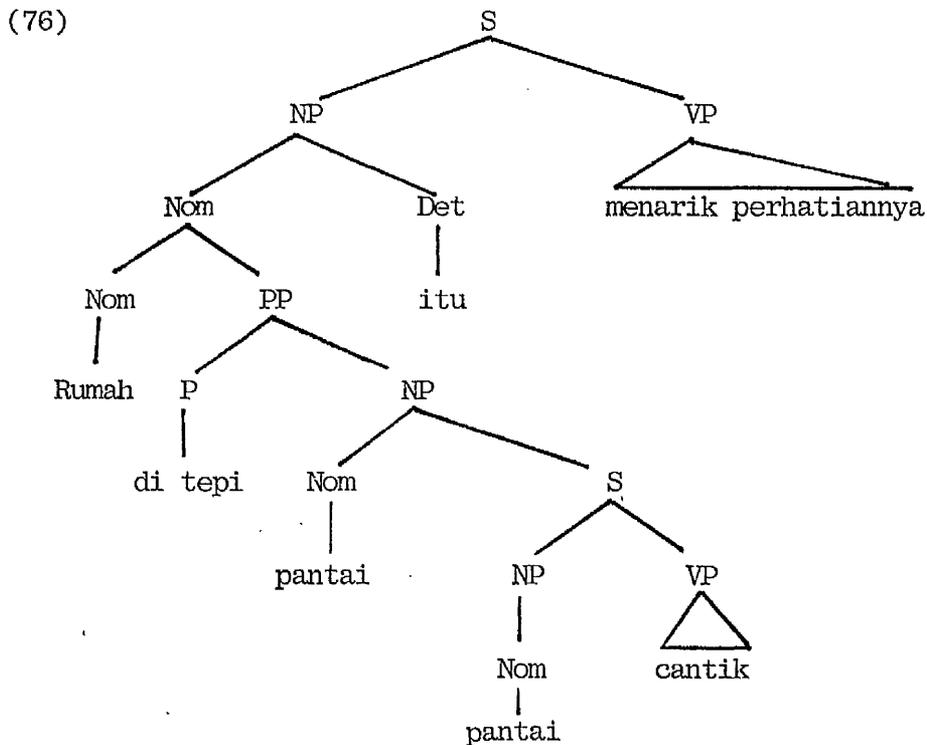
(75)b.



Just like the NP-S analysis, the Art-S analysis predicts that (69b) would have two readings. The fact that only the reading in which the relative clause modifies the noun pantai is possible argues

against the Art-S analysis too.

Under the Nom-S analysis, (69b) would be given only one underlying structure (76) and this explains why the sentence has only one interpretation.

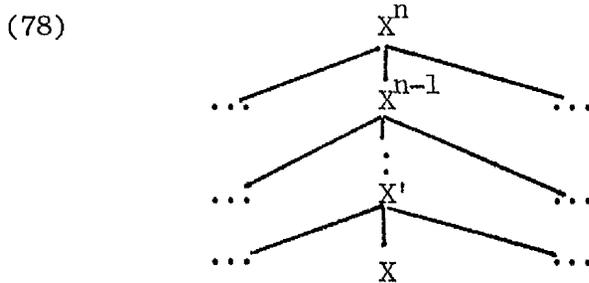


1.11 The Nom-S Analysis and the X' Convention

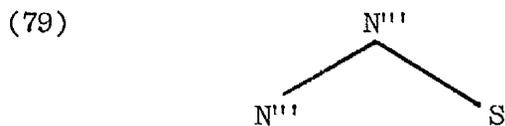
The Nom-S analysis of the relative clause is compatible with the X' theory which was first introduced by Chomsky in "Remarks on Nominalization" (1970) and later expanded by Jackendoff (1977a,b). One of the principle claims made by this hypothesis is that every lexical category X must be dominated by a hierarchy of categories X', X'', X'''...Xⁿ by a phrase structure rule of the form (77).

(77) $X^n \longrightarrow \dots X^{n-1} \dots$

The schema in (77) is claimed to be provided by the universal grammar and produce phrase structure configuration of the form (78).

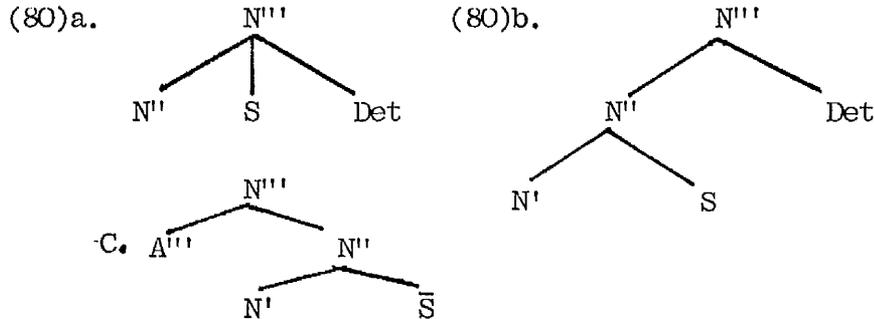


Within this framework, the NP-S analysis of the relative clause is not a possible phrase structure in the grammar because in such an analysis the node NP dominates an NP. In the X' term the NP-S analysis will have a configuration of (79) where the dominating and the dominated noun phrases belong to the same categorial level.



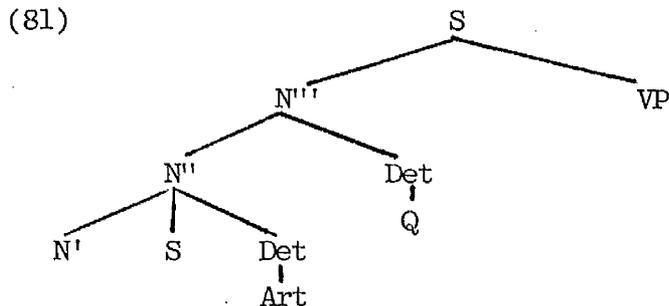
In Malay, in order for the relative clause analysis to be compatible with the X' hypothesis the structure has to be either (80a) or (80b). I will argue that (80b), which is actually a modified form of (29) (p. 37) is the correct configuration for Malay relatives.⁸ The only apparent difference between (80a) and (80b) is that in (80a) the embedded sentence together with its antecedent Nom are dominated by N''' (NP) whereas in (80b), they are dominated

by N'.



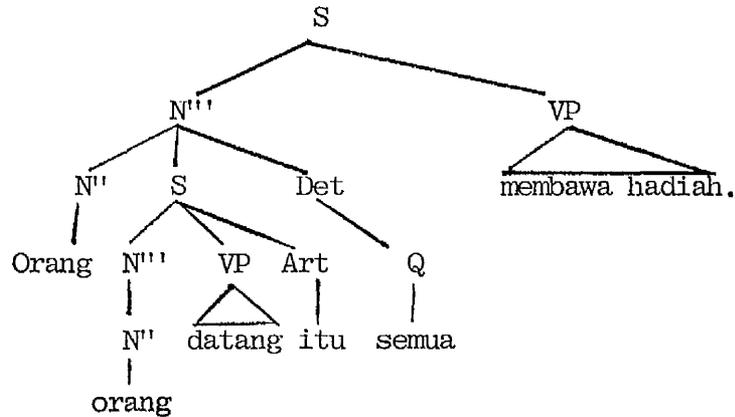
Structure (80b) is paralleled to (80c), the structure which was proposed by Jackendoff for English relatives.⁹ Jackendoff further claims that Art''' is the specifier of N''' and Q''' (quantifiers) the specifier of N'. I would like to claim that, for Malay at least, quantifiers are generated as the specifiers of N''' while articles and demonstratives are generated as the specifiers of N'. The reason for this claim will be discussed presently.

I will propose that the structure of Malay relative is as given in (81).



Let us see how our analysis would account for the problematic cases discussed in section 1.01 and 1.03. We will first look at

(83)



Notice that in (83) orang yang datang itu do not form a constituent and given that only constituents can be deleted under identity with some preceding material as evidenced from (84), it would predict that it would not be possible to delete this string even if it is identical to some preceding material.

(84)a. Dua orang kawan baik saya dari Kuala Lumpur
 Two coef. friend good I from Kuala Lumpur
 dan tiga orang dari Penang sedang belajar
 and threecoef. from Penang prog. study
 di London.
 at London.

"Two of my good friends from Kuala Lumpur and
 three from Penang are studying in London".

b. *Dua orang kawan baik saya dari Kuala Lumpur
 Two coef. friend good I from Kuala Lumpur
 dan tiga orang Penang sedang belajar di London.
 and three coef. Penang prog. study at London.

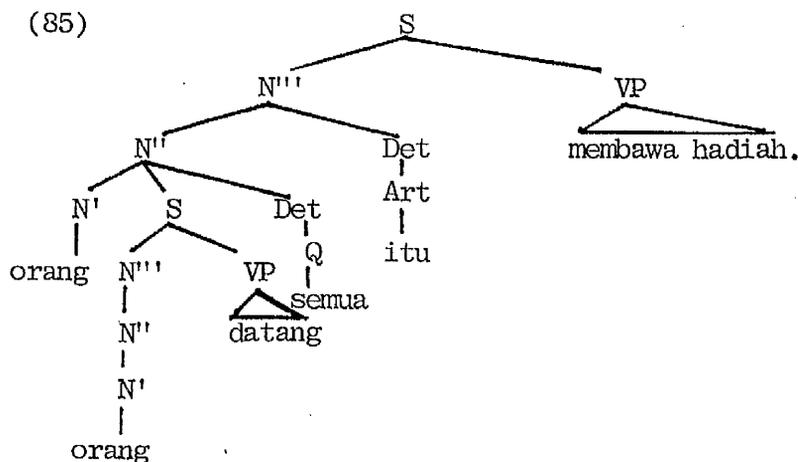
- c. Dua orang kawan baik saya dari Kuala Lumpur dan tiga orang kawan baik saya dari Penang sedang belajar di London.

"Two of my good friends from Kuala Lumpur and three of my good friends from Penang are studying in London".

In (84), when kawan baik saya, which is a constituent is deleted from the source sentence (84c) the result is, as shown by (84a), grammatical. But when the string kawan baik saya dari is deleted the result (84b) is bad. 10

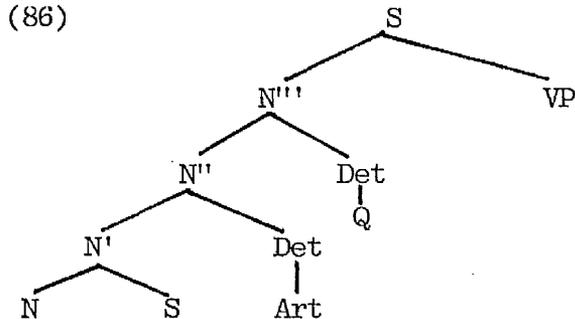
The fact that orang yang datang itu may be deleted in (67) shows that sentence (65) has (82) and not (83) as its underlying structure and that the correct structure for Malay relatives is (80a) and not (80b).

Suppose now, following Jackendoff, we assume that Art is generated under the N''' node and Q under the N'' node. The underlying structure for (65) would then look like (85).¹¹



Here again the string orang yang datang itu do not form a constituent and this suggests that (85) cannot be the correct structure of (65).

I have just shown the Q and Art are generated under the N''' and N'' nodes respectively. This however does not necessarily show that (81) is the correct structure of relative clauses. The question which may be asked is why must the embedded sentence be dominated by N'' and not N' as shown in (86).



In (86), the relative clause and the preceding noun form a constituent whereas in (81) they do not. That (81) is the correct structure can be seen from sentences such as (87).

- (87)a. Dua buah buku cerita yang di atas meja itu buku Ahmad
Two coef. book story that at on table the book Ahmad
dan tiga buah yang di atas meja ini buku Ali.
and three coef. that at on table this book Ali.
"The two story books on that table are Ahmad's book
and three on this table are Ali's book".
- b. *Dua buah buku cerita yang di atas meja itu buku Ahmad
dan dua buah ini buku Ali.

- c. Dua buah buku cerita di atas meja itu buku Ahmad
dan dua buah buku cerita yang di atas meja ini buku
Ali.

-as (a) -

From (87), we can see that if the relative clause and the preceding noun are deleted leaving the Det behind the sentence is ungrammatical on the intended reading, as evidenced from (87b). On the other hand if the noun is deleted the output is alright. This shows that the relative clause and the preceding noun do not form a constituent and therefore (86) cannot be the correct structure of Malay relative clauses.

Another argument in favour of (81) is provided by the category level of the identical nominals. Consider the following sentences.

- (88)a: Payung saya yang berwarna hitam itu hilang.
Umbrella I that colour black the lost.
"My umbrella which is black is lost".

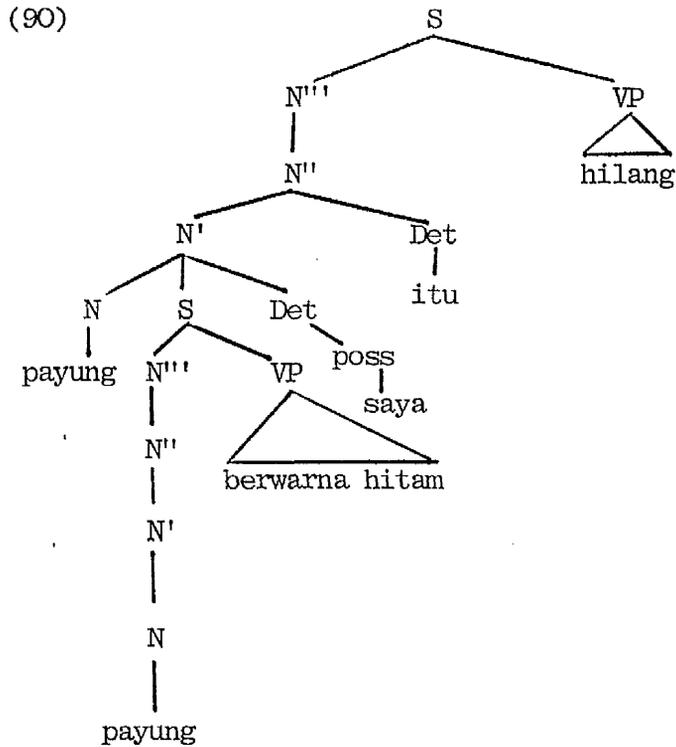
- b. *Payung yang berwarna hitam saya itu hilang.
Umbrella that colour black I the lost.

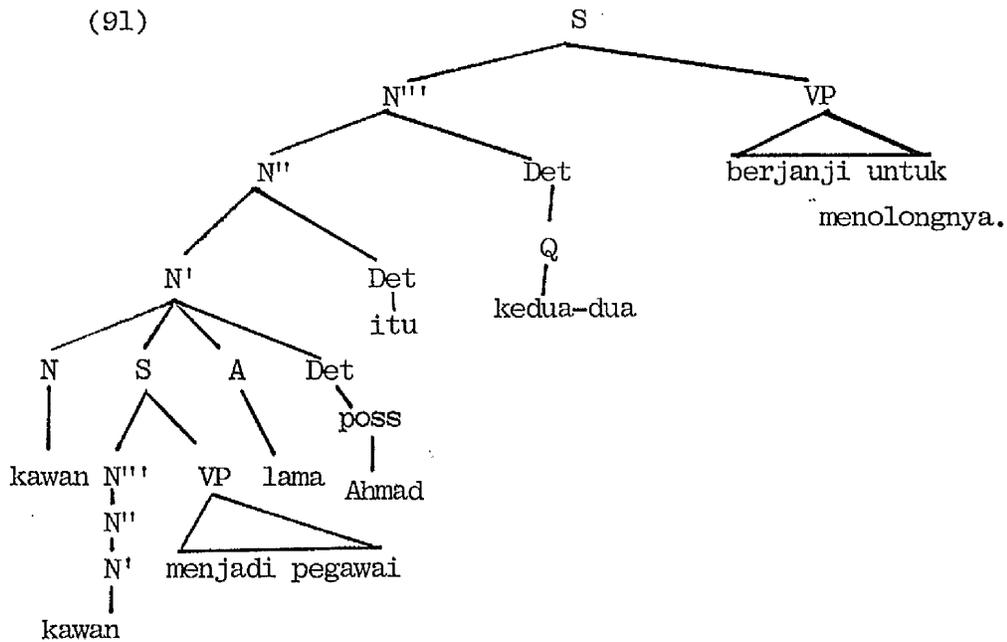
- (89)a. Kedua-dua kawan Ahmad yang menjadi pegawai itu
Card. -two friend Ahmad that become officer the
berjanji untuk menolongnya.
promise to help-him.

"Both of Ahmad's friends who are officers promise to help him".

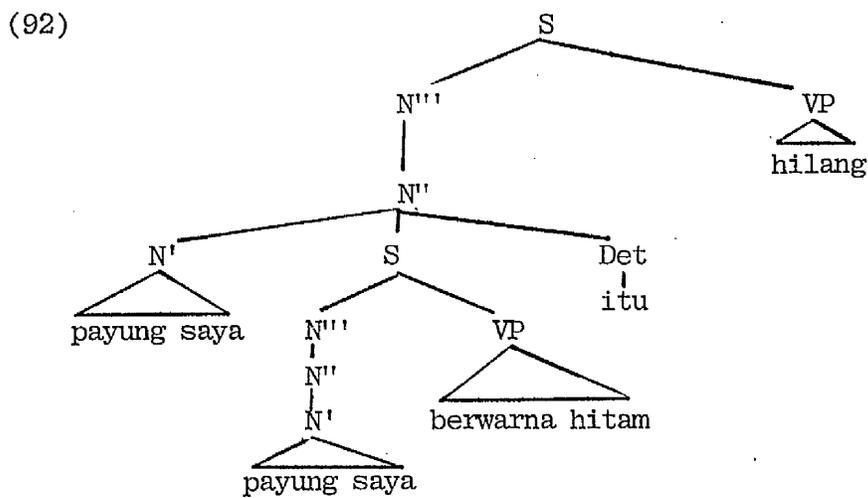
- b. *Kedua-dua kawan yang menjadi pegawai lama Ahmad berjanji untuk menolongnya.

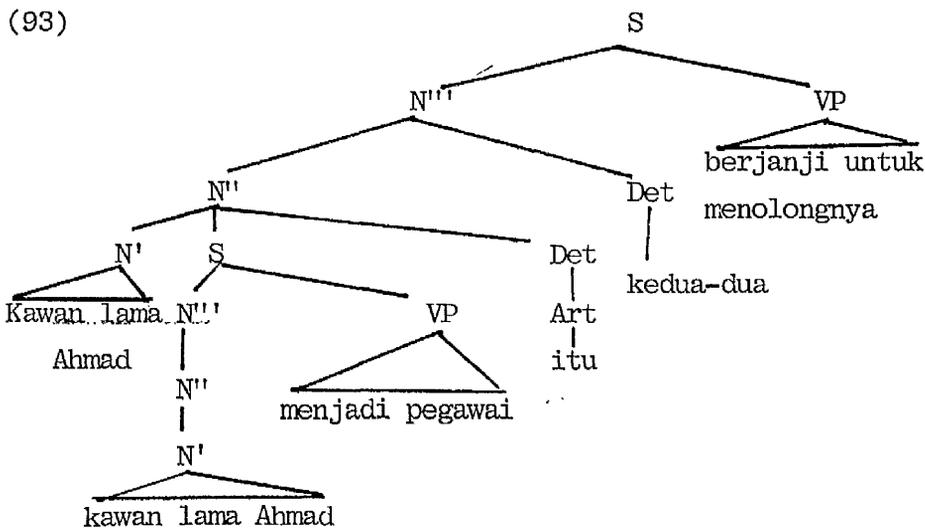
(86) would predict that (88b) and (89b) are grammatical with underlying structures as given in (90) and (91) respectively.





On the other hand, (81) correctly predicts that the (a) sentences are grammatical while excluding the (b) sentences. According to the structure in (81), (88) and (89) would be given the underlying structures of (92) and (93).



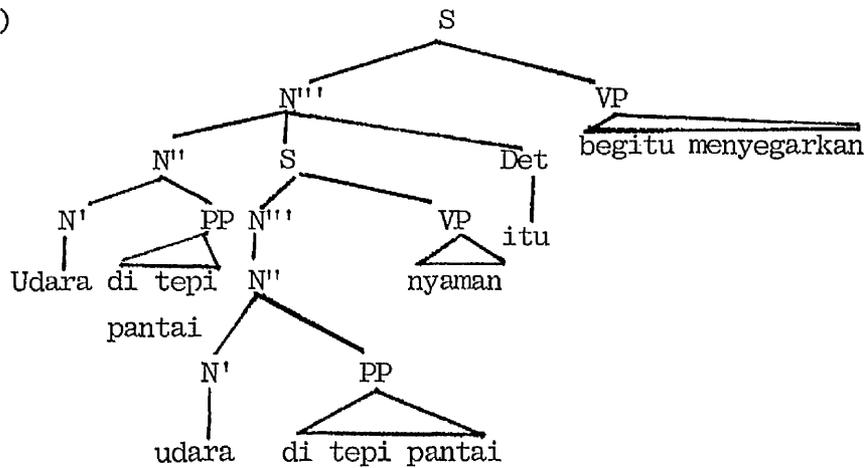


Another evidence in favour of (80b) as opposed to (80a) is provided by sentences of the type (68) reproduced here for convenience.

- (68)a. Udara yang nyaman di tepi pantai itu begitu menyegarkan.
 "The cool air at the beach is so refreshing".
- b. *Udara di tepi pantai yang nyaman itu begitu menyegarkan.
 "The air at the beach which is cool is so refreshing".

(80a) is going to face the same problem faced by the NP-S analysis. According to the structure (80a) the underlying structure of (68) will presumably be (94), since a prepositional phrase such as di tepi pantai itu is a restrictive modifier and like all restrictive modifiers, under Jackedoff's analysis, it should be the complement of N'.

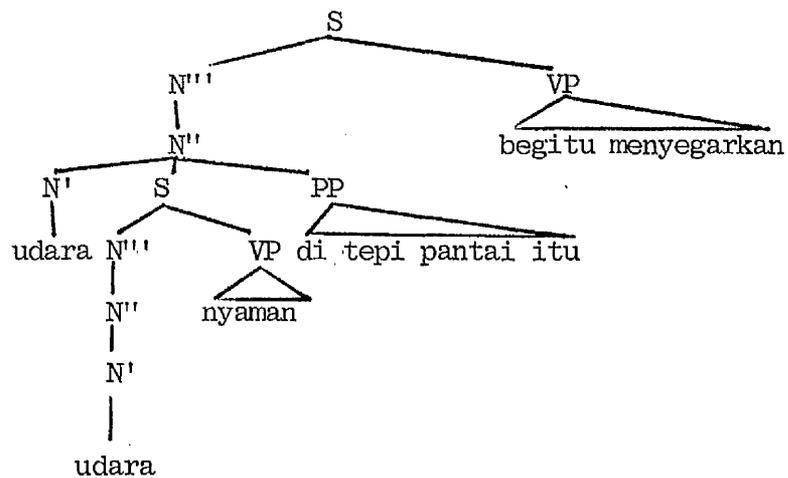
(94)



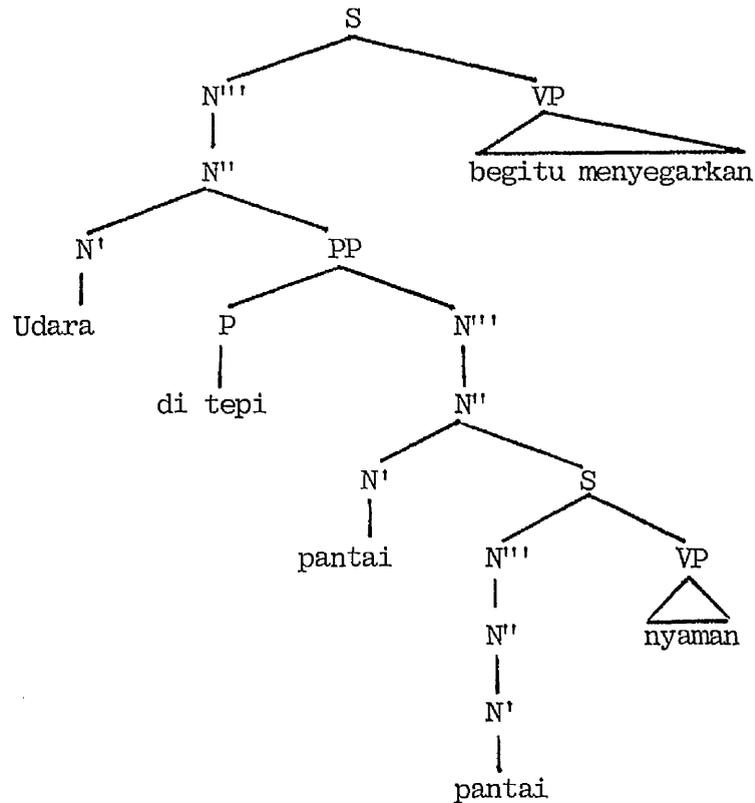
Like the NP-S analysis, (80a) would wrongly predict that (68b) is good.

If the relative clause is given the underlying structure of (81), as proposed in this thesis, the grammaticality of (68a) and the ungrammaticality of (68b) can be accounted for. Following this analysis the underlying structures of (68a) and (68b) are as shown in (95a) and (95b).

(95)a.



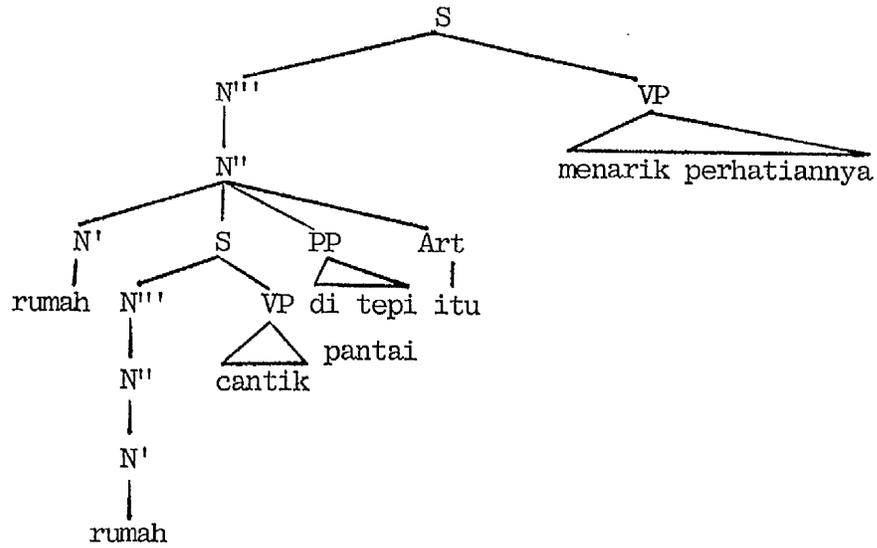
(95)b.



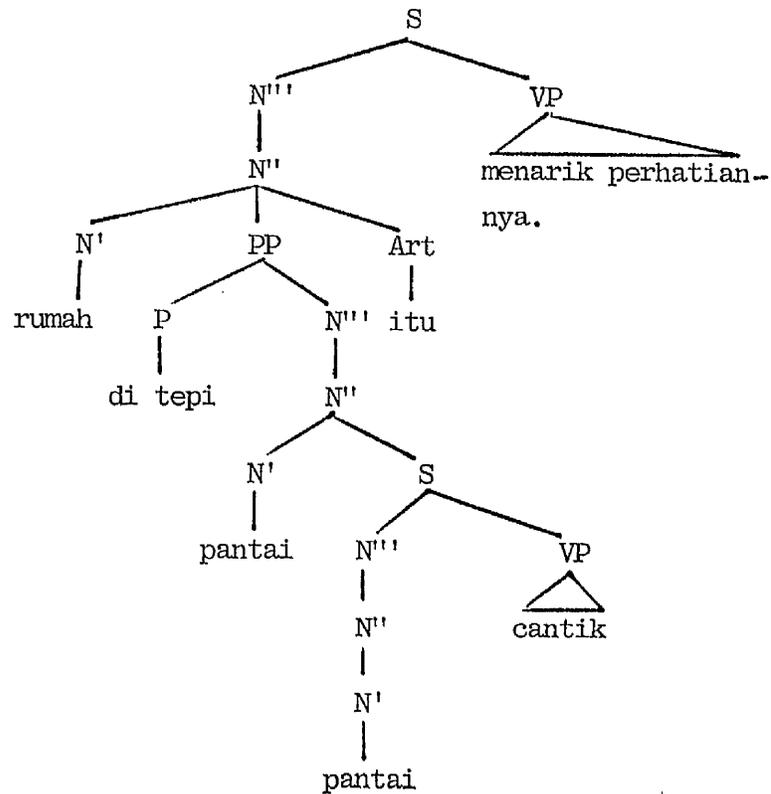
(95b) explains why the relative clause in (68b) cannot be interpreted as modifying the noun udara. And as we have mentioned earlier, the fact that nyaman cannot be the predicate of pantai makes the sentence anomalous.

(80b) also explains why (69b) has only the reading where the relative clause modifies the noun pantai and why it is not possible to have a reading in which the relative clause modifies the whole noun phrase with the reading of (69a). The underlying structures of (69a) and (69b) are (96a) and (96b) respectively.

(96)a.



(96)b.



1.2 Conclusion

In this chapter I have discussed briefly the various proposals

for the internal structure for relative clauses within the transformational framework (the Det-S Analysis, the Nom-S Analysis, the NP-S Analysis and the Conjoined Construction Analysis) and examined them in the light of Malay data in an attempt to provide an analysis which can best describe Malay relative clauses. I have argued for the Nom-S analysis because I find that this analysis is capable of explaining a number of problematic constructions such as constructions with quantified expression and NPs with prepositional phrases, which other analyses fail to do satisfactorily.

Since the Nom-S analysis is compatible with the X' hypothesis I have made use of this notation for the NP construction for expository purposes. The relevant PS rules are as follows:

$$\begin{array}{l} N''' \longrightarrow N' (Q) \\ N'' \longrightarrow N' (S) (PP) (Art) \\ N' \longrightarrow N (A) (Poss) \end{array}$$

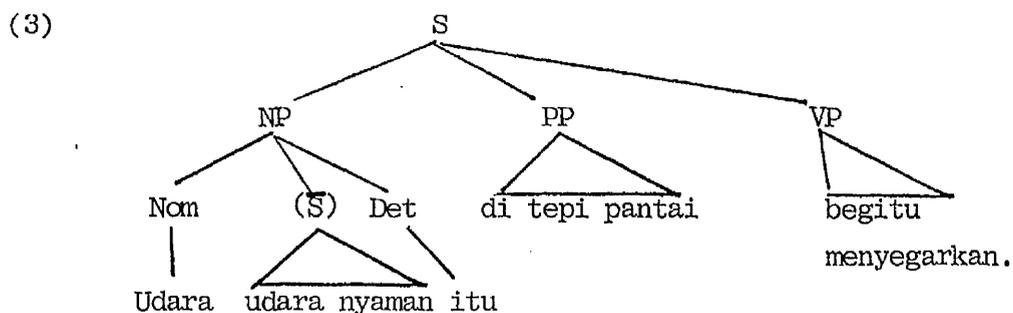
Notes to Chapter I

1. Many of the earlier studies on relative clauses for various languages may be found in Papers from the Relative Clause Festival of the Chicago Linguistic Society (1972).
2. A relative clause may be defined as an NP which contains a clause modifying a head noun. This definition, though approximate, is nevertheless sufficient for the moment.
3. We cite the NP-S analysis as an example since it is the standard analysis. The argument holds for any of the embedding analyses.
4. It is of course possible to state the constraint in such a way so as to apply to NPs quantified by tiap-tiap, semua, kebanyakan and beberapa only, thus preventing it from making the wrong predictions for sentences of the type (46). However, the fact still remains that within the NP-S analysis we have to have the constraint at all, whereas within the Non-S analysis no such constraint is needed. On this ground alone the latter is to be preferred.
5. For details fo the arguments see Selkirk (1977).
6. Plural in Malay is marked either by reduplicating the noun or by the presence of some kind of quantifiers before or after the noun. Though reduplicating is optional to mark plurality, a plural reading is not possible when the noun is followed by a demonstrative pronoun.

In sentence (1), the noun baju can either mean a dress or dresses whereas in (2) it can only mean that dress.

- (1) Dia ke kedai untuk membeli baju.
He to shop for buy dress.
"He went to the shop to buy a dress / dresses.
- (2) Baju itu baru siap.
Dress the just completed.
"The dress is (just) ready".

7. The PP di tepi pantai cannot be directly dominated by S as in (3) since it has to follow the determiner itu, as evidenced from the ungrammaticality of (4).



- (4) *Udara yang nyaman itu di tepi pantai begitu menyegarkan.

8. In the original version of the Nom-S analysis given in (29), since both N' and N'' are labelled as Nom, we have a structure where a node Nom dominating a node Nom, which is also an impossible structural configuration within the X' hypothesis.

9. See Jackendoff (1977b) for detailed arguments in support of this structure.

10. This sentence is ungrammatical only on the intended reading whereby the deleted string is interpreted to mean kawan saya dari. This sentence is perfectly alright when nothing has been deleted, in which case tiga orang Penang can only have the meaning three Penang people.

11. In all the tree diagrams throughout the thesis, the X' notation will only be used for noun phrases. Verb phrases and prepositional phrases will simply be represented by VP and PP since the details are not relevant to our discussions. Also, for simplification, an N' which exhaustively dominates an N will consistently be represented as directly dominating a lexical item.

CHAPTER II

FORMALIZING THE RULE OF RELATIVE CLAUSE
FORMATION IN MALAY

2.0 In Chapter 1 I proposed what seems to be the correct underlying structure for the relative clause in Malay. In this chapter I will try to formalize the rule for relative clause formation and I will argue that relative clause formation in Malay does not involve a movement rule but a deletion rule which deletes the nominal (N') which is in the clause initial position of the embedded sentence, under identity with a nominal in the main sentence.

2.1 Yang as a Relative Marker

In the prevailing analyses of Malay relative clause yang in sentences like (1) is regarded as the invariant relative pronoun¹ analogous to the English relative pronouns which, who and that.

(1)a. Orang yang memandu kereta itu cedera.

Person Pro drive car the injure.

"The person who drove the car was injured".

b. Buku yang di atas meja itu buku Ahmad.

Book Pro at on table the book Ahmad.

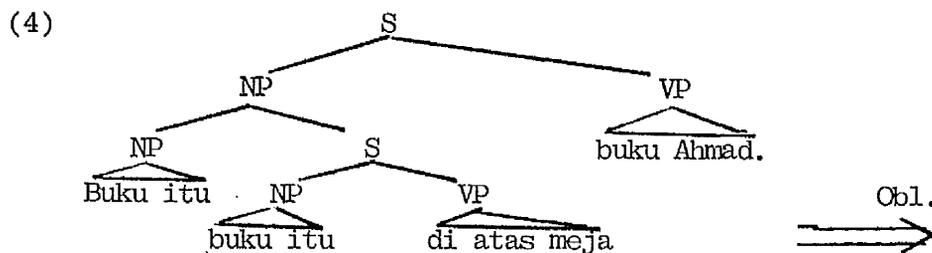
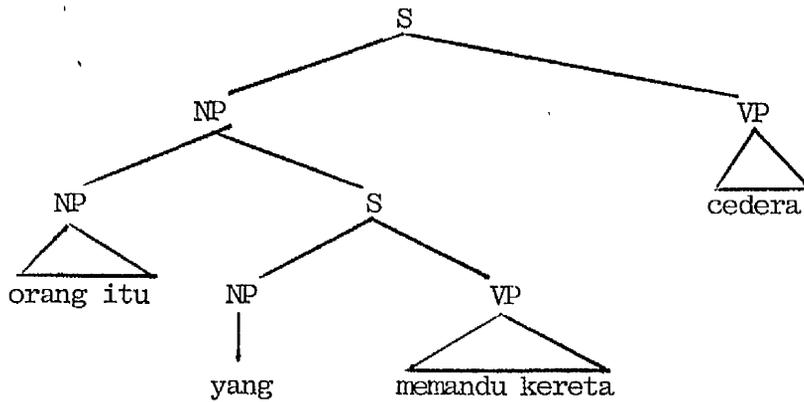
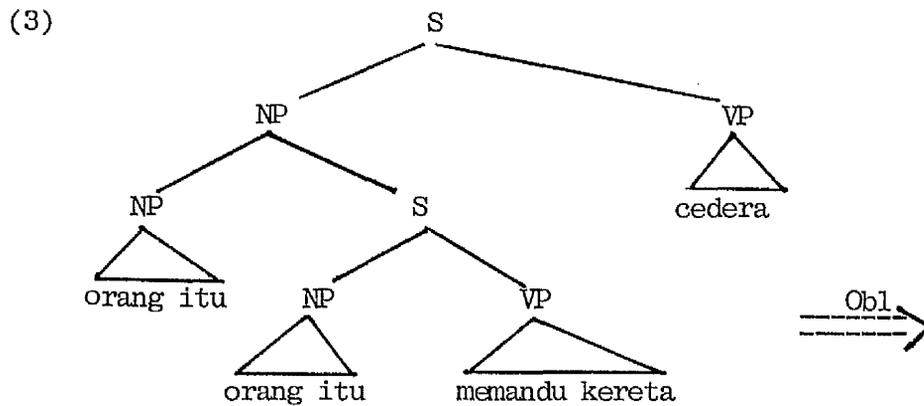
"The book which is on the table is Ahmad's book".

These sentences are said to derive from (2a) and (2b) by a relative transformation which replaces the subject of the embedded clause

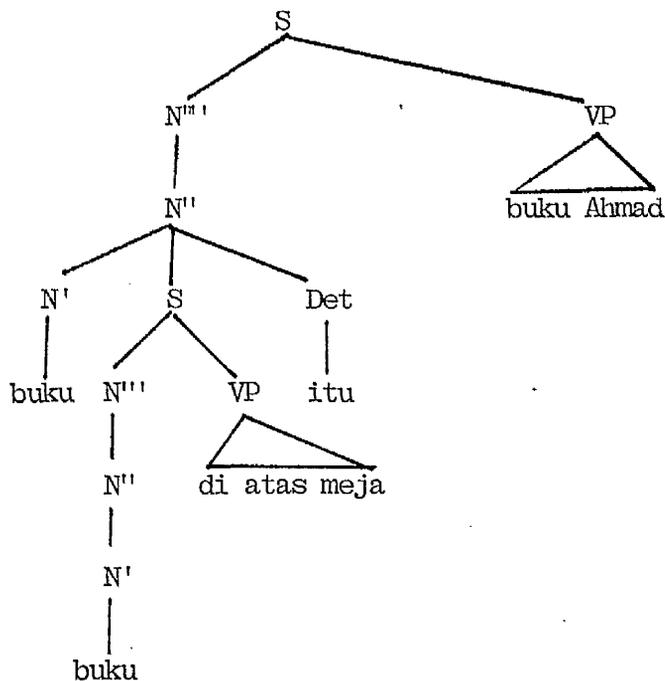
by the invariant 'relative pronoun' yang under identity with an antecedent noun phrase in the matrix sentence.

- (2)a. Orang itu [orang itu memandu kereta] cedera.
Person the [person the drive car] injure.
"The person[the person drove the car] is injured".

The derivation may be represented by the following tree diagrams.



(6)



In none of the treatments of the relative clauses that I know of have justifications for treating yang as a relative pronoun been provided. In this section I will attempt to show that if yang introducing relative clauses in Malay is analyzed as a complementizer, the analysis will be made simpler and will be able to capture a generalization which the Rel-yang analysis fails to capture.

The idea that the particle which introduces relative clauses is the same particle that introduces other dependent clauses was first suggested by Klima (1964). He proposes that that in English relative clause is not a relative pronoun but the same particle which introduces sentential complements. The idea was adopted by Emonds (1976) in his analysis of English relative clauses. In this view, a relativized NP or PP replaces the complementizer, the morpheme that in most clauses, only by means of wh-fronting rule.

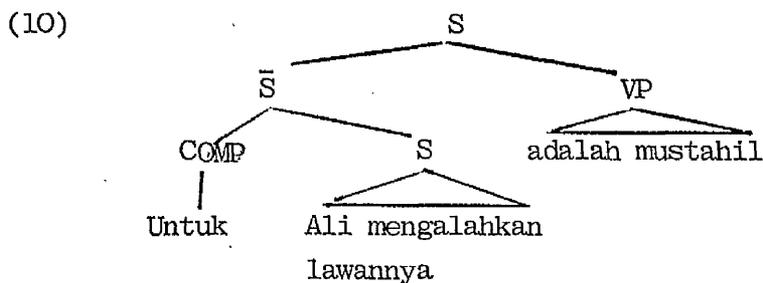
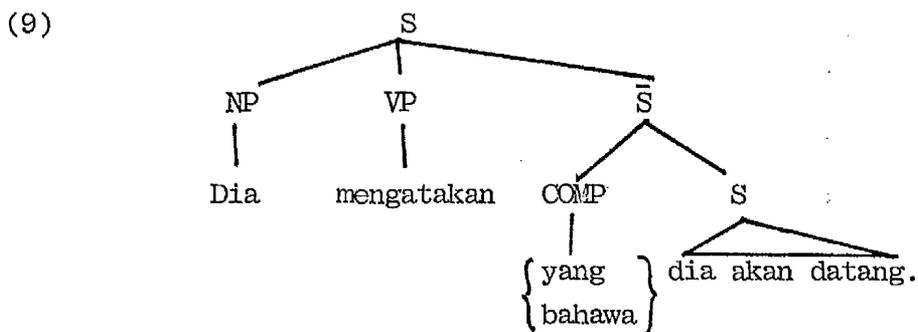
2.2. Yang as a Subordinate Marker

Like in English, there is a class of words in Malay which introduces sentential complements, normally known as complementizers. This includes words such as yang (that) untuk (for), bahawa (that) and supaya (so that). Two examples of such constructions are given in (7) and (8).

(7) Dia mengatakan {bahawa } dia akan datang.
He say that he will come.
"He said that he would come".

(8) Untuk Ali mengalahkan lawannya adalah mustahil.
For Ali defeat opponent-his is impossible.
"For Ali to defeat his opponent is impossible".

The underlying structures for (7) and (8) may be represented by (9) and (10).



Assuming that transformations may not introduce or insert meaningful lexical items because if they do, this would violate the condition that transformations must preserve unique recoverability, and since yang and untuk are not semantically empty for they do have different meanings as evidenced from the examples (11) and (12), complementizers cannot be transformationally inserted but must be generated by the base rules.

- (11)a. Untuk Ahmad menceraikan isterinya adalah mustahil.
For Ahmad divorce wife-his is impossible.
"For Ahmad to divorce his wife is impossible".
- b. Yang Ahmad menceraikan isterinya adalah mustahil.
That Ahmad divorce wife-his is impossible.
"That Ahmad divorced his wife is impossible".
- (12)a. Tidak mungkin untuk Ahmad memungkiri janjinya.
Not possible for Ahmad break promise-his.
"It is not possible for Ahmad to break his promise".
- b. Tidak mungkin yang Ahmad memungkiri janjinya.
Not possible that Ahmad break promise-his.
"It is not possible that Ahmad break his promise".

This base-generated hypothesis of the complementizers was argued for rather convincingly by Bresnan (Bresnan 1970). I do not wish to go into the details of the argument here. What is important for our purposes is her claim that there exists in the grammar of English and all languages having complementizers, a phrase structure rule of the form (13) along with other phrase

structure rules. 2

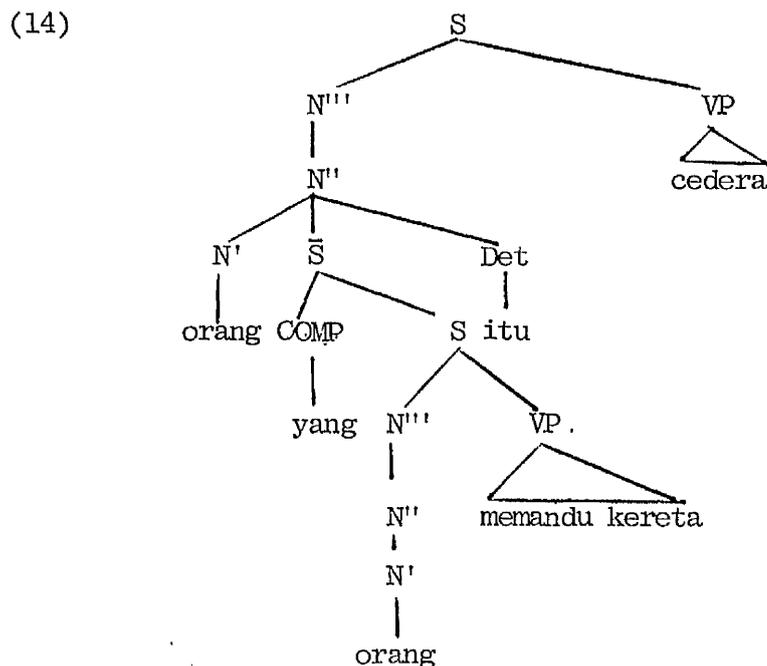
(13) $\bar{S} \rightarrow \text{COMP. S}$

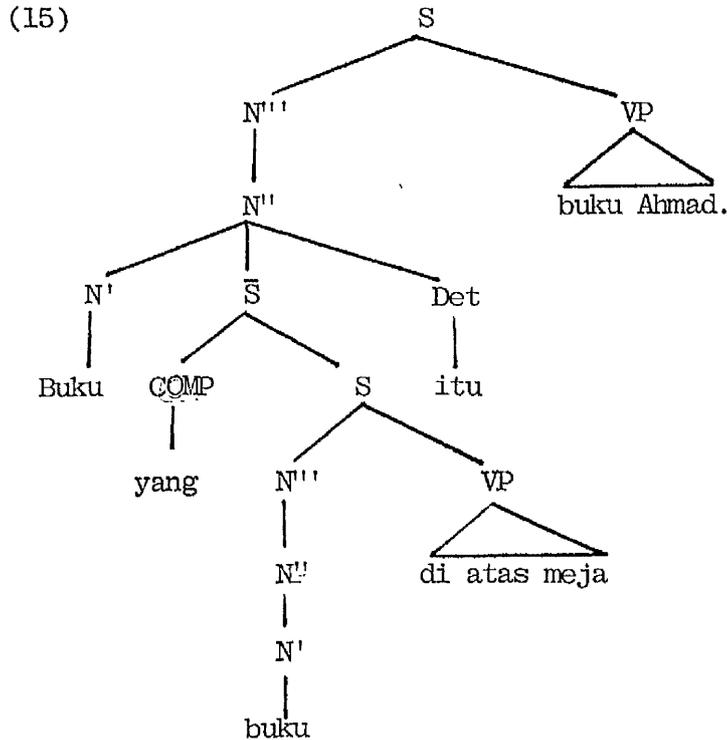
This phrase structure rule has now been widely accepted. It has been adopted by most transformationalists in their respective analyses.

2.3 Motivations for Analysing yang Introducing Relative Clause as a Complementizer

2.31 Relative Clauses with Yang

Assuming that complementizers are generated by the base component by rule (13), as argued by Bresnan, structures (5) and (6) which were postulated for (1a) and (1b) have to be slightly modified to (14) and (15) to accomodate the base-generated COMP.





I will take it that (14) and (15) are the correct underlying structures for (1a) and (1b). As mentioned earlier on, according to the Rel-yang analysis, the NP (or nominal in the analysis I am proposing here) in the embedded sentence is replaced by the relative pronoun yang by the relative clause formation rule. Clearly with the complementizer yang already in the deep structure some other rule has to apply so that (16) is blocked.

- (16) *Orang yang yang memandu kereta itu cedera.
 Person comp rel drive car the injure.
 "The person that who drove the car was injured".

There are two possible ways in which we can arrive at the surface structure. One way is simply to delete one of the two yang. Alternatively we could move the relative pronoun yang into the COMP

position replacing the complementizer yang. Let us first consider the first alternative. Since yang that occurs on the surface is claimed by the Rel-yang analysis to be the relative pronoun, clearly the deleted element has to be the complementizer. This means that Comp-yang deletion rule has to be made obligatory so that sentences such as (16) may be excluded. This is inconsistent with the behaviour of the complementizer yang which introduces sentential objects such as in (7) or sentential subjects such as in (11b), where in the former its deletion is optional and in the latter it may not be deleted as illustrated by (17) and (18).

(17)a. Dia mengatakan yang dia akan datang.

b. Dia mengatakan dia akan datang.

(18)a. Yang Ahmad menceraikan isterinya adalah mustahil.

b. Untuk Ahmad menceraikan isterinya adalah mustahil.

c. *Ahmad menceraikan isterinya adalah mustahil.

The rule of Comp deletion has to be complicated to some extent if we assume the Rel-yang analysis. The deletion has to be obligatory in relative constructions, optional in sentential objects whereas in sentential subjects deletion is not allowed. This situation does not arise if yang in the relative clause is analysed as a complementizer. I will refer to this analysis as the Comp-yang analysis. According to this analysis there is no need for a transformation to replace the identical nominal with a relative pronoun. The nominal in the embedded sentence simply gets deleted if it is coreferential with a nominal in the matrix sentence, to produce

pronoun yang into the COMP position replacing the complementizer yang. This may look more appealing because it appears to be rather straight forward. This is quite true as long as we are just dealing with relative constructions introduced by yang. But as we will soon see this is no longer the case once relative constructions introduced by untuk are taken into consideration.

2.32 Relative Clauses with Untuk

Another motivation for analysing yang as a complementizer is that by so doing we could provide a single rule of relative clause formation which is capable of accounting for relative clauses of the type we have just examined ie those introduced by yang, as well as those introduced by untuk such as in (20) and (21).

- (20) Orang untuk menjalankan upacara itu belum datang.
Person for carry out ceremony the not yet come.
"The person to carry out the ceremony has not come".
- (21) Guru untuk mengajar sains tidak ada.
Teacher for teach science not have.
"Teachers to teach science are not available".

It may be thought that (20) and (21) are not relative clause constructions but sentences with their adverb clause of purpose untuk menjalankan upacara and untuk mengajar sains moved from the end of their source sentences (22) and (23).

- (22) Orang belum datang untuk menjalankan upacara itu.
"People have not come yet to carry out the ceremony".
- (23) Guru tidak ada untuk mengajar sains.
Teacher not have for teach science.
"There are no teachers available in order to teach science".

In general adverbial clauses may be fronted to the sentence initial position as in (24) or to the position immediately after the subject as in (25).

- (24)a. Untuk mendapatkan makanan manusia sanggup
For get food people willing
melakukan apa saja.
do what only.
"In order to get food people are prepared to do anything".
- b. Dengan cermatnya Ahmad membuka bungkusannya itu.
With care Ahmad open parcel the.
"Carefully, Ahmad opened the parcel".
- c. Sebelum dilantik menjadi pengurus dia haruslah
Before pass-nominate become manager he must
membuktikan yang ia layak memegang jawatan itu.
prove that he capable hold post the.
"Before he could be nominated as the manager he had to prove that he is capable of doing the job".

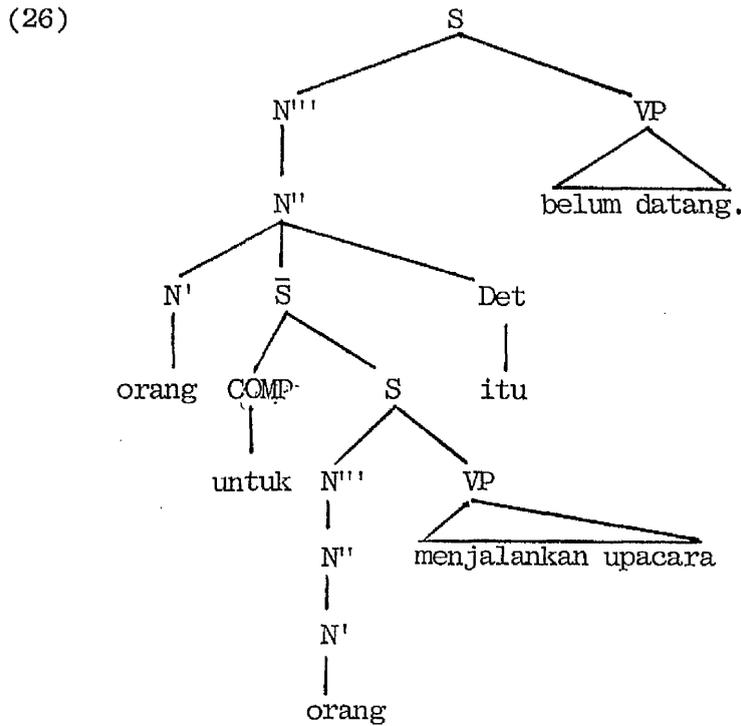
- (25)a. Manusia, untuk mendapatkan makanan, sanggup melakukan apa saja.
"People, in order to get food, are prepared to do anything".
- b. Ahmad, dengan cermatnya, membuka bungkusan itu.
"Ahmad, carefully opened the parcel".
- c. Dia, sebelum dilantik menjadi pengurus, haruslah membuktikan yang dia layak memegang jawatan itu.
"He, before being nominated as the manager, must prove that he could do the job".

One of the characteristics of fronted adverbial clauses, as illustrated by all the examples above, is that they are separated from the main sentence by a comma intonation. The absence of comma intonation in examples like (20) and (21) suggests that the clauses introduced by untuk are not adverbial clauses but are actually relative clauses. This claim has semantic support. Semantically the untuk clauses in (20) and (21) function to restrict the set of entities mentioned in the main clause namely person(s) to carry out the ceremony and teachers to teach science respectively.

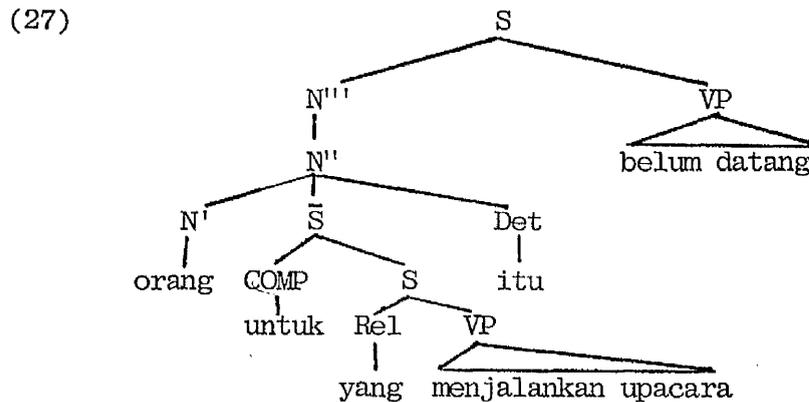
If yang introducing a relative clause is a relative pronoun as claimed by the Rel-yang analysis, we either have to extend our relative pronoun to include untuk, or alternatively we have to analyse relative clauses introduced by untuk differently from those introduced by yang. I will explain why this is so.

In the last section, we saw that within the Rel-yang analysis,

the complementizer yang has to be obligatorily deleted. Let us now see what happens if the same rule applied to untuk relatives. We will take (20) to illustrate. The underlying structure of (20), according to the analysis I am proposing here is (26).



Following the Rel-yang analysis, the nominal orang in the embedded sentence is first replaced by the relative pronoun yang giving the intermediate structure of (27).



As I have said earlier there are two possible ways to get to the surface structure. Consider the first possibility first. Recall that in the case of relatives with yang, the complementizer has to be obligatorily deleted. If this obligatory deletion of the complementizer is applied to (27), we will get (28) instead of the sentence we want (20).

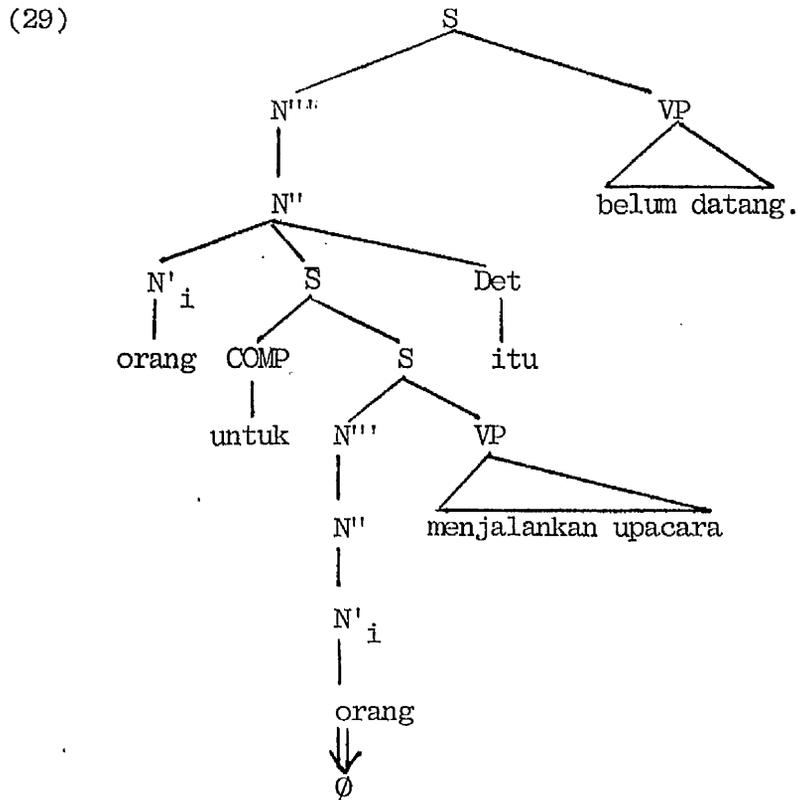
- (28) Orang yang manjalankan upacara itu belum datang.
Person that carry out ceremony the not yet come.
"The person who carried out the ceremony has not
come".

Sentence (28), though perfectly alright, has a different meaning from (20). The same result will be obtained if the second alternative is assumed. The movement of the relative pronoun yang will replace the complementizer untuk giving rise again to (28).

The only way in which (20) may be generated within the Rel-yang analysis is by analysing relative clauses introduced by untuk differently from those introduced by yang. Instead of deleting the complementizer as in the case of yang relatives, the relative pronoun itself is obligatorily deleted leaving the complementizer untuk behind. This is undesirable since not only do we have two separate rules for relative clause formation in Malay, we also have an analysis in which the relative pronoun itself is obligatorily deleted.

Under the Comp-yang analysis which is being proposed is this

thesis, the untuk relatives can be analysed in exactly the same way as the yang relatives. The nominal in the embedded clause gets deleted under identity with an antecedent nominal in the matrix sentence. The derivation of (20) is as given in (29).



What I have tried to show in this section is that if yang in sentences such as (1) is analysed as a relative pronoun, as it has been done under the Rel-yang analysis, then we will have to analyse sentences such as (20) and (21) differently. This clearly is undesirable because it is missing the generalization we would certainly like to capture. On the other hand by analysing yang in (1) as a complementizer we not only have a uniform rule of relative clause formation but also a uniform phrase structure rule for all embedded sentences irrespective of whether they are sentential com-

plements such as in (7), (8), (11) and (12) or embedded under NP nodes as in (1), (20) and (21). So the fact that the particles introducing relative clauses and those introducing sentential complements have the same shape is not a mere coincidence.

2.4 The Rule of Relative Clause Formation

In the last section I suggested that Malay relativization is a deletion rule which deletes a nominal in the embedded sentence under identity with a nominal in the matrix sentence. Relativization by deletion is not a new idea. Emonds (Emonds 1970) proposes a dual analysis for relative clauses in English; one involving movement of the relative pronoun (wh-movement) for cases where relative pronouns appear in the surface structure, and another which simply deletes an NP of the embedded sentence under identity with an NP in the matrix for cases without overt relative pronouns. Morgan (Morgan 1972) also analyses relative clauses which do not exhibit relative pronouns in their surface structures as being derived via a deletion rule. The two analyses may be summarized as follows:

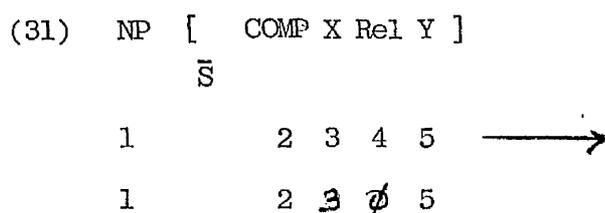
(30)a. Movement

1. A rule changing the coreferential NP into the appropriate WH-form
2. A movement rule, subject to Ross constraints and pied-piping moving the WH-form to the left.

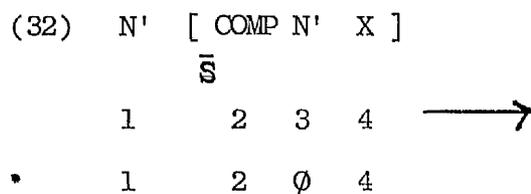
b. Deletion

1. A rule deleting a coreferential NP, subject to Ross constraints.
2. A rule optionally inserting the complementizer that in relatives where deletion has occurred.

The deletion analysis is strongly supported by Bresnan (Bresnan 1977) who elaborates this by making use of variables. Bresnan's reformulation of the rule is given in (31).³



I propose that the rule of relativization for Malay is as given in (32).



The claim made by rule (32) is that unlike (31), there be no material intervening between the COMP and the deleted nominal. In other words the nominal which is being deleted must be in the left-most position of the embedded sentence. This explains why (33a) is grammatical whereas (33b) is bad.

- (33)a. Anjing yang mengejar kucing itu anjing Pak Mat.
Dog that chase cat the dog Pak Mat.
"The dog that chased the cat was Pak Mat's dog".
- b. *Anjing yang saya memukul itu anjing Pak Mat.
Dog that I hit the dog Pak Mat.
"The dog that I hit was Pak Mat's dog".

The underlying structure for (33) would be (34).

- (34)a. Anjing [COMP anjing mengejar kucing] itu
anjing Pak Mat.
- b. Anjing [COMP saya memukul anjing]itu anjing Pak.Mat.

In the case of (34a), there is no intervening material between the COMP and the coreferential Nominal and therefore relative clause transformation can take place deleting the second occurrence of the nominal anjing to yield (33a). In the case of (34b), the coreferential nominal is not in the left-most position of the embedded sentence. Relative Clause transformation cannot apply and this accounts for the ungrammaticality of (33b). I use the term left-most instead of subject here for reasons that will be discussed in section 2.41.

2.41 Arguments for the Left-most Relativized Nominal Position

This section will be devoted to defending my claim that only a nominal in the left-most position of the embedded sentence may be deleted by the relative clause deletion rule. But before going

into this it is necessary to examine active sentences with me-verbs. I briefly mentioned in the preliminary chapter that when an NP is preposed, it normally leaves behind a pronominal copy nya in its original place. One instance of NP fronting which does not obligatorily leave a copy behind is object fronting. When the object of a me-verb is fronted it may or may not leave its copy in its original place. In the case of the latter, the prefix me-obligatorily gets deleted. Below are more examples to demonstrate this.

- (35)a. Dia sudah membaca buku itu.
He compl. read book the.
"He has read the book".
- b. *Buku itu dia sudah membaca.
Book the he compl. read.
"The book he had read".
- c. Buku itu dia sudah baca. ⁴
"The book he has read (it)".
- d. Buku itu dia sudah membacanya.
Book the he compl. read-it.
"The book he has read it".
- e. *Buku itu dia sudah bacanya.
" - as in (d) - "

- (36)a. Saya membasuh baju itu tadi.
I wash dress the just now.
"I washed the dress just now".

- b. *Baju itu saya membasuh tadi.
Dress the I wash just now.
"The dress I washed just now".
- c. Baju itu saya basuh tadi.
Dress the I wash just now.
"The dress I washed (it) just now".
- d. Baju itu saya membasuhnya tadi.
Dress the I wash-it just now.
"The dress, I washed it just now".
- e. *Baju itu saya basuhnya tadi.
Dress the I wash-it just now.
" - as in (d) - "

Notice that the prefix me- may not be deleted when the object NP leaves its pronominal copy behind, as illustrated by (35e) and (36e).

Now consider (37) ⁵.

- (37)a. Aminah memasak.
Aminah cook.
"Aminah is cooking".
- b. Budak itu sedang melukis.
Child the prog. draw.
"The child is drawing".
- c. Mereka suka membaca.
They like read.
"They like to read/They like reading".

- d. Mereka selalu mengumpat.
They always gossip.
"They always gossip".

For those people who believe in the existence of the unspecified NP deletion rule, these sentences would be derived from (38).

- (38)a. Aminah memasak sesuatu.
Aminah cook something.
"Aminah is cooking something".
- b. Budak itu melukis sesuatu.
Child the draw something.
"The child is drawing something".
- c. Mereka suka membaca sesuatu.
They like read something.
"They like to read something".
- d. Mereka selalu mengumpat seseorang.
They always gossip someone.
"They always gossip about someone".

If the prefix me- in the above examples are deleted following the unspecified object NP deletion, the results are ungrammatical, as evidenced from (39).

- (39)a. *Aminah masak.
b. *Budak itu sedang lukis.
c. *Mereka suka baca.
d. *Mereka selalu umpat.

Compare these with (40) where the object noun phrases are preposed.

- (40)a. Ikan itu Aminah masak/*memasak.
Fish the Aminah cook.
"The fish Aminah cooked it".
- b. Gambar itu budak itu lukis/*melukis.
Picture the child the draw.
"The picture the child drew it".
- c. Buku novel mereka suka baca/*membaca.
Book novel they like read.
"Novel they like to read".
- d. Jiran kami mereka selalu umpat/*mengumpat. ⁶
"Our neighbours, they always gossip about them".

From the above examples we can conclude that when an object NP of an active sentence with me- verb is deleted the prefix me- may not be deleted but when the object NP is preposed the prefix me- has to be deleted.

2.411 Relativized Object Nominal

Having looked briefly at the behaviour of the affix me- let us now examine relative clause constructions in which the relativized nominals are in the object position in their underlying structures. Some examples of these are given in (41).

- (41)a. Cerita yang mereka dengar itu sungguh menyedihkan.
Story that they hear the very sad-caus.
"The story that they heard was very sad".

- b. Buku yang Ali baru beli itu hilang.
Book that Ali just buy the lost.
"The book that Ali bought was lost".
- c. Surat yang saya terima pagi tadi itu dari ibu.
Letter that I receive morning just now from mother.
"The letter that I received this morning was from mother".
- d. Wang yang Aminah pinjamkan saya itu akan saya
Money that Aminah lend I the will I
pulangkan esok.
return tomorrow.
"The money which Aminah lent me, I will return it tomorrow".

As we can see, all the verbs in the relative clauses are without the prefix me-, which suggests that the coreferential nominal must have been preposed before deletion takes place. The underlying structures for (41) would be structures corresponding to (42).

- (42)a. Cerita [mereka {mendengar
dengar} cerita] sungguh
menyedihkan.
"The story[they hear story] was very sad".
- b. Buku[Ali baru {membeli
beli} buku] hilang.
"The book[Ali just bought book] was lost.
- c. Surat [saya {menerima
terima} surat pagi tadi] dari
ibu.
"The letter [I received letter this morning]was
from mother".

- d. Wang [Aminah { meminjamkan } wang kepada saya]
 { pinjamkan }
akan saya pulangkan esok.
"The money [Aminah lent me money] I will
return (it) tomorrow".

All the examples in (41) are ungrammatical if the verbs in the embedded sentences are the me- verbs.

2.412 Possessive Constructions

Another piece of evidence which supports the claim that nominals which are relativized must occupy the left-most position in the embedded sentence is provided by the following sentences.

- (43)a. Budak yang adiknya dipukul Ali itu menumbuk Ali.
Child that younger brother/sister his hit Ali the
punch Ali.
"The child whose younger brother/sister was hit
by Ali punched Ali".
- b. *Budak yang adik dipukul Ali itu menumbuk Ali.
Child that younger brother/sister hit Ali the
punch Ali.
"The child whose younger brother/sister was hit
Ali punched Ali".
- c. Budak [adik budak dipukul Ali] itu menumbuk Ali.
"The child [the child's younger brother/sister
was hit by Ali] punched Ali".

In (43c) which is the source for (43a) and (43b), the co-referential nominal budak is contained in a larger nominal adik budak and by virtue of this construction, it does not occur in the left-most position of the embedded clause. Relativization rule therefore cannot apply and this accounts for the ungrammaticality of (43b). The grammaticality of (43a) follows, however, from the fact that the nominal budak may be fronted to the initial clause position of the embedded sentence if it leaves a pronominal copy behind as illustrated by (44).

- (44) Budak itu, adiknya dipukul Ali.
Child the, younger brother/sister pass-hit Ali.
"The child, his younger brother/sister was hit
by Ali".

The structure of (43c) after fronting takes place is (45).

- (45) Budak [budak, adiknya dipukul Ali] itu menumbuk
Ali.

This configuration now meets the structural description of relative clause transformation as stated in (32). The application of the rule derives (43a). The ungrammaticality of (43b) is the automatic consequence of the fact that possessive nouns may not be preposed unless it leaves a pronominal copy behind. The following examples illustrate this fact.

- (46)a. Adik budak itu menangis.

Younger brother/sister child the cry.

"The child's younger brother/sister cried".

b. *Budak itu adik menangis.

c. Budak itu adiknya menangis.

Child the younger brother/sister-his cry.

"The child his younger brother/sister cried".

(47)a. Saya mengecat dinding rumah itu.

I paint wall house the.

"I painted the wall of the house".

b. *Rumah itu saya mengecat dinding.

c. Rumah itu saya mengecat dindingnya.

House the I paint wall-its.

"The house, I painted its wall".

If the Relative Clause Deletion is allowed to take place over a variable then we would expect that sentences of the type (43b) are grammatical.

2.413 Indefinite Noun Phrase and Objects of ber-type Verbs

Further support that only nominals in the left-most position of the embedded sentence may be relativized is provided by the fact that when the object nominals may not be preposed such as in the case of indefinite noun phrases as in (48) and in sentences with ber-type of verbs as in (49), relativization cannot apply.

(48)a. Dia mengajar seorang murid.

He teach a-coef. pupil.

"He taught a pupil".

- b. Ahmad menulis sebuah buku.

Ahmad write a-coef book.

"Ahmad wrote a book".

- c. Kami mengemukakan suatu masalah.

We bring out coef. problem.

"We brought out a problem".

- (49)a. Budak itu bermain bola.

Child the play ball.

"The child played (with a) ball".

- b. Ah Kow bertanam sayur.

Ah Kow grow vegetables.

"Ah Kow grows vegetables".

- c. Dia bercukur janggut.

He shave beard.

"He is shaving his beard".

It is generally known that indefinite noun phrases cannot be topicalized. (50) are impossible sentences since the indefinite noun phrases in (48) have been fronted.

- (50)a. *Seorang murid dia mengajarnya.

- b. *Sebuah buku Ahmad menulisnya.

- c. *Suatu masalah kami mengemukakannya.

As predicted by our analysis their corresponding relative clause constructions are also ungrammatical, as demonstrated by (51).

- (51)a. *Seorang murid yang dia mengajarnya lulus.
A-coef pupil that he teach-him pass.
"A pupil that he taught him passed".
- b. *Sebuah buku yang Ahmad menulisnya menarik.
A-coef book that Ahmad write-it interesting.
"A book that Ahmad wrote it is interesting".
- c. *Suatu masalah yang kami mengemukakannya itu
agak penting.
"The problem that we brought up was quite important".

Compare (51) with (52) where the fronted noun phrases are definite. ⁷

- (52)a. Murid yang dia mengajarnya itu lulus.
"The pupil who he taught passed".
- b. Buku yang Ahmad menulisnya itu menarik.
"The book that Ahmad wrote is interesting".
- c. Masalah yang kami mengemukakannya itu agak penting.
"The problem which we brought up was quite important".

Like indefinite objects, objects of the ber-class of verbs cannot be fronted. This may be illustrated by the ungrammaticality of (53).

- (53)a. *Bola, budak itu bermain.
Ball child the play.
- b. *Sayur, Ah Kow bertanam.
Vegetable Ah Kow plant.
- c. *Janggut, dia becukur.
Beard he shave.

Here again the corresponding relative clauses are ungrammatical.

- (54)a. *Bola yang budak itu bermain kempis.
Ball that child the play deflate.
"The ball that the child played was deflated".
- b. *Sayur yang Ah Kow bertanam sudah boleh dijual.
Vegetables that Ah Kow grow compl can pass-sell.
"The vegetables that Ah Kow grew was ready to be sold".
- c. *Janggut yang dia bercukur tebal.
Beard that he shave thick.
"The beard that he shaves is thick".

The deletion over a variable however would make the wrong prediction that all the sentences in (54) are grammatical.

2.5 Apparent Counterexamples of the Proposed Rule

Sentences of the type (55) may appear to be the counterexamples of the claim made by rule (32) that nominals of the embedded sentence must be in the clause initial position at the time relative clause transformation applies.

- (55)a. Kawan saya [esok kawan saya akan ke Kuala Lumpur]
Friend I [tomorrow friend I will to Kuala Lumpur]
belum datang.
not yet come.
"My friend [tomorrow my friend will go to Kuala Lumpur] has not come.

- b. Kawan saya yang esok akan ke Kuala Lumpur
belum datang.
"My friend who is going to Kuala Lumpur tomorrow
has not come".
- c. Kawan saya yang akan ke Kuala Lumpur esok
belum datang.
"My friend who is going to Kuala Lumpur tomorrow
has not come".

- (56)a. Budak [dengan tiba-tiba budak masuk ke dalam
Child [suddenly child enter to in
bilik]mengancam untuk membunuh Ali.
room threaten to kill Ali
- b. Budak yang dengan tiba-tiba masuk ke dalam
bilik itu mengancam untuk membunuh Ali.
"The boy who suddenly entered the room threatened
to kill Ali".
- c. Budak yang masuk dengan tiba-tiba ke dalam
bilik itu mengancam untuk membunuh Ali.

- same as (b) -

Sentence (55b), though not as good as (55c) is nevertheless grammatical. (56b) is certainly an equally good sentence if not better than (56c). It may therefore look as though the nominal in the embedded sentence need not be in the left-most position in order for relativization to apply. Sentence of the type (57) and (58) however confirms our claim.

- (57)a. Rumah [di atas bukit itu terletak rumah] itu cantik.
The house [on the top of the hill is situated house]
is beautiful.
- b. *Rumah yang di atas bukit itu terletak cantik.
- c. Rumah yang terletak di atas bukit itu cantik.
House COMP situated at on hill the beautiful.
"The house which is situated on the hill is beautiful".
- (58)a. Saya dapat merasakan perasaan sedih [pada
mukanya terbayang perasaan sedih] .
"I can feel the sad feeling [on his face a sad
feeling can be seen] .
- b. *Saya dapat merasakan perasaan sedih yang pada
mukanya terbayang.
- c. Saya dapat merasakan perasaan sedih yang ter-
bayang pada mukanya.
"I can feel the sadness on his face".

Now if it is true that the identical nominal need not be in the clause initial position at the time when relative deletion takes place both (57b) and (58b) should be alright. The fact that they are not further suggests that the identical nominal must occupy the left-most position of the embedded clause for the deletion rule to be able to apply. This requirement will exclude (57b) and (58b) because as we can see from (59b) and (60b), rumah and perasaan sedih cannot occupy initial position in such sentences.

- (59)a. Rumah itu terletak di atas bukit.
House the situated at on hill.
"The house is situated on a hill".

- b. *Rumah itu di atas bukit terletak.
"The house on a hill is situated".
- c. Di atas bukit terletak rumah itu.
At on hill situated house the.
"On the hill, the house is situated".
- d. ??Di atas bukit rumah itu terletak.

- same as c -

- (60)a. Perasaan sedih terbayang pada mukanya.
Feeling sad pass-see at face-his.
"There is sadness on his face".

- b. *Perasaan sedih pada mukanya terbayang.
- c. Pada mukanya terbayang perasaan sedih.

- same as a -

- d. ??Pada mukanya perasaan sedih terbayang.

- same as a and c -

Let us now come back to sentences (55) and (56). Since prepositional phrases in Malay can occupy various positions in a sentence as illustrated by (61) and (62), (55b) and (56b) may not be derived from (55a) and (56a) as posited earlier on but from structures (63) and (64).

- (61)a. Kawan saya akan ke Kuala Lumpur esok.
"My friend is going to Kuala Lumpur tomorrow".
- b. Kawan saya esok akan ke Kuala Lumpur.
"My friend tomorrow is going to Kuala Lumpur".
- c. Esok kawan saya akan ke Kuala Lumpur.
"Tomorrow my friend is going to Kuala Lumpur".

(62)a. Budak itu masuk ke dalam bilik itu dengan tiba-tiba.

"The boy entered the room suddenly".

b. Budak itu, dengan tiba-tiba, masuk ke dalam bilik itu.

"The boy suddenly entered the room".

c. Budak itu masuk, dengan tiba-tiba, ke dalam bilik itu.

"The boy entered suddenly (into) the room".

d. Dengan tiba-tiba budak itu masuk ke dalam bilik itu.

"Suddenly the boy entered the room".

(63) Kawan saya [kawan saya esok akan ke Kuala Lumpur] belum datang.

(64) Budak [budak dengan tiba-tiba masuk ke dalam bilik] itu mengancam untuk membunuh Ali.

Both (63) and (64) satisfy the structural description of relative clause transformation stated in (32). By deleting the coreferential nominal kawan saya in the case of (63) and budak in the case of (64), the surface structures (55b) and (56b) are produced. In (59), the prepositional phrase di atas bukit forms part of the verb phrase terletak di atas bukit and its occurrence in a sentence is not as free as a prepositional phrase which is directly dominated by an S. The same is true with (60) where pada mukanya forms part of the verb phrase terbayang pada mukanya.⁸ The only order in which rumah and perasaan sedih can occupy the clause initial positions

are (59a) and (60a), and relative transformation applied on these structures gives us (57c) and (58c).

Another set of examples which may be provided as counterexamples of the claim made by our relative deletion rule are the following.

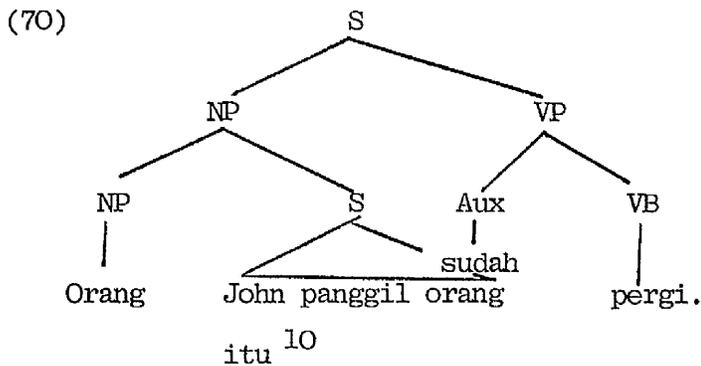
- (65)a. Anak saya [anak saya ia baru lulus peperiksaan]
Child I child I he just pass examination
itu hendak menjadi guru.
the want become teacher.
"My son[my son he has just passed his examination]
wants to be a teacher.
- b. *Anak saya yang ia baru lulus peperiksaan itu
hendak menjadi guru.
"My son who he just passed his examination wants
to be a teacher".
- (66)a. Perompak bank [perompak bank mereka telah
Robber bank robber bank they compl.
ditangkap] melarikan diri.
pass-catch run away self.
"The bank robbers [the bank robbers they were
caught] escaped.
- b. *Perompak bank yang mereka telah ditangkap itu
melarikan diri.
"The bank robbers who they were caught escaped"

The ungrammaticality of (65b) and (66b) poses a problem.

The fact that not all NPs in the embedded sentence may be relativized has been noted by a number of linguists working in this area. Karim (1975) claims that the NPs have to be the focus of the embedded sentence, for relative transformation to apply. This according to her explains the ungrammaticality of (69) whose deep structure is (70).

(69) *Orang yang John memanggil itu sudah pergi.

[Karim (19)]



[Karim (20)]

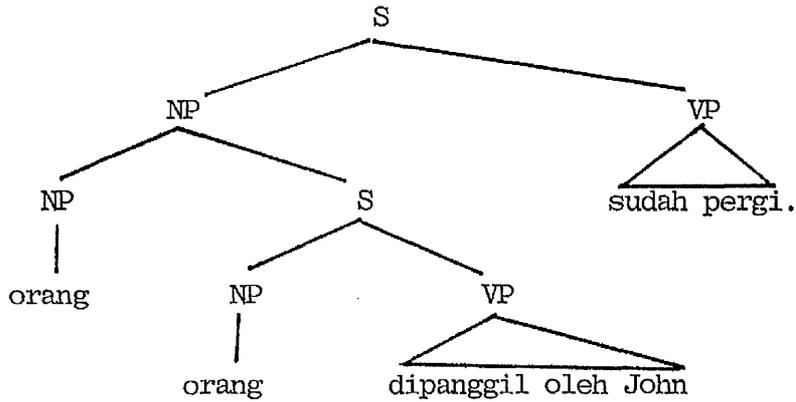
The sentence will be grammatical if the coreferential NP in the embedded sentence is topicalized or made the topic of the sentence as shown by (71) which has (72) as its intermediate structure.

(71) Orang yang dipanggil oleh John itu sudah pergi.

"The person who called by John has gone".

[Karim (22)]

(72)



Since this is her only example, it is not quite clear what she means by focus or topic though I suspect that what she means is really the left-most NP. If I am right in this assumption, the arguments forwarded in the last section supports her claim.

2.6 The Relational Approach

Some grammarians like Keenan (Keenan 1972), Chung (1976a) and Yeoh (1977) attempt to explain whether or not an NP may be relativized in terms of grammatical role of the coreferential NP. Keenan and Chung claim that subject NPs as well as direct object NPs of the embedded sentence can undergo relativization. Yeoh challenges this claim and argues that only NPs in the subject position can be relativized. Keenan's and Chung's examples in support of their claim that object NPs may also be relativized are given below.

(73) Ali bunuh ayam yang Aminah sedang memakan.

"Ali killed the chicken that Aminah (prog) eats".

[Keenan (49)]

- (74) Ikan yang saya masak untuk Ali tidak enak rasanya.
Fish REL I cook for Ali not good taste-its
[Chung (50)]

I fully agree with Yeoh that (73) must be ruled out as ungrammatical. Yeoh quoted Keenan's own example (75), and pointed out that since (73) and (75) are structurally similar, (75) should also be predicted as grammatical if (73) is grammatical.

- (75) *Aminah membasuh baju₂ yang Ali tidak membasuh.
"Aminah is washing clothes that Ali isn't washing".

As for (74) Yeoh disagrees with the claim that the embedded sentence is an active sentence. According to him (74) is a 'quasi-passive' and therefore the NP which is relativized is not an object of the sentence at the point of relativization but is the subject of the sentence. The evidence of passiveness of the sentence, he claims, is the presence of verb without the me- prefix (stem verb) together with the fact that the pronoun and the prefixless verb form an inseparable unit. ¹¹ It must be pointed out, however, that this argument is based on the assumption that sentences with stem verbs and first or second person pronouns as their subjects are passive sentences, whereas sentences with stem verbs with subjects other than those just mentioned are ungrammatical. This assumption may not be correct. I personally find sentences of the form (76) grammatical.

- (76)a. Ali baca buku itu; Buku itu Ali baca.

Ali read book the; Book the Ali read.

"Ali reads the book; The book, Ali reads(it)".

b. Budak itu pukul Ahmad; Ahmad, budak itu pukul.

Boy the hit Ahmad; Ahmad, boy the hit.

"The boy hit Ahmad; Ahmad, the boy hit (him)".

Sentences of the type (76) are not just confined to colloquial Malay, as many people are led to believe. Hassan (Hassan 1974) who works on the morphology of Malay finds that the presence of affix me- in active sentences in Malay is optional. ¹²

Omar (1968) gives the following as two of Malay sentence patterns.

(77)	Pola Pelaku	Perbuatan	Pelengkap
	Pattern Actor	Verb	Complement
a.	Ali	bacha ¹³	buku
	Ali	read	book
	"Ali reads (a) book".		
b.	Dia	tulis	surat
	He	write	letter
	"He wrote (a) letter".		
c.	Dia	menjirus	bunga.
	He	pour	flower
	"He waters the (flower) plants".		

(78)	Pola	Pelengkap	Pelaku	Perbuatan
	Pattern	Complement	Actor	Verb
	a.	Ikan	kuching ¹³	makan.
		Fish	cat	eat.
		"The fish, the cat eats (it)".		
	b.	Baju	emak	jahit.
		Dress	mother	sew.
		"The dress, mother sew (it)".		

From the examples in (77), it is quite clear that Omar regards sentences with stem verbs as active and that the presence of the prefix me- is optional. Sentences in (78) though she considers these as passive sentences (pasif semu as she calls it), refute the claim made by Yeoh that the subject of quasi-passive must either first or second person pronouns. The point I would like to bring out is that the criteria for Yeoh's claim that the embedded sentence in (74) is passive sentence are themselves questionable.

Coming back to the claim made by Keenan and Chung on the one hand and Yeoh on the other, what seems to be the problem here is the question of identifying the grammatical relations of the objects in stem sentences. If one considers that such an NP is the grammatical subject of a passive sentence, as Yeoh does,¹⁴ then it is correct to say that relativization operates only on NP subjects. But on the other hand, if one considers that such an NP is the object of an active sentence, then he is right to claim that relativization can operate either on subject or object NPs as claimed by Keenan and Chung.¹⁵ This problem may be eliminated by describing

the sentence simply in terms of its linear configuration rather than their grammatical relations. By saying that relativization operates on nominals (noun phrases) in the left-most position of the sentence irrespective of whether it is a subject or an object, as stated in (68) would account for both the claims.

Another major problem of describing relativization in terms of grammatical relations concerns the possibility of relativizing genitive nominals. Consider sentences in (79).

(79)a. Perempuan yang anaknya masuk hospital kelmarin
Woman Comp son-her enter hospital yesterday
ingin berjumpa dengan doktor.

wish meet with doctor.

"The woman whose son was admitted to hospital
yesterday would like to see the doctor".

b. Buku yang kulitnya koyak itu buku saya.

Book Comp cover-its tear the book I.

"The book the cover of which is torn is my book".

Yeoh would derive (79) from structures corresponding to (80).

(80)a. Perempuan [anak perempuan itu masuk hospital
kelmarin] itu ingin berjumpa dengan doktor.

"The woman [the woman's son was admitted to
hospital yesterday] would like to see the doctor".

b. Buku [kulit buku itu koyak] itu buku saya.

"The book [the book's cover is torn] is my book".

In the above examples it is obvious that perempuan itu and buku itu are not the subjects of the embedded sentence. So Yeoh has to weaken his claim by saying that in genitive NPs the 'possessed NP' must be the syntactic subject of the sentence. Further more he has to consider relativization on such sentences to be a different process from that which operates on subject NPs. In the case of genitive NPs in addition to replacing the NP with a 'relative marker' yang which has to be moved out into the position immediately following the head NP, a pronoun is required to fill in the slot that is left vacant. But even his weakened claim cannot be maintained. Consider (81).

- (81)a. Rumah yang di belakangnya ada pokok limau
House Comp at behind-its have tree orange
itu rumah saya.
the house I.
"The house behind which there is an orange tree
is my house".
- b. Dia suka membaca suratkhabyang di dalamnya
He like read papers Comp at in-it
terdapat banyak berita luar negeri.
pass-get many news outside country.
"He likes to read newspaper which has a lot
of foreign news in it".

I find (81) perfectly alright and I am quite sure that most people would share my judgement. (81a) and (81b) are derived from the structure corresponding to (82a) and (82b) respectively.

- (82)a. Rumah [di belakang rumah ada pokok limau]
itu rumah saya.
"The house [behind the house there is an
orange tree] is my house".
- b. Dia suka membaca suratkhabar[di dalam surat
khabar terdapat banyak berita luar negeri] .
"He likes to read newspaper [in the newspaper
there is a lot of foreign news] .

Notice that the relativized nominals in (82) are not even contained in the subject NPs and yet relativization is possible. In fact the prepositional phrases containing the nominals need not even occupy the initial position in their underlying structures as demonstrated by (83), which must have been derived from the structures corresponding to (84).

- (83)a. Rumah yang ada pokok limau di belakangnya itu
House that have tree orange at behind-it the
rumah saya.
house I.
"The house which has an orange tree behind it
is my house".
- b. Dia suka membaca suratkhabar yang terdapat banyak
He like read newspaper that pass-find many
berita luar negeri di dalamnya.
news out country at in-it.
"He likes to read newspaper which has a lot of
foreign news in it".

- (84)a. Rumah [ada pokok limau di belakang rumah]
itu rumah saya.
"The house [there is an orange tree behind house]
is my house.
- b. Dia suka membaca suratkhobar [terdapat banyak
berita luar negeri di dalam suratkhobar itu] .
"He likes to read newspaper [there are a lot
of foreign news in the newspaper] .

As long as the identical nominals may be fronted into the clause initial position of the embedded clause relativization is able to apply. So the structures of (81) and (83) when relativization applies are (85) and (86) respectively.

- (85)a. Rumah [rumah di belakangnya ada pokok limau]
itu rumah saya.
- b. Dia suka membaca suratkhobar [suratkhobar di
dalamnya terdapat banyak berita luar negeri] .
- (86)a. Rumah [rumah ada pokok limau di belakangnya].
itu rumah saya.
- b. Dia suka membaca suratkhobar [suratkhobar
terdapat banyak berita luar negeri di dalamnya].

The same is true with genitive nominals. What makes it possible for genitive nominals to undergo relativization is not the fact that the possessed noun phrase is the subject of the sentence, but due to the fact that the nominals in question can be fronted.

Further evidence to support this claim is provided by sentences of the type (87) which are derived from structures corresponding to (88).

(87)a. Perempuan yang kami menumpang di rumahnya
Woman that we stay at house-her
itu baik.
the nice.
"The woman in whose house we stayed was nice".

b. Lelaki yang ada parut di mukanya itu ialah
Man that have scar at face-his the is
ketua mereka.
leader they.
"The man with a scar on his face is their
leader".

(88)a. Perempuan [kami menumpang di rumah perempuan]
itu baik.
"The woman [we stayed in the woman's house]
is nice.

b. Lelaki [ada parut di muka lelaki] itu ialah
ketua mereka.
"The man [there is a scar on the man's face]
is their leader.

As we can see from (88a) and (88b), the 'possessed NPs' rumah and muka are not the subjects of the embedded sentences but are contained in prepositional phrases di rumah perempuan and di muka orang respectively. The structures at the time when relativization

applies corresponds to (89).

(89)a. Perempuan [perempuan kami menumpang di rumah-
nya] itu baik.

"The woman [the woman, we stayed in her house]
is nice".

b. Lelaki [lelaki ada parut di mukanya] itu
ialah ketua mereka.

"The man [the man, there is a scar on the man's
face] is their leader.

We can therefore conclude that the structures for (79a) and (79b) are not (80a) and (80b) when relativization applies, as claimed, but those corresponding to (90a) and (90b).

(90)a. Perempuan [perempuan anaknya masuk hospital]
itu ingin berjumpa dengan doktor.

b. Buku [buku kulitnya koyak] itu buku saya.

Notice also that by analysing such sentences in this way there is no need for additional movement rule which moves yang to the position immediately following the head NP. Neither do we need the so called pronoun maintaining strategy to account for the presence of nya in the position where the nominal was initially.

I have argued, contrary to the claim made by relational grammarians, that an analysis which makes use of grammatical relations not only fails to capture the generalization which can be captured

by an analysis which makes use of linear configuration, but also that it is not capable of accounting for sentences of the type (81), (83) and (87). Relativization operates if the coreferential nominal in the embedded sentence occupies the sentence initial position regardless of the grammatical role it plays in that sentence. So as long as there is some way of bringing the coreferential nominal into this position relativization is always possible.

In many cases a number of transformations may be necessary before the nominal finds itself in this position. Let us take (91) to illustrate.

- (91)a. Perempuan yang saya belikan rokok itu mengucapkan
Woman Comp I buy-benef cigarette the say
terima kasih.
thank you.
"The woman ~~for~~ whom I bought the cigarettes said
thank you".
- b. Perempuan yang dibelikan (oleh saya) rokok itu
Woman Comp pass- buy (by I) cigarette
mengucapkan terima kasih.
say thank you.
" - same as (a) - "

The source for both (91a) and (91b) corresponds to (92). First dative transformation applies to the embedded sentence giving (93). Then the nominal in the embedded sentence is moved to the left-most position of the sentence either by object preposing producing (94a) or by passivization producing (94b). Once the coreferential nom-

inal is in the left-most position relativization can now apply deriving their surface structures (91a) and (91b).

(92) Perempuan [saya membelikan rokok untuk perempuan]
itu mengucapkan terima kasih.

"The woman [I bought cigarettes for the woman]
said thank you".

(93) Perempuan [saya membelikan perempuan rokok] itu
mengucapkan terima kasih.

"The woman [I bought woman cigarette] said
thank you".

(94)a. Perempuan [perempuan saya belikan rokok]
itu mengucapkan terima kasih.

"The woman [woman I bought her cigarettes]
thank you.

b. Perempuan [perempuan dibelikan rokok (oleh
saya)] itu mengucapkan terima kasih.

"The woman [woman was bought cigarette (by
me)] said thank you.

2.7 The Yang Deletion Rule: Arguments for its Non-existence

In section 2.31 I mentioned that the complementizer yang in relative clause may not be deleted. In this section I will attempt to provide some arguments for the non-existence for the yang-deletion rule.

2.71 Relative Clauses with Adjective Predicates

It has been proposed that yang may optionally be deleted if the predicate of the embedded clause is an adjective (Yeoh 1977; Karim 1975).¹⁶ Thus sentences (95) are assumed to be derived from structures corresponding to (96).

- (95)a. Orang miskin kurang mendapat perhatian.
People poor little get attention.
"The poor people get little attention".
- b. Dia menasihatkan pelajar-pelajar baru supaya
He advise student new to
belajar bersungguh-sungguh.
study hard.
"He advised the new students to study hard".
- c. Buku tebal itu buku Ali.
Book thick the book Ali.
"The thick book is Ali's book".
- (96)a. Orang yang miskin kurang mendapat perhatian.
"The people who are poor get little attention".
- b. Dia menasihatkan pelajar-pelajar yang baru
supaya belajar bersungguh-sungguh.
"He advised the students who are new to study
hard".
- c. Buku yang tebal itu buku Ali.
"The book which is thick is Ali's book".

The rule of yang-deletion is supposed to have deleted yang from the relative clause orang yang miskin, pelajar-pelajar yang baru and buku yang tebal in (96) to produce noun phrases orang miskin, pelajar-pelajar baru and buku tebal in (95). As demonstrated by (97) and (98) yang-deletion does not apply to all relative clauses with adjective predicates.

(97)a. Dia tidak dapat membaca seluruh buku yang
"He not can read all book that

{ sangat } 17
{ amat }
{ sungguh } tebal itu.
{ paling }
{ terlalu }

very thick the.

"He could not read the whole book which is
very thick".

b. Saya tidak pernah melihat bangunan yang lebih
I not ever see building that more
tinggi.

tall.

"I have never seen a building which is taller".

c. Bunga yang tidak cantik diberinya kepada Aminah.
Flower that not beautiful pass-give (by)-him to
Aminah.

"The flower which was not beautiful was given (by
him) to Aminah".

(98)a. *Dia tidak dapat membaca seluruh buku

{ sangat
amat
sungguh
paling
terlalu } tebal itu.

b. *Saya tidak pernah melihat bangunan lebih tinggi.

c. *Bunga tidak cantik diberinya kepada Aminah.

The ungrammaticality of (98) is claimed to be due to the fact that yang-deletion may not apply if there are constituents such as intensifiers, negative or comparative articles intervening between the yang and the adjectives. In fact as evidenced from (99). the materials need not be just be intervening materials, as the results are still bad even if they occur after the adjectives.

(99)a. *Dia tidak dapat membaca buku tebal { sangat
amat
sungguh
sekali }
itu.

b. *Mereka meminta tolong budak tinggi sedikit itu.

From the above facts Karim concluded that yang may not be deleted if the adjectives in the predicates consist of words describing state of health, sensation and state of mind, that is any subjective evaluation and descriptions referring to conditions or situations that do not have a sense of permanency, as in the case of intensifiers and comparatives. It is the feature[± temporary] , it is claimed, that determines whether or not yang may be deleted. This explains why (100) is ungrammatical.

(100) *Anak { lapar
 pening
 sakit
 marah
 meradang } itu ...

Child { hungry
 headache
 sick/ill
 angry
 angry } the ...

Other examples which appear to support this claim are given in (101) and (102).

(101)a. Buah yang { sudah
 telah
 akan
 sedang
 belum } masak akan dijual

Fruit which { already
 already
 will
 are now
 not yet } ripe the will pass-sell

"The fruit which are already ripe will be sold".

b. *Buah { sudah
 telah
 akan
 sedang
 belum } masak akan dijual

(102)a. Peristiwa yang { menarik¹⁸
 mengembirakan
 mengharukan
 menyedihkan } itu tidak dapat

Incident which { pleasant
 happy
 touching
 sad } the not can

kami lupakan
we forget.

"The pleasant incident cannot be forgotten".

- b. *Peristiwa $\left\{ \begin{array}{l} \text{menarik} \\ \text{mengembirakan} \\ \text{mengharukan} \\ \text{menyedihkan} \end{array} \right\}$ itu tidak
dapat kami lupakan.

There are two comments I would like to make about this analysis. Firstly, about the term temporary itself; it is not quite clear what class of words can be included in temporary - can comparative, negative for instance be considered as temporary in the required sense? Secondly, even for adjectives which clearly could take the feature [+ temporary] , it is possible to delete yang as demonstrated by (103), assuming for the moment there is such a rule.

- (103)a. Budak kecil itu menangis.
Child small the cry.
"The small child cried".
- b. Mempelam muda masam.
Mango young sour.
"Green mangoes are sour".
- c. Budak itu memakai baju baru tiap-tiap hari.
Child the wear dress new every day.
"The child wears new dress everyday".

It is fairly clear that adjectives in the above sentences have the feature [+ temporary] . A child will not be small for ever. The same is true with muda and baru; green mangoes will get ripe (masak) and a dress will get old (buruk) after some time. So contrary to the facts, the above analysis would predict that (103) would be ungrammatical.

From the examples cited in this section, we find that the only environment where yang may optionally delete is, as illustrated by (95) and (103), when the adjectives in the predicate are of the attribute type i.e. adjectives which characterize the set of entities mentioned rather than define them. We have already seen how this is derived, within the current analysis, by constraining the yang-deletion.

The fact that the yang-deletion is to be confined to a very small subgroup of adjectives that can occur in relative clauses, in itself makes the claim that adjectives are derived from relative clauses rather suspicious. An alternative solution is to generate attributive adjectives directly in the base. A number of people including Emonds (1976), Baker (1975), Brame (1976) Jackendoff (1977) and Bresnan (1977) have proposed either explicitly or implicitly that prenominal adjectives in English are not derived from relative clauses but are base-generated. Emonds, for instance, noted that there are several constructions that we may assume as a result of deep structure expansion of NP \rightarrow ... (AP) N ... Below are some examples.

- (104)a. Students are traditional revolutionaries
in that country.
- b. They have arrested three possible suspects.
- c. Potential criminals are hard to detect.
- d. Don't overestimate the actual importance
of election.
- e. The main purpose of this assignment has never
been made known.

- f. We witness an utter failure.

As evidenced from (105) the putative relative clause sources of the above sentences are ungrammatical.

- (105)a. *Students are revolutionaries who are traditional
in the country.
- b. *They have arrested three suspects who are possible.
- c. *Criminals who are potentials are hard to detect.
- d. *Don't overestimate the importance of the election
which is actual.
- e. *The purpose of the assignment which is the main
has never been made known.
- f. *We witness a failure which is utter.

This fact was first noticed by Winter (Winter 1965) who then rejected Chomsky's proposal that the transformation T_{Adj} operates on any string Article-noun be adjectives to form an Adjective-noun combination.

Though similar examples are not very common in Malay the fact that they do exist suggests that at least some adjectives are not derived from relative clauses via the yang-deletion rule. The following are some of the Malay examples.

- (106)a. Ali ialah kawan lama Ahmad.
Ali is friend old Ahmad.
"Ali is Ahmad's old friend".

- b. Anita Serawak merupakan salah seorang penyanyi
Anita Serawak is one of the most popular singer
sukaramai pada masa ini.
popular at time this.
"Anita Serawak is one of the most popular singer
today".
- c. Mereka sekarang tinggal di rumah haram.
They now live at house illegal.
"They are now living in an illegal house".
- d. Jawatankuasa itu akan mengadakan mesyuarat
Committee the will hold meeting
tergempar pada petang ini.
urgent at evening this.
"The meeting will hold an extra-ordinary meeting
this evening".
- e. Anjing itu mati kerana kena peluru sesat.
Dog the die because pass-hit bullet stray.
"The dog died because he was hit by a stray bullet".
- (107)a. *Ali ialah kawan Ahmad yang lama.
b. *Anita Serawak merupakan salah seorang penyanyi
yang sukaramai pada masa ini.
c. *Mereka sekarang tinggal di rumah yang haram.
d. *Jawatankuasa itu akan mengadakan mesyuarat
yang tergempar pada petang ini.
e. *Anjing itu mati kerana peluru yang sesat.

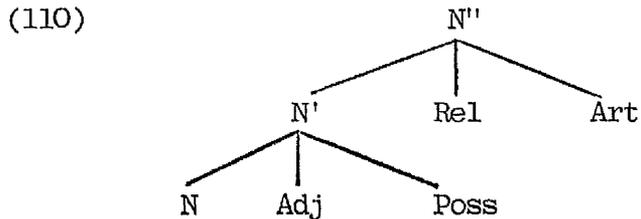
There is, however, a large number of constructions of the form
noun-noun where the second noun functions as an adjective in that

they modify the first noun. If the noun is such a construction is analysed as an adjective, then the motivation for generating adjectives in the base is even stronger since constructions of this type are not derived from the relative clause constructions as evidenced from the ungrammaticality of their relative clause correspondence.

- (108)a. Rumah kayu tidak tahan lama.
House wood not last long.
"A wooden house does not last long".
- b. Kasut kulit mahal.
Shoe leather expensive.
"Leather shoes are expensive".
- c. Pinggan plastik tidak mudah pecah.
Plate plastic not easy break.
"Plastic plates do not break easily".
- d. Kerusi rotan cantik.
Chair cane beautiful.
"Ratan chairs are beautiful".
- (109)a. *Rumah yang kayu tidak tahan lama.
b. *Kasut yang kulit mahal.
c. *Pinggan yang plastik tidak mudah pecah.
d. *Kerusi yang rotan cantik.

Another point which favours the base-generated adjectives concerns the nouns which they modify. We saw in chapter 1 that relative clauses are N' complements; they modify N'. If adjectives

are derived from relative clauses we would expect them, like relatives, to modify N'. This however is not the case. Adjectives in Malay, unlike relatives, modify N. They are N' complements. Structurally they may be represented by (110).



This structure will explain why (112) and (114) are ungrammatical while (111) and (113) are fine.

- (111)a. Murid-murid Melayu yang cerdas diberi biasiswa.
Pupil Malay that bright pass-give scholarship.
"The Malay pupils who are bright were given scholarship".
- b. Orang-orang kampung yang miskin kurang
People village that poor little
mendapat perhatian.
get attention.
"The rural people who are poor get little attention".
- c. Di dalam bilik tidur yang kecil itu hanya ada
At in room sleep that small the only have
sebuah katil.
coef bed.
"In the bed-room there is only one bed".
- (112)a. *Murid-murid Melayu cerdas diberi biasiswa.

- b. *Orang-orang kampung miskin kurang mendapat perhatian.
- c. *Di dalam bilik tidur kecil itu hanya ada sebuah katil.

- (113)a. Murid-murid cerdas diberi biasiswa.
"The bright pupils were given scholarships".
- b. Orang-orang miskin kurang mendapat perhatian.
"The poor people get little attention".
 - c. Di dalam bilik kecil itu hanya terdapat sebuah katil.
"In the room there is only one bed".

- (114)a. *Murid-murid yang cerdas Melayu diberi biasiswa
- b. *Orang-orang miskin kampung kurang mendapat perhatian.
 - c. *Di dalam bilik kecil tidur itu hanya ada sebuah katil.

Next let us consider (115) and (116).

- (115)a., Murid-murid miskin yang cerdas diberi biasiswa.
"The poor students who were bright were given scholarships".
- b. Kereta besar yang baru mahal.
"A big car which is new is expensive".
 - c. Di dalam bilik kecil yang gelap itu hanya ada sebuah katil.

"In the small room which was dark there was only one bed".

(116)a. Murid-murid yang miskin dan cerdas diberi biasiswa.

"The pupils who were bright and poor were given scholarships".

b. Kereta yang besar, baru dan tahan mahal.

"A car which is big, new and lasting is expensive".

c. Di dalam bilik yang kecil, gelap lagi kotor itu hanya ada sebuah katil.

"In the room which is small, dark and dirty there is only one bed".

In an analysis which assumes that adjectives are derived from relative clauses it would predict that only sentences of the type (116) are grammatical while those of the type (115) are not. This is because in constructions containing more than one relative clauses yang may only appear before the first relative clause, as shown by examples in (117) and (118).

(117)a. Murid-murid yang sangat miskin dan agak cerdas diberi biasiswa.

"Pupils who were very poor and quite bright were given scholarships".

b. Kereta yang lebih besar, baru sedikit dan agak tahan mahal.

"A car which is bigger, a bit newer and quite lasting is expensive".

- c. Di dalam bilik yang begitu kecil, gelap dan sangat kotor itu hanya ada sebuah katil.

"In the room so small, dark and very dirty there is only one bed".

- (118)a. *Murid-murid sangat miskin yang agak cerdas diberi biasiswa.
b. *Kereta lebih besar, baru sedikit yang agak tahan mahal.
c. *Di dalam bilik begitu kecil, agak gelap yang sangat kotor itu hanya ada sebuah katil.

From (118) we can see that if yang is placed anywhere else other than before the first relative clause the result is bad. This shows the noun phrases murid-murid miskin, kereta besar and bilik kecil in (115) are not derived from relative clauses.

All the above facts argue against the transformationally derived adjectives in favour of the base-generated hypothesis. The relevant rules are as follows:

- (119)a. N' → N' (S) (PP) (Art)
b. N' → N (A) (Poss)

2.72 Relative Clauses with Prepositional Phrases

Within the current analysis adjectival predicates are not the only predicates which allow the deletion of yang. Karim has pointed

out that relative clauses with PP (Locative) can also undergo yang deletion. It is assumed that (120) are derived from an intermediate form corresponding to (121).

(120)a. Pelajar-pelajar dari luar bandar diberi tempat
di asrama.

"The pupils from the rural areas are given
places in the hostel".

b. Beg di atas meja itu cantik.

"The bag on the table is beautiful".

c. Rumah di depan rumah saya itu baru siap.

"The house in front of my house has just
been completed".

(121)a. Pelajar-pelajar yang dari luar bandar diberi
tempat di asrama.

"The pupils who are from the rural areas are
given places in the hostel".

b. Beg yang di atas meja itu cantik.

"The bag which is on the table is beautiful"

c. Rumah yang di depan rumah saya itu baru siap.

"The house which is in front of my house has
just been completed".

Like relative clauses with adjectival predicates there are cases where the PPs following the nouns in nominal phrases have no relative clause correspondence. Consider for instance the following examples.

- (122)a. Suasana di dalam bilik itu tenteram.
Atmosphere at in room the peace.
"The atmosphere in the room is peaceful".
- b. Udara di tepi pantai itu nyaman.
Air at edge beach the cool.
"The air at the beach is cool".
- c. Keadaan di dalam negeri tidak dapat dikawal lagi.
Situation at in country not can pass-control
anymore.
"The situation in the country cannot be controlled
anymore".
- (123)a. *Suasana yang di dalam bilik itu tenteram.
b. *Udara yang di tepi pantai itu nyaman.
c. *Keadaan yang di dalam negeri tidak dapat
dikawal lagi.

The ungrammaticality of (123), the relative clause correspondence of (122), shows that they are not the sources of the sentences in (122) and therefore the prepositional phrases in those sentences are not derived via the supposed yang-deletion rule but must have been generated in the base. However, unlike adjectives PPs are not expansions of N', but are expansions of N' as shown in (119). This accounts for the impossibility of relative clauses occurring between the head noun and the adjective in (114) and the possibility of them occurring between the head noun and the prepositional phrase as in (124).

- (124)a. Suasana yang tenteram di dalam bilik itu
Atmosphere that peaceful at in room the
tiba-tiba bertukar menjadi riuh rendah.
suddenly change become noisy.
"The atmosphere which was peaceful suddenly
became noisy".
- b. Udara yang bersih di tepi pantai itu begitu
menyegarkan.
"The air which is clean at the beach is so
refreshing" (The clean air at the beach is so
refreshing).
- c. Keadaan yang kacau bilau di dalam negeri tidak
Situation that chaos at in country not
dapat dikawal lagi.
can pass-control anymore.
"The situation in the country which is chaotic
cannot be controlled anymore".
(The chaotic state of the country cannot be
controlled anymore).

So even though, like the adjectives, prepositional phrases must have been base-generated, they are not generated under the same node as adjectives. This is correctly predicted by the internal structure proposed in chapter 1 where PPs are sister-adjoined to the embedded sentence under the N' node (See section 1.11).

2.73 Relative Clauses with Verbal Predicates

Relative Clauses with verbal predicates as illustrated by (125)

and (126) do not have corresponding constructions without yang.

- (125)a. Budak yang menangis itu lapar.
Child that cry the hungry.
"The child who was hungry cried".
- b. Anak yang dididik dengan sempurna akan menjadi
Child that pass-bring up with perfect will become
warga negara yang bertanggungjawab.
citizen that responsible.
"A child who is well brought up will become a
responsible citizen".
- c. Doktor itu merawat pesakit yang memerlukan
Doctor the treat patient that need
rawatan segera.
treatment immediate.
"The doctor is treating the patient who needs
immediate treatment".
- (126)a. *Budak menangis itu lapar.
- b. *Anak dididik dengan sempurna akan menjadi
warga negara yang bertanggungjawab.
- c. *Doktor itu merawat pesakit memerlukan rawatan
segera.

I have argued that adjectives are not derived from relative clause constructions but are generated in the base by the PS- rules given in (119). I have also shown that yang in relative clause constructions with verbal predicates such as (125) may not be deleted. In the case of relative clauses with prepositional phrases,

though there are corresponding constructions without yang, there is no evidence whatever to show that these sentences are derived from relative clauses by a yang-deletion rule since they are generable directly in the base as an expansion of N' by the PS-rules. This rule is independently motivated to account for the sentences of the type (122). There is therefore no compelling motivations for having a yang-deletion rule in the grammar.

Notes to Chapter 11

1. See Karim (1975) and Yeoh (1977).
2. The existence of the node COMP for sentential complements in Malay is argued for by Kader (1980). Kader, however, proposes that the complementizers are transformationally inserted rather than present in the base. No mention is made whether a COMP node is also present in relative constructions. The rule of relativization under the assumption that the complementizer is transformationally introduced will be discussed in the next chapter.
3. 'Rel' is used here as a neutral term for the relativised item. According to this analysis, the complementizer that that remains in the clause initial position is itself subject to an optional deletion rule (1).

(1) that \rightarrow \emptyset / NP ___ NP.

4. For traditional grammarians and for some speakers, sentences of this type are unacceptable. For these people only 1st and 2nd person pronouns may occur in this type of constructions and in addition it is claimed that there should be no intervening material between the pronoun and the verb. All particles (modals, aspectuals etc) should therefore come before the pronoun as in (2).

(2) Buku itu sudah { saya }
 { awak } baca.

I personally find sentences of this type (35c) acceptable. Karim

noted that at present it is possible to get all of the following forms:-

(3) Buku itu $\left\{ \begin{array}{l} \text{kubaca} \\ \text{saya baca} \\ \text{kau baca} \\ \text{engkau baca} \\ \text{dia baca} \end{array} \right\}$

5. The status of this type of constructions is a matter of controversy. Bresnan (1978) proposes that they are syntactically intransitive but differ from verbs such as tidur in that the former have logical objects. This difference is represented in the functional structure of the verb. The lexical rules for memasak and tidur, for instance would be as follows:

(4) memasak: V [____ NP] ,NP₁ MASAK NP₂
 [____] , (2y) NP₁ MASAK y
tidur: V [____] , NP₁ TIDUR

The formula on the left represent the syntactic contexts of the verbs whereas the one on the right represents the functional structure which constitutes the grammatical functions with the logical argument structures. As we can see memasak can appear in two syntactic contexts, it may or may not be followed by an NP. But even when there is no overt NP object it still has a logical object as is shown by the functional structure which may be translated roughly as there is a y such that NP₁ memasak y.

6. This sentence is ungrammatical only on the intended reading in which jiran kami is associated with the object of the verb umpat.

It is fully acceptable on the reading whereby jiran kami is related to the pronoun mereka with the meaning that our neighbour(s) like to gossip.

7. Sentences of the type (52) are always said with emphasis put on the subject of the embedded sentence. The emphasis is often accompanied by the emphatic particle sendiri (self) as in (5).

(5) Murid yang dia sendiri mengajarnya itu lulus.

Pupil that he self teach-him the pass.

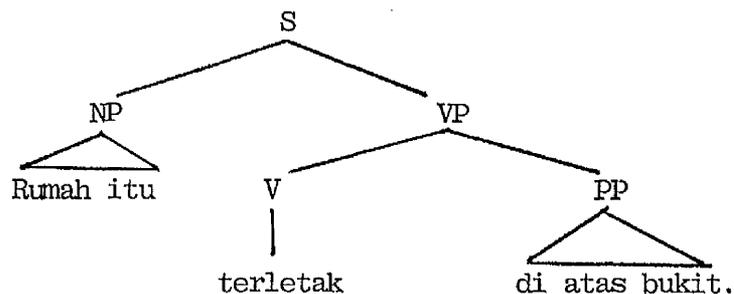
"The pupil that he himself taught passed".

This type of sentences are only used for purpose of contrast.

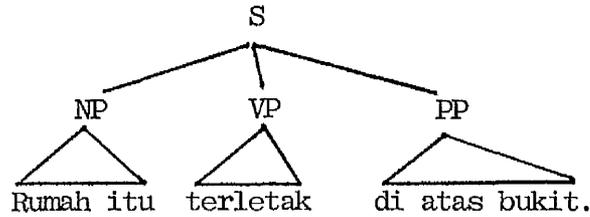
Sentence (52a), for instance, is used to bring out the contrast between the pupils that were taught by him and those that were taught by other people.

8. The deep structure for sentences (59a), for instance, is (6a) where the PP is dominated by the VP node and not directly by S, as in (6b).

(6)a.



b.



9. It is possible that there is a general constraint on embedding requiring that sentences with topicalized subject NPs may not be embedded. Consider the following sentences.

(7)a. *Saya diberitahu yang anak saya, ia baru lulus
I pass-inform that son I he just pass
peperiksaan.
examination.

"I was informed that my son, he has just passed his examination".

b. *Polis melaporkan yang perompak bank itu, mereka
Police report that robber bank the they
telah ditangkap.
compl pass-caught.

"The police reported that the robbers, they were caught".

c. *Kami tidak tahu bila Ahmad dia akan pulang.
We not know when Ahmad he will return.
"We do not know when Ahmad, he will return".

d. *Saya diberitahu mengapa budak itu dia tidak
I pass-inform why boy the he not
datang.
come.

"I was informed why the boy, he did not come".

- e. *Guru menerangkan bagaimana murid-murid itu
Teacher explain how student the
harus menjawab soalan.
should answer question.
"The teacher explained how the students they
should answer the questions".

Sentences in (7) are bad because they do not obey the constraint. (7a) and (7b) are produced by embedding (8a) and (8b) as sentential objects whereas (7c), (7d) and (7e) are obtained as a result of embedding (8c), (8d) and (8e) as embedded questions. Their underlying structures are given in (9).

- (8)a. Anak saya, ia baru lulus peperiksaan.
"My son, he has just passed his examination".
- b. Perompak bank itu, ia telah ditangkap.
"The bank robbers, they were caught".
- c. Ahmad, ia akan pulang.
"Ahmad, he will return".
- d. Budak itu, ia tidak datang.
"The boy, he did not come".
- e. Murid-murid itu, mereka harus menjawab soalan.
"The students, they should answer the questions".
- (9)a. Saya diberitahu [COMP anak saya, ia baru lulus
pereriksaan].
- b. Polis melaporkan [COMP perompak itu, mereka
telah ditangkap].
- c. Kami tidak tahu [COMP Ahmad, dia akan pulang bila].

- d. Saya diberitahu [COMP budak itu, ia tidak datang
mengapa] .
- e. Guru menerangkan[COMP murid-murid harus
menjawab soalan bagaimana] .

The exact nature of this constraint is not entirely clear to me at the moment.

10. In her analysis, which is based on R.A. Jacobs and P.S. Rosenbaum, all the lexical items are entered in their simple forms (root). The surface structure is derived by a segment transformation inserting, in this case, the prefix me- .

11. I find both (a) and (b) sentences in the following examples equally acceptable and in some cases like (9), the (b) sentences better than their (a) counterparts.

(7)a. Buku itu, saya sudah baca beberapa kali.

Book the I compl. read several time.

"The book, I have read(it) several times".

b. Buku itu, sudah saya baca beberapa kali.

"The book, I have read (it) several times".

(8)a. Perkara ini, awak harus fikirkan baik-baik.

Matter this, you must think good.

"This matter, you should think (about it) carefully".

b. Perkara ini, harus awak fikirkan baik-baik.

(9)a. Kerja ini, $\left\{ \begin{array}{l} \text{saya} \\ \text{awak} \end{array} \right\}$ mesti siapkan hari ini juga.

Work this $\left\{ \begin{array}{l} \text{I} \\ \text{you} \end{array} \right\}$ must finish day this emph.

"This work, $\left\{ \begin{array}{l} \text{I} \\ \text{you} \end{array} \right\}$ must finish (it) today".

b. Kerja ini, mesti $\left\{ \begin{array}{l} \text{saya} \\ \text{awak} \end{array} \right\}$ siapkan hari ini juga.

- as in (a) -

The acceptability of both (a) and (b) sentences refute the claim that the pronoun and the prefixless verb form an inseparable unit.

12. The same position is taken by Chung (Chung 1976a; 1976b and 1978), in which she argues that for most speakers sentences with stem verbs are active though there are speakers (those who are more conversant with the literary style) who tend to associate them with the passive forms. But even for this group, it is argued that the active analysis is also possible. Thus sentences of this type can either be active or passive forms.

13. These words are spelt as they were found in their original forms i.e. in the old spelling system. Under the present Malay spelling system 'ch' in the old system is replaced by 'c'. "Kuching" is now spelt as 'kucing' and 'bacha' as 'baca'.

14. How Yeoh derives (10), for instance, is as follows:

(10) Saya masak ikan untuk Ali.

"I cooked the fish for Ali".

The object ikan is first fronted by the object preposing rule from its source sentence (11a) giving us (11b). Then VP fronting applies to (11b) yielding (10) and since in his analysis object preposing is a kind of passive, (10) is therefore claimed to be a passive sentence. See also footnote (4) and (11).

- (11)a. \uparrow Saya memasak ikan untuk Ali,
I cook fish for Ali.
"I cooked the fish for Ali".
- b. \uparrow Ikan (saya masak) untuk Ali.
Fish I cook for Ali.

15. This position is adopted by Farid Onn (1980). It is not entirely clear to me how within this framework, to exclude relativization from operating on the obvious cases of object NPs i.e. NP objects of the me-type of verbs.

16. Yeoh claims that this is the only environment where yang may be deleted. For Karim, the yang-deletion rule applies to both relative constructions with adjectives as well as PP predicates. Since yang, according to both of them, is a relative pronoun, the yang-deletion rule is considered to be analogous to the Wh-iz deletion in English.

17. All these words are intensifiers in Malay. Sangat, amat and sungguh may either occur before or after the adjectives. Paling and terlalu can only occur before the adjectives whereas sekali can only follow them.

18. These words have the morphological shape of verbs. They contain verbal affixes me- and me-kan, but they can also function as adjectives as in these examples in addition to their function as ordinary transitive verbs as in the following sentences.

(12) Peristiwa itu menarik perhatian orang ramai.

Incident the attract attention people many.

"The incident attracts the attention of the public".

(13) Peristiwa itu { mengembirakan
mengharukan
menyedihkan } orang yang melihatnya.

"The incident { pleased
touched the feeling of
saddened } the people

who saw it".

That they are indeed adjectives in sentences like (102a) may be demonstrated by the possibility of putting adjective intensifiers such as sangat, amat, sungguh and the like either in front or after them.

CHAPTER III

AGAINST TRACE THEORY

3.0 Brief Outline of Trace Theory

In the pre-trace theory analysis (Chomsky 1973), it was assumed that underlying a wh- phrase is a full lexical NP which is in some sense identical to an NP in the matrix sentence. The formation of relative clause is thus analysed as involving the following operations:

- (1)a. Wh-placement on NP or PP.
b. Wh- movement: in the structure
- $$\left[\left[\begin{array}{c} X_1 \ X_2 \ X_3 \\ S \ \text{COMP} \end{array} \right] \begin{array}{c} + \\ -\text{WH} \end{array} \right] \ X_5 \ \text{Wh} \ X_7$$

The sixth term fills the position of X_2 and is replaced by PRO.

- c. [wh, NP] becomes null in the context
- $$\left[\begin{array}{c} \text{NP} \ _ \dots \\ \text{NP} \end{array} \right] .$$

In later works, however, this position was modified (Chomsky 1977: Chomsky and Lasnik 1977). Full lexical NPs are no longer considered to underly wh-phrases as assumed earlier but are replaced by wh-phrases in the underlying structure. Thus underlying (2a), for instance, is the structure corresponding to (2c) instead of (2b).

- (2)a. The person who Bill saw.

- b. [the person[[NP that] [Bill saw the person]]] .
NP \bar{S} COMP
- c. [the person[[NP that] [Bill saw who]]] .
NP \bar{S} COMP

The wh-movement rule will then move the wh-phrase in the embedded sentence into the COMP to the left of the complementizer proper by rule (3) leaving its trace in the original position as shown in (4).

(3) Move wh-phrase into COMP.

(4) [the person[[who that] [Bill saw t]]] .
NP \bar{S} COMP

This trace will be available for the assigning of thematic relations and the relation between the moved phrase and its trace is essentially that of a bound variable. The application of rule (5) which optionally deletes either who or that or both will produce the surface structure (6a), (6b) and (6c).

- (5)a. wh-phrase becomes null.
b. (i) that becomes null.
(ii) for becomes null.

- (6)a. The person that Bill saw.
b. The person who Bill saw.
c. The person Bill saw.
d. *The person who that Bill saw.

If rule (5) is not applied (6d) is produced and this will be filtered out by filter (7) which will mark all structures which have a doubly filled COMP ungrammatical.

- (7) * [wh-phrase ϕ], $\phi \neq e$.
COMP

It is claimed that under this analysis, infinitival relatives differ from finite relatives only in rules specifying the surface form of the element COMP. Whereas in finite relatives, as we have already seen, we can either delete the wh-phrase or the complementizer that or both, in infinitival relatives wh-deletion in structures such (8a) has to be made obligatory so that the desired result will be generated. The Recoverability Condition prevents it from applying to (8b) where the wh-phrase contains actual lexical items.

- (8)a. I found a book[[which for]] you read t]
I found a book for you to read.
- b. I found a man[[to whom for] PRO to give the book t] .
S
I found a man to whom to give the book.

The case with relativized subject NP in infinitival relatives is similar to other relatives. Wh-movement will transform the deep structure (9) to (10).

- (9) The man [[for] [who to fix the sink]] .
S
- (10) The man [[who for] [t to fix the sink]] .

The application of rule (5) will give (11).

- (11)a. The man [[who for] t to fix the sink] .
- b. The man [[for] [t to fix the sink]] .
- c. The man [[who] [t to fix the sink]] .
- d. The man [to fix the sink] .

(11a) is ruled out by filter (7); (11b) by for-to filter; (11c) by the NP to VP filter as stated in (12), leaving (11d) as the only possible string.

- (12) * [NP to VP], unless
 - a. α is adjacent to and in the domain of a verb or for.
 - b. α = NP

Wh-movement as stated in (3) only involves movement of a wh-phrase within a clause. This rule will not, for instance, allow the extraction of who into the COMP of \bar{S}_1 in (13) because it has to cross more than one cyclic nodes, thus violating Chomsky's Subjacency Condition. ¹

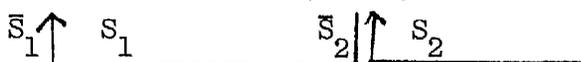
- (13) [the person [COMP [John claimed[COMP
 \bar{S}_1 \uparrow \bar{S}_2
[Bill saw who]]]]] .
 \bar{S}_2 |

In order to allow the grammar to generate (14), Chomsky has to introduce another rule permitting COMP-to-COMP movement of the wh-phrase. According to this analysis who is first moved to the COMP position

of \bar{S}_2 and then the COMP-to-COMP escape hatch will allow it to be moved into the COMP of \bar{S}_1 as shown in (15).

(14) The person John claimed Bill saw.

(15) The person[COMP[John claimed[COMP[Bill saw who]]]].



The successive cyclic application of wh-movement with the help of COMP-to-COMP escape hatch will allow the wh-phrase to be moved across an indefinite number of cyclic nodes as long as the verbs in such sentences allow such a movement.

3.1. Malay Relatives and Trace Theory

Having outlined very briefly the analysis of English relatives within Chomsky's movement framework, we can move on to examine Malay relatives. Let us first consider (16)

(16)a. Buku yang Ahmad suruh saya baca__itu tebal.

Book that Ahmad ask I read__the thick.

"The book that Ahmad asked me to read is thick".

b. *Buku yang Ahmad suruh saya baca cerita dalam__itu tebal.

"The book that Ahmad asked me to read the story in is thick".

- c. *Buku yang Ahmad suruh saya baca apa__tebal.

"The book that Ahmad asked me to read what__is thick".

Sentences in (16) exhibit the properties Chomsky claims to be the characteristics of wh-movement.² The presence of the gaps are indicated by __. (16a) contains a bridge verb suruh (ask) and there is an apparent violation of the subadjacency condition and the specified subject condition. The ungrammaticality of (16b) and (16c) shows that wh-movement is blocked by the Complex Noun Phrase Constraint and the Wh-Island Constraint respectively. CNPN and Wh-Island Constraint can automatically be accounted for by the subadjacency condition if the cyclic nodes are extended to include S, as strongly suggested by Chomsky (1977).

Within the trace theory framework, sentences of the type (16) would be assumed to be derived from their corresponding underlying structures (17) by the wh-movement as illustrated below.³

- (17)a. Buku itu [[NP yang] [Ahmad suruh saya]
 \bar{S} COMP $\left[\begin{array}{l} \uparrow \\ \text{[comp]} \end{array} \right] S$

[\bar{S} COMP [S PRO baca yang]] .
 $\left[\begin{array}{l} \uparrow \\ \text{[+wh]} \end{array} \right]$

- b. Buku itu [[NP yang] [Ahmad suruh saya]
 \bar{S} COMP [+comp] S

[COMP [PRO baca [cerita dalam yang]]] .
 \bar{S} $\left[\begin{array}{l} \uparrow \\ \text{[+wh]} \end{array} \right]$

- c. Buku itu [[NP yang] [Ahmad suruh saya]
 \bar{S} COMP [+comp]

[\bar{S} COMP [PRO baca [yang apa]]] .
 \bar{S} $\left[\begin{array}{l} \uparrow \\ \text{[+wh]} \end{array} \right]$

In (17a) the movement of wh-phrase over three cyclic nodes is permitted under the bridge condition where in the first cycle it is moved into the COMP of the lower \bar{S} and then on the next cycle the COMP-to-COMP movement moves it into the higher COMP leaving a trace in its original position and possibly in the lower COMP as well as illustrated by (18).

- (18) Buku itu [[yang yang] [Ahmad suruh saya]
 \bar{S} COMP^[+wh] [+comp]
 [t [PRO baca t]]] tebal.
 \bar{S} S

The application of (5a) or (5b) will delete the relative pronoun yang or the complementizer yang respectively. In both cases the intermediate structure (19) will be produced. The postponing of the determiner itu will ultimately produce the surface structure (16a).

- (19) Buku itu yang Ahmad suruh saya baca tebal.
 Book the that Ahmad ask I read thick.

In (17b) the movement of the wh-phrase yang into the COMP of the lower S is blocked because it is contained in a larger NP cerita dalam yang. This accounts for the ungrammaticality of (16b). The extraction of yang in (17c) is also not allowed because it is contained in a Wh-Island.

3.2. Arguments against Trace Theory

3.21 Possessive NPs

From the preceding section it may appear that there is good reason to believe that Malay relatives are formed as a result of wh-movement. It is fairly obvious, however, that evidence of Chapter .II is already incompatible with Trace Theory. In this section I will present further evidence to show that wh-movement cannot be motivated and cannot satisfactorily explain Malay relatives. First let us consider sentences of the type (20).

- (20)a. Rumah yang atap hijau itu baru siap.
House that roof green the just complete.
"The house that has green roof has just been completed".
- b. Budak yang rambut panjang itu telah ditangkap
Boy that hair long the compl. pass-catch.
"The boy that has long hair was caught".
(The boy with the long hair was caught).

Under the wh-movement analysis outlined in the preceding section sentences in (20) would be derived from structures corresponding to (21).

- (21)a. Rumah itu [[NP yang] [[atap yang]
 S COMP[+comp] S NP [+wh]
 hijau]] baru siap.
- b. Budak itu [[NP yang] [[rambut yang]
 S COMP[+wh] S NP [+wh]
 panjang]] telah ditangkap.

Now if S is indeed a cyclic node as suggested by Chomsky, the relative pronoun yang in both (21a) and (21b) cannot be extracted into the COMP position because such a movement would violate the Subjacency Condition. The grammaticality of (20) shows that either S is not a cyclic node or that Malay relatives are not the results of wh-movement. Assume S is not a cyclic node. We still cannot extract yang from the NP containing it because this violates the Subject Condition (Chomsky 1973; Ross 1967) and the NP Constraint (Bach and Horn 1976).⁴

The above facts suggest that there is no wh-movement involved in the derivation of such sentences. The other alternative is to regard sentences of this type as a special case, as has been suggested by Chomsky himself with respect to sentences of the type (22).

(22) Who did [you see[a picture of t]].
 S NP

To my mind such a move is only to be taken seriously if there is no better explanation. The only reason we can think of why Chomsky did this is that by so doing S may be included in the cyclic node. The inclusion of S into the cyclic node will automatically explain Complex Noun Phrase Constraint and Wh-Island Constraint which he claims would be difficult to explain in a principled way otherwise.⁵

It has been suggested that (20) may not be derived from an underlying structure given in (21) but instead from a structure

corresponding to (23).

(23)a. Rumah itu [[NP yang] [yang beratap hijau]
 \bar{S} COMP [+comp]_S [+wh]

baru siap.

b. Budak itu[[NP yang] [yang berambut panjang]]
 \bar{S} COMP [+comp]_S [+wh]

telah ditangkap.

In this case wh-movement can take place moving the wh-phrase yang into the COMP position. The application of either relative yang-deletion or complementizer deletion deletes either the wh-phrase yang or the complementizer yang and subsequent postponing of the determiner itu will yield (24).

(24)a. Rumah yang beratap hijau itu baru siap.

"The house with the green roof has just been completed".

b. Budak yang berambut panjang itu telah ditangkap.

"The boy with the long hair was arrested".

A later rule which optionally deletes ber- will finally produce (20).⁶ However such an analysis does not seem to be correct. As illustrated by (25), many of the sentences prior to the deletion of ber- are either marginal in their grammaticality or totally ungrammatical. So in such cases ber- deletion has to be made obligatory in order to exclude sentences of the type (25) from the grammar. This is clearly contrary to the facts in Malay.

- (25)a. ?Orang yang beranak ramai...
People that poss-child many...
"Those who have many children..."
(cf. Orang yang mempunyai anak yang ramai...)
- b. ?Orang yang berharta banyak...
People that poss-property many...
"Those who have a lot of properties..."
(cf. Orang yang mempunyai harta yang banyak).
- c. *Wanita yang berhidung mancung itu...
Woman that poss-nose sharp the...
"The woman with a sharp nose..."
- d. *Lelaki yang berperut buncit itu...".
Man that poss-stomach the...
"The man with a paunch..."
- (26)a. Orang yang anak ramai ...
b. Orang yang harta banyak ...
c. Wanita yang hidung mancung itu ...
d. Lelaki yang perut buncit itu ...

3.22 Constructions with Prepositional Phrases

Another piece of evidence that there is no wh-movement involved in the formation of Malay relatives comes from sentences of the type (27).

- (27)a. Tok Bomoh yang semua orang yang berubat dengannya
 Medicineman that all people that treat with
 baik itu ...
 him good the ...
 "The medicineman who cured all the people who went
 to him for treatment ..."
- b. Guru yang semua budak yang melawannya dapat E itu ...
 Teacher that all child that fight-him get E the ...
 "The teacher who gives E to all the students who go
 against him ..."
- (28)a. *Tok Bomoh yang semua orang sakit yang berubat dengan
 baik itu ...
- b. *Guru yang semua budak yang melawan dapat E itu ...

The wh-movement analysis would not be able to explain why (27), if not fully acceptable, are definitely much better than (28). Under this analysis underlying both (27) and (28) would be structures corresponding to (29).

- (29)a. [[Tok Bomoh₂ [[NP yang] [[semua orang
 S₀ NP S₁ COMP^[+comp] SI NP
 sakit₁ [[NP yang] [yang₁ berubat
 S₂ COMP^[+comp] S₂^[+wh]
 dengan yang₂]]] baik]]] ...] .
 S₂ S₂ NP S₁ S₁ NP SO

b. [[Guru₂ [[NP yang] [[semua budak₁
 SO NP2 \bar{S}_1 COMP [+comp] S1 NP

[[NP yang] [yang₁ melawan yang₂]]]
 \bar{S}_2 COMP [+comp] S2 [+wh] [+wh]

dapat E itu]]] ...] .

According to the wh-movement analysis (28) will correctly be excluded because the wh-phrase yang₂ in (29) has been extracted over more than one cyclic nodes up the tree, thus violating the Subjacency Condition. Though there is a COMP in the lower \bar{S} , COMP-to-COMP movement is not possible either because of the Subjacency Condition or the Strict Cyclicity Condition. Let us take (29a) as an illustration. If we assume that relative clause formation rule applies on S_1 first, moving the relative pronoun yang₁ into the lower COMP producing (30), then movement of the relative pronoun yang₂ into the lower COMP is not allowed because it has been filled by the relative pronoun yang₁. This subsequently blocks COMP-to-COMP movement.

(30) [[Tok Bomoh [[NP yang] [[semua
 So NP \bar{S}_1 COMP [+comp] S1 NP
 orang sakit [[yang yang]] [t₁ berubat
 \bar{S}_2 COMP [+wh] [+comp] S2
 dengan yang₂]]] baik]]] ...] .
 [+wh] S \bar{S} NP S \bar{S} NP SO

If, on the other hand, we assume that yang₂ is moved before yang₁

is moved into the lower COMP and yang₁ is moved only after the COMP is already empty as result of yang₂ being moved into the higher COMP of \bar{S}_1 , this movement will violate the strict cyclicity condition. ⁷ Furthermore COMP-to-COMP movement is only permitted when there is a bridge word. As we can see there is no such word in (29).

The acceptability of (27) poses a problem for the wh-movement analysis. The only way to explain this is simply to assume that there is no movement involved in a relative clause where a pronoun appears in an open sentence. There is nothing wrong in this of course, but if there is a unitary explanation that both accounts for the grammaticality of (27) and at the same time excluding (28), such an account would be preferred.

3.23. Infinitival Relatives and Relatives with Relativized Subjects

Infinitival relative clauses and relative clauses with relativized subject NPs in Malay make the movement analysis rather suspicious. Let us look at the infinitival clauses first and see how it is supposed to operate under the wh-movement analysis. Consider (31).

- (31)a. Pegawai untuk mengetuai kumpulan itu ...
Officer for head group the ...
"The officer to head the group ..."
- b. Barang untuk dieksport ke luar negeri ...
Goods for pass-export to outside country ...
"The goods to be exported..."

The underlying structure of (31) would be something like (32).

- (32)a. Pegawai [[NP untuk] [yang mengetuai
 \bar{S} COMP [+comp] S [+wh]
 kumpulan itu]]...
- b. Barang [[NP untuk] [yang dieksport ke
 \bar{S} COMP [+comp] S [+wh]
 luar negeri]]....

After the application of wh-movement (33) would be derived.

- (33)a. Pegawai [yang untuk] t mengetuai kumpulan itu ...
- b. Barang [yang untuk] t dieksport ke luar negeri ...

In order to generate the correct surface structure, relative yang deletion has to be obligatory. The obligatoriness of the wh-deletion makes one wonder whether there is a need at all to postulate this empty NP node in the COMP and claiming that yang has been moved into the COMP and subsequently gets deleted when there is no evidence whatever to suggest such an operation does in fact take place.

The same can be said about finite relatives in which the relativized NP is in the subject position of the embedded sentence. For relatives of this type there is no evidence to show that wh-movement has ever taken place. To illustrate consider (34) with (35) as its underlying structure.

- (34) Orang yang memandu kereta itu cedera.
Person that drive car the injure.
"The person who drove the car was injured".

- (35) Orang itu [[NP yang] [yang memandu kereta]]cedera.
 \bar{S} COMP [+comp] [+wh]

From (34) there is nothing to tell us whether yang that shows up in the surface structure is a complementizer or a relative pronoun.

If it is a relative pronoun then this time it is the complementizer which is the target of obligatory deletion as contrast to the relative pronoun in the infinitival relatives. But since there is no way to find out, it may well be that the supposedly relative pronoun yang is moved into the COMP and obligatorily gets deleted just as in infinitival relatives, leaving the complementizer yang to appear on the surface.

It appears that there is no reason to believe that wh-movement has taken place in both the cases just examined. In fact there is no motivation even to postulate the empty NP node in the COMP position in Malay. One of Chomsky's motivation for having the empty NP node in the COMP position is that there are languages including Middle English which permit the occurrence of both the wh-phrase and the equivalent of the complementizer (Chomsky and Lasnik 1977). Secondly, assuming that cyclic transformations are structure preserving (Emonds 1976) and since within this framework wh-movement is a cyclic transformation, the empty node in the COMP position is needed to

provide a slot for the wh-phrase to be moved in. It is therefore claimed that wh-movement placing the wh-word into the COMP position is a universal rule. However, as argued by Kenesei (1978), none of these arguments holds under scrutiny. Kenesei further pointed out that in order to motivate an empty node there must be some structures in which the node is lexically filled without having to rely on a movement rule to fill it. In this case there is no such structure.

The first argument deserves special mention, since as observed by Kenesei, one of the languages that exhibits the occurrence of wh-word and a complementizer in their question formation is Malay. ⁸ Presumably, the structure that is claimed to permit this sequence is a structure of the type (36).

- (36)a. Siapa yang Ahmad panggil?
Who that Ahmad call?
"Who were the people that Ahmad called?"
- b. Awak tidak tahu siapa yang Ahmad panggil?
You not know who that Ahmad call.
"Don't you know who were the people that Ahmad called?"
- c. Siapa yang mencuri buku saya?
Who that steal book I
"Who is the person that stole my book?"
- d. Ahmad tahu siapa yang mencuri buku saya.
Ahmad know who that steal book I.
"Ahmad knew who stole my book".

One could claim that a natural account for such sentences is to have them derived from underlying structures such as (37) by wh-movement rule which moves the wh-phrase into the NP position of the COMP as indicated by the arrows.

- (37)a. [NP yang] [Ahmad panggil siapa]
 ↑
 COMP
- b. Awak tidak tahu [[NP yang] [Ahmad
 ↑
 S COMP
panggil siapa]]
- c. [NP yang] [siapa mencuri buku saya] .
 ↑
 COMP
- d. Ahmad tahu [[NP yang] [siapa mencuri buku saya].
 ↑
 S COMP

Undeniably, this analysis appears to be very elegant. But as the following sentences show this cannot be the correct analysis.

- (38)a. Saya tahu dengan siapa Ahmad berjalan.
 I know with who Ahmad walk.
 "I know with whom Ahmad walked".
- b. Mereka tahu di dalam apa Ahmad simpan buku itu.
 They know at in what Ahmad keep book the.
 "They knew where Ahmad kept the book".
- (39)a. *Saya tahu dengan siapa yang Ahmad berjalan.
 "I knew with whom that Ahmad walked".

- b. *Mereka tahu di dalam apa yang Ahmad simpan buku itu.
"They knew where that Ahmad kept the book".

Under the analysis we are discussing the underlying structures for sentences are given in (40).

- (40)a. Saya tahu [[NP yang] [Ahmad berjalan
 \bar{S} COMP
 dengan siapa]].
- b. Mereka tahu [NP yang] [Ahmad simpan buku itu
 \bar{S}
 di dalam apa]] .

There are several problems with analysis. First, it fails to generate sentences of the type (41).

- (41)a. Saya tahu Ahmad berjalan dengan siapa.
 I know Ahmad walk with who.
 - as (38a) -
- b. Mereka tahu Ahmad simpan buku itu di dalam apa.
 They know Ahmad keep book the at in what.
 - as (38b) -

Assuming that wh-movement is optional in Question Formation in Malay, the wh-phrases dengan siapa and di dalam apa need not be fronted. But in this case the empty node dominated by the COMP will not be obliterated and will then appear on the surface which will render the sentence ungrammatical.

(36). (38) will be accounted for in similar fashion if we postulate (43) as its corresponding underlying structure.

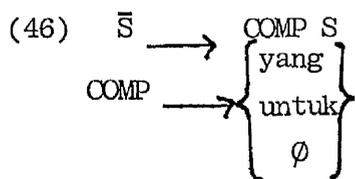
- (43)a. Saya tahu [[yang] [Ahmad berjalan dengan siapa]].
 \bar{S} COMP S
- b. Mereka tahu [[yang] [Ahmad simpan buku itu
 \bar{S} COMP
 di dalam apa]].

If PP preposing does not apply (44) will be produced. If it does, dengan siapa and di dalam apa are moved to the initial position of the embedded sentence producing (45).

- (44)a. Saya tahu yang Ahmad berjalan dengan siapa.
 b. Mereka tahu yang Ahmad simpan buku itu di dalam apa.
- (45)a. Saya tahu yang dengan siapa Ahmad berjalan.
 b. Mereka tahu yang di dalam apa Ahmad simpan buku itu.

Application of the complementizer deletion rule to (44) and (45) will finally produce (41) and (38) respectively. There is therefore no compelling motivation for having the NP node in the COMP.

From the preceding discussion, I hope to have shown that the wh-movement rule as it stands cannot satisfactorily account for the formation of Malay relatives. We will see if such an analysis could be saved if the PS rules for COMP were modified. Let us assume that the relevant rules are as follows:



The choice of the complementizer will determine whether the relative clause is finite or infinitival.

Let us consider the infinitival relatives first. Underlying sentences such as (31), repeated here for convenience, will be something like (47).

(31)a. Pegawai untuk mengetuai kumpulan itu ...

"The officer to head the group ...".

b. Barang untuk dieksport ke luar negeri ...

"The goods to be exported (to other countries)..."

(47)a. Pegawai [[untuk] [yang mengetuai kumpulan itu]]
 \bar{S} COMP $S^{[+wh]}$

b. Barang [[untuk] [yang di eksport ke luar negeri]]
 \bar{S} COMP $S^{[+wh]}$

In (47) no movement into the COMP is allowed because COMP is not empty and such a movement will violate the condition which requires that COMP may not be doubly filled. Since within the trace-theoretical framework, free deletions are very restricted, in particular only wh-phrase in the domain of COMP may be deleted, there is no way of getting rid of the relative pronoun yang. What we will get are (48) instead of the sentences we want (31).

- (48)a. *Pegawai untuk yang mengetuai kumpulan itu ...
b. *Barang untuk yang dieksport ke luar negeri ...

The wh-movement analysis will face the same problem when we consider relatives introduced by yang. Underlying sentences such as (34), for instance, would be a structure represented by (49).

(34) Orang yang memandu kereta itu cedera.

"The person who drove the car was injured".

(49) Orang itu [[yang] [yang memandu kereta]]
 \bar{S} COMP [+wh]
cedera.

Here again the relative pronoun yang cannot be moved into the COMP because the COMP is already filled. The only way to allow for such a movement to operate is to have the complementizer yang deleted before wh-movement. This is inconsistent with the framework of the theory itself where deletion rules may only apply after all transformations have applied and before filters apply as shown by table (50).

- (50) 1. Base
 2. Transformations (movement, adjunction and substitution)

3a. Deletion	3b. Construal
4a. Filters	4b. Quantifier interpretation
5a. Phonology	
6a. Stylistic rules.	

Since the basic assumption of the wh-movement theory is that wh-phrase can only be moved into the COMP position, the existence of the node COMP is essential. So in order to guarantee that yang is indeed a relative pronoun we have to assume that COMP in relative constructions is always empty (\emptyset) and that the choice of the complementizer is done by a later complementizer realization rule. Under this alternative analysis (34) would be given an underlying structure corresponding to (51).

(51). Orang itu [[e] [yang memandu kereta]] cedera
 \bar{S} COMP S^[+wh]

Application of wh-movement will produce (52).

(52). Orang itu[yang_i] [t_i memandu kereta] cedera.

Postponing of the determiner itu will finally produce the surface structure (34).

Similarly (16a) would be derived from an underlying surface structure corresponding to that given in (53).

(16)a. Buku yang Ahmad suruh saya baca itu tebal.

"The book that Ahmad asked me to read".

(53) Buku itu [[e] [Ahmad suruh saya [[e]]]]
 \bar{S} COMP S \bar{S} COMP

[PRO baca yang]]] .
S [+wh]

Following this analysis sentences of the type (54) and (55) would be derived from a common underlying structure (56).

(54) Pegawai untuk mengambil tempat Encik Kasim itu...
Officer for take place Encik Kasim the...
"The officer to take Encik Kasim's place ...".

(55) Pegawai yang mengambil tempat Encik Kasim itu ...
"The officer who takes Encik Kasim's place ...".

(56) Pegawai itu [[e] [yang mengambil tempat
S COMP [+wh]
Encik Kasim]].

The derivation of (55) is straight forward and needs no further explanation. In the case of (54), presumably the relative pronoun gets deleted after being moved in to the COMP position. A later rule will introduce untuk into the COMP. This analysis is not implausible though the question of how to choose between two complementizers still remains, since unlike sentential complement construction, there is no higher verb to determine the choice of the complementizer.

In the preceding discussion, I have argued that wh-movement transformation cannot adequately account for the formation of relative clauses in Malay. Not only is such an analysis unable to account for the full range of facts, there is not even sufficient motivation for such a rule in Malay. The question that needs to be answered now is,

if it is true that relative clauses are not the results of the wh-movement rule then how do we account for the existence of the gap and other properties of the movement rule. The obvious answer to this question is that those properties are not to be taken as a diagnosis for a wh-movement rule. Bresnan (1977) shows that deletion over variables such as Comparative Deletion and Comparative Sub-deletion rules are also subject to Ross's constraints (Ross 1967) and argues that those properties are not a sure test for wh-movement. Under Bresnan's analysis the gap present in (16a) for instance, is created by an unbounded deletion rule. Another alternative open to us to account for the presence of such a gap which I will not attempt to defend in this thesis, is that the gap is left behind by a fronting rule which moves NPS into the clause initial position prior to relativization process.

3.3. NP Preposing in Subordinate Clauses

In the previous section I argued that the the gap present in the relative clause cannot be explained satisfactorily by Chomsky's wh-movement rule. Furthermore I proposed in chapter II that when the relativised NP is not in the sentence initial position of the embedded sentence, the presence of the gap may be accounted for if we assume that NP preposing has taken place prior to the application of the clause formation rule. If this assumption is correct, then it follows that relative clause constructions would have the same characteristics as sentences resulting from NP preposing. They should, for instance, behave in similar fashion with respect to the various constraints on movement rules. It will also predict that relativization would be able

to apply on all the inputs of these rules.

In this section we will examine some of the rules that have the effect of moving NPs into sentence initial position and try to determine the nature of these rules. The rules that will be discussed include Passive, Topicalization, Left-Dislocation and Tough Movement. The first of these is rather straightforward and will be discussed very briefly. It is the other three that we will devote our attention to.

3.31 Passive

Assuming that passive sentences like (57) are derived from structures like (58a), the passive transformation may be viewed as involving two operations. The first postposes the subject NP into the empty NP position of the oleh phrase and the other preposes the object NP into the position initially occupied by the postposed NP, as demonstrated by (58b) and (58c).

(57) Buku saya dicuri oleh orang itu.

Book I pass-steal by person the.

"My book was stolen by the man".

(58)a. Orang itu dicuri buku saya oleh NP.

b. dicuri buku saya oleh orang itu.

c. Buku saya dicuri oleh orang itu.

As one might expect such passive sentences can be freely embedded in

larger sentence or structure. If it is embedded in an NP whose head is coreferential with the preposed NP then relativization will apply.

3.32 Topicalization

Sentences of the type (59) are generally assumed to have resulted from topicalization rule.

- (59)a. Gambar ini, awak belum lihat lagi.
Picture this, you not yet see also.
"This picture, you have not seen yet".
- b. Kerja itu, saya akan siapkan esok.
Work the I will finish tomorrow.
"This work, I will finish tomorrow".
- c. Buku itu, Ahmad sudah pinjamkan kepada Aminah.
Book the Ahmad compl lend to Aminah.
"The book, Ahmad had lent to Aminah".

According to the transformational account (Ross 1967; Emonds 1976), sentences in (59) are derived from their corresponding underlying structures (60) by a transformational rule which moves the relevant NPs to the front of the sentences as shown.

- (60)a. Awak belum lihat (gambar ini).
"You have not seen this picture".
- b. Saya akan siapkan (kerja itu) esok.
"I will finish the work tomorrow".

kepada Aminah.

- c. Ahmad sudah pinjamkan (buku itu) kepada Aminah.
 "Ahmad has lent the book to Aminah".

Based on examples such as (61), Emonds claims that in English, Topicalization is a root transformation, that is to say it attaches the preposed NP to the highest sentence.

- (61)a. *Have I shown you this broom (that) these steps I used to sweep with?
 b. *I fear that each part John examined carefully.
 c. *We are going to the school play because our daughters we are proud of.

Chomsky (1977), on the other hand, claims that topicalized sentences are base-generated by rules given in (62).

- (62)a. $\bar{S} \rightarrow \text{TOPIC } \bar{S}$
 b. $\bar{S} \rightarrow \text{COMP } \left\{ \begin{array}{c} \bar{S} \\ \bar{S} \end{array} \right\}$

He observes that topicalized sentences may be embedded with varying degrees of acceptability. This is allowed by his rule (62b). Under his analysis (59) would be derived from structures corresponding to those given in (63) as a result of his wh-movement rule.

- (63)a. $\left[\begin{array}{c} \bar{S} \\ \bar{S} \end{array} \right] \text{ Gambar itu } \left[\begin{array}{c} \bar{S} \\ \bar{S} \end{array} \right] \text{ COMP } \left[\begin{array}{c} \text{awak belum lihat yang} \\ \text{[+wh]} \end{array} \right] \left[\begin{array}{c} \bar{S} \\ \bar{S} \end{array} \right]$

- b. [Kerja itu [COMP [saya akan siapkan yang
S S S [+wh]
esok]]] .
- c. [Buku itu [COMP [Ahmad sudah pinjamkan yang
S S S [+wh]
kepada Aminah]]] .

Wh-movement moves the relative pronoun yang into the COMP position where it obligatorily gets deleted. As pointed out by Kenesei (1978), the fact that the wh-phrase never appears on the surface in itself makes the analysis suspect.

Essentially, our objection to the wh-movement analysis is along the same lines as that concerning relative clauses. In addition facts concerning sentences of the type (64) do not seem to favour this analysis either.

(64)a. Rumah itu, saya harap pintunya Ahmad sudah betulkan.

House the I hope door-its Ahmad compl repair.

"The house, I hope its door, Ahmad has repaired".

(The house, I hope Ahmad has repaired its door).

b. Bantal itu, saya rasa sarungnya emak belum pernah

Pillow the I feel cover-its mother not yet ever

basuh lagi.

wash yet.

"The pillow, I think its case, mother has not washed yet".

(The pillow, I think mother has not washed its case yet).

According to Chomsky's wh-movement analysis (64) would presumably be derived from structures such as (65).

- (65)a. $\begin{array}{l} [[\text{Rumah itu}_i] [\text{COMP} [\text{saya harap} [\text{COMP} \\ \bar{S} \text{ TOPIC} \quad \bar{S} \quad S \quad \bar{S} \\ \\ [[\text{pintunya}_j] [\text{Ahmad sudah betulkan} \\ \bar{S} \text{ TOPIC} \quad S \\ \\ \text{yang}_j \text{ yang}_i]]]]]]] . \end{array}$
- b. $\begin{array}{l} [[\text{Bantal itu}_i] [\text{COMP} [\text{saya rasa} [\text{COMP} \\ \bar{S} \text{ TOPIC} \quad S \quad \bar{S} \\ \\ [[\text{sarungnya}_j] [\text{COMP} [\text{emak belum pernah} \\ \bar{S} \text{ TOPIC} \quad \bar{S} \\ \\ \text{basuh yang}_j \text{ yang}_i \text{ lagi }]]]]]]] . \end{array}$

Notice that if (65) is the correct underlying structure, then (64) will be excluded either by the doubly filled COMP condition or the strict cyclicity condition. Recall that deletion rules can only apply after all transformations have already applied.

Proponents of the wh-movement analysis may argue that structures like (65) are not the correct sources for sentences of the type (64). Instead underlying (64) are structures such as (66).

- (66)a. $\begin{array}{l} [[\text{Rumah itu}] [\text{COMP} [\text{saya harap} [\text{COMP} \\ \bar{S} \text{ TOPIC} \quad \bar{S} \quad S \quad \bar{S} \\ \\ [[\text{pintunya}_i] [\text{COMP} [\text{Ahmad sudah betulkan} \\ \bar{S} \text{ TOPIC} \quad \bar{S} \quad S \\ \\ \text{yang}_i]]]]]]] . \end{array}$

"To whom the book did Ahmad give?"

(To whom did Ahmad give the book).

b. Bila kerja itu awak hendak siapkan?

When work the you want finish.

"When the work you want to finish?"

(When do you want to finish the work).

c. Buku itu kepada siapa Ahmad berikan?

Book the to who Ahmad give.

"The book, to whom did Ahmad give?"

(The book, who did Ahmad give it to?).

d. Kerja itu bila awak hendak siapkan?

Work the when you want finish.

"The work, when do you want to finish?"

(68)a. [COMP [[Buku itu] [COMP [Ahmad berikan
S̄ S̄ TOPIC S̄ S
yang kepada siapa]]]] .
[+wh]

b. [COMP [[Kerja itu [COMP [awak hendak siapkan
S̄ S̄ TOPIC S̄ S
yang bila]]]]] .
[+wh]

c. [[Buku itu] [COMP [Ahmad berikan yang
S̄ TOPIC S̄ S [+wh]
kepada siapa]]] .

d. [[Kerja itu] [COMP [awak hendak siapkan
S̄ TOPIC S̄ S
yang bila]]]] .
[+wh]

The question wh-phrases kepada siapa and bila in (68a) and (68b) cannot be moved into the COMP position of the matrix sentence without either violating the doubly filled COMP condition or the strict cyclicity condition. In the case of (68c) and (68d) yang cannot be moved into the COMP since it has already been filled by kepada siapa and bila respectively.

Our final argument against the wh-movement analysis of topicalization is that such an analysis will have to derive all the sentences in (69) from different sources namely (70), thus missing the generalization which one would definitely like to capture.

- (69)a. Saya yakin yang awak belum lihat gambar ini.
I believe that you not yet see picture this.
"I believe that you have not seen this picture yet".
- b. Saya yakin yang gambar ini awak belum lihat
I believe that picture this you not yet see.
"I believe that this picture you have not seen yet".
- c. Gambar ini saya yakin yang awak belum lihat.
Picture this I believe that you not yet see.
"This picture I believe you have not seen yet".

- (70)a. Saya yakin [COMP[awak belum lihat gambar ini]] .
 \bar{S} S
- b. Saya yakin [COMP[[gambar ini] [COMP
 \bar{S} \bar{S} TOPIC \bar{S}
[awak belum lihat yang]]]] .
 S [+wh]

Sentences such (69) suggest that topicalization is successive cyclic and optional. The movement of gambar ini into the highest S appears to violate the generally accepted A - over - A Condition.⁹ This is true only if the embedded S in all those examples are dominated by an NP node. However, as demonstrated by (73), the inability of the embedded sentence to be fronted (73a), passivized (73b) or replaced by an NP (73c) shows that the \bar{S} was never dominated by an NP.

- (73)a. *Yang awak belum lihat gambar ini saya yakin.
"That you have not yet seen this picture I believe".
- b. *Yang awak belum lihat gambar ini diyakin (oleh saya).
- c. *Saya yakin perkara itu.

The presence of the complementizer yang in (69b) is evidence that the preposed NP is not placed in the COMP, and the occurrence of the preposed NP to the right of the complementizer suggests that this NP is attached to the lower sentence. The exact nature of this attachment will be discussed in section 3.35

3.33 Tough Movement

Since Adjective Complement Structures share the same characteristics as those which he claims to be the results of wh-movement rule, Chomsky analyses them in the same way. According to him (74) is derived from structures corresponding to (75).

(74) John is easy (for us) to please.

(75) John is easy (for us) [[who for] PRO to
S̄ COMP
please t] .

In (75), wh-movement has applied on the inner cycle and he has obligatory wh-deletion in the same way as comparative deletion and infinitival relatives. COMP deletion will delete for before to thus yielding (74).

Let us now see how this analysis works for Malay. Consider (76), which under the wh-movement assumption would be derived from the structure corresponding to (77).

- (76)a. Pasukan Selangor bukannya ¹⁰ mudah untuk mengalahkannya.
Team Selangor not-emph easy for defeat-it.
"The Selangor Team is not easy to defeat".
- b. Pasukan Selangor bukannya mudah untuk dikalahkan.
"The Selangor Team is not easy to be defeated".

(77) Pasukan Selangor bukannya mudah [[untuk]
S̄ COMP
PRO mengalahkan yang]
[+wh]

Wh-movement on the inner cycle will place the wh-phrase yang in front of the complementizer untuk giving the intermediate structure of (78).

(78) Pasukan Selangor bukannya mudah[yang untuk]
PRO mengalahkan t] . S̄

Obligatory wh-deletion deletes yang and on the assumption that 't' in Malay is realized as nya, the result is (76a). If passive applies in the lower S before wh-movement takes place then the result is (76b).

This analysis, however, will wrongly predict that sentences in (79) are ungrammatical since within this framework there is a restriction imposed on the underlying structure that the subject of the embedded S must be a PRO.

- (79)a. Pasukan Selangor bukannya mudah untuk
Team Selangor not-emph easy for
dikalahkan oleh kita.
pass-defeat by we.
"The Selangor Team is not easy to be defeated by us".
- b. Pasukan Selangor bukannya mudah untuk kita kalahkan.
Team Selangor not-emph easy for we defeat.
"The Selangor Team is not easy for us to defeat".
- c. Pasukan Selangor bukannya mudah untuk kita
Team Selangor not-emph easy for we
mengalahkannya.
defeat-it.
"The Selangor Team, it is not easy for us to defeat it".

As we can see from (80), which is presumably the corresponding underlying structure of (79), the underlying subject of the embedded sentence is not a PRO.

(80) Pasukan Selangor bukannya mudah (bagi kita)

Team Selangor not-emph easy for we

[[NP untuk] kita mengalahkan yang]
S̄ COMP [+wh]

Now consider (81).

(81)a. Bukannya mudah untuk Pasukan Selangor dikalahkan
oleh kita.

"It is not easy for the Selangor Team to be defeated
by us".

b. Bukannya mudah untuk Pasukan Selangor kita kalahkan.

"It is not easy for the Selangor Team for us to defeat".

c. Bukannya mudah untuk Pasukan Selangor kita
mengalahkannya.

"It is not easy for the Selangor Team for us to defeat
it".

The wh-movement analysis of Adjective Complement is unable to generate any of the above sentences. Chomsky would not only have to derive these sentences via a different process from that of (76) but also each of these from different sources altogether.

(81a) presumably derives from the structure corresponding to (82) with passive applying on the inner cycle.

(82) Bukannya mudah (bagi kita) [̄ untuk [PRO
S̄ S
mengalahkan Pasukan Selangor]] .

- (85) Bukannya mudah [untuk NP mengalahkan Pasukan Selangor].
S

Passivization and Object Preposing operating on the embedded sentence will produce (81a) and (81b) respectively. Derived Subject Raising applying on these sentences will then produce (79a) and (79b). I go along with Chung's analysis differing from her only on one point. In addition to (79a,b) and (81a,b) we also have (79c) and (81c) since in our assumption (79c) will also result from NP preposing.

The fact that (86), (87) and (88) are ungrammatical, according to Chung, shows that the Derived Subject Raising rule does not apply to object or oblique NPs.

- (86) *Mobil itu sulit (bagi kami) untuk (mem) perbaiki.
Car the difficult (for us) to repair.

- (87) *Hassan mudah untuk membeli hadiah (untuk).
Hassan easy to buy present (for).

- (88) *Danau itu menyenangkan untuk berenang(di).
Lake the nice to swim (at).

Notice, however, that the ungrammaticality of (86) by itself does not argue against a single movement rule, as Chung wishes to show, because as illustrated by (89) all the above sentences are grammatical if the moved NPs leave behind a pronominal copy nya.

- (89)a. Mobil itu sulit (bagi kita) untuk memperbaikinya.
"The car is difficult (for us) to repair".

Another piece of evidence to show that Tough movement involves cyclic rules is provided by sentences of the type (91).

- (91)a. Pengurus itu bukannya mudah (bagi pekerja-
Manager the not easy (for worker
pekerja itu) untuk dipengaruhi oleh mereka.
the) for pass-influence by they.
"The manager is not easy (for the workers)
to be influenced by them".
- b. Pengurus itu bukannya mudah (bagi pekerja-
pekerja itu) untuk mereka pengaruhi,
"The manager is not easy (for the workers)
for them to influence".
- c. Pengurus itu bukannya mudah (untuk pekerja-
pekerja itu) untuk mereka mempengaruhinya.
"The manager is not easy (for the workers)
to influence him".

Underlying (91) is the structure corresponding to (92).

- (92) Bukannya mudah [bagi pekerja-pekerja itu]
PP
[untuk [mereka mempengaruhi pengurus itu]] .
S S

If Tough Movement is indeed a post-cyclic rule, (91b) and (91c) should be ungrammatical since under the post-cyclic assumption, mereka in (92) would be obligatorily deleted by Equi Deletion. The fact that they are grammatical suggests that Tough Movement

involves two rules - NP preposing and Raising. Under this assumption, the preposing of the object NP into the initial sentence position of the embedded sentence will destroy the structural description for Equi. On the assumption that obligatory rules apply before optional rules, Equi Deletion cannot apply once Raising has applied since as illustrated by (81), Raising is an optional rule. ¹²

It may be argued that mereka in (92) cannot be deleted since the controller in this case is a PP which is inconsistent with Equi Deletion where it is generally accepted that it must be either a subject or an object of the matrix sentence. If this is true then, mereka in (92) can never be deleted and (93) will never be generated at all.

- (93) Pengurus itu bukannya mudah (bagi pekerja-pekerja itu) untuk mempengaruhinya.

"The manager is not easy (for the workers) to influence".

The grammaticality of (91b) and (91c) shows that at some point there is a subject present in the lower clause while the grammaticality of (93) suggests that this subject must have been deleted by Equi. The possibility of sentences like (94) with (95) as its underlying structure, further shows that a PP in Malay is a possible controller for Equi. though the precise condition for equivalence is not quite clear.

- (94)a. Saya telah meminta kebenaran dari Cik Gu
I compl. ask permission from teacher
untuk membolehkan saya pulang cepat.
to allow I go back early.
"I have asked permission from the teacher to
(allow me) go back early".
- b. Saya telah berpesan kepada Ali untuk memberi-
I compl. send message to Ali to tell
tahu Ahmad yang saya tidak dapat datang.
Ahmad that I not can come.
"I told Ali to tell Ahmad that I cannot come".
- (95)a. Saya telah meminta kebenaran dari Cik Gu[untuk
S S̄
[Cik Gu membolehkan saya[untuk [saya
S S̄ S
pulang cepat]]]] .
- b. Saya telah berpesan kepada Ali[untuk[Ali
S̄ S
memberitahu Ahmad [yang [saya tidak dapat
S̄ S
datang]]]] .

Given that a PP can be a controller for Equi, our analysis can account for all the sentences (91) as well as (93). According to our analysis (91b) and (91c) are generated if NP preposing applies on the lower sentence prior to Raising. Since NP preposing is optional it may choose not to apply on this cycle. This does not stop it from applying on the higher sentence after Equi has

already applied in which case (93) is produced.

3.34 Left Dislocation

In this section I will discuss sentences of the type (96), generally known as Left Dislocated sentences.

- (96)a. Meja itu, saya mengecatnya.
Table the I paint-it.
"The table, I painted it".
- b. Insuran kereta itu saya membayarnya.
Insurance car the I pay-it.
"The car insurance, I paid it".
- c. Rumah itu, Ahmad hendak tanam pokok kelapa
House the Ahmad want plant tree coconut
di belakangnya.
at behind-it.
"The house, Ahmad wanted to plant a coconut
tree behind it".

Since there does not seem to be any compelling reason to prefer one over the other between the base-generated hypothesis and the transformational account and the choice between the two is not crucial to the relativization process, I will simply give an account of the two analyses. I will argue, however, that within the transformational account Left Dislocation has to be a cyclic rule and there are reasons to believe that this rule and Topicalization are one and the same rule.

Chomsky analyses Left Dislocated structures in the same way as he does Topicalized sentences, by having them generated by the base rules given in (62). The only difference is, unlike Topicalization, there is no wh-movement involved in the derivation of Left Dislocated sentences and the pronoun is associated with the relevant NP by the interpretive rule of anaphora.

Under this assumption, underlying (97) is the structure corresponding (98).

(97)a. Kereta itu, budak yang mencurinya telah ditangkap.
Car the child that steal-it compl. pass-
kap.
arrest.

"The car, the boy who stole it has been arrested".

b. Rumah itu, kontrekter yang membuatnya telah
House the contractor that make-it compl.
bangkrap.
bankrupt.

"The house, the contractor who built it has
gone bankrupt".

(98)a. [[Kereta itu] [COMP [budak yang mencuri-
S̄ TOPIC S̄
nya telah ditangkap]]] .

[[Rumah itu] [COMP [kontrekter yang
S̄ TOPIC S̄ S
membuatnya telah bangkrap]]] .

As demonstrated by (99), the COMP in the \bar{S} immediately dominated by \bar{S} is always null.

(99)a. *Kerta itu, yang budak yang mencurinya telah ditangkap.

"The car, that the boy who stole it has been arrested".

b. *Rumah itu, yang kontrekter yang membuatnya telah bangkrap.

"The house, that the contractor who built it has gone bankrupt".

Since COMP deletion in his framework is an optional rule Chomsky assumes the deletion of COMP in Topicalization and Left Dislocation is a special case of a process that applies uniformly in matrix sentences. Such an assumption cannot be maintained for Malay since COMP deletion has to apply not only in matrix sentences but to all sentences dominated by an \bar{S} . This can be demonstrated by (100) where the COMP is contained in an embedded S.

(100)a. *Saya dengar kereta itu, yang budak yang mencurinya telah ditangkap.

"I heard that the car, that the boy who stole it has been arrested".

b. *Saya rasa rumah itu, yang kontrekter yang membuatnya telah bangkrap.

"I believe the house, that the contractor who built it has gone bankrupt".

If this analysis is to be maintained, Chomsky has to treat Comp deletion in Topicalization and Left Dislocation as an exceptional case, rather than a special case of a process that applies uniformly in matrix sentences.

According to the transformational account, (96) are derived from their corresponding underlying structures (101) by a rule which moves the relevant NPs into the sentences initial position leaving behind its pronominal copy in its original place.

- (101)a. \uparrow Saya mengecat (meja itu)
"I painted the table".
- b. \uparrow Saya membayar asuransi (kereta itu)
"I paid the car insurance".
- c. Ahmad hendak tanam pokok kelapa di belakang
 \uparrow (rumah itu).

Roughly the rule may be stated as (102) assuming that the characterization of nya is a separate, later process.

$$(102) [X - NP - Y]$$
$$S_1 \quad 2 \quad 3 \quad \overset{\text{opt}}{\rightarrow} 2 + 1 - \text{nya} - 3$$

Basically sentences of the type (96) share a common feature with Topicalized sentences discussed earlier. In both types of sentences there is an NP which has been preposed to the sentence initial position. The only difference between them, apart from the presence of the prefix me-, is that in the case of dislocated

constructions there is a pronominal copy that is coreferential with the left-most NP of the sentence, whereas in the case of topicalized sentences, there is a gap which is controlled by the left-most NP.

Ross claims that Topicalization and Left Dislocation are two distinct rules. The former is a chopping rule while the latter is a copying rule. Since according to his analysis only chopping rules are subject to his constraints this will explain why (97) is grammatical while (103) is ill-formed.

- (103)a. ??Kereta itu, budak yang curi telah ditangkap.
"The car, the boy who stole has been arrested".
- b. ??Rumah itu, kontrekter yang buat telah bangkrup.
"The house, the contractor who built has gone bankrupt".

However, as illustrated by (104), (105) and (106) both structures behave alike with respect to Co-ordinate Constraint, Left-Branch Constraint and Sentential Subject Constraint. 13

- (104) *Buku itu Ahmad sudah { baca
membacanya } dan
majalah itu.

"The book Ahmad has read(it) and the magazine".

- (105) *Gambar, kami { lihat
melihatnya } bandar itu,

"The photograph, we saw (it) the town".

(106) *Pemain terkenal itu, yang Ali {kalahkan
mengalahkannya}

adalah mustahil.

"The famous player, that Ali defeated (him) is impossible."

Departing from Ross, I will attempt to show that Left-Dislocation operates in exactly the same fashion as Topicalization, as far as Malay is concerned, except that the moved NP leaves behind a pronominal copy nya. This similarity can naturally be accounted for if we assume that Topicalization and Left Dislocation which are generally assumed to be two distinct rules are one and the same rule. The presence of nya in Left Dislocated constructions follows automatically from the general property of NP fronting mentioned in the preliminary chapter. It has been noted in section 2.41, however, that when the object NP of a transitive sentence containing a me- verb is fronted, it may or may not leave its copy behind and when it does not leave a copy the prefix me- obligatorily gets deleted.¹⁴ This accounts for the presence of the gap coupled with the absence of the prefix me- in a topicalized sentences.

That Left Dislocation is a cyclic rule and operates in similar fashion as that of Topicalization may be seen from the grammaticality of all the sentences in (107). The underlying structure of (107) is the structure corresponding to (108) which in fact directly corresponds to (107a).

(107)a. Saya dengar Ali membayar insuran kereta itu.

I hear Ali pay insurance car the.

If the rule applies to the whole NP insuran kereta itu, attaching it to the lower S we get (107b). The rule may apply to this sentence moving kereta itu in front of insuran leaving behind its pronominal copy in its place yielding (107c) or it may apply to the whole NP again, this time attaching it to the matrix S producing (107d). Movement of kereta itu in (107c) into the matrix sentence will give us (107h). Subsequent application of the rule with (107d) as its input, moving kereta itu in front of insuran will give us (107e). (107f) is produced when the rule is applied to the underlying structure selecting only the NP kereta itu placing it in front of the lower S. The application of the rule to (107f), placing kereta itu to the highest S will result in (107g).

Under the post-cyclic analysis (107c), (107e) and (107h) cannot be generated. So by assuming that NP preposing is a cyclic rule, we are able to account for the derivation of the whole set of sentences which is not possible if it is a post-cyclic rule.

Another argument for the cyclic nature of NP preposing concerns sentences of the type (109) with (110) as its corresponding underlying structure.

- (109)a. Perkara itu dianggap (oleh mereka) semua
Subject the pass-consider (by they) all
orang telah mengetahuinya.
people compl. know-it.
"The subject is considered (by them) everyone
knows it".

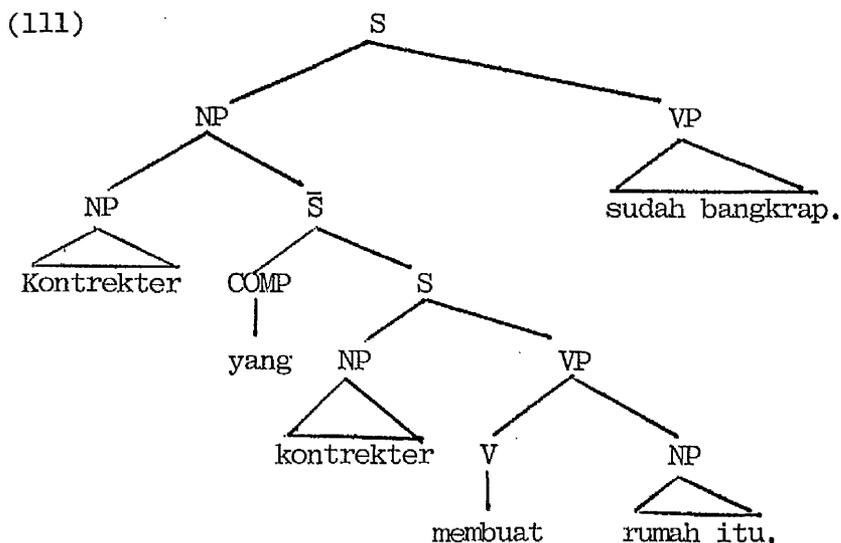
optional, there is nothing to stop it from being left behind in any of the cycles. The fact that it can only be left behind in its original place and in no other intermediate positions provide strong evidence that the rule does not apply successively but just in one swoop. This argument does not hold for Malay since Malay does not allow stranding of preposition in any position. Recall that a preposition may only be left behind if the pronominal copy of the NP (nya) is present. The fact that nya may appear in any intermediate positions as shown in (107) is evidence for the cyclic movement.

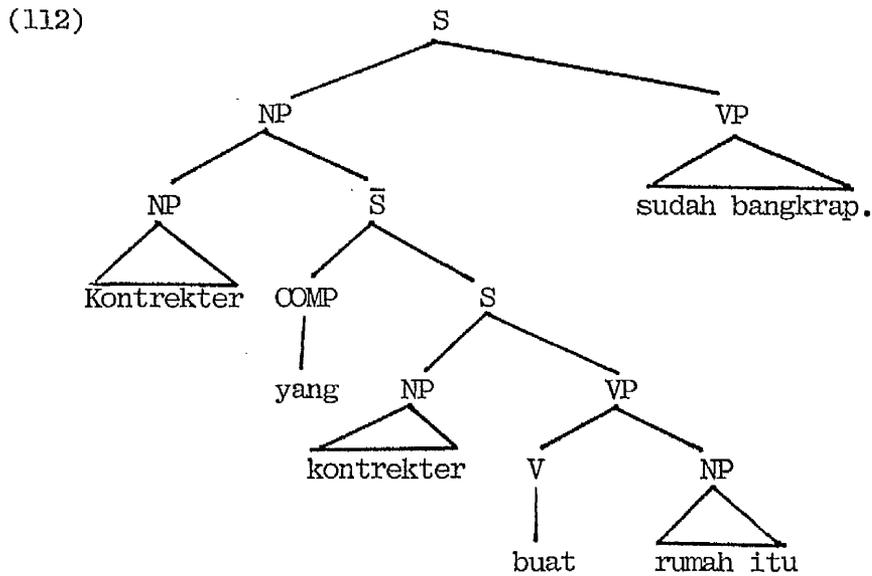
The question that may be asked is, if it is true that Topicalization and Left Dislocation are instances of the same rule in Malay as proposed in this thesis, why is it then that they do not behave alike with respect to Complex NP Constraint. We saw that in (97) and (103), repeated here for convenience, sentences with preposed NP are acceptable when nya is present whereas those without nya are not acceptable though some speakers do not reject it altogether.

- (97)a. Kereta itu, budak yang mencurinya telah ditangkap.
"The car, the boy who stole it has been arrested".
- b. Rumah itu, kontrekter yang membuatnya telah bangkrap.
"The house, the contractor who built it has gone bankrupt".

- (103)a. ??Kereat itu, budak yang curi telah ditangkap.
 "The car, the boy who stole has been arrested".
- b. ??Rumah itu, kontrekter yang buat telah bangkrap.
 "The house, the contractor who built has gone bankrupt".

This difference, at first sight appears to favour the analysis which treats Topicalization and Left Dislocation as two distinct rules. Furthermore, if Left Dislocation is analysed as a Post-cyclic rule the difference could easily be accounted for. Let us take the (b) pair to illustrate. Under the movement analysis (97b) and (103b) are derived from (111) and (112).





In (112), the cyclic movement of the NP rumah itu, first into the initial position of the lower S and then into the initial position of the higher S will block relativization from taking place. On the first cycle the structural description for relativization is destroyed while on the next cycle, it is blocked by the Strict Cyclicity Condition. This accounts for the unacceptability of (103b). In the case of (111), the post-cyclic rule of Left Dislocation will move the noun phrase rumah itu in one move into the highest S, thus rendering (97b) grammatical.

Examination of other types of sentences, however, shows that this cannot be the correct explanation.. Consider (113).

- (113) Baju itu, saya lupa untuk beritahu Ahmad
 Dress the I forget to tell Ahmad
 Aminah hendak ambil esok.
 Aminah want take tomorrow.
 "The dress, I forgot to tell Ahmad that Aminah wants

Aminah hendak ambil esok.

Aminah want take tomorrow.

"I forgot to tell Ahmad that the dress, Aminah wants to take (it) tomorrow".

Based on the same argument, sentences of the type (103) should be grammatical. In (103b), for instance, if Topicalization chose not to apply on the lower S in (112), this will allow relativization to apply on the highest cycle. The application of Topicalization on this cycle will produce (103b), otherwise (117) will be produced.

(117) Kontrekter yang buat rumah itu sudah bangkrap.

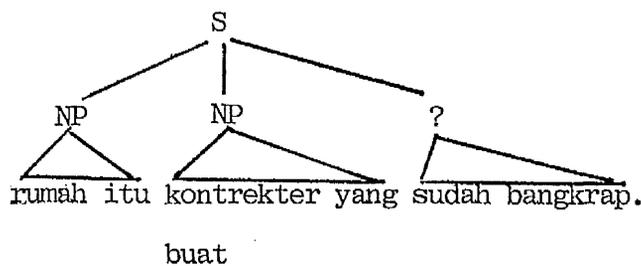
"The contractor who built the house has gone bankrupt".

How then do we explain the unacceptability of sentences of the type (103)? One plausible answer is that sentences of this type are grammatical and that their unacceptability is due to extragrammatical factors. One such factor is that of a perceptual strategy.

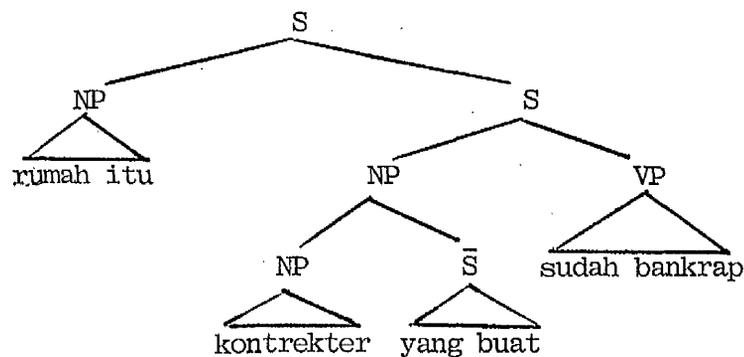
It has been reported (Fodor, Bever and Garrett 1974) that according to several studies done in the field of psycholinguistics, one of the main strategies employed in syntax recognizing process is what is termed as 'cannonical sentoid strategy'.¹⁶ Though the findings are somewhat inconclusive, many of the experiments show that, in English, the first indication of unelaborated surface

sequence of the form NP V (NP) are characteristically interpreted as a sentoid. I suspect that the unacceptability of (103) has something to do with this strategy. In Malay, a sentence or sentoid is not limited to NP VP sequence but may also include NP NP sequence. Thus the string rumah itu kontrekter yang buat may be understood as a sentoid. If the hearer applies the canonical sentoid strategy to (103), then the string is most likely to be 'heard' as a sentence where rumah itu will be interpreted as the subject and the rest of the string as the predicate NP dominating an S which in turn dominates NP NP sequence as in (118) rather than a relative construction as in (119). Having 'heard' this NP NP sequence as a full sentence, the hearer will be unable to assign the function of sudah bangkrap without having to recompute the whole sentence again.

(118)



(119)



In the case of (97b), though the string rumah itu kontrekter yang

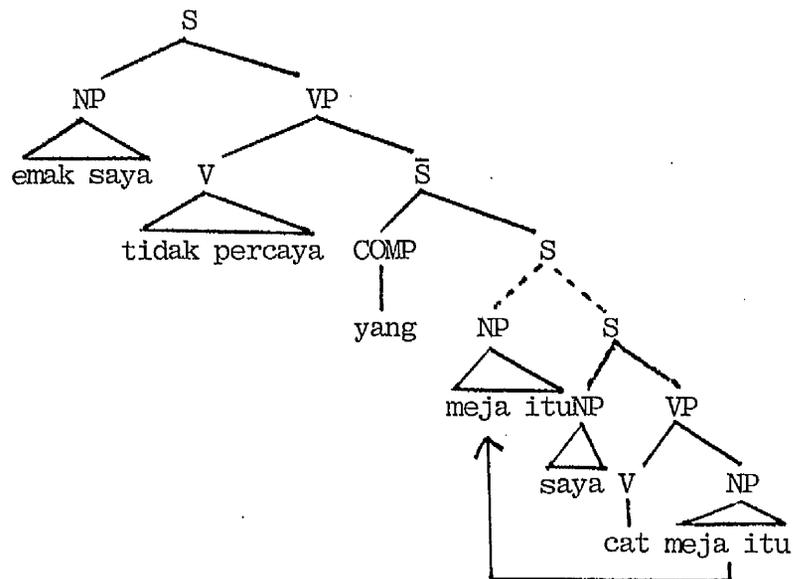
membuatnya has the same NP NP structure as (103), it is less likely to be interpreted as a sentoid unless kontrekter is stressed, in which case the sentence is just as unacceptable as (103).

I am not claiming that this is the answer to the problem in hand. What I am saying is simply that this could be a possible explanation. Clearly much more needs to be studied in order to accept or reject it.

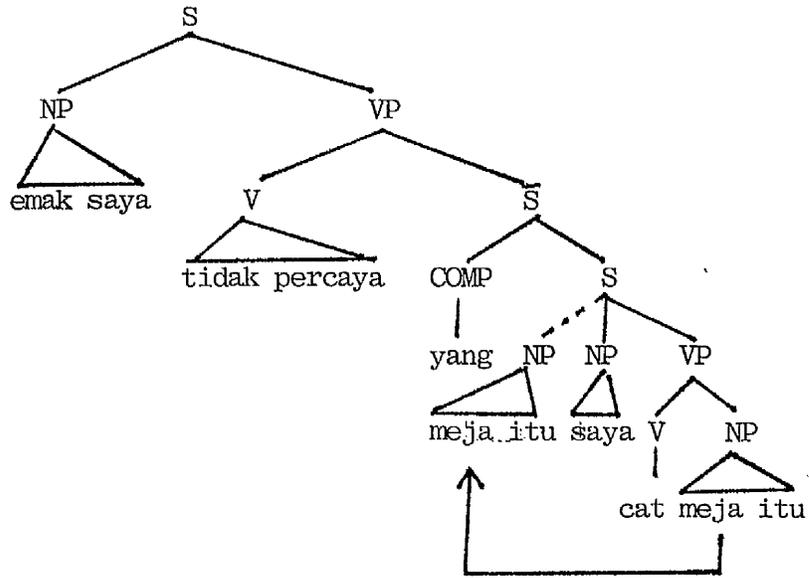
3.35 Position of the Preposed NP

One question that has deliberately been left unanswered until now is how exactly is the topicalized NP attached to the relevant S. There are at least three possibilities as to how this NP may be attached. It may be Chomsky - adjoined to that S, where a new node is created as in (120a) or it may simply be attached to it as in (120b) or again it may be placed in an empty NP slot as in (120c).

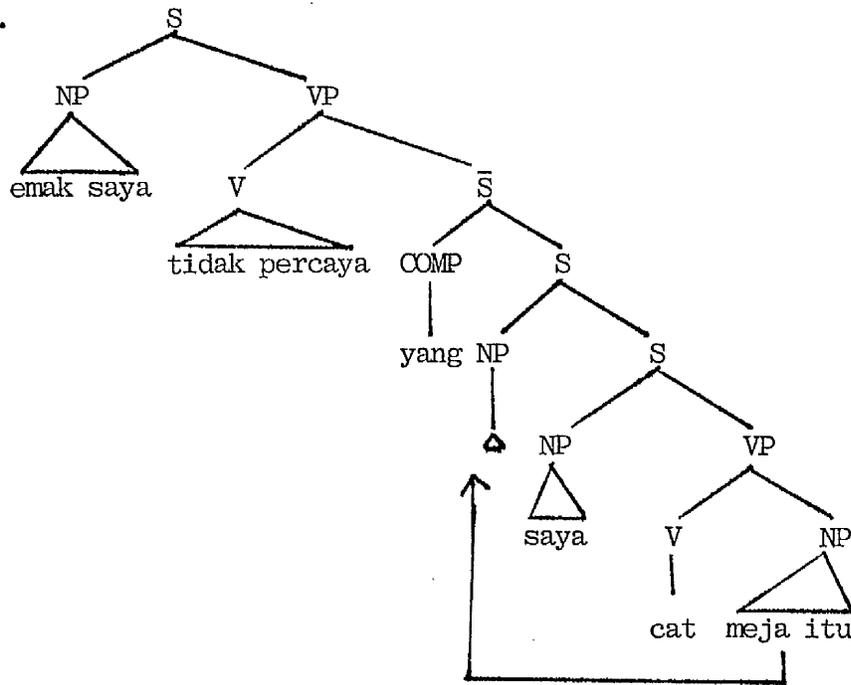
(120)a.



(120)b.



(120)c.



(120c) is possible only on the assumption that there is in the grammar of Malay a phrase structure rule of the form (121) in addition to $S \rightarrow NP VP$.

(121) $S \rightarrow NP S$

This rule is motivated by sentences of the type (122), (123) and (124).

- (122) Bapa Ahmad itu, orangnya peramah.
 Father Ahmad the person-his talkative.
 "Ahmad's father, his person is talkative".
 (Ahmad's father is a talkative person).
- (123) Ali, saya jumpa hantu itu di kedai makan.
 Ali I meet devil the at shop eat.
 "Ali, I met the devil in an eating shop".
- (124) Penyanyi wanita Melayu, saya suka Saloma,
 Singer lady Malay I like Saloma.
 "Malay lady singers, I like Saloma".

In all the sentences, the left-most NPs cannot possibly have been preposed as the ungrammaticality of their corresponding sentences illustrates.

- (125) *Orang bapa Ahmad itu peramah.
 Person father Ahmad the talkative.
- (126) *Saya jumpa Ali hantu itu di kedai makan.
 I meet Ali devil the at shop eat.
- (127) *Saya suka penyanyi wanita Melayu Saloma.
 I like singer lady Malay Saloma.

The choice of $S \rightarrow NP S$ rather than Chomsky's $\bar{S} \rightarrow COMP \left\{ \begin{array}{l} \bar{S} \\ S \end{array} \right\}$ will eliminate the unnecessary presence of the COMP which is never realized when it is directly dominated by \bar{S} .

Whichever of the three structures turns out to be the correct one for NP preposing, is not crucial to our main thesis. There is, however, an advantage of assuming either (120a) or (120c), because unlike (120b), both these structures allow us to distinguish subject NPs from preposed NPs. We could then say that only NPs dominated by an S which also dominates a VP is a subject of a sentence. In order to be consistent with Emond's structure preserving hypothesis, I will assume that (120c) is the correct structure for NP preposing.

3.4 The Nature of Relative Clause Formation Rule

Under the wh-movement rule of relative clause formation, there are at least two competing analyses regarding the process of application of this rule. One proposal permits the use of unbounded domain of application by making use of variables while the other assumes the iterative application of transformational cycle. The former is adopted by people like Ross (1967), Postal (1972) and Akmajian (1975).

The latter is advanced by Chomsky (1973; 1977), who proposes that all syntactic transformations are subject to a bounding condition - the Subjacency Condition.

Postal, in arguing against the cyclic nature of what he calls U-rules (these include wh-relative, wh-question movement and topicalization), gives two main arguments; the Preposition Dangle argument and the interaction of such rules with Tough Movement. We have already seen in section 3.34 that the Preposition Dangle argument does not hold for Malay, since prepositions are not allowed to be stranded in any position (including the original position) unless the pronominal copy of the moved NP is also left behind. The grammaticality of sentences in (128) shows that the relativized nominal has been proposed cyclicly and the presence of nya in (128b) and (128c) indicates their intermediate positions.

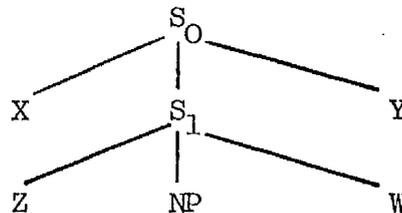
- (128)a. Tasik yang saya dengar ada naga di dalamnya
Lake that I hear have dragon at in-it
itu menjadi tempat tumpuan pelancung.
the become place attraction tourist.
"The lake which I heard that there is a
dragon in it has become a tourist attraction".
(The lake in which I heard there is a dragon
has become a tourist attraction).
- b. Tasik yang saya dengar di dalamnya ada naga
Lake that I hear at in-it have dragon
itu menjadi tempat tumpuan pelancung.
the become place attraction tourist.

" - as in (a) - "

- c. Tasik yang di dalamnya saya dengar ada naga
Lake that at in-it I hear have dragon
itu menjadi tempat tumpuan pelancong.
the become place attraction tourist.
" - as in (a) and (b) - "

Postal also argues that if U-rules are cyclic they must apply before Tough Movement because Tough Movement cannot be applied until the next cycle is reached. He further argues that if obligatory U-rules apply successive cyclically, they will necessarily apply to S_1 in structure like (129) in such a way to block the application of Tough Movement.

(129)

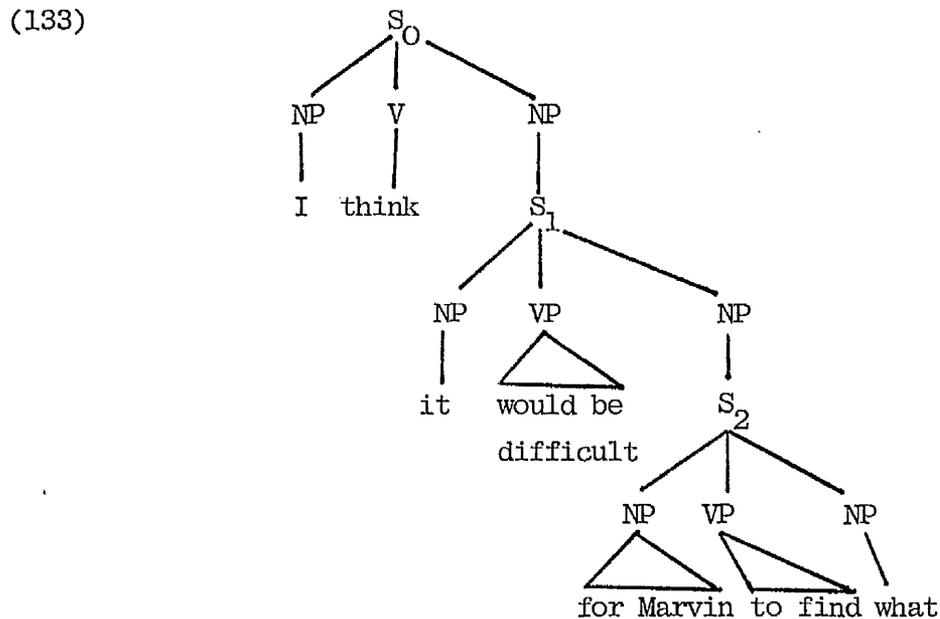


The fact that sentences like (130), (131) and (132) are grammatical shows that U-rule application cannot be allowed to block Tough Movement application.

- (130) Who do you think would be difficult for Marvin
to find?
- (131) The thing that you think would be difficult
for Marvin to find...

(132) Gold, I think would be difficult for Marvin
to find.

He points out that the operation of Tough Movement shows that the NPs moved by U-rules must, in cases like (130), (131) and (132), remain in their original place until the cycle on which Tough Movement applies as in (133). But this is what they cannot do if obligatory U-rules are successive cyclic.



Postal's arguments depend heavily on two points. First, as pointed out to him by Lakoff, is the assumption that U-rules are obligatory. If, according to Lakoff, U-rules are optional sentences like those in (130), (131) and (132) could be derived even with successive cyclic application, on the branch of derivation on which optional wh-movement is not applied on the first appropriate cycle.

Let us take (133) to illustrate Lakoff's point. On the cycle

of S_2 wh-movement may not apply and this will allow Tough Movement to apply on the S_1 cycle. Application of wh-movement on S_0 cycle will give us (130).

Postal is right in maintaining that such an analysis cannot be correct for English since wh-question and relative clause formation are obligatory rules. But as I have argued that in Malay the relativized element is fronted not by wh-movement but by NP preposing, which is an optional rule, Lakoff's idea may be incorporated into our analysis.

The second point is the assumption that the NP moved by Tough Movement must remain in its original place in a structure such as (133) because if it is moved into the initial position of S_2 , the structural description for Tough Movement will be destroyed. This argument does not hold for Malay as it has already been argued that NP preposing in adjective complement, the rule equivalent to Tough Movement in English, is a cyclic rule involving NP preposing and Raising. Thus the fronting of the relativized element to the initial position of S_2 in a structure identical to that of (133) does not destroy the structural description. 'Tough Movement' in Malay. In view of this, Postal's arguments against the cyclicity of U-rules collapse.

The cyclic movements of the relativized nominal in the structure identical to that of (133) would correctly predict that all of the sentences in (134) are grammatical. If, on the other hand, the relativized nominal, pergurus, has to remain in its original

place until the cycle of S_1 is reached, then only (134d) is possible.

- (134)a. Pengurus yang paling mudah untuk dipengaruhi
 Manager that most easy for pass-influence
 ialah Ahmad.
 is Ahmad.
 "The manager that is the easiest to be influenced
 is Ahmad".
- b. Pengurus yang paling mudah untuk kita pengaruhi
 Manager that most easy for us influence
 ialah Ahmad.
 is Ahmad.
 "The manager that is the easiest for us to
 influence is Ahmad".
- c. Pengurus yang paling mudah untuk kita mem-
 Manager that most easy for we
 pengaruhinya ialah Ahmad.
 influence-him is Ahmad.
 "The manager that is the easiest for us to
 influence (him) is Ahmad".
- d. Pengurus yang paling mudah untuk mempengaruhi-
 Manager that most easy for influence-
 nya ialah Ahmad.
 him is Ahmad.
 "The manager that is the easiest to influence
 is Ahmad".

3.5 Conclusion

In this chapter I started by describing briefly how relative clause

formation is treated in the trace-theoretical framework and I hope to have shown that such a theory cannot adequately describe Malay relativization process. I went on to examine NP preposing in subordinate clauses to show that all rules which have the effect of moving an NP into the clause initial position characteristically leave behind either a gap or a pronominal copy of the moved NP nya and that these rules are cyclic in nature. I also argued that none of these rules involve wh-movement. Finally, I argued that relative clause formation cannot be a post-cyclic rule.

We can therefore conclude that the presence of a gap or nya in a relative clause construction does not constitute an argument for the wh-movement analysis of relative clause formation since such a gap or a pronominal copy can be accounted for by NP preposing. If our hypothesis is correct then it should be possible for relative clause transformation to apply cyclically (whenever the structural description is met) to all the outputs of NP preposing rules and if the reader cares to check this, he will find that this is indeed the case.

Notes to Chapter 111

1. The Subjacency Condition states that:

No rule can involve X, Y, X superior to Y, if Y is not subjacent to X.

A is superior to B in the phrase marker if every major category dominating A dominates B as well but not conversely. If X is superior to Y in a phrase marker P, then Y is subjacent to X if there is at most one cyclic category $C \neq Y$ such that C contains Y and C does not contain X.

This condition allows (extraction)rules to apply only within adjacent cyclic categories or within the same cyclic category.

2. Chomsky (1977) claims that wh-movement has the following properties:

- (1)a. There is a gap in the sentence from which a wh-phrase is moved.
- b. Where there is a bridge, there is an apparent violation of subjacency, PIC (Propositional Island Constraint) and SSC (Specified Subject Condition).
- c. It observes CNPC (Complex Noun Phrase Constraint).
- d. It observes Wh-Island Constraint.

It is further claimed that whenever we find a configuration which has the above properties, we can explain it on the assumption that

the configuration results from wh-movement rule. Under this assumption, wh-movement, which was formally thought to be limited to Question Formation and Relative Clause Formation (that is to cases where the wh-word actually occurs in the structures or if it has been deleted as in the case of relatives, it is recoverable) is now used to explain a much wider range of constructions including Comparative Deletion, Clefts, Pseudo-Clefts and Topicalized sentences.

3. The use of the term wh-movement here is simply because the term is widely used in the literature even though there is no wh-word involved. Since in Malay, the complementizer and the so-called relative pronoun have the same morphological shape (isomorphic), I have added the feature [+comp] and [+wh] to distinguish the two for purposes of exposition.

4. Essentially the NP Constraint prohibits any constituent which is dominated by an NP from being moved or deleted by a transformational rule (apart from free deletion, if such exist). For further discussion see Horn (1974).

5. There is strong evidence, for English, that S is not a cyclic node, because if it is then all COMP-to-COMP movement will violate subadjacency in its present form:

$$(2) \begin{array}{ccccccc} [& \text{COMP} & [& \dots & [& [\text{wh}] & \dots] &] &] . \\ \bar{S} & & S & & \bar{S} & \text{COMP} & \bar{S} & S & \bar{S} \end{array}$$

It is claimed that S needs to be cyclic if sentences of the type

(3) is to be blocked by subadjacency.

(3) *John, I wonder who saw.

However, since the sentence can be excluded by other mechanisms such as Strict Cyclicity Condition, the claim for the cyclicity of S is somewhat weakened.

6. This argument is based on the assumption that affixes in Malay may optionally be deleted.

7. The Strict Cyclicity Condition states that:

No rule can apply to a domain dominated by a cyclic node A in such a way as to affect solely a proper subdomain of A dominated by a node B which is also a cyclic node.

8. The occurrence of the sequence of the wh-word and complementizer seems to appear only in Question Formation. In none of the languages is it known that such sequence is allowed in Relative Clause Constructions.

9. The A-over-A Condition states that:

If a transformation applies to a structure of the form

α [... [...] ...]
A

where α is a cyclic node, then it must be interpreted so as to

apply to the maximal phrase of the type A.

10. Nya in this construction is distinct from the pronominal copy nya we have seen earlier. Nya here is used as an emphatic marker.

11. This sentence is ungrammatical without the word dalam, as illustrated by (4).

- (4) *Danau ini sangat menyenangkan untuk berenang dinya.
Lake this very nice for swim at-it.

This is because there is a restriction on the occurrence of nya in PP requiring that the preposition must not be either di or ke. This, however, has nothing to do with NP preposing since all sentences with dinya and kenya are ungrammatical as can be seen from the following examples.

- (5) Pada hari Isnin kami bertolak ke Kuala Lumpur.
*Dinya kami tinggal selama tiga hari.
'On Monday we left for Kuala Lumpur. In it we stayed for three days''.
- (6) Sekarang cita-cita Ahmad untuk bekerja di bandar telah tercapai. *Esok ia akan pergi kenya untuk bekerja di salah sebuah firma dinya.
'Now Ahmad's ambition to work in town is achieved.
*Tomorrow he will go to it to work in one of the firms in it''.

With all other prepositions they are fine. So we have:

	padanya		on it/with him /with her.
	kepadanya		to him/her
	darinya		from it
	dari padanya		from him/her
	dengannya		with it/him/her.
	untuknya		from him/her/it.
{ di } { ke }	{ hadapannya } { belakangnya } { atasnya } { bawahnya } { kirinya } { kanannya } { tepinya }	{ at } { to }	in front of it/him/her
			behind it/him/her.
			on top of it/him/her
			under "
			left "
			right "
			edge "

12. This argument is based on the more conservative analysis of Equi whereby an NP in an embedded sentence obligatorily gets deleted under identity with a subject or an object NP (and in certain cases with an NP contained in a PP as in (95)) of the matrix sentence. The rule is as given in (7).

$$\begin{array}{cccccccccc}
 (7) & X & - & (NP_i) & - & \dots & [\dots NP_i \dots] & \dots & (NP_i) & - & X \\
 & & & & & & \bar{S} & & & & \\
 & 1 & & 2 & & 3 & 4 & 5 & 6 & & 7 & 8 & 9 & \longrightarrow \\
 & 1 & & 2 & & 3 & 4 & \emptyset & 6 & & 7 & 8 & 9 &
 \end{array}$$

Many transformationalists today would derive Equi constructions such as (8) not by the deletion rule given in (7) but from a struc-

ture such as (9) in which PRO in the embedded sentence is related to the controlling NP by rule of construal (Chomsky 1973; 1977).

- (8) Dia mahu pergi ke sekolah.
He want go to school.
'He wanted to go to school'.

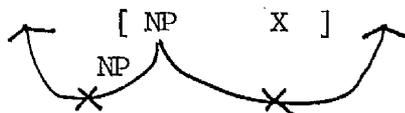
- (9) Dia mahu [PRO pergi ke sekolah].

13. (i) Co-ordinate Constraint:

In a co-ordinate structure, no conjunct may be moved, nor any element in a conjunct be moved out of that conjunct.

(ii) Left-Branch Condition:

No NP which is the left-most constituent of a larger NP may be reordered out of this NP by a transformational rule. The condition prohibits movement of an NP out of the following structure:



(iii) Sentential Subject Constraint:

No element dominated by an S may be moved out of that S if the node S is dominated by an NP which itself is

immediately dominated by S.

14. There is a possibility that in some dialects, sentences containing verbs with di- affix are also subject to this rule. For dialects which find all the following passive sentences acceptable, the most natural explanation for the presence of nya in (b) and (c) is to assume that nya is the pronominal copy left behind by the second bit of passive operation i.e. the preposing of the object NP buku itu, and not the pronominal copy of the PP oleh Ahmad as some people might assume.

- (10)a. Buku itu dibaca oleh Ahmad.
Book the pass-read by Ahmad.
"The book was read by Ahmad".
- b. Oleh Ahmad buku itu dibacanya.
By Ahmad book the pass-read-him /it.
- as in (a) -
- c. Buku itu dibacanya oleh Ahmad.
Book the pass-read-it/him by Ahmad.
- as in (a) and (b) -

Considering that a PP movement does not leave behind a pronominal copy nya, this analysis may be correct though it still has to account for the ungrammaticality of (b) sentences in the following pairs.

- (11)a. Perjanjian itu mestilah dipersetujui oleh
Contract the must pass-agree by
kamu berdua.
you two.

"The contract must be agreed by the two of you".

- b. *Perjanjian itu mestilah dipersetujuinya oleh
kamu berdua.

- (12)a. Kedai ini diurus oleh saya sendiri.

Shop this pass-manage by I self.

"This shop is managed by me".

- b. *Kedai ini diurusnya oleh saya sendiri.

- (13)a. Perkara ini telah diketahui oleh kami.

Matter this compl. pass-know by we.

"This matter was known to us".

- b. *Perkara ini telah diketahuinya oleh kami.

Furthermore unlike me-, di- may not be deleted.

15. After the application of Equi, the NP baju itu cannot be moved into the initial position of S_1 , as since Equi cannot apply until the next cycle is reached, this movement will violate the Strict Cyclicity Condition. This explains why sentence (14) is ungrammatical.

- (14) *Saya lupa baju itu beritahu Ahmad Aminah hendak

I forget dress the tell Ahmad Aminah want

ambil esok.

take tomorrow.

16. For further discussion on this subject see J.J. Katz and T. G. Bever (1976) and D. T. Langedoen (1976).

CHAPTER IV

FREE RELATIVES

4.0 Introduction

In this chapter I will discuss relative constructions which do not exhibit their heads in their surface structures. Relative clauses of this type are generally known as Free Relatives or Headless and are very common in Malay. As I will be arguing that in spite of their surface forms, these constructions are headed, I will refer to these constructions as Free Relatives. Some of the examples of Free Relatives are given below.

- (1)a. Yang berdiri di hadapan kedai itu ialah

That stand at front shop the is
penghulu kampung kami.
headman village we.

"(The one) that is standing in front of the
shop is our village headman".

- b. Yang membela Ahmad setelah ibunya meninggal.

That rear Ahmad after mother-his die
ialah neneknya.
is grandmother-his.

"(The one) who looked after Ahmad after his
mother died was his grandmother".

- (2)a. Yang di belakangnya ada pokok kelapa itu

That at behind-it have tree coconut the

rumah guru saya.

house teacher I.

"(The one) that has a cocunut tree behind it
is my teacher's house".

- b. Yang ada gambar kucing di cermin belakangnya itu

That have picture cat at behind-it the
kereta Ali.

car Ali.

"(The one) that has a picture of a cat on
its rear screen is Ali's car".

- (3)a. Beg ini lebih besar dari yang di dalam bilik itu.

Bag this more big from that at in room the.

"This bag is bigger than (the one) that is in
the room".

- b. Kakak Aminah membelikannya kasut untuk mengganti

Elder sister Aminah buy-her shoe for replace

yang diambilnya itu.

that pass-take-she the.

"Aminah's sister bought her (a pair of) shoes

to replace (the ones) that she took".

- (4)a. Saya suka yang merah itu.

I like that red the.

"I like the one that is red".

- b. Mereka memilih yang senang.

They choose that easy.

"They choose (the one) that is easy".

Unlike in English, the surface structure of Malay free relatives is quite distinct from that of embedded questions.¹ The following pairs of sentences illustrate the difference.

(5)a. Ahmad tidak tahu siapa berdiri di depan kedai itu
Ahmad not know who stand at front shop the
"Ahmad did not know who was standing in front of
the shop".

b. Ahmad tidak tahu yang berdiri di depan kedai
Ahmad not know that stand at front shop
itu ialah penghulu kampung kami.
the is headman village we.
"Ahmad did not know that (the one) who was standing
in front of the shop is our village headman".

(6)a. Dia mengambil apa di dalam bilik itu?
He take what at in room the.

"What is he taking in the room?"

b. Dia mengambil yang di dalam bilik itu.
He take that at in room the.

"He is taking (the one) that is in the room".

Free relatives in Malay are exactly similar to ordinary relatives discussed in previous chapters except for the absence of the NP head.

(7) - (10) are the ordinary relative or full relative counterparts of (1) - (4).

(7)a. Orang yang berdiri di hadapan kedai itu ialah
penghulu kampung kami.

"The person who was standing in front of the shop is our village headman".

- b. Orang yang membela Ahmad setelah ibunya meninggal ialah neneknya.

"The person who was looking after Ahmad after his mother died was his grandmother".

- (8)a. Rumah yang di belakangnya ada pokok kelapa itu rumah guru saya.

"The house that has a coconut tree behind it is my teacher's house".

- b. Kereta yang ada gambar kucing di cermin belakangnya itu kereta Ali.

"The car that has a picture of a cat on its rear screen is Ali's car".

- (9)a. Beg ini lebih besar dari beg yang di dalam bilik itu.

"This bag is bigger than the bag that is inside the room".

- b. Kakak Aminah membelikannya kasut untuk mengganti kasut yang diambilnya.

"Aminah's sister bought her (a pair of) shoes to replace the shoes she took".

- (10)a. Saya suka $\left\{ \begin{array}{l} \text{baju} \\ \text{bunga} \\ \text{payung} \end{array} \right\}$ yang merah itu.

" I like the $\left\{ \begin{array}{l} \text{dress} \\ \text{flower} \\ \text{umbrella} \end{array} \right\}$ that is red".

(I like the red { dress
flower
umbrella }).

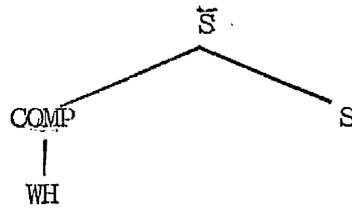
b. Mereka memilih { kerja
kira-kira
masalah
:
:
: } yang senang.

"They chose { job
sum
problem
:
:
: } that is easy".

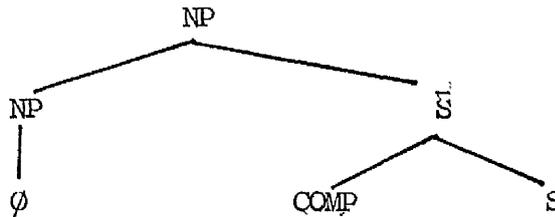
(They chose the easy { job
sum
problem
:
:
: }).

From the above examples, several facts become clear. Firstly, as we have already noted, Malay relatives unlike English relatives have surface structures which are quite distinct from that of embedded questions. All free relatives in Malay are introduced by the complementizer yang whereas embedded questions are introduced by question words such as apa (what) and siapa (who). Secondly, and this follows from the first, since all Malay relatives are introduced by yang there is no problem of matching the syntactic categories of the head of the clause with the dominating node that has to be accounted for. Following Bresnan and Grimshaw (1978), I will refer to this problem as the matching problem. Thirdly, the exact parallel between free relatives and their corresponding full relatives could not have been a mere coincidence which then suggests that either free relatives are derived from full relatives or both of them are derived from a

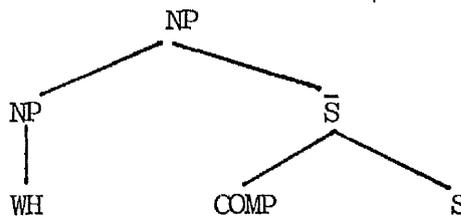
(13)a.



b.



c.²



Their argument against (13a) is that though superficially the structure of free relatives in English bear a close resemblance to that of embedded questions, there are certain syntactic properties of free relatives which indicate that a free relative has a syntactic structure considerably different from what has generally been assumed under the transformational analysis. The differences may be summarized as follows:

- (14)a. Free relatives appear in positions that are subcategorized for NPs but not for S.
- b. Free relatives trigger number agreement but embedded questions do not.
- c. Free relatives are not subject to internal NP over S constraint.

- d. Multiple wh-words can appear in embedded questions but not in free relatives.

(13b), they argue, would require an ad hoc constraint to ensure that the head of the phrase, the element in COMP and the phrase itself be of the same category. This property of free relatives is what they refer to as the matching effect mentioned earlier. They note that in free relatives the head of the constructions belongs to the same syntactic category as the wh-phrase itself. To illustrate this matching effect, here are their examples.

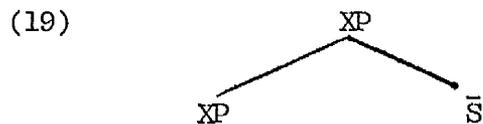
- (15) I'll buy [[whatever]you are selling] .
NP NP

- (16) I will word my letter [[however]you word yours].
Adv Adv

- (17) John will be [[however tall] his father was] .
AP AP

- (18) I'll put my books [[wherever] you put
PP PP
yours.] .

In all examples, the syntactic category of the wh-phrase is the same as that of the dominating node. In other words the structure of free relatives in English is of the form (19).



This constraint follows automatically in (13c) from conditions on

\bar{X} theory³ and will account for the ungrammaticality of (20) and (21).

(20) *He will reach [[however tall] his father
NP AP
did] .

(21) *He will get [[whatever height] his father
AP NP
get].

They further argue that a constraint on wh-movement requiring that the two occurrences of XP in (19) of the same category in order to exclude bad outputs such as (20) and (21) will be unable to account for the well-formedness of interrogatives like (22).

(22) The storekeeper was uncertain about [[how
NP AP
tall] my Dieffenbachia would get] .

Their final argument concerns pied piping. Unlike questions and full relatives, free relatives in English do not allow pied piping. This fact can naturally be explained if the wh-phrase is base-generated in the head position and not moved into the COMP by wh-movement.

Having examined the arguments in defence of the base-generated hypothesis for English free relatives, we will now see if such arguments can be put forward in the analysis of Malay free relatives.

With regard to the first argument namely the difference between the structure of free relatives and that of embedded questions, facts from Malay clearly support their claim. Free relatives in Malay are phrasal complements whereas embedded questions are sentential complements. As illustrated by (23) and (24), embedded questions may occupy positions which are subcategorized for S but free relatives may not.

(23)a. Awak fikir [Ahmad mengambil buku itu].

S

You think Ahmad take book the.

"You thought Ahmad took the book".

b. Awak fikir siapa mengambil buku itu.

You think who take book the.

"Who did you think take the book".

c. *Awak fikir [buku itu] .

NP

"You thought the book"

d. *Awak fikir yang mengambil buku itu.

"You thought (the one) that took the book".

(24)a. Saya tidak tahu [Ahmad datang tadi] .

S

I not know Ahmad come just now.

"I did not know Ahmad came just now".

b. Saya tidak tahu siapa datang tadi.

I not know who come just now.

"I did not know who came just now".

c. *Saya tidak tahu [Ahmad] .

NP

"I did not know Ahmad".

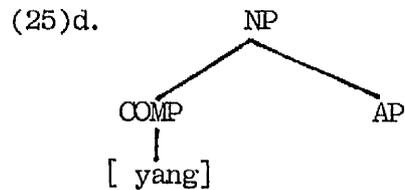
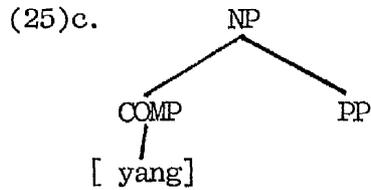
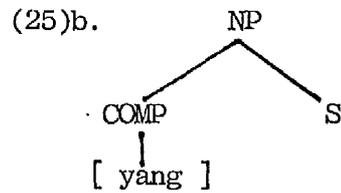
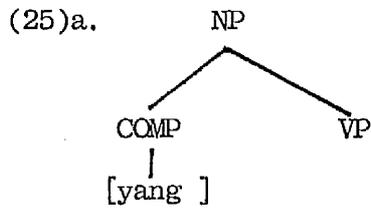
d. *Saya tidak tahu yang datang itu.

"I did not know (the one) that came".

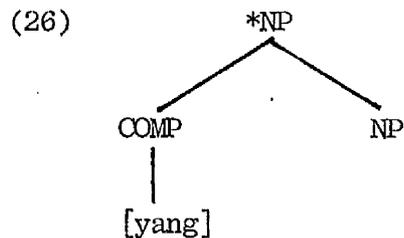
This fact will exclude (13a) as the correct structure for free relatives.

As for their choice between (13c) over (13b), the arguments put forward do not hold for Malay. In fact, as far as Malay is concerned, not only is there no evidence to support such a structure, but also such an analysis fails to account for the properties of Malay free relatives.

In Malay, as the rule of relativization only operates on NPs, the matching problem does not arise. All free relatives, as I have mentioned earlier, are introduced by yang, and the relative clause can only function as an NP. I have also argued in chapter 2 that yang in full relatives is a complementizer which is isomorphic with yang introducing sentential complements and is generated by the base rule $\bar{S} \rightarrow \text{COMP S}$. Let us assume for the moment, that yang in free relatives is the same yang. Now, if we were to assign the phrase structure for free relatives parallel to that of Bresnan and Grimshaw's, we will find that the head of Malay free relatives can never be of the same category as the relative clause itself. To illustrate let us take the free relatives in sentences (1), (2), (3) and (4) whose structures are represented by (25a), (25b), (25c) and (25d) respectively.



As we can see, in all the examples above, none of the elements which are dominated by the NP node is an NP. According to the base-generated hypothesis all of these construction would be ruled out as ill-formed. What is even worse, if the right hand branch of the structure is an NP, the structure is ill-formed because it will produce ungrammatical sentences of the type (27).⁴



- (27)a. *Yang bangunan di atas bukit itu ialah
 That building at on hill the is
 Pejabat Pelajaran.
 Office Education.
 "(The one) that is the building on the hill
 is the Education Office".
- b. *Yang pokok itu sudah berbuah.

That tree the compl bear fruit.

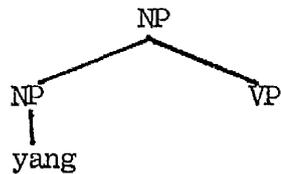
"(The one) that is the tree has already borne fruit".

- c. *Yang anak jiran saya baru pulang dari Kuala Lumpur.
That child neighbour I just return from Kuala Lumpur.

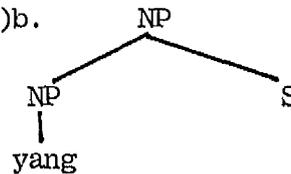
"(The one) that is my neighbour's son has just returned from Kuala Lumpur".

One could say that this argument is crucially dependent on the assumption that yang is indeed a complementizer, and that there is no relative pronoun in Malay. For the sake of argument, let us suppose that yang is a wh-phrase and is generated in the base as the head of the relative clause. The structures of (1), (2), (3) and (4) will now look like those given in (28a), (28b), (28c) and (28d).

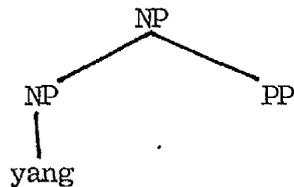
(28)a.



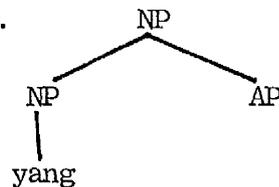
(28)b.



(28)c.



(28)d.



Though these structures are compatible with the base-generated hypothesis, this does not tell us anything, for assuming that yang is a wh-phrase, such structures can equally be explained by the trans-

formational analysis. In other words treating yang in free relatives as a wh-word does not in any way support the base-generated analysis though it is not incompatible with it.

A stronger argument, I think, why the base-generated analysis cannot be the correct analysis for Malay free relatives is that such an analysis fails to explain the relation that holds between sentences (1 - 4) and (7 - 10). This hypothesis cannot explain why for every full relative there is an exact construction without the head. Furthermore, if yang in free relatives is generated as the head of the clause, then by definition it would not be possible for another head to occur in front of yang. But as demonstrated by the (1 - 4) and (7 - 10) pairs, an NP head can occur in front of the free relative and the result is a full relative. In fact any nominal can occupy this position as long as its grammatical features agree with the verb in the clause.

The base-generated hypothesis would also predict that the occurrence of a complementizer after the wh-head would at least be marginally acceptable. But as demonstrated by (29), (30), (31) and (32), these sentences are totally ungrammatical.

- (29)a. *Yang yang berdiri di hadapan kedai itu ialah
penghulu kampung kami.
- b. *Yang yang membela Ahmad setelah ibunya meninggal
ialah neneknya.
- (30)a. *Yang yang di belakangnya ada pokok kelapa
itu rumah guru saya.

b. *Yang yang ada gambar kucing di belakangnya itu
kereta Ali.

(31)a. *Beg ini lebih besar dari yang yang di dalam
bilik itu.

b. *Kakak Aminah membelikannya kasut untuk mengganti
yang yang diambilnya.

(32)a. *Saya suka yang yang merah itu.

b. *Mereka mengambil yang yang senang.

According to structure (13c), the above sentences are the necessary outputs of the base-generated hypothesis. This is obviously undesirable and in order to avoid this Bresnan and Grimshaw have to postulate that free relatives, unlike full relatives, has a structure $XP \rightarrow XP S$ rather than $XP \rightarrow XP \bar{S}$. This is inconsistent with Bresnan's claim (Bresnan 1970) that all embedded sentences are introduced by a complementizer. This is not to say that it is not possible to put a constraint requiring that the COMP in (13c) must be null but if we have an alternative way that can naturally explain the ungrammaticality of (29) - (32), then such an alternative is to be preferred.

From the preceding discussion I hope to have shown that the properties of Malay relative cannot accurately be accounted for by generating yang as the head of the relative clause.

4.12 The Transformational Analysis

The standard transformational account derives free relatives in the same way as it derives full relatives and interrogatives via wh-movement. Kuroda (1968), for instance, proposes that the underlying structure of (33a) is the same as that underlying (33b) which is represented by (34).

- (33)a. Anything which surprised Mary pleased John.
b. Whatever surprised Mary pleased John.

- (34)a. SOME PRO [WH + SOME PRO surprised Mary]
pleased John.

The relevant rules involved in deriving the surface structures are the following. ⁵

- (35) SOME PRO \rightarrow something (which also surface
as anything).

- (36)a. WH + SOME \rightarrow what
b. THAT + WHICH \rightarrow what

- (37) WH + THAT \rightarrow which

- (38) PRO \rightarrow \emptyset (after what and which).

- (39) Det + PRO \rightarrow \emptyset (before WH, SOME PRO).

- (40) N_1 X + Det N_2 \rightarrow N_1 X THAT N_2 .

Condition: N_1 and N_2 are identical and coreferential.

According to Kuroda, the difference between (33a) and (33b) is that definitization applies in the derivation of (33a) but not in (33b), where rule (39) applies. The application of (40) together with (37) and (38) will produce (33a). Alternatively, (39) together with (36) and (38) will give us (33b).

Kuroda claims that by introducing the basic form such as (34), we are able to account for the synonymy of (33a) (33b). Despite its apparent incoherence, we will see that Kuroda's claim that full relatives and free relatives should be derived from the same basic structure has some support from Malay data; though like Bresnan and Grimshaw, I do not agree that free relatives and interrogatives share the same underlying structure.

Chomsky (1973), in passing, suggests that free relatives be derived from full relatives with unspecified head. Thus sentence (11) for instance, repeated below for convenience, would be derived from the structure corresponding to (41).

(11) I'll buy what you are selling.

(41) I'll buy [NP [PRO [you are selling wh]] S] .

Since Chomsky does not give the details of the derivation it is not clear what happens after the wh-phrase has been moved into COMP. Possibly a later rule spelling out the phonological shape of the wh-phrase as what will apply.

Wirth (1978), assumes that there exists in English a rule

which deletes a non-human pronominal head in relative clauses. This rule, as given in (42), derives (43) from (44). Here again some kind of rule changing that to what is needed.

(42) Non-human Nominal Deletion (NHND)

X	$\left\{ \begin{array}{l} +N \\ +Pro \\ +Def \\ -Hum \end{array} \right\}$	S	Y	
1	2	3	4	--> Opt.
1	∅	3	4	

(43)a. I like what arrived.

b. What John ate poisoned him.

(44)a. I like the thing that arrived.

b. The thing that John ate poisoned him.

A similar analysis to that of Wirth has been proposed for Malay free relatives by Karim (1975), who derives free relatives⁶ from full relatives by what she calls the Head Noun Deletion. This rule is comparable to Wirth's Non-human Nominal Deletion except that it does not require the head NP be non-human or a pronoun. That in Malay such a deletion (assuming it exists) is not restricted to non-human nouns alone can be illustrated by (45). Since the head noun deletion is not restricted to pronouns, according to Karim, underlying (45) and (46) before the application of deletion are structures corresponding to (47) and (48) respectively.

(45) Yang pergi itu adik saya.

That go the younger sister/brother I.

"The one that went away is my younger sister/
brother".

(46) Mereka membeli yang biru.

They buy that blue.

"They bought (the one) that is blue".

(47) Orang yang pergi itu adik saya.

"The person that went away is my younger sister/
brother".

(48) Mereka membeli buku yang biru.

"They bought the book that is blue".

Though, I agree with her that the most natural way to account for the similarity between full relatives and free relatives is to have both derived from a basic underlying structure, I do not agree that the latter is derived from the former by Head NP-Deletion. The problem with such an analysis is pretty obvious. Since according to the Head NP-Deletion, the head NP can freely be deleted, there is no way to recover the deleted NP, thus violating the Recoverability Condition (Chomsky 1965). There is nothing to tell us in (45), for instance, it is orang and not any other NP like budak (child), lelaki (man), perempuan (woman) or budak perempuan (girl), just to name a few, which has been deleted. There is no reason, syntactic or semantic, to rule out these NPs from appearing as the head NPs in the intermediate structure. The same can be said of (46). Any

NP which can take biru (blue) as its predicate such as baju (dress), payung (umbrella) fail (file) etc can be postulated as the deleted NP. Thus (49) and (50) can equally be the intermediate structures of (45) and (46) respectively.

- (49) { Budak
Lelaki
Perempuan
Budak perempuan } yang pergi itu adik saya.
- " The { child
man
woman
girl } that went away is my younger.
brother/sister".

- (50) Mereka membeli { baju
payung
fail } yang biru itu.
- "They bought the { dress
umbrella
file } that is blue".
- (They bought the blue { dress
umbrella
file }) .

It may be suggested that this problem may be solved by putting a constraint requiring that only neutral NPs or NPs with the least semantic features be allowed to be deleted. Such a constraint has been suggested for Head NP-Deletion in sentential complements. ⁷ If this is the case then the intermediate structure for (46) cannot be (48) as claimed by Karim but something like (51).

- (51) Mereka membeli benda yang biru.
They buy thing that blue.
"They bought the thing that was blue".
(They bought the blue thing).

However, unlike (46) where given the right context the missing NP may be interpreted as buku (book), it is most unlikely that benda (thing) in (51) would be interpreted as buku. Perhaps the only context in which such an interpretation is possible is when the speaker does not know or at least is not sure that the thing he bought was a book.

Another argument against the Head NP-Deletion concerns sentences of the type (1a) and (2a) repeated here for convenience.

(1)a. Yang berdiri di hadapan kedai itu ialah penghulu
kampung kami.

"(The one) standing in front of the shop is our
village headman".

(2)a. Yang di belakangnya ada pokok kelapa itu
rumah guru saya.

"(The one) which has a coconut tree behind it is
my teacher's house".

Under the assumption that these sentences are derived as a result of Head NP-Deletion rule and that this rule is subject to the constraint that only 'neutral' NPs may be deleted, underlying (1a) and (2a) would be structures corresponding to (52) and (53).

(52) Orang yang berdiri di hadapan kedai itu ialah
penghulu kampung kami. [= 7a]

(53) *Benda yang di belakangnya ada pokok kelapa itu
rumah guru saya.

"The thing that has a coconut tree behind it is
my teacher's house".

Since (53) is unacceptable, the Head NP-Deletion has to be an obligatory rule. The grammaticality of (52), however, shows clearly that if there is such a rule, it has to be an optional rule.

In order to maintain that (2a) is derived from a full relative via Head NP-Deletion, we would have to posit an intermediate structure (full relative) (54), where the subject NP is identical to the head of the predicate noun phrase.

(54) Rumah yang di belakangnya ada pokok kelapa itu,
rumah guru saya [= 8a]

"The house that has a coconut tree behind it is
my teacher's house".

At first glance it looks as if (2a) is derived from (54) by a deletion rule which deletes the subject N' under identity with the noun rumah in the predicate. There is, apparently, an obligatory cataphoric dependency between the missing N' and rumah in rumah guru saya. This assumption cannot be true for two reasons. Firstly, the 'missing head' and the noun it is supposed to be dependent upon do not belong to the same category. The former is an N' whereas the latter is an N. Thus if we say that the head of the relative clause is deleted under identity with rumah, we are

claiming that there is a cross categorial dependency. Secondly, such a deletion will violate the recoverability condition.

Another possibility here is that the 'missing head' of the free relative in (2a), though necessarily coreferential with the predicate, is referentially dependent on some antecedent (Evans 1980), a preceding sentence for instance, such as (55) where the 'missing NP' is referentially dependent on the first occurrence of rumah.

- (55) Rumah yang berlangsir merah itu rumah Ahmad
House that have-curtain red the house Ahmad
dan yang di belakangnya ada pokok kelapa itu
and that at behind-it have tree coconut the
rumah guru saya.
house teacher I.
"The house with the red curtains is Ahmad's house
and (the one) which has a coconut tree behind
it is my teacher's house".

But there are instances where no antecedent is needed. Consider (56).

- (56) Mari saya perkenalkan kepada keluarga saya.
Come I introduce to family I.
Ini ibu saya, itu kakak saya dan yang di tepi
This mother I that sister I and that at edge
pintu itu adik saya yang bungsu.
door the sister I that youngest.

(56) is a perfect introductory sentence and here we find that the 'missing' head of the relative clause yang di tepi pintu itu has neither an identical NP in the predicate nor a potential antecedent.

Finally, if (2a) is indeed derived from (54), by the same principle (1a) should be given a structure of (57).

(57) *Penghulu yang berdiri di hadapan kedai itu
ialah penghulu kampung kami. ^f 8

"The headman that is standing in front of the
shop is our village headman".

4.13 Towards the Null Head Hypothesis

Having looked at the nature of Malay free relatives and at the various analyses of free relatives, we are now in a position to propose an analysis which could best describe Malay free relatives.

We have already noted earlier that the fact that for every full relative there is an exact parallel free relative construction could not possibly be a mere coincidence. This can be taken as an indication that the two constructions must be related to one another. I have also indicated that the most natural way to account for this relationship is either to hypothesize that one is derived from the other or alternatively to derive both from a basic underlying structure. In the last section, we saw the problem faced by the former assumption. In this section I will attempt to show

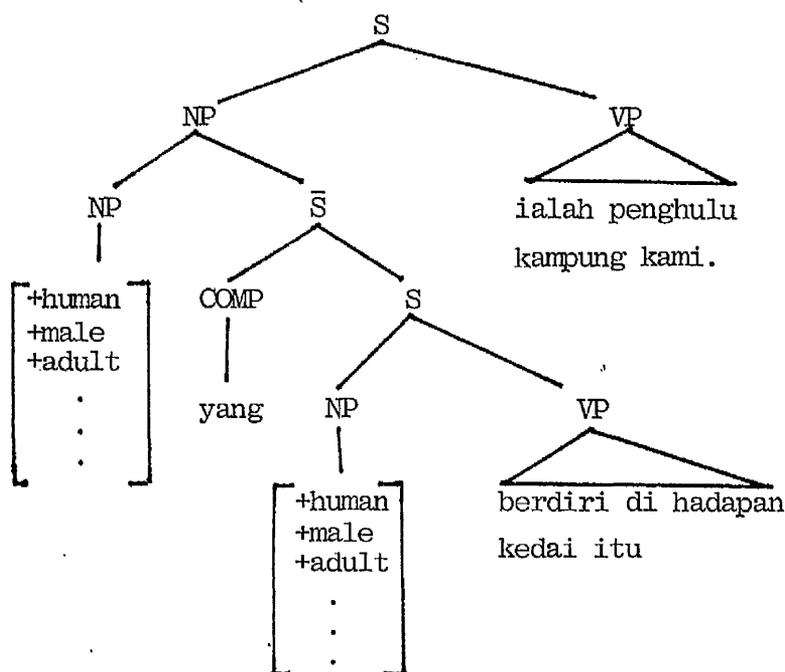
that such problems do not arise if we were to assume that the two constructions have an identical underlying structure and that they are derived in exactly the same way. The absence of the head noun is not the result of a deletion rule but can be explained by positing a phonologically null element as the head noun. This null element can either be taken as a feature bundle or alternatively, following Chomsky (1973), as PRO where PRO is taken to be a syntactic primitive which may be given an arbitrary interpretation.

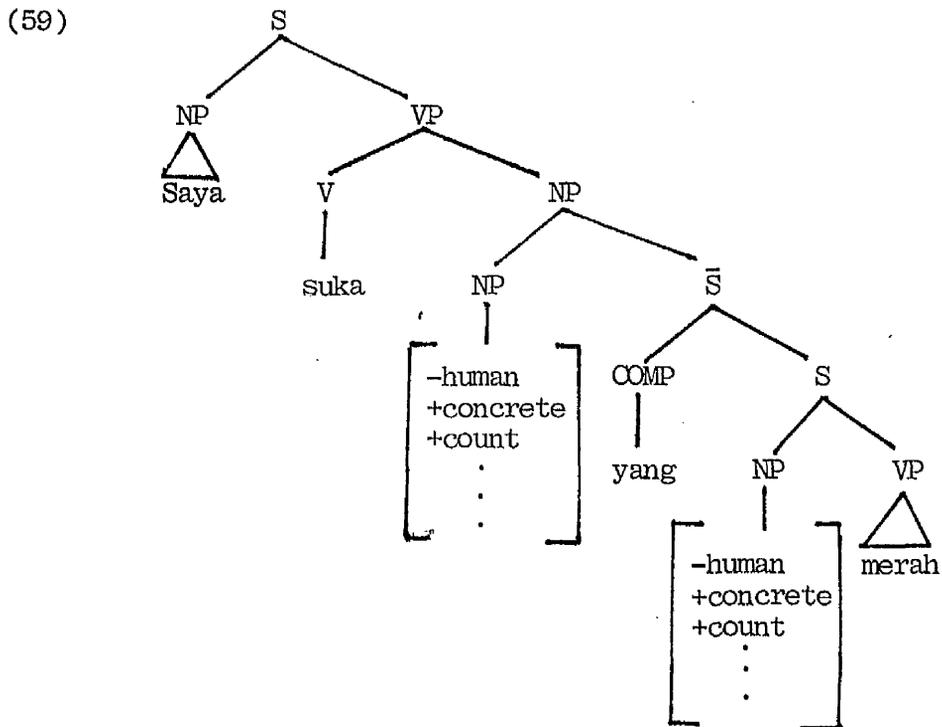
Let us consider (1a) and (4a) again repeated here for convenience. Under the first alternative, underlying (1a) and (4a) would be (58) and (59).

(1)a. Yang berdiri di hadapan kedai itu ialah penghulu kampung kami.

(4)a. Saya suka yang merah itu

(58)

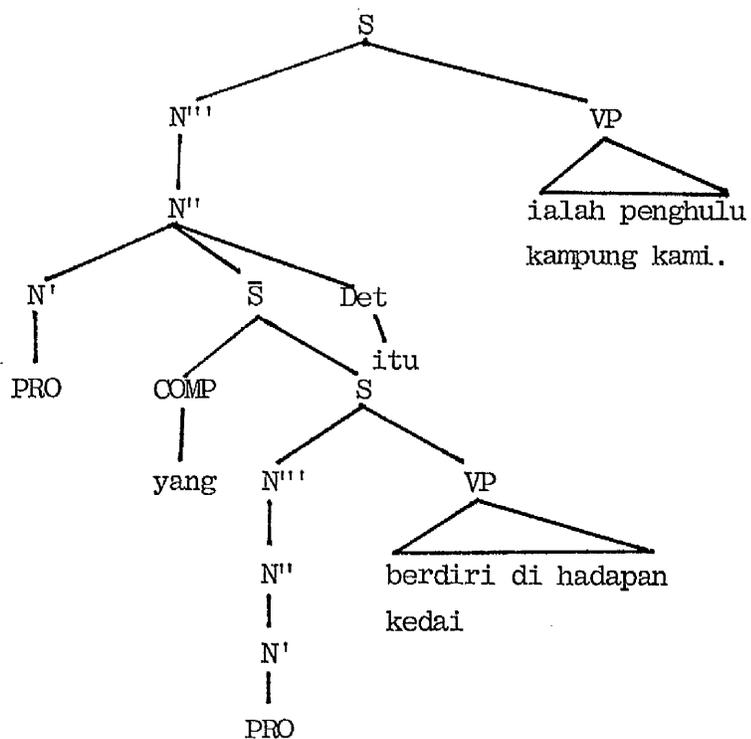




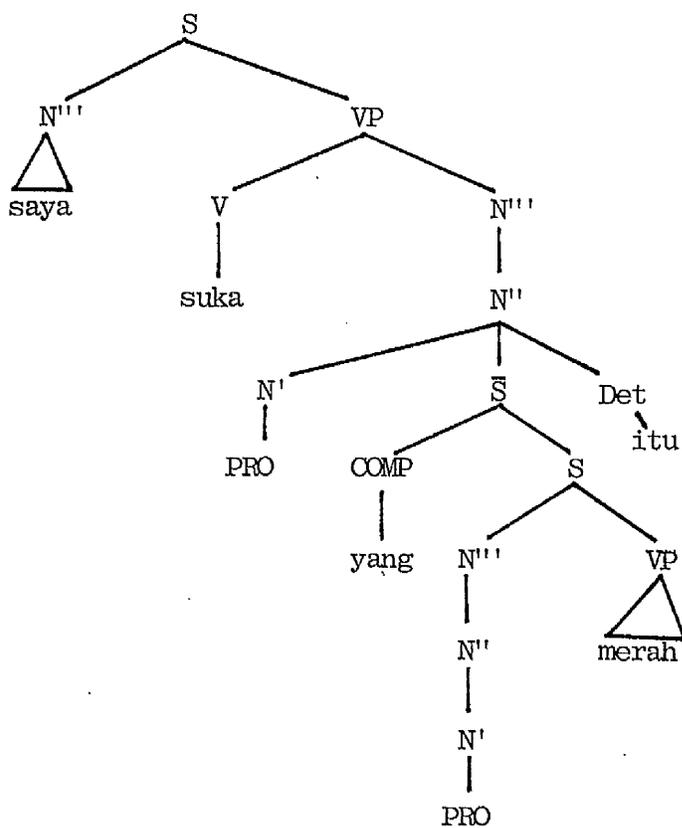
As in the case of full relatives, the nominal in the embedded sentence gets deleted under identity with the head nominal. In order to meet this condition, the two nominals have to agree in all their feature specifications. On the assumption that there exists a rule of Unspecified NP-Deletion, this rule will delete the unspecified head noun yielding the surface structure (1a) and (4a). If no rule applies deleting the dummy noun, the sentence will be marked ill-formed since dummies are not permissible on the surface.

Under the second alternative which will be referred to as the PRO Head Analysis, (1a) and (4a) are given the following underlying structures.

(60)



(61)



Coreferentially between the two PROs can either be handled by assigning the dominating nodes the same referential indices or by an interpretive rule of anaphora. In the first case the embedded PRO will get deleted under identity with the head nominal whereas in the second, the embedded PRO will be interpreted as being controlled by the head noun. Whichever alternative is taken will not affect our main thesis. The head PRO, since it is not controlled, will be pragmatically interpreted. In (4a) for instance, the head PRO may be interpreted as baju (dress), bunga (flower) payung (umbrella) etc according to the context. Whatever interpretation is given to the head PRO, will be given to the embedded PRO since this PRO is controlled by the head PRO. In the case of equative sentences like (1a), as we have already seen, though there is an apparent obligatory cataphoric dependency, the null head of the free relative is not referentially dependent on the nominal in the predicate. Coreferentiality between the relative clause and the predicate noun phrase is as we will see in section 4.32, something which is asserted by the speaker.

Up to this point we saw that both the Unspecified NP-Deletion and PRO Head Analysis can equally account for all the sentences we have been looking at. There is therefore no reason to prefer one over the other. But as we will see presently the PRO Head Analysis has an advantage over the Unspecified NP-Deletion when we begin to look at sentences like (3).

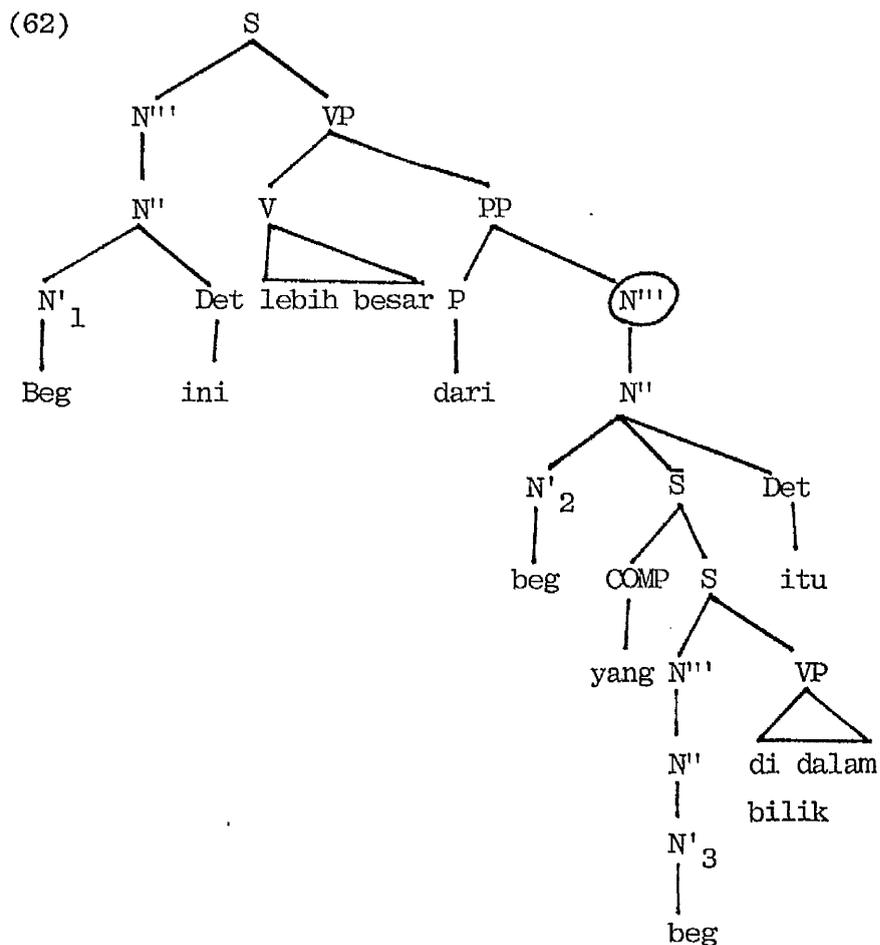
- (3)a. Beg ini lebih besar dari yang di dalam bilik itu.
"This bag is bigger than (the one) in the room"

- b. Kakak Aminah membelikannya kasut untuk mengganti yang diambalnya itu.

"Aminah's sister bought her (a pair of) shoes to replace (the ones) she took".

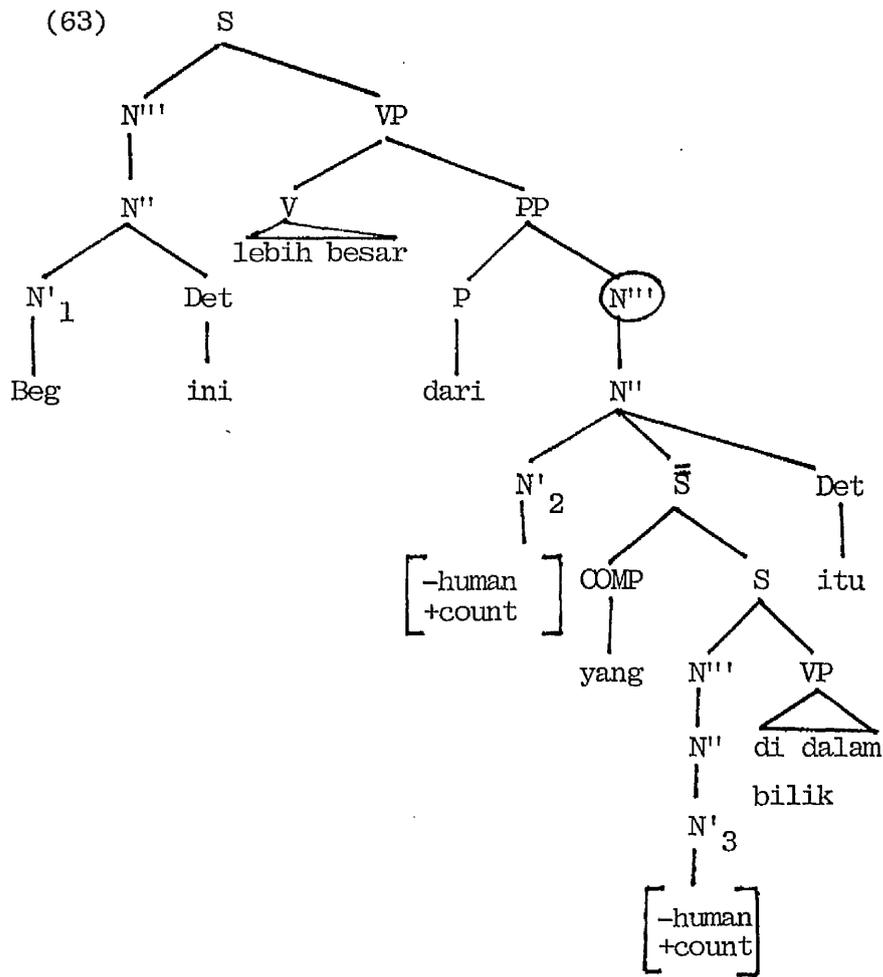
Each of the sentences in (3) has two readings. On their normal readings, yang di dalam bilik itu and yang diambalnya itu will be interpreted as beg di dalam bilik itu and kasut yang diambalnya itu. On a second reading, given the right context, the 'missing' head may have an arbitrary interpretation. This reading is quite hard to perceive. Take (3a) to illustrate. Suppose we have a situation in which A and B are trying to pack some books into just one case. They have a couple of boxes, one of which is in the room, and a bag to choose from. After being unable to get all the books in box X, A suggests that they should try the box in the room. In such a situation if B utters (3a), then yang di dalam bilik itu will be interpreted as kotak di dalam bilik itu. A similar context is not difficult to set up for (3b) so that the missing head noun may be interpreted as other things than kasut.

Under the head noun deletion analysis, we need two separate deletion rules to account for these two readings. The first is deletion under identity which deletes the embedded noun under identity with an antecedent in the matrix sentence. The underlying structure for this reading is (62).



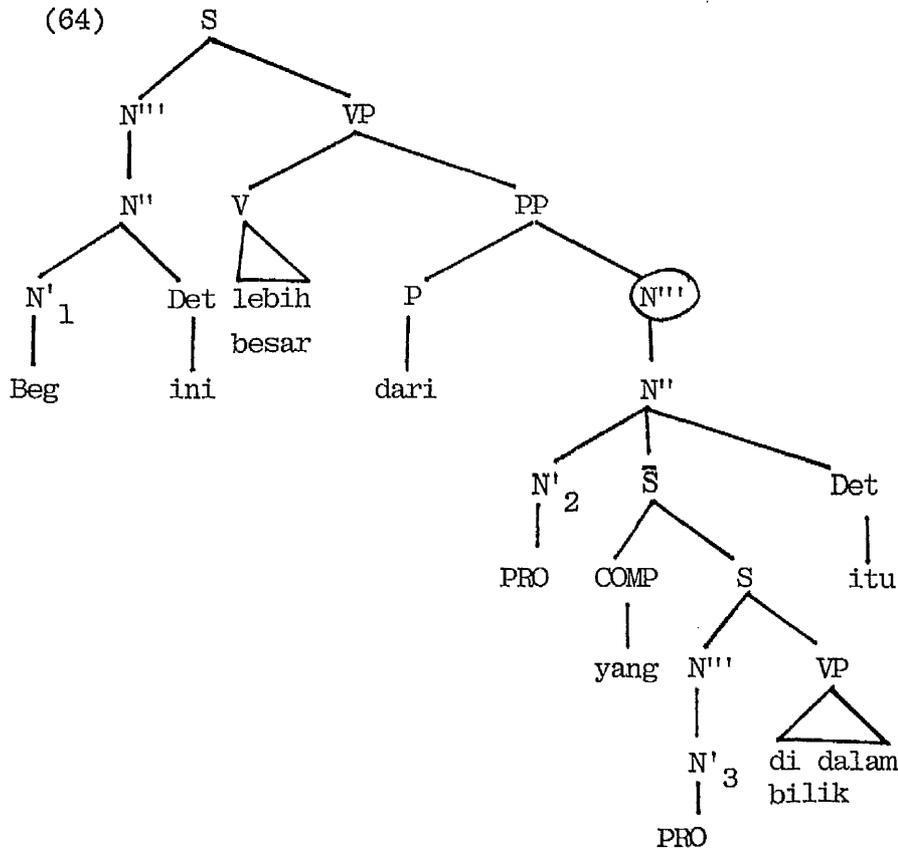
On the circled N''' cycle, relativization applies deleting N'_3.
 On the top-most S, N'_2 gets deleted under identity with N'_1.

The underlying structure for the arbitrary reading of the missing noun head is represented by (63).



As in the other case, relativization applies on the circled N''' cycle deleting N'3. N'2 is later deleted by the Unspecified NP-Deletion.

The PRO Head Analysis can naturally account for both the readings. Underlying (3a), under this hypothesis is (64).



Relativization applies either deleting N'_3 or relating it to N'_2 by rule of control. N'_2 , the head PRO, can either be interpreted as beg giving its normal reading or pragmatically interpreted as in the case of its second reading.

4.2 Some Apparent Counterexamples

At the beginning of this chapter I claimed that free relatives have a different surface structure than that of the interrogatives. Free relatives are introduced by the complementizer yang whereas interrogatives are introduced by words like apa, siapa, mana etc. Sentences like (65), which though not very elegant, nevertheless are not totally unacceptable, would seem to be the counterexamples of the claim made.

- (65)a. Saya akan makan apa awak makan.
I will eat what you eat.
"I will eat whatever you eat".
- b. Siapa belum siap tidak dibenarkan pulang.
Who not yet complete not pass-allow go home.
"(Those) who have not completed (their work)
are not allowed to go home".
- c. Baju mana tidak padan diberikannya kepada adiknya.
Dress which not fit pass-give-she to sister-her
"Whichever dress that does not fit (her) is given
to her sister".

It is fairly obvious that apa awak makan, siapa belum siap and baju mana tidak padan in the above examples are not embedded questions for none of the verbs akan makan (will eat), dibenarkan (allowed) or diberikan (given) has the feature [+Q] to allow question formation. One may, therefore, be led to believe that these are free relatives and may then jump to the conclusion that free relatives in Malay may be introduced by the same words introducing embedded and ordinary questions such as apa, siapa and mana. Closer examination however will show that these are not free relatives but full relatives with apa, siapa and baju mana as their indefinite heads. As illustrated by (66), each of these words, apart from functioning as question words, may also function as an indefinite noun phrase.

- (66)a. Tidak ada siapa di dalam bilik itu.
Not have anyone at in room the.
"There is no one in the room".

b. Tidak ada apa di dalam kotak ini.

Not have anything at in box this.

"There is nothing in this box".

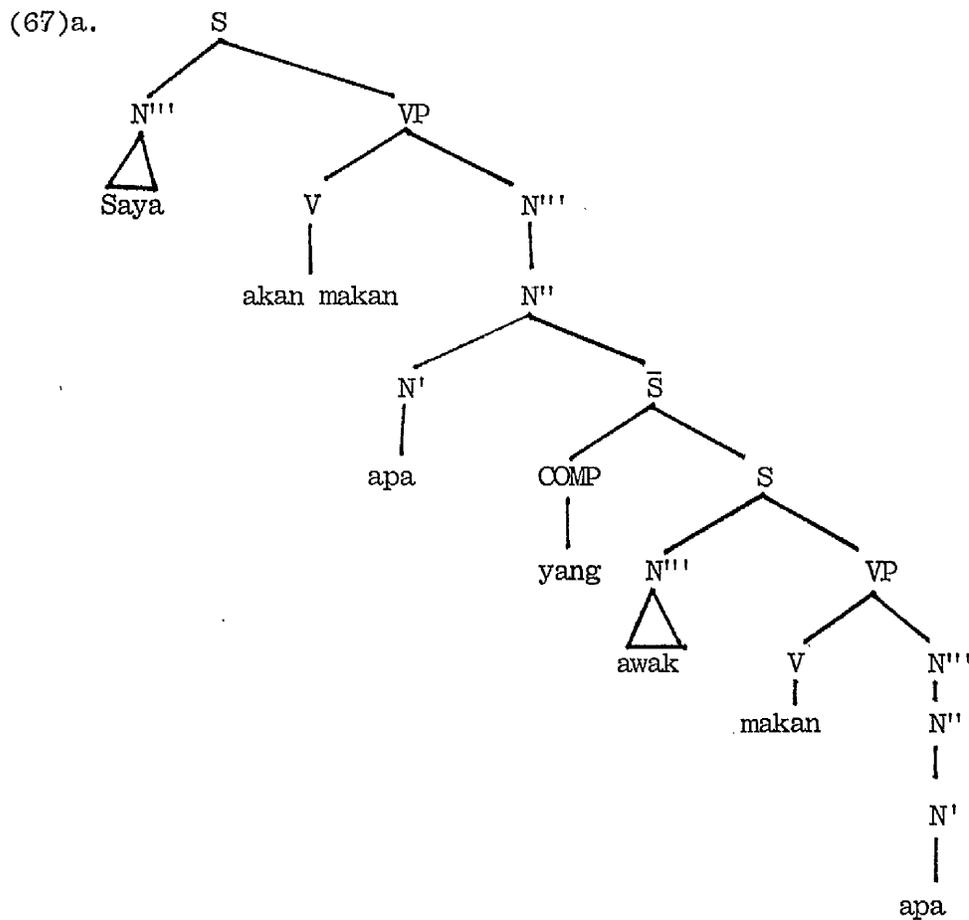
c. Aminah itu, pakai baju mana pun cantik.

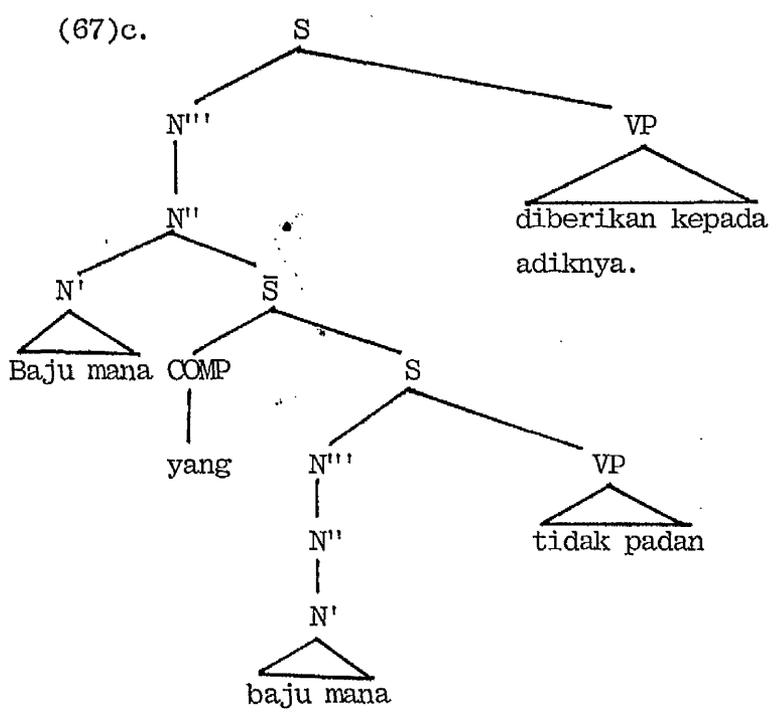
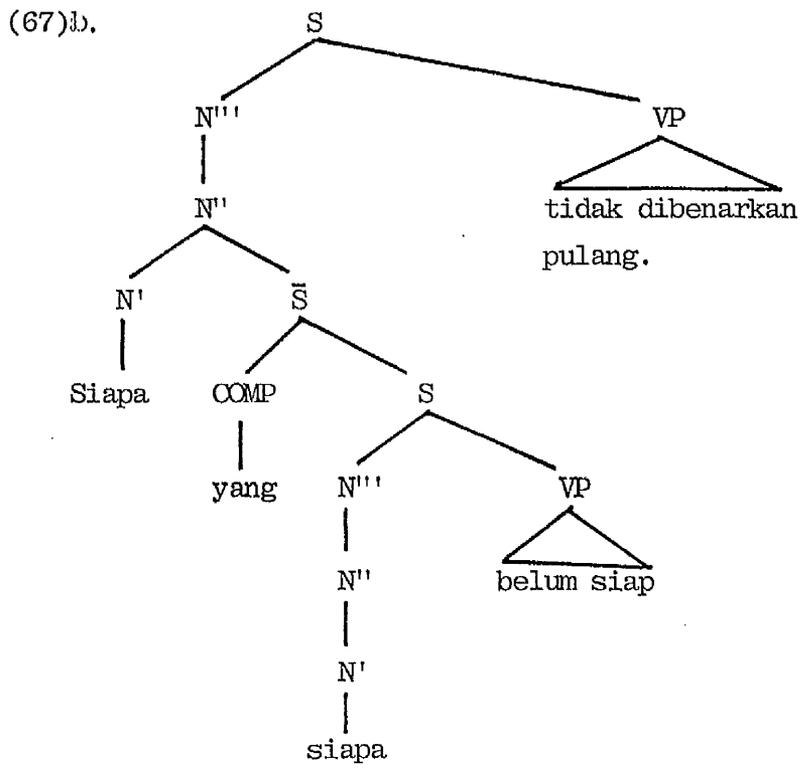
Aminah the wear dress which emph beautiful.

"Aminah, she wears whatever dress she looks nice".

(Aminah looks nice in whatever dress).

I would propose that underlying (65a), (65b) and (65c) are structures given in (67a), (67b) and (67c).





The application of the relativization rule will produce (68a), (68b) and (68c) which are the preferred variant of (65). The reason why

(65) is not fully acceptable is probably because of the complementizer yang has been deleted (see section 2.7).

- (68)a. Saya akan makan apa yang awak makan.
I will eat what that you eat.
"I will eat anything that you eat".
(I will eat whatever you eat).
- b. Siapa yang belum siap tidak dibenarkan pulang.
Who that not yet complete not allow go home.
"(Those) who have not yet completed (their work)
are not allowed to go home".
- c. Baju mana yang tidak padan diberikannya kepada
Dress which that not fit pass-give-she to
adiknya.
sister-her.
"Whichever dress that does not fit (her) is given
to her sister".

The very fact that words like apa, siapa and mana in (68) may be followed by the complementizer yang shows that they are not what may be thought as relative pronouns but are actually indefinite nouns.

4.3 Interpretation of PRO

Our analysis of free relatives with an empty head, loosely referred to as PRO in the preceding section, obviously requires some account of conditions on anaphora. In this section I will attempt to show that there is no evidence whatever to show that

this null element results from a transformational rule (deletion) and therefore must be present in the base. I will also show that its interpretation, subject to the condition of anaphora, may be pragmatically determined. Before I go into this I will show that the null element PRO is not just confined to the free relative constructions but is also present in other constructions such as sentential complements and subjectless sentences. The type of constructions we will be looking at is represented by (69) and (70).

- (69) Ahmad kata ___ hendak balik pagi ini.
Ahmad say want go back morning this.
"Ahmad said (he) wanted to go back this morning".
- (70) ___ baru dapat gaji.
just get pay.
(He/she/they) just got (his/her/their) pay".

Sentence (69) is normally said to be ambiguous between the coreferential and non-coreferential readings.⁹ On the coreferential reading, the missing NP in the subject position of the embedded sentence, indicated by ___, is understood as having the same referent as Ahmad. On the non-coreferential reading this missing noun phrase may be assigned any referential value except the one assigned to Ahmad, provided that the context provides enough informations for the hearer to pick out its referent. In this aspect the missing element behaves exactly like the pronoun ia in (71) where the interpretation of ia is determined by the pragmatics. Under the transformational approach only the coreferential reading is possible. The fact that the non-coreferential

reading is also possible shows that the null element in (69), like the pronoun ia in (71), is not derived by deletion as it would be assumed under the transformational approach but like the pronoun must have been present in the base. ¹⁰

(71) Ahmad kata ia hendak balik pagi ini.

Ahmad say he want go back morning this.

"Ahmad said he wanted to go back this morning".

Further support that PRO is present in the base comes from sentences of the type (70). Unlike (69), the null subject in (70) has no linguistic antecedent. But even without the presence of a potential linguistic antecedent, sentences of this type are well-formed in the contexts which contain enough information to allow unambiguous determination of the intended referent(s) of the null element. Since there is no NP in the sentence under consideration which can act as the potential antecedent for the null element, this null element could not therefore possibly be derived from pronominalization or deletion rules since the very nature of these rules requires that it has a linguistic antecedent. It must therefore be present in the underlying structure as represented in (72).

(72) PRO baru dapat gaji.

"PRO has just got (his/her/their) pay".

The interpretation of PRO in (72) like that of the pronoun in (73) will be pragmatically determined.

(73) Dia baru dapat gaji.

"He/she has just got his/her pay".

From the above discussion we see that the null element PRO behaves like ordinary pronouns in many ways. Like pronouns they do not require linguistic antecedents and therefore must be present in the base. We also saw that even in the case where there is an antecedent in the syntactic structure as in (69), the interpretation of PRO as well as that of a pronoun is entirely determined by its pragmatics.

4.31 Conditions on Anaphora

Facts from sentential complements and subjectless sentences suggest that the null element in Malay are actually instances of pronouns. This is further supported by its behaviour with respect to the constraint governing the rule of interpretation. It is generally accepted that the rule of interpretation of pronouns is subject to a certain constraint though the exact nature of the constraint is a matter of controversy.¹¹ The most widely assumed is the precede - command rule roughly stated in (74).

(74) If NP_1 precedes and commands NP_2 and NP_2 is not a pronoun then NP_1 and NP_2 cannot be coreferential.¹²

A is said to command B if B is not in A and the S node most immediately dominating A also dominates B. This constraint will account for the ungrammaticality of sentences such as (75) while

allowing those of the type (76) with the interpretations in which the underlined NPs are coreferential.

(75)a. *Dia kata Ahmad hendak balik pagi ini.

He say Ahmad want go back morning this.

"He said Ahmad wanted to go back this morning".

b. *Dia telah dipukul oleh Ali sebelum Ahmad

He compl pass-hit by Ali before Ahmad.

dapat menerangkan keadaan yang sebenar.

can explain situation that true.

"He was hit by Ali before Ahmad could explain the real situation".

(76)a. Sebaik saja dia sampai Ramlah pun terus memasak.

As soon as she arrive Ramlah emph start cook.

"As soon as she arrived Ramlah started cooking".

b. Waktu kami berbual dengan gurunya kami diberitahu

When we talk with teacher-his we pass-tell

bahawa Ahmad terkenal sebagai seorang penuntut

that Ahmad well-known as coef pupil

yang rajin.

that industrious.

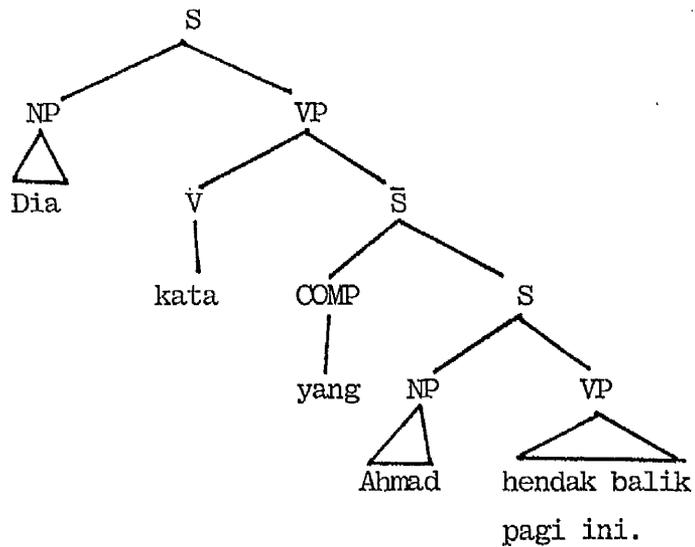
"While talking to his teacher we were told that

Ahmad was well-known as an industrious pupil".

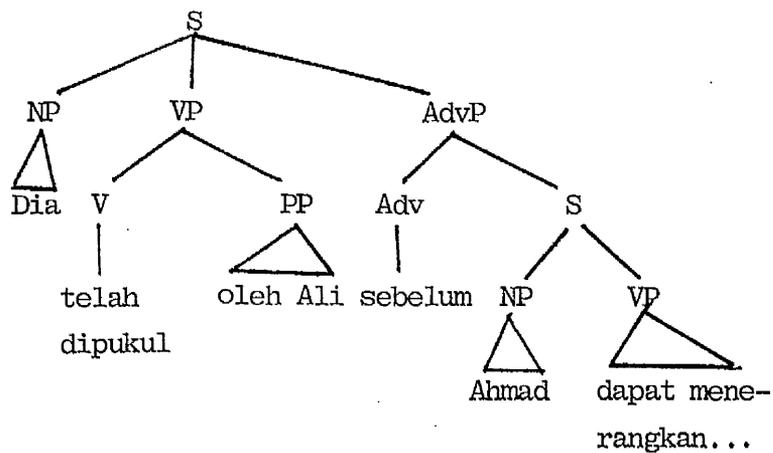
As we can see from the tree below in both (77a) and (77b) the pronoun dia both precedes and commands Ahmad. The most immediate S node dominating dia, the matrix S, also dominates Ahmad and since the second NP is not a pronoun, the two NPs cannot be inter-

reted as coreferential as required by constraint (74).

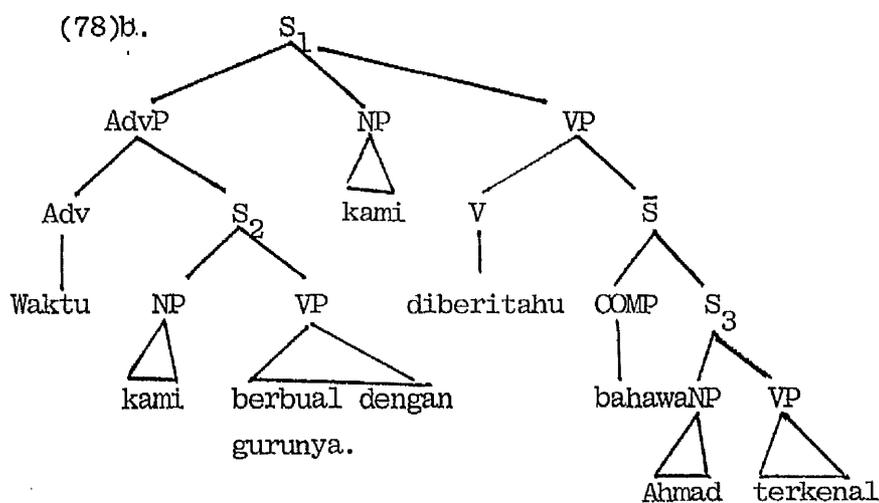
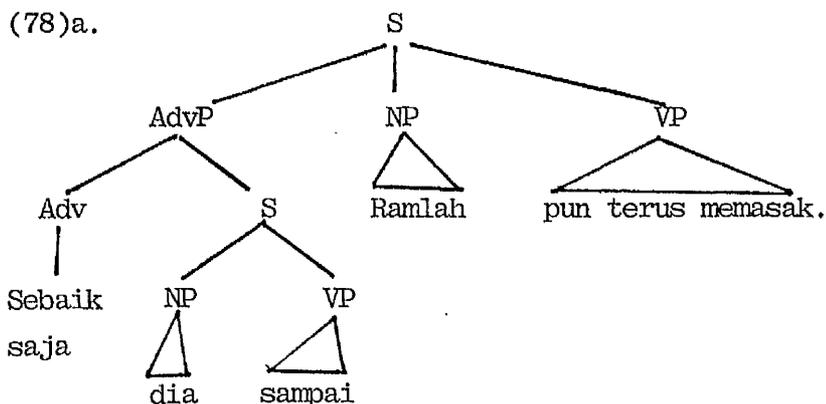
(77)a.



(77)b.



On the other hand as demonstrated by (78), though the pronouns dia and nya in (76) precede their antecedents, they do not command them, thus allowing the coreferential readings.



It was pointed out by Reinhart (1978) that though constraint (74) can account for a wide range of data, it is incapable of explaining the asymmetry in coreference options between noun phrases in the subject and non-subject positions. Coreference is impossible when the pronoun is a subject but possible when it is not a subject. This asymmetry cannot be handled by the precede-command relation since the relation cannot by definition distinguish between subject and non-subject of the same sentence. To illustrate this point consider the following pair of sentences.

(79)a. Ali memukulnya sebelum Ahmad dapat menerangkan
 Ali hit-him before Ahmad can explain
 kan keadaan yang sebenarnya.

situation that true.

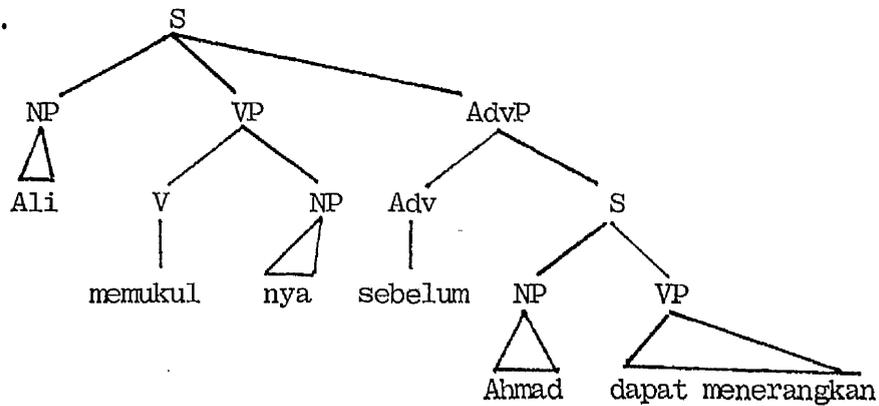
"Ali hit him before Ahmad could explain the
 real situation".

b. *Dia dipukul oleh Ali sebelum Ahmad dapat
 He pass-hit by Ali before Ahmad can
 menerangkan keadaan yang sebenarnya.

explain situation that real.

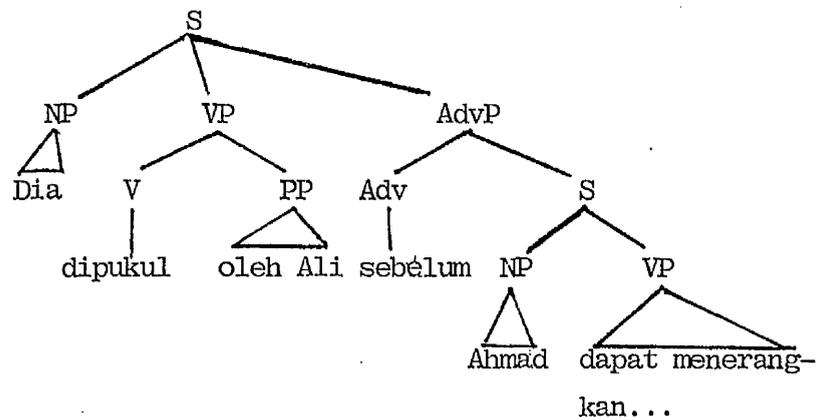
"He was hit by Ali before Ahmad could explain
 the real situation".

(80)a.



...

(80)b.



As demonstrated by (80a) and (80b) dia as well as nya both precede and command Ahmad. The precede-command condition would predict that both the sentences would be ungrammatical. Reinhart explains this difference by introducing the notion of domain into her rule of non-coreferential given in (81).

- (81) Two NPs must be interpreted as non-coreferential if one is in the domain of the other and is not a pronoun.

in which she defines domain as follows:

"The domain of node A consists of all and only the nodes dominated by the (non-unitary) branching node which most immediately dominates A".

(81) will adequately account for the asymmetry between the subject and non-subject pronouns. It allows Ahmad in (79a) to be interpreted as coreferential with nya since Ahmad is not in the domain of nya. In contrast Ahmad in (79b) is in the domain of dia and since it is not a pronoun the coreferent interpretation is blocked.

A different account is provided by Evans (1980) who attempts to explain whether or not a pronoun may be coreferential with an NP in terms of referential dependency. According to him a full term can be referential with a pronoun which precedes it as long as that pronoun is not referentially dependent on that full term. He claims that it is this referential dependence, given in (82), which is subject to precede-command relation and not coreference.

- (82) A term can be referentially dependent upon an NP if and only if it does not precede and command that NP.

This rule will account for the difference between sentences like (83) and those like (84).

- (83) Cerita itu sungguh tidak diduga oleh Ramlah.
Story the emph not pass-expect by Ramlah
Ahmad tetap mencintainya walaupun Ramlah sudah
Ahmad still love-her even Ramlah compl
dipunyai oleh orang lain.
pass-possess by person other.
"The story was not expected by Ramlah. Ahmad
still loves her even though Ramlah belongs to
someone else".

- (84) *Ketiga-tiga orang pemuda itu mencintai gadis-
Three coef men the love girl
gadis itu. Roslan mencintai Aminah, Ali men-
the. Roslan love Aminah Ali
cintai Zainon, dan Ahmad mencintainya walaupun
love Zainon and Ahmad love-her though
Ramlah sudah dipunyai oleh orang lain.
Ramlah compl pass- possess by person other.
"The three men love the girls, Roslan loves
Aminah, Ali loves Zainon and Ahmad loves her
though Ramlah belongs to someone else".

The grammaticality of (83) and the ungrammaticality of (84) is,

according to Evans, because in (83) though the pronoun nya precedes and commands Ramlah, it is not referentially dependent on this occurrence of Ramlah, but rather on the first occurrence of it in the preceding sentence. In contrast in (84) there is no occurrence of Ramlah which the pronoun nya can be referentially dependent upon, hence the star.

We have just looked at the nature of the constraint governing the interpretation of pronouns, proposed by various people. Now, if we are correct in claiming the null elements in sentences like (69) and (70) are actually instances of pronouns, then we would expect them to be subject to the same constraint too. Consider now the sentences in (85) and (86) whose underlying structures, according to the analysis I am proposing, are (87) and (88).

(85)a. Sebaik saja ___ sampai Ramlah pun terus memasak.

(cf 76a)

"As soon as (she) arrived Ramlah started cooking".

b. Mereka pukul ___ sebelum Ahmad dapat menerangkan

keadaan yang sebenarnya. (cf 79a)

(86)a. * ___ kata Ahmad hendak balik pagi ini (cf 75a)

(He) said Ahmad wanted to go back this morning".

b. * ___ telah dipukul oleh Ali sebelum Ahmad

dapat menerangkan keadaan yang sebenarnya (cf 75b).

"(He) was hit by Ali before Ahmad could explain

the real situation".

- (87)a. Sebaik saja PRO sampai Ramlah pun terus memasak.
b. Mereka pukul PRO sebelum Ahmad dapat menerangkan keadaan yang sebenarnya.
- (88)a. PRO kata Ahmad hendak balik pagi ini.
b. PRO telah dipukul oleh Ali sebelum Ahmad dapat menerangkan keadaan yang sebenarnya.

In (85a) and (85b), just as in the case of dia and nya in (76a) and (79a), the subject of sampai (arrive) and the object of pukul (hit) may either be interpreted as Ramlah and Ahmad respectively or as some other individual in the context. In contrast, the null subjects in (86), like dia in (75a) and (75b), do not allow coreferential readings. This suggests that the interpretation of PRO in (87) and (88) is subject to the same condition that governs the interpretation of ordinary pronouns. Whatever constraint governing the interpretation of pronouns discussed earlier turns out to be, the same constraint will apply to the interpretation of PRO.

I hope to have shown that the null element PRO behaves in exactly the way as ordinary pronouns. The interpretation of PRO like that of pronouns is entirely determined by the pragmatics and the condition under which PRO may be coreferential with full NP is precisely the same as that which determines whether or not a pronoun may be coreferential with a full NP. Two conclusions may be drawn from this observation. Firstly, that PRO is derived from pronouns by a process known as pronoun drop or secondly we might say that it is actually an instance of pronouns and differs from them only in that it is not phonologically realized. It is the

second position I am arguing for in this thesis.

It has been observed that in some languages like Turkish and Japanese there is a rule which allows pronouns to be deleted (Hankamer 1979). It might be suggested that such an operation is at work here. However, there is evidence to show that this is not the case. As demonstrated by (89) and (90) null elements may occur in positions where pronouns may not.

- (89)a. Ahmad tidak membeli buku itu kerana buku itu
Ahmad not buy book the because book the
terlalu mahal.
very expensive.
"Ahmad did not buy the book because the book
is very expensive".
- b. *Ahmad tidak membeli buku itu kerana ia terlalu
mahal.
- c. Ahmad tidak membeli buku itu kerana terlalu
mahal.
"Ahmad did not buy the book because (it is)
very expensive".
- (90)a. Pokok kelapa itu sudah tumbang.
Tree coconut the compl. fall.
"The coconut tree has fallen down".
- b. *Ia sudah tumbang.
- c. Sudah tumbang.
"(It) has fallen down".

If the (c) sentences in the above examples are derived from their corresponding (a) sentences by rule of pronominalization and then pronoun drop, then we would expect that the (b) sentences are alright. The fact that null elements can occur in (c) but pronouns cannot occur in (b) shows that if there is a rule of pronoun drop in Malay, it has to be an obligatory rule. But sentences like (71), (73), (76) and (79a) shows that it cannot be an obligatory rule.

At first glance it appears that pronoun drop is obligatory applying to subject NPs with the feature[-human] like those in (89) and (90) but optional when the NPs have the feature[+human] . The ungrammaticality of sentences of the type (91), however, shows that such an explanation is not satisfactory.

(91)a. Orang yang berdiri di hadapan kedai itu
Person that stand at front shop the
mengeluarkan sesuatu dari sakunya.
take out something from pocket-his.
"The man who was standing in front of the
shop took out something from his pocket".

b. *Dia yang berdiri di hadapan kedai itu mence-
luarkan sesuatu dari sakunya.
"He who was standing in front of the shop
took out something from his pocket".

We can therefore conclude that there is no rule of pronoun drop in Malay and that the null element PRO is actually an instance of

pronouns, differing from other pronouns in that it is phonologically unrealized.

4.32 Interpretation of the Head PRO in Free Relatives

Having argued that PRO is generated in the base and that its interpretation is pragmatically controlled and subject to the same constraint governing the interpretation of pronouns, let us now see how such a hypothesis explains the interpretations of sentences (1 - 4), repeated here for convenience.

- (1)a. Yang berdiri di hadapan kedai itu ialah
penghulu kampung kami.
"(The one) that is standing in front of the
shop is our village headman".
- b. Yang membela Ahmad setelah ibunya meninggal
ialah neneknya.
"(The one) who looked after Ahmad after his
mother died was his grandmother".
- (2)a. Yang di belakangnya ada pokok kelapa itu rumah
guru saya.
"(The one) that has a coconut tree behind it
is my teacher's house".
- b. Yang ada gambar kucing di cermin belakangnya
itu kereta Ali.
"(The one) that has a picture of a cat on its
rear screen is Ali's car".

(3)a. Beg ini lebih besar dari yang di dalam bilik itu.

"This bag is bigger than (the one) that is in the room".

b. Kakak Aminah membelikannya kasut untuk mengganti yang diambilnya itu.

"Aminah's sister bought her (a pair of) shoes to replace (the ones) that she took".

(4)a. Saya suka yang merah itu.

"I like (the one) that is red".

b. Mereka memilih yang senang.

"They chose (the one) that is easy".

We will start from the bottom first. The underlying structure of (4a) is (61) and the structure after relativization takes place is (92).

(92) Saya suka PRO yang merah itu.

I like PRO that red the.

Like sentences of the type (70), PRO here has no potential syntactic controller and it is therefore entirely left to the pragmatics to pick out its referent(s). Likewise in (4b), the absence of a syntactic antecedent leaves the determination of the referent(s) entirely to the pragmatics.

Sentences of the type (3) provide an interesting case for the Head PRO Analysis. We saw earlier that (3) has two readings. The normal interpretation is where the subject of the embedded sentence

is interpreted as beg, though not coreferential with the subject of the matrix, and the less obvious one is where the null subject of the embedded sentence can be given an arbitrary interpretation. I also pointed out that the second reading would not be possible under the NP Head Deletion Analysis. The possibility of the second reading can easily be accounted for within the present analysis of PRO.

PRO in sentences like (3) is similar to that in (69) in that it has a syntactic antecedent and the rule of interpretation allows this PRO to be anaphorically related to that antecedent since it is both preceded and commanded by this antecedent. But notice that though PRO in (3) may be anaphorically related to the matrix subject, the context does not allow it to be coreferential with this subject. There is no reading in which PRO and beg ini are coreferential. If we are right in claiming that PRO is actually a pronoun, this can easily be explained by assuming that PRO in this case is a lazy pronoun where it is used as a substitution for a linguistic antecedent without referential identity.¹³ This accounts for the first reading. The second reading is possible within our analysis because, since it is subject to pragmatic control, PRO may (as determined by the context) be directly referential.

Let us now move on to sentence (2). We see that, contrary to the prediction made by the precede-command and Domain constraint, PRO in (2a) and (2b) can only be interpreted as coreferential with the predicate NPs of the matrix sentence. This may appear to be a problem to our analysis but this problem may be eliminated if we

adopt Evan's account of coreferentiality. As we noted earlier PRO in (2a) and (2b) though is obligatorily coreferential with rumah guru saya and kereta Ali is not referentially dependent on these NPs but on some other antecedent which may be present in the preceding sentence or pragmatically determined. That PRO in this type of sentences is not referentially dependent on the predicate NPs may be demonstrated by sentences like (1) where as we have seen earlier the 'missing' noun cannot be anaphorically related to penghulu (headman) and nenek (grandmother). In other words coreferentiality between PRO and the predicate NPs in sentences (1) and (2) is an asserted coreferentiality, parallel to all other equative sentences such as (93), where the dia may be directly referential and it being coreferential with guru saya is something asserted by the speaker. 14

(93) Dia ialah guru saya.

He is teacher I.

"He is my teacher".

We will find that in sentences where no such assertion is made, the PRO head analysis together with the base generated hypothesis correctly rule out the coreferential readings as ungrammatical.

This may be illustrated by sentences of the type (94).

(94) *Yang tegap itu mengambil dompet dari saku orang

That strong the take wallet from pocket person
itu.

the.

"(The one) who is well-built took out a wallet

from the man's pocket".

(94) is ungrammatical on its coreferential reading because the condition on pronoun will not allow PRO and orang itu in (95) to be coreferential.

(95) *PRO yang tegap itu mengambil dompet dari
saku orang itu.

The ungrammaticality of (94) can of course be equally accounted for by the Head NP-Deletion analysis since its source is also ungrammatical.

(96) *Orang yang tegap itu mengambil dompet dari
saku orang itu.

The Head NP-Deletion Analysis, however, cannot account for sentences of the type (97).

(97) *Yang mengajak Ahmad pergi dan Ahmad telah
That invite Ahmad go and Ahmad compl
dimarah oleh bapa budak itu.
pass-scold by father boy the.
"(The one) who invited Ahmad to go and Ahmad
were scolded by the boy's father".

Within the Head NP-Deletion Analysis it is not quite obvious that such sentences may be blocked since its supposed source is perfectly alright.

- (98) Budak yang mengajak Ahmad pergi dan Ahmad telah
Boy that invite Ahmad go and Ahmad compl
dimarah oleh bapa budak itu.
pass-scold by father boy the.
"The boy who invited Ahmad to go and Ahmad were
scolded by the boy's father".

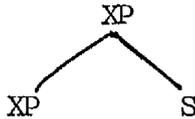
4.4 Conclusion

In this chapter; I have attempted to demonstrate that neither the base-generated hypothesis nor the Head Noun Deletion analysis is adequate to account for free relatives in Malay. Two alternative analyses which are parallel to that proposed for full relatives, namely the Unspecified NP-Deletion analysis and the PRO Head Analysis were then considered. It has been shown that the latter, with a pragmatic account for the interpretation of PRO, is capable of accounting for a wider range of data.

Notes to Chapter IV

1. I will discuss some of the apparent counterexamples in section 4.2.

2. In fact for reasons which will become obvious soon, they propose a more general structure of the form



where XP stands for any syntactic category. Because the presence of complementizers in free relatives are at most marginal in Modern English, S is used instead of \bar{S} .

3. This theory was first proposed by Chomsky (1973) and later developed by Jackendoff (1977). For further discussion see Jackendoff (1977). See also Chapter 1 of this thesis.

4. There is however, a class of NPs which may occur in this structure. These NPs include words that denote professions such as guru (teacher), kerani (clerk) etc. The following sentences are fine.

(1) Yang guru itu sudah kahwin.

"(The one) who is a teacher is married".

(2) Yang kerani itu sudah naik pangkat.

"(The one) who is a clerk has been promoted".

This structure will be dealt further in chapter V.

5. The use of PRO in Kuroda's analysis is quite different from that adopted in this thesis (see section 4.13). PRO in Kuroda's analysis is considered as a syntactic feature which when combined with other syntactic features such as human, masculine, singular etc together with an appropriate determiner will be realized as someone, he, it and the like.

6. Karim calls this type of constructions as Nominal Yang constructions and claims that they should be distinguished from NPs (relative constructions) based on the fact that this type of constructions cannot be relativized. Thus sentence (3) is ungrammatical.

(3) *Yang pergi yang kecil itu adik saya.

That go that small the younger brother/sister I.

"(The one) that went who is small is my younger brother/sister".

I find the corresponding relative construction equally bad.

(4) *Orang yang pergi yang kecil itu adik saya.

There are sentences which are structurally similar to that of (3) which are acceptable. (5) for instance is alright.

(5) Yang kecil yang berbaju merah itu adik saya.

"(The one) who is small who is wearing the red dress is my younger brother/sister".

What contributes to the difference in acceptability between these sentences is not entirely clear to me.

7. Such a deletion rule was first proposed by Wong (1970). Unfortunately I did not have the chance to see this work and therefore I do not know the exact formulation of the rule. Whatever it turns out to be I do not think it will affect our argument.

8. This sentence is ungrammatical only on its relevant reading. It is perfectly acceptable if uttered in a context where there were at least two headmen and the speaker is referring to the one in front of the shop.

9. This assumption is based on the fact that this sentence may be used to express two distinct propositions. A. Cormack and R. Kempson (1979) argue that this is not a sufficient condition for determining whether or not a sentence is ambiguous. According to this analysis third person pronouns are vague or unspecified as to the individual they are referring to. They postulate a single initial representation from which the different interpretations are arrived at by a set of rules which map the former onto the latter. The initial representation for sentence (6) for instance, is as given in (7).

(6) John washed his dog.

(7) $\exists J_1 \exists j \exists D_1 \exists d \exists M_1 \exists m$ (Wjd & Bdm & *m)

where 'B' represents the predicate 'belong' and *-predicate a search instruction necessary to interpret the variable corresponding to the pronoun. (7) reads as 'There is an individual John and an individual dog and some identifiable male individual to whom that dog belongs and John washed that dog'.

A similar procedure may be applied to (69) and (70) in which the null element may be represented by a *-predicate and the search instruction applied to this variable would then identify the individual referred to, either as Ahmad or as some other individual in the context in the case of (69).

10 For arguments for base-generated pronouns see Dougherty (1969) and Lasnik (1976).

11. See Lakoff (1968); Jackendoff (1972); Lasnik (1976) and Reinhart (1978) for further discussions on this.

12. Evans (1980) has shown that a pronoun can be coreferential with its antecedent even if it precedes and commands it as long as it does not pick out its referent from that antecedent. This hypothesis is supported by the difference in acceptability between the following sentences.

(8) Everyone has finally realized that Oscar is incompetent.
Even he has finally realized that Oscar is incompetent.

(9) Everyone eventually realized that someone dear to them is incompetent. For example Mary has realized that Fred is incompetent, Susan has realized that her daughter is

incompetent, and he has realized that Oscar is incompetent.

In (8) he may be coreferential with Oscar since it does not pick out its referent from that occurrence of Oscar but from its first occurrence in the preceding sentence. In (9) he cannot be coreferential with Oscar since there is no occurrence of Oscar upon which he may be referentially dependent.

13. The well-known example of a lazy pronoun is the pay-cheque sentence (10).

(10) The man who gave his pay-cheque to his wife is more sensible than the man who gave it to his mistress.

It is obvious that in (10), the pronoun it is not coreferential with his pay-cheque but simply refers to its lexical content 'his pay cheque' without any reference to an individual item. The required interpretation is obtained by replacing the pronoun it with its linguistic antecedent 'his pay-cheque'. For further discussion see Geach (1962); Partee (1975); Lasnik (1976); Cooper (1978;1979) and A. Cormack and R. Kempson (1979).

14. Within the two-level analysis proposed by Cormack and Kempson (1979), sentence (93) would be represented by (11),

(11) $(\exists x) (\exists y) (Gx \&*y \& x=y)$

where G represents guru saya and the *-predicate some search instruction applying to the previous discourse or context, to

identify who is being talked about.

NON-RESTRICTIVE RELATIVES
AND NP-COMPLEMENT CONSTRUCTIONS

5.0 In this chapter I will discuss rather briefly the two remaining types of constructions which are related, though in rather different ways, to the restrictive relatives discussed in the previous chapters namely non-restrictive and NP-complement constructions.

5.1 Non-restrictive Relatives

5.10 Introduction

It has generally been accepted, at least for English, that there are two types of relative clauses namely restrictive relative clauses and non-restrictive clauses (hereafter RRs and NRs). The distinction between these two types of relative clauses is based on phonological, semantic and syntactic factors. The contrast between these two types is often illustrated by pairs such as (1).

- (1)a. The soldiers who were brave pushed on.
- b. The soldiers, who were brave, pushed on.

(1a) differs from (1b) in two ways. In (1b), the relative clause is marked phonologically by a comma intonation after the head NP. In writing the difference in intonation is represented by commas. Such intonation is absent in (1a). (1a) also differs from (1b) in that the relative clause in (1a) defines a sub-set of soldiers namely

the brave ones and says that this sub-set pushed on. (1b) simply says that the soldiers pushed on and adds the information that these soldiers were in general brave. In other words the relative clause in (1a) but not (1b) is essential in order to pick out the precise referent(s) of the NP.

The syntactic differences between RRs and NRs may be illustrated by examples (2 - 6).

- (2)a. *Bill who is the smartest of us all could not solve the problem.
b. Bill, who is the smartest of us all, could not solve the problem.
- (3)a. Every man who came to see him needed some kind of help.
b. *Every man, who came to see him, needed some kind of help.
- (4)a. The boy I met at the party left early.
b. *The boy, I met at the party, left early.
- (5)a. The man that dated Mary works at the library.
b. *The man, that dated Mary, works at the library.
- (6)a. *John decided to leave early which I think is a good idea.
b. John decided to leave early, which I think is a good idea.

In all the above examples, the (a) sentences contain RRs whereas the (b) sentences contain NRs. (2a) is ungrammatical because it has a proper noun Bill as the head of the clause which is not permissible for restrictive relatives. On the other hand, NPs with quantifiers such as every and any cannot be modified by NRs, hence the ungrammaticality of (3b). Further restrictions imposed on NRs are, as illustrated by (4b) and (5b), that the wh-phrase cannot delete and that the clause cannot be introduced by the complementizer that. Finally, as illustrated by (6b), only NRs can modify a sentence.

5.11 The Conjoined Construction Analysis

The difference in intonation, choice of complementizer and the different syntactic distribution of NRs mentioned above need to be accounted for in any adequate theory of grammar and one way of doing this is to have RRs and NRs derived from different sources. The standard theory, which was first proposed by Ross (1967), derives NRs from coordinate sentences with the second conjunct inserted into the first.¹ According to this analysis, (1b) and (2b) would be given (7a) and (7b) as their respective sources with (8a) and (8b) as their corresponding intermediate structures after the insertion of the second conjunct has taken place.

- (7)a. The soldiers pushed on, and they were brave.
- b. Bill could not solve the problem, and he is the smartest of us all.

- (8)a. The soldiers, and they were brave pushed on.

- b. Bill, and he is the smartest of us all, could not solve the problem.

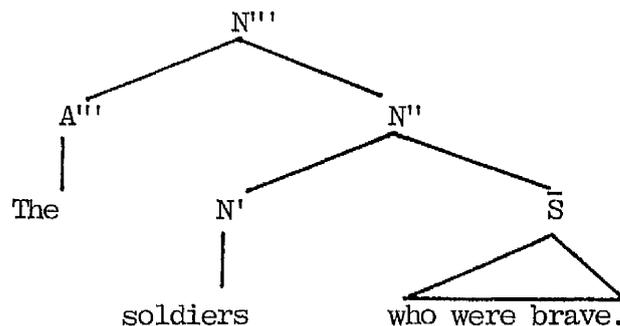
One of the motivations for deriving NRs such as (1b) and (2b) from conjoined constructions is the close similarity between NRs and constructions such as (8). Furthermore such an analysis can automatically account for sentences of the type (3b) since their corresponding conjoined constructions are ungrammatical, as shown in (9).

- (9) *Every man needed some kind of help, and he came to see him.

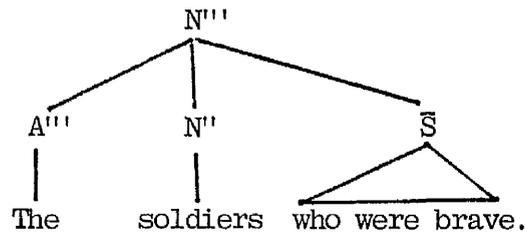
5.12 Base-generated Analysis

Within the base-generated hypothesis as developed by Jackendoff (1977), the differences between RRs and NRs are accounted for by having them generated as complements of NPs at different levels. NRs, according to this analysis, are generated as the complement of N''' whereas RRs are the complements of N''. The relative clauses of (1a) and (1b) would therefore be represented by (10a) and (10b).

(10)a.



b.



Jackendoff also has who generated in the base and then related to the NP head by interpretive rules given in (11).

(11)a. Restrictive Wh-Interpretation

$\left[\begin{array}{c} X \\ +wh \end{array} \right]'''$ is bound to Art''' , in the configuration

Art''' [... [[... X''' ...] S] ...] .

N'' \bar{S} COMP

b. Appositive Wh-Interpretation

$\left[\begin{array}{c} X \\ +wh \end{array} \right]'''$ is anaphoric to Y''' in the configuration

[... Y''' [[... X''' ...] S]] .

Y''' \bar{S} COMP

It is further claimed that the comma intonation which marks off NRs occurs across category of X''' since sentence final adverb, parentheticals and the like all have similar intonation. This explains why ARs but not RRs can occur with a sentential head (V''' in Jackendoff's framework) as in (6).

5.13 Main Clause Analysis

The two analyses we have just outlined have one thing in common, the assumption that at least in surface structure an AR forms a constituent with its head.

A rather different analysis is advanced by Emonds (1979), and independently by Pullum (1979), who claim that an NR is never embedded at any point of derivation, not even in its surface structure. According to Emond's analysis, which he calls Main Clause Hypothesis, MCH for short, NRs are derived from *independently* motivated rules of parenthetical formation (12) and \bar{S} -attachment (13).

(12) Parenthetical Formation

$$X - C^{\max} \left\{ \begin{array}{c} \bar{S} \\ PP \end{array} \right\} - Y$$

1 2 3 4

1 3+2 \emptyset 4

Where 1-2 is a root \bar{S} and C^{\max} is a phrasal constituent that is a maximal projection of a lexical category in the bar (prime) notation ².

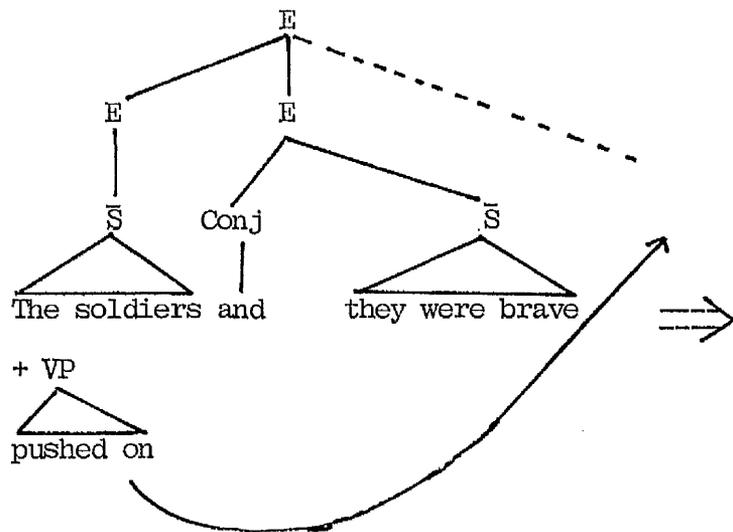
(13) \bar{S} - Attachment Rule

$$C_i - \text{CONJ} - \bar{S}$$

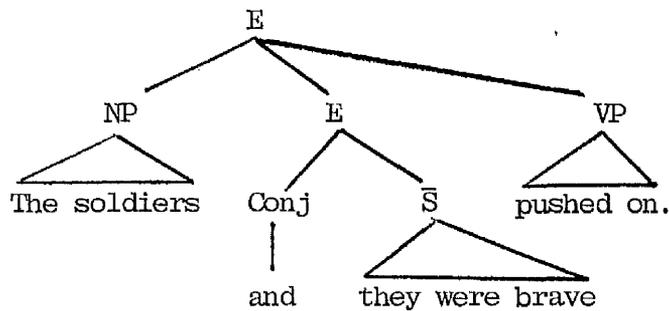
1 2 3 \longrightarrow 1 + 3 \emptyset

Taking (1b) again as an example, the parenthetical formation rule would postpone the VP of the first conjunct as shown in (14).

(14)a

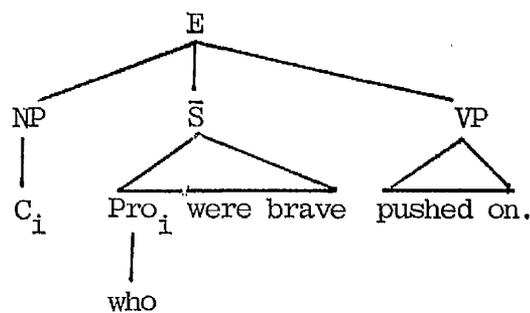


b.



Application of the \bar{S} -Attachment rule on (14b), shown in (14c), would finally give the surface structure (1b).

(14)c.



A prohibition against moving materials into \bar{S} (Chomsky 1965) and the restriction on the structure preserving framework involving two phrasal constituents guarantee that the attachment affected

is the higher \bar{S} (E).

5.14 Non-Restrictive Relatives in Malay

In the preceding section I discussed the differences between RRs and NRs and briefly outlined the various analyses that have been proposed for English in order to account for these differences. Another difference between these two types of relatives clauses that has not been mentioned is that RRs may optionally be extraposed from their heads whereas NRs must always stand in apposition to their heads. The term non-restrictive is therefore normally used interchangeably with appositive relative.

As I will be arguing that in Malay, the semantic and the syntactic characteristics of relative clauses do not divide in the way they do for English³, I will use the term non-restrictives only to refer to relative clauses with a semantic function similar to that of non-restrictive relatives in English. The term appositive relatives will only be used to mean relative clauses that stand in apposition to their heads. I will try to demonstrate that NRs in Malay fail to show any phonological and syntactic differences from RRs and therefore there does not seem to be any motivation to assume a different syntactic source for them. I will also demonstrate that there are no appositive relatives in Malay.

5.141 Phonological Characteristics

We saw earlier that one of the defining characteristics which distinguish NRs from RRs is the comma intonation. However, as

demonstrated by (15), comma intonation is absent in Malay ARs.

- (15)a. Saya yang bodoh pun dapat membuat kira-kira itu.
I that stupid also can do sum the.
"Even I, who is stupid, can do the sum".
- b. Matanya yang tajam itu merenung Ahmad.
Eye-his that sharp the stare Ahmad.
"His eyes, which were sharp, were fixed on Ahmad".
- c. Farid melihat muka ayahnya yang menggulung
Farid see face father-his that roll.
rokok daun itu.
cigarette the.
"Farid looked at his father, who was rolling his cigarette".

The presence of comma intonation would make all of these examples ungrammatical though it is fairly obvious that the relative clauses in these sentences must be understood as NRs since the head NPs saya (I), matanya (his eyes) and ayahnya (his father), being unique in reference, do not allow restriction.

5.142 Choice of Complementizers

Unlike in English, where the choice of complementizers is determined by the type of relative clause following it (that may only occur with RRs), the complementizer yang is used invariably for all relative clauses in Malay. Here again we fail to find any difference between RRs and NRs.

5.143 The Syntax of Malay NRs

Another defining characteristic which distinguishes RRs from NRs is that only the latter may modify proper noun heads. This together with the semantic aspect would allow the relative clauses in (16) to be interpreted only as NRs⁴.

- (16)a. Ali memand~~ang~~ Sungai Pahang yang bercabang
Ali look River Pahang that branch
dua itu.
two the.
"Ali looked at the Pahang River, which branches
into two".
- b. Rohana yang sudah sampai ke pintu itu tiba-tiba
Rohana that compl. reach at door the suddenly
berpatah balik.
turn back.
"Rohana, who was already at the door, suddenly
turned back".

Given the MCH, the two possible sources for (16a) for instance, are the structures corresponding to (17a) and (17b).

- (17)a. *Ali memand~~ang~~ Sungai Pahang, dan Sungai
Pahang bercabang dua itu.
"Ali looked at Pahang River, and (the) Pahang
River branches into two".

- b. Ali memandang Sungai Pahang itu, dan Sungai
Pahang itu bercabang dua.

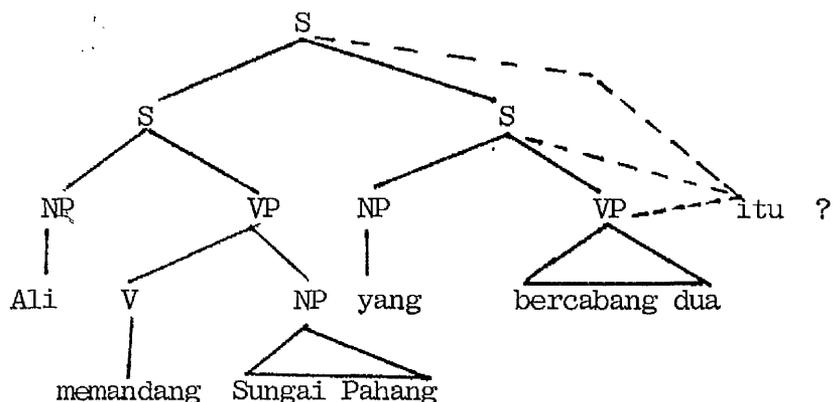
"Ali looked at (the) Pahang River, and (the)
Pahang River branches into two".

As we can see (17a) is ungrammatical and is therefore not a plausible correct source for (16a). Suppose we assume that (17b) is grammatical, which is highly questionable, and derive (16a) from it. After the application of a rule replacing the second occurrence of Sungai Pahang itu with yang (or alternatively yang may be generated in the base and interpreted as coreferential with the NP object of the first conjunct) followed by the \bar{S} -Attachment rule deleting the conjunction dan, we will get (18).

- (18) *Ali memandang Sungai Pahang itu yang bercabang dua.
"Ali looked at the Pahang River, which branches into
two".

To get to the surface structure (16a), we now need an obligatory rule to postpone the determiner itu to the end of the sentence. But the problem is where can itu be attached to. As we can see from (19), all the possible attachments namely to the VP of the second conjunct; to the S of the second conjunct and the top-most S, are all not permissible PS rules for determiner.

(19)



The fact provided by the determiner itu suggests that if there is a separate rule for NRs, it cannot be the parenthetical formation rule since the presence of the determiner itu shows that the relative clause, at least on its surface structure, and its head form an NP constituent.

The conjoined construction analysis (Ross 1967) and Jackendoff's base-generated hypothesis are not incompatible with this since under both the analyses, the head noun and the relative clause are dominated by an NP node. However, as we will see later, there is no motivation whatever to require a separate rule since the rule for RRs will also account for the facts of Malay NRs. I therefore propose that RRs and NRs are derived in the same way from an identical underlying source.

5.144 Relative Clauses with Mixed Interpretation

Relative Clauses with mixed interpretations such as those found in (20) provide good support for the existence of NRs as distinct from RRs and the need for deriving them from a different source.

- (20)a. Rabbits, which are a pest, ate my plants
yesterday.
- b. Children, who are always messy, spoilt my
kitchen wall.

In (20), an interpretation where the head NP and the relative pronoun do not have the same referent(s) is possible. In (20a), for instance, the subject of the relative clause may have a generic reading referring to the entire class of rabbits whereas the subject of the main clause may have a non-generic reading namely those rabbits which ate my plants yesterday. The same is true with (20b).

Such constructions are again lacking in Malay. The nearest equivalents for sentences in (20) with the mixed interpretations are something like (21), with two independent sentences where the NPs of the first sentence has a generic reading and the pronoun in the second sentence has a non-generic reading.

- (21)a. Arnab ini jahat sungguh. Habis pokok saya
Rabbit this bad very. Finish plant I
dimakannya.
pass-eat-them.
"Rabbits are a pest. My plants are eaten by
them".
- b. Budak-budak memang pengotor. Habis dinding
Child real messy Finish wall
saya dikotorkan oleh mereka.
I pass-dirty by them.

"Children are always messy. My kitchen wall was spoilt by them".

In sentences like (22), though the NPs anggota pembangkang (members of the opposition) and wanita (women) may either have generic or non-generic readings and so do the subjects of the relative clauses, mixed interpretations are not allowed. If the subject of the relative clause is interpreted as generic, the subject of the main sentence has to be interpreted as generic as well, thus having a non-restrictive reading. Even though it may be the case that in (22a), for instance, the failure of the project does not make all the members of the opposition party happy, the sentence is only grammatical on the interpretation that anggota-anggota pembangkang does not refer to any specific members of the opposition party but to them as a group. The same can be said about (22b).

(22)a. Kegagalan projek itu mengembirakan anggota-

Failure project the please member

anggota pembangkang yang sentiasa menunggu

opposition that always wait

kesalahan pemerintah.

fault government.

"The failure of the project pleased members of the opposition party who are always waiting for government's fault".

b. Wanita yang dahulunya tunduk kepada kehendak

Woman that previously bow to needs

suami mereka sekarang mula bangun menuntut
husband they now start wake demand
hak-hak mereka.

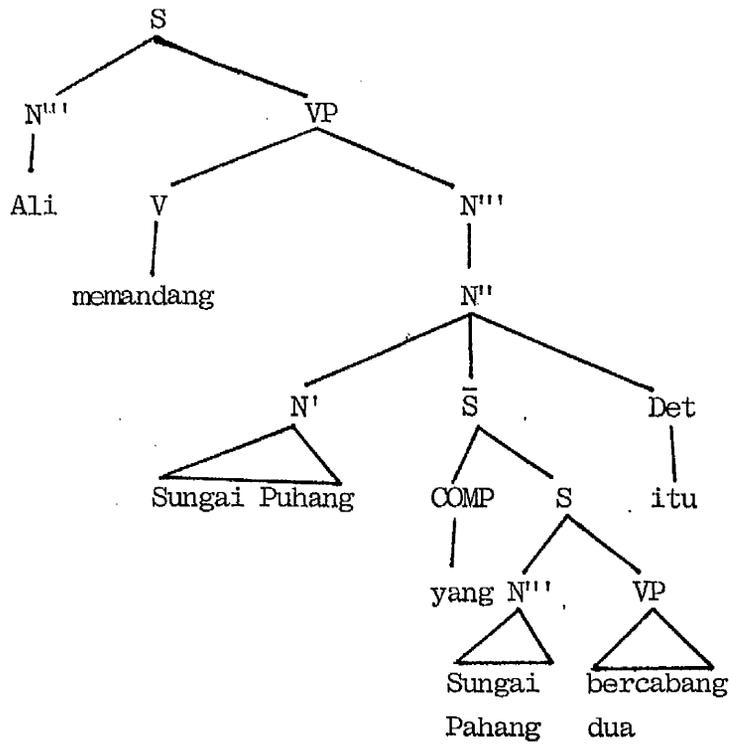
right . they.

"Women who have always submitted to their
husband's needs began to demand their
rights".

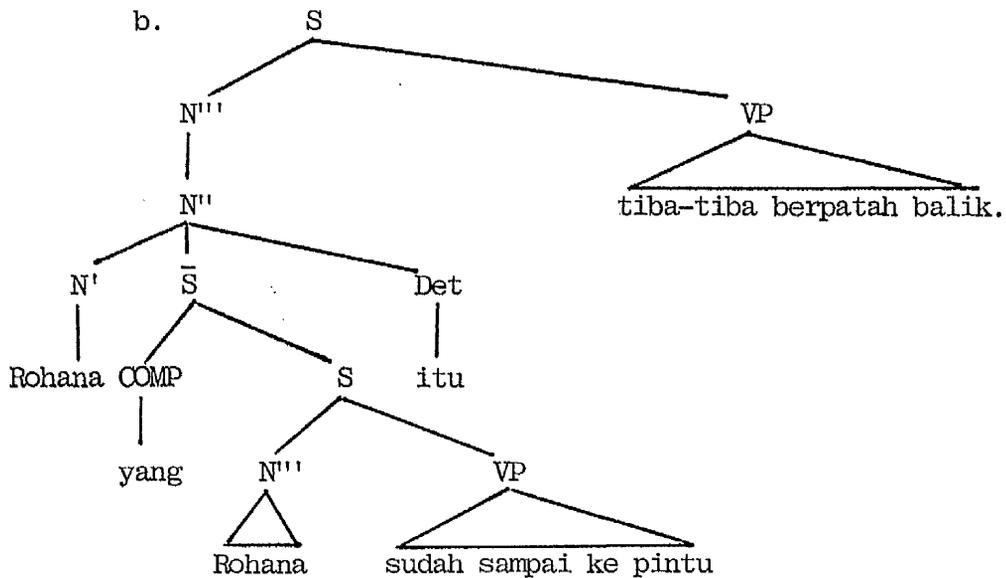
5.15 Embedded Sentence Analysis

In the preceding section, we looked at what have been generally accepted as the characteristics which distinguish RRs and NRs and we saw that these characteristics fail to distinguish the two types of Malay relatives. Due to this, we fail to see any motivation at all to posit two different sources for Malay relative clauses and proposed that NRs, like RRs, are derived from a source in which the relative clause is embedded in an NP of the matrix sentence. Under the analysis I am proposing, the derivation of (16a) and (16b) may therefore be represented as in (23).

(23)a.



b.



Proper nouns in Malay may take a determiner itu (that) or ini (this) (see footnote 4). This means that they are simply treated as common nouns and therefore being dominated by a Nom node would not raise any problem.

5.151 Arguments for Embedded Sentence Analysis

Deriving NRs in exactly the same way as that of RRs automatically excludes relative clauses with sentential heads, which is a desirable consequence, since Malay does not have such constructions. The Malay equivalents of English sentences like those in (24), as illustrated by (25) are either ungrammatical or have a different meaning.

(24)a. He decided to stop work, which I think is
a good idea.

b. He married Mary, which is strange.

(25)a. *Dia memutuskan untuk berhenti kerja (,) yang
saya fikir keputusan yang baik.

b. Dia kahwin dengan Mary (*,) yang ganjil.

(25b) is only grammatical without the comma intonation, in which case the relative clause can only be understood to modify the noun Mary, and not the whole sentence dia kahwin dengan Mary.

Another argument which favours the embedded sentence analysis concerns constructions with quantified heads. One of the strongest motivations for deriving NRs from a different source from that of RRs, I think, is that within the NP-S analysis a separate analysis is needed to account for the inability of NRs to occur with quantified NP heads. This fact can automatically be accounted for within our analysis since in our analysis the rule of relativization does not delete full NPs but an identical Nom. Let us take (26)

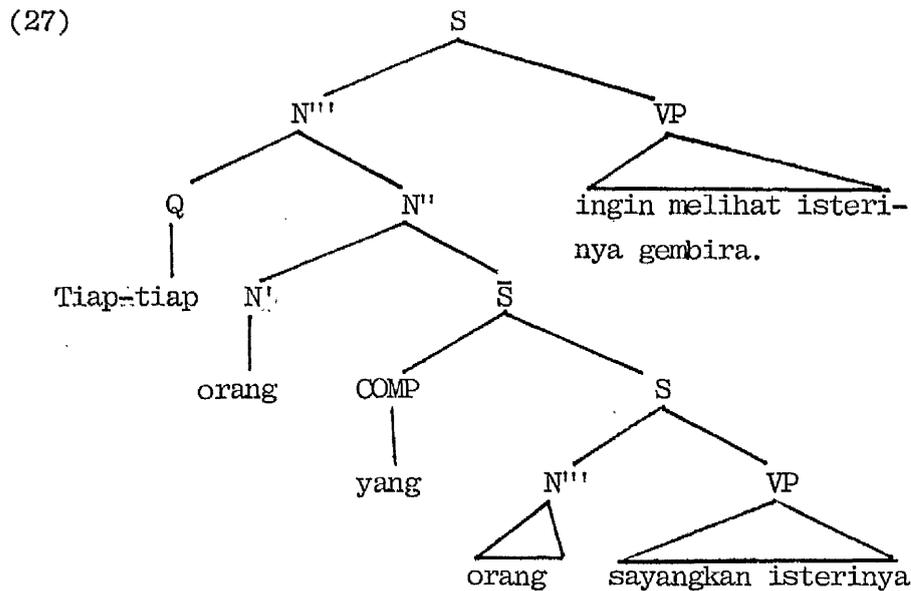
to illustrate this point.

(26) Tiap-tiap orang yang sayangkan isterinya ingin
Every person that love wife-his like
melihat isterinya gembira.

see wife-his happy.

"Every man who loves his wife would like to see
her happy".

(26), under the Nom-S analysis, would be derived from (27).



Since it is the Nom orang which deletes when relativization rule applies, there is no way that we would get the non-restrictive interpretation. In fact such a restriction applies not only to noun phrases containing tiap-tiap but also to other quantified NPs such as those with semua (all) and kabanyakan (most), as illustrated by (28).

(28)a. Semua pelajar perempuan yang rajin lulus
All student girl that industrious pass
peperiksaan tersebut.
examination pass-mention.
"All the girl students who were industrious
passed that examination".

b. Kebanyakan buku cerita yang ditulis ketika
Most book story that pass-write when
ia berada di dalam penjara mengesahkan
he is at in jail describe.
pengalaman-pengalaman pahitnya.
experience bitter-his.
"Most of the story books which he wrote when
he was in jail were about his bitter experience".

Compatible with our analysis, (28) can only be understood as having restrictive interpretations. In order for the relative clause to have a non-restrictive reading, the quantifier has to be in the relative clause itself, as shown in (29).

(29)a. Pelajar-pelajar perempuan yang semuanya
Student girl that all-they
rajin-rajin lulus peperiksaan tersebut.
industrious pass examination mention.
"The girl students, all of whom were industrious
passed the examination".

b. Buku cerita yang kebanyakannya ditulis ketika
Book story that most-they pass-write when

ia di dalam penjara mengesahkan pengalaman-
he at in jail describe experience
pengalaman pahitnya.

bitter-his.

"The story books, most of which were written
when he was in jail, were about his bitter
experiences".

If the Embedded Sentence Analysis is correct then we would expect
that sentences of the type (30) would have both restrictive and
non-restrictive interpretations, and the prediction is right.

- (30)a. Anak-anak perempuannya yang sudah kahwin
Children female-his that compl marry
tinggal di bandar mengikut suami mereka.
live at town follow husband they.
"His daughters who were married live in town
with their husbands".
- b. Aminah memerhatikan adik-adiknya yang sedang
Aminah look younger brother and sister that
bermain di halaman.
play at compound.
"Aminah looked at her younger brothers and sisters
who were playing in front of her house".
- c. Dia patut menjadi tauladan kepada orang-orang
He should become example to people
kampung yang kolot itu.
village that backward.

"He should set good examples to the people of the village who were backward".

- d. Rakyat Melayu yang dikatakan berpuashati
Citizen Malay that pass-say content
dengan hidup di bawah naungan penjajah
with live at under shelter colonial
mula bergerak menentang penjajah.
start move rebel colonial.

"The Malay people who were said to be contented to stay under the colonial rule started to rebel".

The sentences in (30) can either be interpreted with the relative clause having restrictive or non-restrictive sense. Given the right context, (30a) and (30b) may be understood as non-restrictive though the preferred interpretation is that of a restrictive. (30a), for instance, is perfectly acceptable uttered in a situation where all of the daughters of the man in question are married. Shared knowledge between the speaker and the hearer may also help the hearer to pick out which of the two interpretations is intended. Since the rural people (in Malaysia) are generally considered as kolot (backwards), (30c) will normally be understood as non-restricting. Likewise, as it was assumed that the Malay people, on the whole, were contented to be under the British rule, (30d) will also normally be taken as non-restricting.

5.16 Appositive Relatives

5.161 Apparent Counterexamples

The following sentences contain relative clauses which appear to be non-restrictive which are not embedded under, but stand in apposition to their head NPs and thus provide counterexamples to the claim made in the preceding sections.

(31)a. Budak itu, yang memakai kemeja putih itu,

Child the that wear shirt white the

ingin berjumpa dengan awak.

like see with you.

"The boy, who is wearing the white shirt,

would like to see you".

b. Ahmad, yang telah berkhidmat dengannya selama

Ahmad that compl serve with-him as long

15 tahun itu, sekarang sudah tidak ada lagi.

15 year the now compl not available more.

"Ahmad, who had served him for 15 years, is now

gone".

c. Roslan, yang berbadan tegap itu, makan dengan

Roslan that poss-body strong the eat with

begitu berselera.

so poss-appetite.

"Roslan, who was strong, was full of appetite".

d. Kamaluddin Muhammad, yang lebih terkenal

Kammaluddin Muhammad that more known

dengan nama samarannya Kris Mas, ialah seorang

with name disguise-his Kris Mas is coef

penulis yang terulung dalam kesusasteraan

write that earliest in literature

Melayu baru.

Malay new.

"Kamaluddin Muhammad, who is better known by his pen-name Kris Mas, is one of the first writers in modern Malay literature".

The sentences in (31) have most of the characteristics of non-restrictive relatives we looked at, at the beginning of the chapter. Firstly, the relative clauses are not essential in identifying the precise referent(s) of the head NPs, whose identification may be made independently. Secondly, the relative clauses are set off from the main clauses by comma intonation. In (31b) - (31d), the head NPs are proper nouns.

5.162 NP Status of the Relative Clause

In this section, I will attempt to show that what look like appositive relative clauses in sentences like (31) are not appositive relatives at all, but free relatives standing in apposition to an NP of the matrix clause. In other words what appears to be a relative clause is in fact a relative clause plus its head, which together form an NP. That this is so can be shown by examples like (32), where the heads of the NPs can appear with the relative clauses.

(32)a. Budak itu, budak yang memakai kemeja putih itu,
ingin berjumpa dengan awak.

"The boy, the boy who is wearing the white

shirt, would like to see you"

- b. Ahmad, lelaki yang berkhidmat dengannya selama 15 tahun itu, sekarang sudah tidak ada lagi.
"Ahmad, the man who had served him for 15 years, is now gone".
- c. Roslan, pemuda yang berbadan tegap itu, makan dengan begitu berselera.
"Roslan, the young man who was well built, was full of appetite".
- d. Kamaluddin Muhammad, penulis yang lebih terkenal dengan nama samarannya Kris Mas itu, ialah seorang penulis yang terulung dalam kesusasteraan Melayu baru.
"Kamaluddin Muhammad, the writer who is better known as his pen-name Kris Mas, is one of the earliest writers in modern Malay literature".

Just as in the case of appositive noun phrases, there are of course restrictions on the type of NPs that can stand in apposition in all these examples. One of them is that the NPs must be identical in reference. ⁵ The appositives in (31) and (32) are comparable with and therefore must have the same status as ordinary NPs in sentences like (33).

- (33)a. Budak itu, budak gemuk itu, ingin berjumpa
Boy the boy fat the like see
dengan awak.
with you.

"The boy, the fat one, would like to see you".

- b. Ahmad, tukang kebunnya, sekarang sudah tidak
Ahmad, gardener-his now compl not
ada lagi.
available more.

"Ahmad, his gardener, is now gone".

- c. Roslan, tetamu kami, makan dengan begitu ber-
Roslan guest we eat with so poss-
selera.

"Roslan, our guest, was full of appetite".

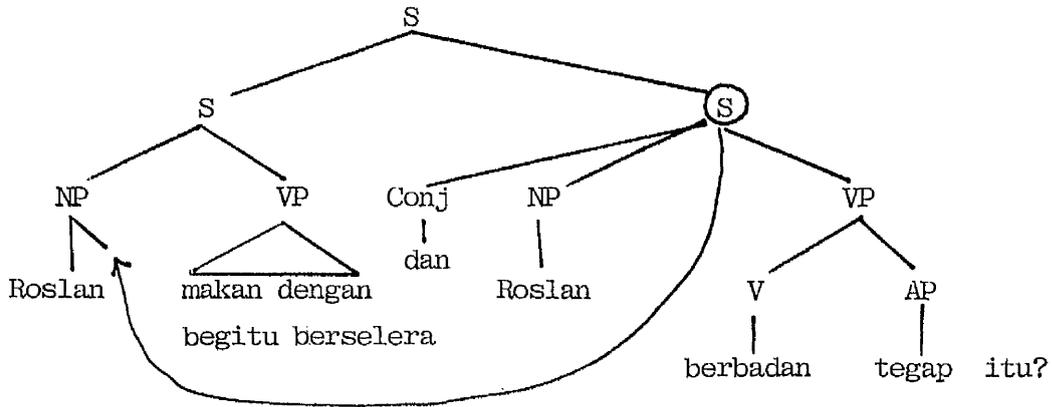
- d. Kamaluddin Muhammad, salah seorang pengasas
Angkatan Sasterawan 50, ialah salah seorang
penulis terulung dalam kesusasteraan Melayu moden.

"Kamaluddin Muhammad, one of the founders of
Angkatan Sasterawan 50, is one of the first
writers in modern Malay literature".

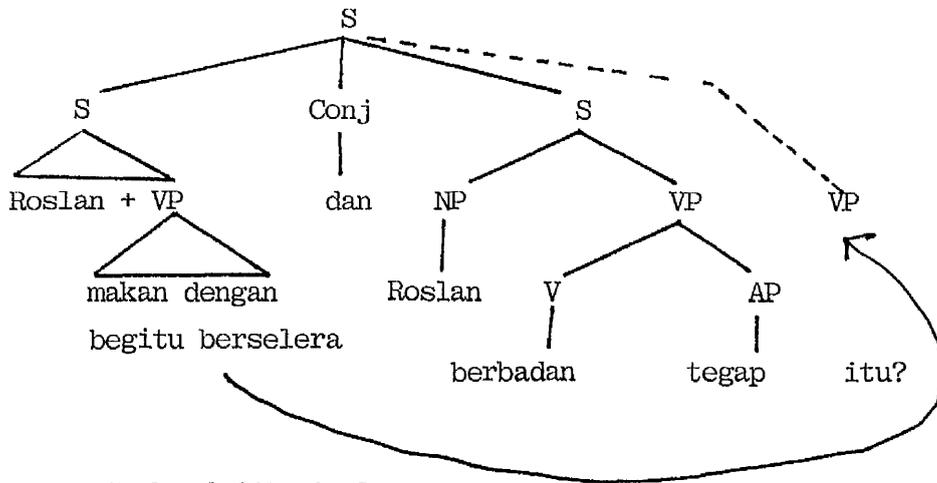
The NP status of the 'relative clause' in (31) is further supported by the possibility of the determiner itu to occur at the end of the relative clause.

If the constituents set off by comma in (31) are indeed relative clauses, then it would be impossible for the determiner itu to appear at the end of it in cases where there is no potential NP node to which it may be attached. (31c) is such an example. Given that yang berbadan tegap itu is an appositive relative, it is impossible to have the determiner itu since, as shown in (34), there is no NP node which can dominate it.

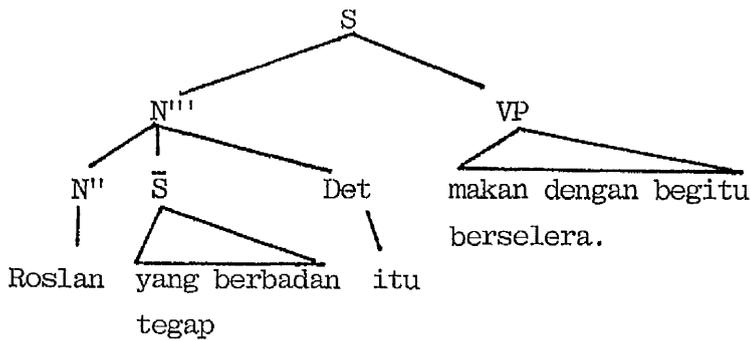
(34)a. Ross's Analysis



b. Emond's Analysis

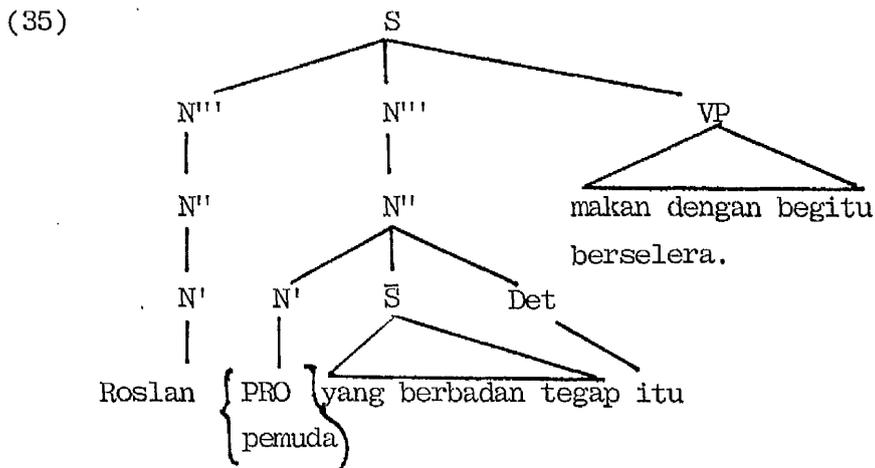


c. Jackendoff's Analysis



Though in Jackendoff's analysis (34c), there is a Det node, itu in the 'relative clause' in (31c) cannot be dominated by this Det node, since as indicated by the comma, the string berbadan tegap itu must be a constituent and therefore has to be dominated by the \bar{S} .

If, on the other hand, what looks like an appositive relative in all the examples in (31) is an NP consisting of a head and a relative clause, the occurrence of itu can be accounted for. (31c) has an underlying structure indentical to that of (32c), being different from it only in that the head NP is phonologically null, as shown in (35).



The fact that an NP may actually appear in front of the relative clause in (31) together with the fact provided by the determiner itu indicate that they are not appositive relatives but appositive NPs. I therefore conclude that there are appositive relatives in Malay.

5.163 The Source for Appositive NPs

The source for appositive NPs merits some discussion but since it is not central to the general proposal of this thesis, it will not be dealt with in great detail. In the preceding section I argued that relative clauses cannot stand in apposition to NPs. This means that appositive NPs could not possibly be derived from relatives via relative clause reduction, the analogue of wh-iz deletion rule in English. Another argument against deriving appositive NPs from copulative relative clauses in examples such as (33) is the fact that their corresponding copulative relatives are ill-formed.

- (36)a. *Budak (,) yang budak gemuk itu(,) ingin berjumpa dengan awak.
"The boy, who is a fat boy, would like to see you".
- b. *Ahmad(,) yang tukang kebunnya(,) sekarang sudah tidak ada lagi.
"Ahmad, who is his gardener, is now gone".
- c. *Roslan(,) yang tetamu kami(,) makan dengan begitu berselera.
"Roslan, who is our guest, is full of appetite".
- d. *Kamaluddin Muhammad(,) yang salah seorang pengasas Angkatan Sasterawan 50.(,) ialah seorang penulis terulung dalam kesusasteraan Melayu baru.
"Kamaluddin Muhammad, who was one of the founders of the Angkatan Sasterawan 50, is

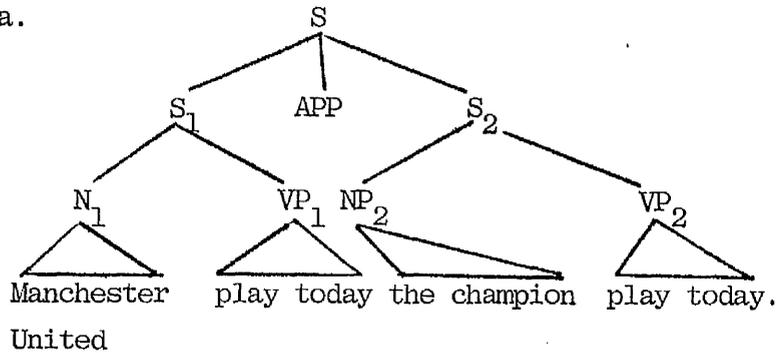
one of the earliest writers in modern Malay literature".

I propose NP appositive be derived from conjoined constructions, an analysis quite similar to that of Burton-Roberts (1975).

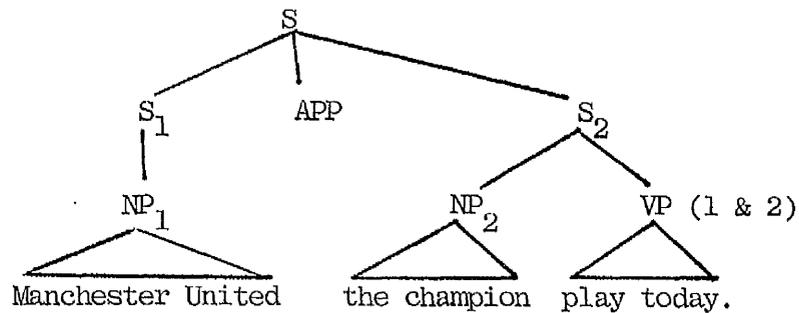
Burton-Roberts derives NP appositives such as (36) as follows:

(36) Manchester United, the champions, play today. ⁶

(37)a.

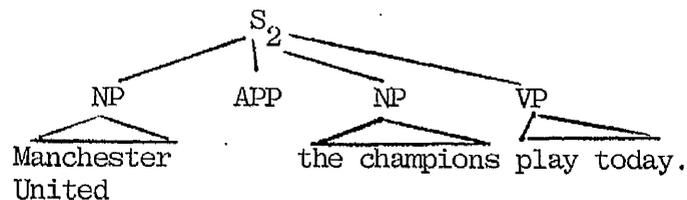


b.



NP₁ and APP are then shifted under S₂, which after pruning gives us (37c). ⁷

(37)c.

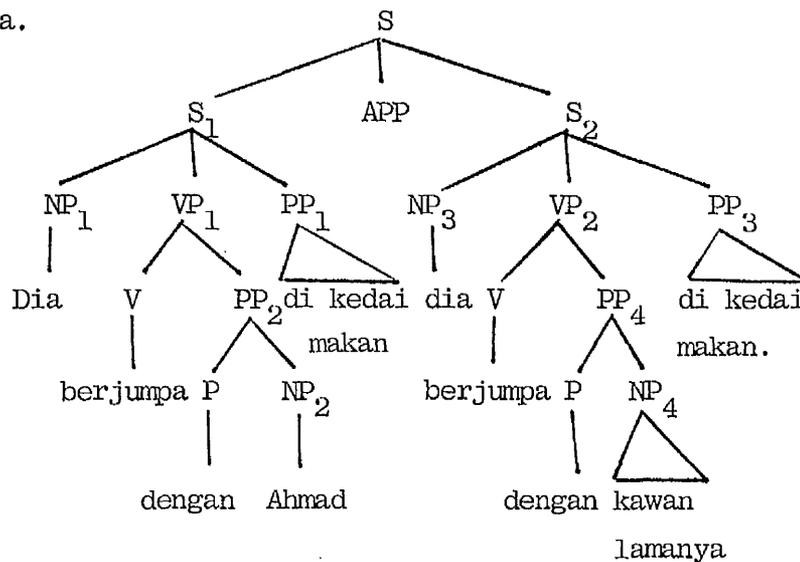


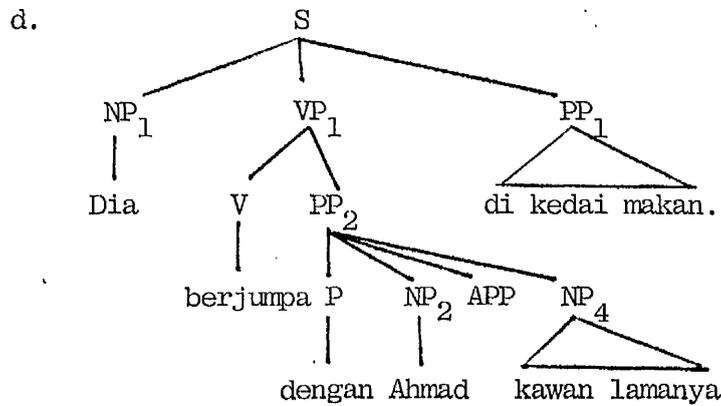
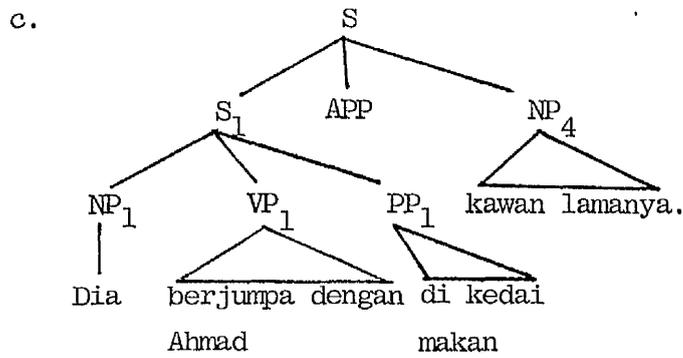
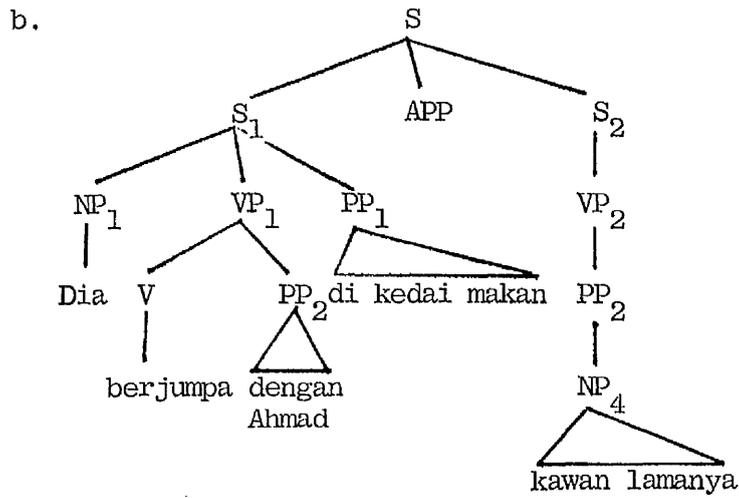
The process involves two separate rules, one a deletion rule and the other, a lowering rule. Instead of deleting VP₁ or superimposing it on VP₂ in (37), I propose that VP₂ gets deleted and NP₂ gets lowered to S₁. In other words the deletion rule which deletes all identical constituents in the second conjunct and the lowering rule is a rule analogous to a Deletion Reduction convention which attaches a constituent exhaustively dominated by an S in the second conjunct to its corresponding constituent in the first conjunct. By corresponding constituent is meant a constituent having the same syntactic function (Hankamer 1979). Such a modification is necessary to provide a unified rule of appositive formation. Consider the derivation of (38) given in (39).

(38) Dia berjumpa dengan Ahmad, kawan lamanya, di kedai makan.

"He met Ahmad, his old friend, in a restaurant".

(39)a.





Since kawan lamanya functions as the object of the preposition dengan in S₂, the requirement that the dangling constituent in the second conjunct be attached to its corresponding constituent in the first conjunct guarantees that it is attached to PP₂

and not to S_1 in apposition to NP_1 , dia.

According to this analysis, the rule deriving appositives is very similar to the rule of conjunction reduction (I leave it open as to whether these two rules can be collapsed into a generalized conjoined-S reduction rule), the only differences being (i) in the former we have a conjunction (and or or) whereas in the latter we have an appositive marker and (ii) in conjunction reduction, the conjunction and the unlike constituent exhaustively dominated by S of the second conjunct are chomsky-adjoined to its corresponding constituent of the first conjunct forming a superordinate node of the same category; in apposition reduction the appositive marker and the unlike constituent are adjoined to its corresponding constituent.

The conjoined sentence analysis has an advantage over the base-generated hypothesis in that this rule can be extended to categories other than NPs. ⁸ Examples of appositives of other categories in Malay are given in (40).

- (40)a. Dia berdoa, bermohon kepada Tuhan, agar
He ask(from God) ask to God so that
anaknya selamat.
child-his save.
"He prayed, asked God, for his child's safety".
(Appositive VPs)

- b. Saya letak buku itu di sini, di atas meja ini,
I put book the at here at on table this

tadi.

just now.

"I put the book here, on this table, just now".

(Appositive PPs)

c. Sekarang namanya sudah masyhur, terkenal, di

Now name-his compl famous well-known at

seluruh tanah air.

all land water.

"Now he is famous, well known, all over the

country".

(Appositive Adjectives)

d. Dia tidak lagi dipedulikan oleh masyarakat,

He not more pass-bother by society

dia sekarang tersisih dari masyarakat.

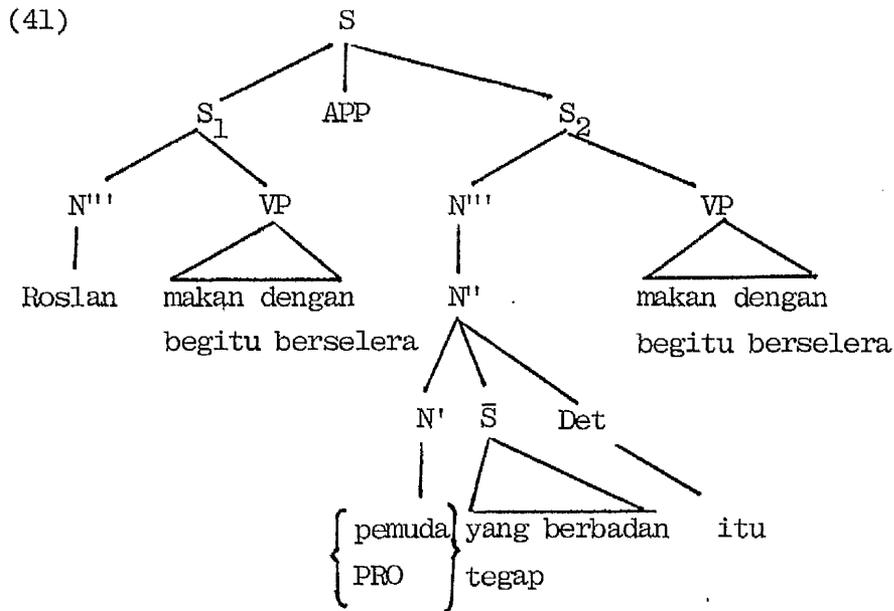
he now put aside from society.

"He is no longer cared by society, he is now

ignored by society".

(Appositive Sentences)

If the conjoined sentence analysis is correct, then (31c) and (32c) would be given an identical underlying structure, as in (41).



I argued earlier that what appears to be an appositive relative clause is actually an appositive NP containing a null head and a relative clause. In the preceding section I proposed that NPs be derived from conjoined sentences by conjunction deletion and deletion reduction rule. This analysis reflects the properties of such NPs noted earlier (pp 316-317) and provides an explanation why they could be mistaken for appositive relatives.

5.17 Conclusion

In this section I have attempted to show that there is no syntactic or phonological differences between NRs and RRs in Malay. I also argued that there are no appositive relatives in the sense that there are no relative clauses standing in apposition to NP or a sentence. Non-restrictive relatives in Malay are different from restrictive relatives only in that they are not essential in identifying the precise referent(s) of the head NPs and this can

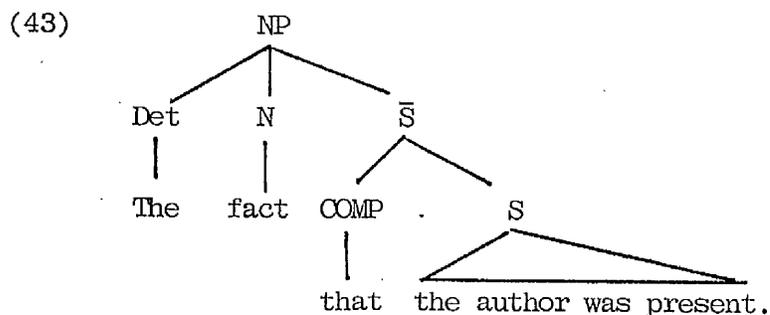
only be accounted for based on non-syntactic considerations such as context and knowledge of the world. Finally, I argued that what look like appositive relatives in sentences like (31) are actually NPs with phonologically null heads. I then proposed the rule of NP apposition which may provide an explanation why NPs consisting of null heads and relative clauses have the properties which are normally attributed to appositive relatives.

5.2 Noun Phrase Complements

5.20 The Standard Analysis

Noun Phrase Complements such as (42) are generally assumed to have a configuration (43), where the noun and the determiner are sisters, directly dominated by the NP (Jacobs and Rosenbaum (1968); Akmajian and Heny (1975)).

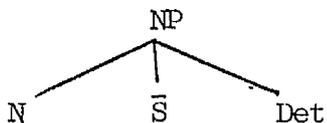
- (42) The fact that the author was present pleased the publishers.



Under this assumption Malay NP-complements such as those found in (44) would be given a structure such as (45).

- (44)a. Berita yang lamaran Ali diterima itu tidak benar.
News that proposition the pass-accept not true.
"The rumour that Ali's proposition was accepted
was not true".
- b. Anggapan yang Bahasa Malaysia tidak mampu
Assumption that language Malay not capable
befungsi sebagai bahasa ilmiah menimbulkan
function as language scientific raise
beberapa masalah.
some problem.
"The assumption that Bahasa Malaysia cannot func-
tion as a scientific language raised a number
of problems".
- c. Setengah-setengah petani masih lagi berpegang
Half farmer still more hold
teguh pada kepercayaan bahawa padi mempunyai
strong at belief that rice have
semangat.
spirit.
"Some farmers still hold the belief that
rice has spirit".

(45)

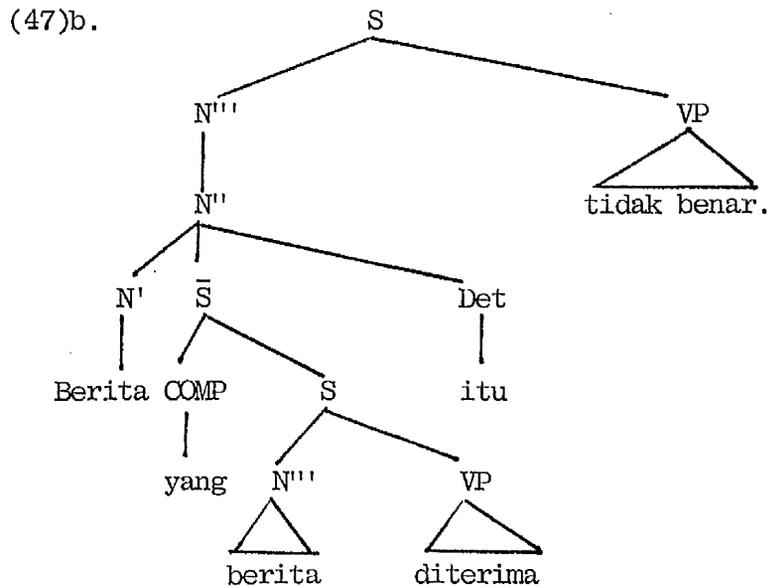
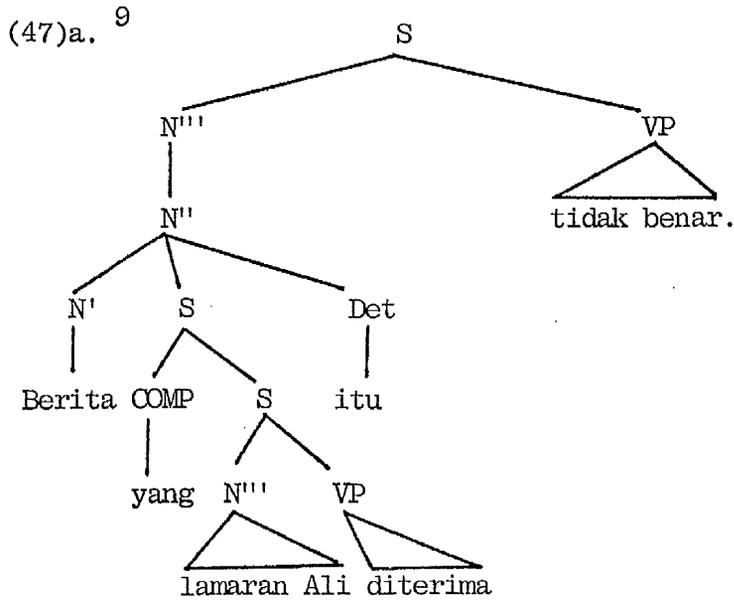


If this configuration is correct, given the Nom-S analysis of relative clause formation proposed in Chapter 11, where a Nom in the embedded S is deleted under identity with an antecedent Nom

in the matrix sentence, we are now faced with a problem. Our configuration for relative clauses is not distinct from the configuration given in (45). This means that sentences of the type (44) and those of the type (46) would be given underlying structures which are identical in form in the relevant respects.

- (46)a. Berita yang diterima itu tidak benar.
News that pass-receive the not true.
"The news that was received was not true".
- b. Anggapan yang salah itu telah menimbulkan beberapa masalah.
Assumption that wrong the compl raise some
pa masalah.
problem.
"The assumption that was wrong has raised a number of problems".
(The wrong assumption has raised a number of problems).
- c. Setengah-setengah petani masih lagi berpegang teguh pada kepercayaan yang karut itu.
Half farmer still more hold
strong at belief that untrue the.
"Some farmers still hold the belief that is stupid".
(Some farmers still hold the stupid beliefs).

To illustrate, let us look at the pair (44a) and (46a) with (47a) and (47b) as their respective underlying structures.



As we can see, the only difference between (47a) and (47b) is that in the former the subject of the embedded sentence is not identical to the head of N'' whereas in the latter the embedded subject and the head Nom are identical, thus satisfying the relative clause formation rule.

Now consider (48).

- (48) *Budak yang orang memakai kemeja putih itu
Child that person wear shirt white the
menegur Ahmad.
greet Ahmad.
"The child that the man who was wearing a
white shirt greeted Ahmad".

Obviously some kind of mechanism is needed to exclude sentences of the type (48). In the earlier transformational work (Chomsky 1965), it was assumed that such sentences would be blocked by the device of transformational blocking of derivation. This simply says that sentences which contain no NP identical to the antecedent, the obligatory rule would 'block' because the condition requiring two identical noun phrases would not be met. The blocking of the derivation due to the inability of this obligatory rule to apply would characterize the sentences as ungrammatical.

An alternative approach is to say that an obligatory transformation must apply whenever the structural description is met and structures which do not meet the condition will be filtered out by a filter of some kind. Suppose we define the identity condition of noun in relative clause formations nouns having the same indices, structures which contain nouns with different indices will be filtered out by having a filter something like (49).

- (49) * [N' _i [COMP [N' _j X]] Det]
N'' \bar{S}

(49) would filter out (48) as well as sentences like (50) in which the two nouns are identical in shape but not in reference.

- (50) *Budak_i yang budak_j lapar itu menangis.
Child that child hungry the cry.

The problem is, if an NP-complement is given an identical deep structure to that of a relative clause, then such a filter will automatically exclude sentences of the type (44). Given that an NP-complement and a relative clause have an identical underlying structure, there does not seem to be any way in which we could generate (44) without also generating (48) or blocking (48) without also blocking (44). In order to eliminate this problem the two constructions need to be given distinct underlying structures. It is for this reason that the structure (45) is given to an NP-complement because such a structure is different from that given to a relative clause within the NP-S analysis in that (45) does not contain an NP-constituent as antecedent.

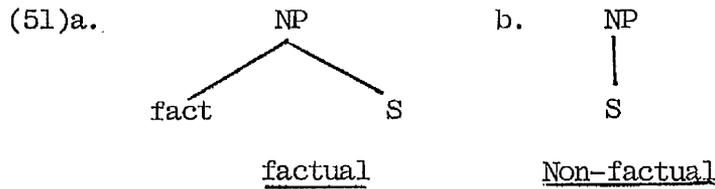
5.21 Alternative Analyses

There are other ways in which we can analyse NP-complements which might provide a solution to the problem just mentioned and in this section I will discuss very briefly two such analyses.

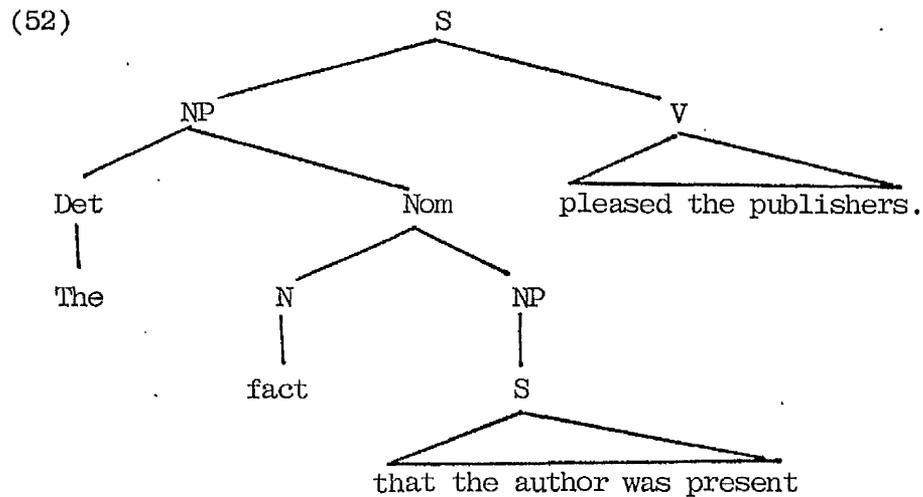
5.211 Nominalization Analysis

The first analysis which we will look at is the one advanced

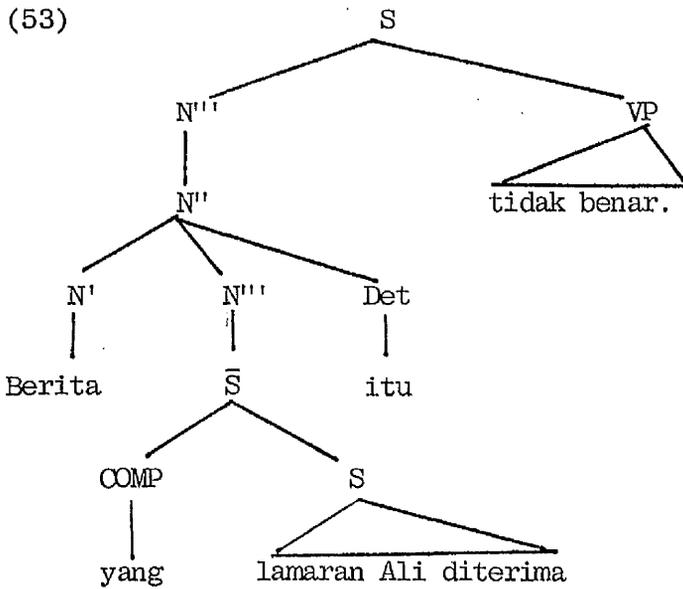
by Stockwell et al (1973), who argue that NP-complementations are actually instances of nominalizations and based on the factual and non-factual distinction (Kiparsky and Kiparsky 1971) they either have the form (51a) or (51b).



Under this analysis, sentences of the type (42) would be given an underlying structure of (52), with case nodes omitted.¹⁰



If this analysis is correct, then (44) would be given an underlying structure something like (53).



(44) now no longer satisfy the configuration for relative clause transformation since \bar{S} is not immediately dominated by N'' as the right sister of N' .

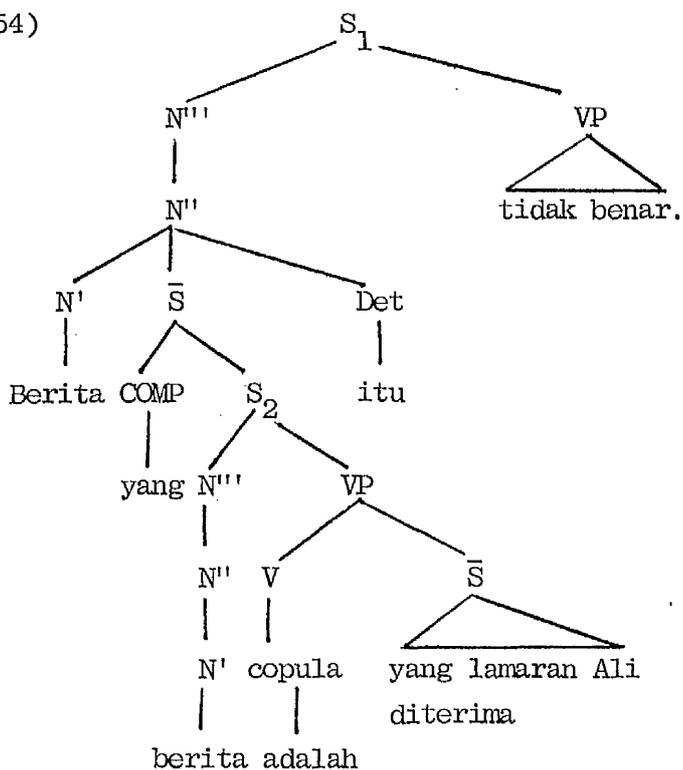
5.212 Copulative Sentence Analysis

An alternative analysis, which I think is more revealing, is to have sentences of the type (44) derived by relativization rule operating on a complex sentence containing a copulative sentence.

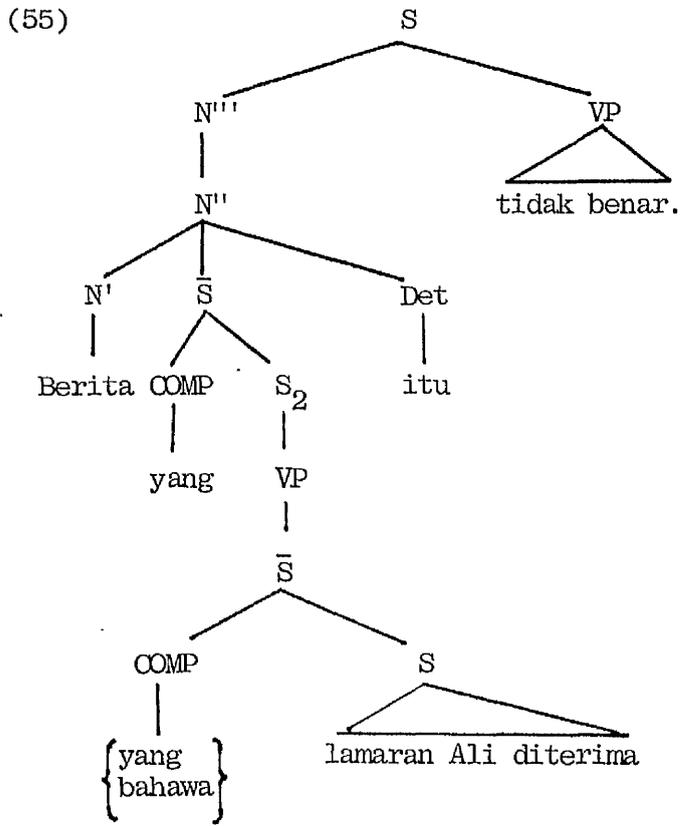
I will refer to this analysis as the Copulative Sentence Analysis. ¹¹

The source for (44), for instance, is the complex structure(54).

(54)



The derivation is as follows. First, relativization rule applies deleting the subject of S₂ berita, under identity with the subject of the matrix sentence. Copula deletion rule, which as we will see later is an independently motivated rule, then deletes adalah producing an intermediate structure (55).



After tree-pruning we finally get the surface structure (44a). Apparently tree-pruning of the sort proposed by Kuroda cited by Hankamer (1979), which allows a node whose head been deleted to be pruned is needed so that the higher \bar{S} may be pruned so as to give us the correct results. This type of pruning is independently needed in Conjunction Reduction (Hankamer 1979) and also in non-restrictive relatives discussed earlier in this chapter.

There are two possible objections to deriving NP-complements by Copulative Sentence Analysis, apart from the complexity of the derivation itself. The first objection which may be raised concerns sentences of the type (56). It is generally assumed that relativization does not operate freely on copulative constructions.

Sentences (56) are impossible.

- (56)a. *Budak yang anak Pak Mat itu rajin.
Child that child Pak Mat the industrious.
"The child who is Pak Mat's child is industrious".
- b. *Buku yang buku cerita itu dibacanya berkali-kali.
Book that book story the pass-read-him time.
"The book which is a story book was read by
him over and over again".
- c. *Bangunan yang perpustakaan itu besar.
Building that library the big.
"The building which is a library is big".

The type of copulative sentences that cannot undergo relativization, however, is only confined to the copulative sentences of the form NP-NP as in (56). All other types of copulative sentences such as (57), (58) and (59), as illustrated by the grammaticality of (60), (61) and (62) may undergo relativization.

- (57)a. Berita itu (adalah) penting.
News the is important.
"The news is important".
- b. Langkah-langkah itu (adalah) sesuai.
Step the is appropriate.
"The move is appropriate".
- (58)a. Bangunan itu (adalah) di tengah-tengah kota.
Building the is at center town.
"The building is in the center of the town".
- b. Permohonan itu (adalah) di dalam pertimbangan.

Application the is at in consideration.

"The application is under consideration".

(59)a. Buku-buku itu (adalah) mengenai sejarah.

Book the is about history.

"The books are about history".

b. Perkara itu (adalah) berhubung rapat dengan

Matter the is relate close with

soal pribadi.

question personal.

"The matter is closely related to personal question".

(60)a. Berita yang penting itu telah kami terima.

News that important the compl we receive.

"We have received the important news".

b. Langkah-langkah yang sesuai perlu diambil

Step that appropriate must pass-take

dengan segera.

with immediately.

"Appropriate steps must be taken immediately".

(61)a. Bangunan yang di tengah-tengah kota itu

Building that at center town the

ialah bangunan Parliamen.

is building Parliament.

"The building which is in the center of the

city is the Parliament House".

b. Besar kemungkinan bahawa permohonan yang di

Big possibility that application that at
dalam pertimbangan. itu akan diterima.

in consideration the will pass-accept.

"Most probably the application which is under
consideration will be accepted".

(62)a. Dia membaca buku-buku yang mengenai sejarah.

He read book that about history.

"He reads books which are related to history".

b. Perkara yang berhubung rapat dengan soal

Matter that relate close with question

pribadi tidak harus ditimbulkan.

personal not must pass-raise.

"Matters which are personal should not be raised".

In order to exclude sentences of the type (56), what we need there-
fore is not a constraint prohibiting relativization from oper-
ating on copulative sentences but some kind of filter which will
exclude only the sort of sentences found in (56). As a rough
approximation a filter of the form (63) may be proposed.

(63) * [N' [yang (ialah) N''] Det] .
N''

The second possible objection to deriving an NP-complement
from a Copulative Sentence is that the copula deletion rule has
to be made obligatory in order to exclude sentences like (64).
But as illustrated by (65) - (67), copula deletion is optional.

(64) *Berita yang adalah lamaran Ali itu diterima
News that is proposition Ali the pass-accept
tidak benar.
not true.
"The rumour which is that Ali's proposition
was accepted was not true".

(65)a. Dia {ialah
 adalah} seorang penyanyi. 12

He is coef singer.

"He is a singer".

b. Dia seorang penyanyi.

- as (a) -

(66)a. Perkara itu adalah penting.

Matter the is important.

"It is an important matter".

b. Perkara itu penting.

- as (a) -

(67)a. Saya tidak mengetahui bahawa ia {ialah
 adalah}

I not know that is

seorang professor.

coef professor.

"I did not know that he is a professor".

b. Saya tidak tahu bahawa ia seorang professor.

- as (a) -

Sentence Analysis of the NP-complement alone. As illustrated by the ungrammaticality of (68), (69) and (70), all the sentences in (60), (61) and (62) are ill-formed if the copula is not deleted.

- (68)a. *Berita yang adalah penting itu telah kami terima.
"The news which is important have been received by us".
- b. *Langkah-langkah yang adalah sesuai perlu diambil dengan segera.
"Steps which are appropriate must be taken immediately".
- (69)a. *Bangunan yang adalah di tengah-tengah kota itu ialah Bangunan Parliamen.
"The building which is in the center of the city is the Parliament House".
- b. *Besarnya kemungkinan bahawa permohonan yang adalah di dalam pertimbangan itu akan diterima.
"Most probably the application which is under consideration will be accepted".
- (70)a. *Dia membaca buku-buku yang adalah mengenai sejarah.
"He reads books which are related to history".
- b. *Perkara yang adalah berhubung rapat dengan soal peribadi tidak harus ditimbulkan.
"Matters which are personal should not be raised".

Copula Deletion has to apply in all the above examples in order to get the right results. In other words obligatory Copula Deletion is independently needed in all these cases whether or not NP-complement is derived via relativization rule. ¹³

It must be admitted that the Copulative Sentence Analysis is somewhat complex and not very elegant. In spite of its complex nature, the analysis does have some advantages. It can automatically account for the identity relation that holds between the head noun and the complement sentence. It also correctly predicts that the class of nouns that can occur as the head of an NP-complement is precisely the class of nouns that can be the subject of an NP-S type of copulative sentence, namely the factive abstract nouns.

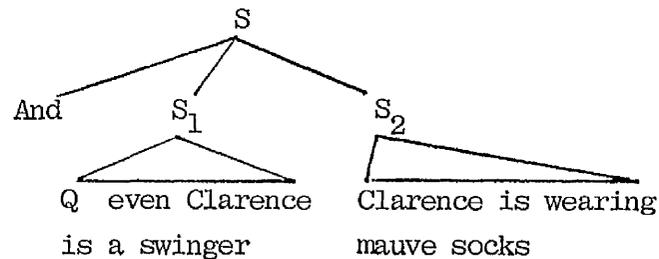
Notes to Chapter V

1. The problem with this analysis, which Ross himself realizes, is how sentences like (1) is generated.

- (1) Is even Clarence, who is wearing mauve socks,
a swinger? [Ross's 6.158] .

The sentence cannot be derived from (2) since he argues that declarative sentences cannot conjoin with interrogatives or imperatives as illustrated by examples (3).

(2)



- (3)a. *I saw you there and who ate what?
b. *What exploded when I warned you it would?
c. *Who gave what to whom and I'm sickened at
this sentiment?

The only way to exclude (3) in his framework is by excluding (2) as the deep structure of (1). This led Ross to posit, with reluctance, another source for appositive relatives namely that they are derived from two independent sentences such as (4).

- (4) Is even Clarence a swinger. And Clarence
is wearing mauve socks.

2. A root S is an S which is directly dominated by an S. It is sometimes labelled E as in the following examples.

3. In fact even for English these characteristics should not be taken as absolute criteria dividing the two types of relative clauses. For discussion on this see Quirk et al (1972).

4. Though it is possible to treat proper nouns in Malay as common nouns as illustrated by (5) and (6),

(5) Ali itu baru balik dari sekolah.

Ali the just return from school.

"Ali has just returned from school".

(6) Di Kuala Lumpur ini, orang tidak peduli akan

At Kuala Lumpur this, people not bother part.

hal orang lain.

business people other.

"In Kuala Lumpur, people don't bother about other people's business".

where they may be followed by the determiner itu or ini, it is obvious that in these examples the only plausible interpretations are the non-restrictive ones.

5. The notion of coreferential has to be modified as we will see later, the rule of appositive NPs as proposed in this thesis may be extended to other categories such as VPs, APs, PPs and Ss. What exactly is the nature of coreference in these cases is not

quite clear and I will leave it undefined.

6. The element APP represents a quasi-metalinguistic marker which is realized as \emptyset , or, that is (to say), namely etc, depending on the semantic relationship between the constituents in apposition. In Malay APP may be realized as \emptyset , atau (or) or iaitu (that is, namely).

7. Burton-Roberts (1975) has somewhat modified Ross's Pruning Convention (Ross 1967) to allow non-branching non-embedded S to be pruned. In fact as we will see presently tree pruning of the sort proposed by Kuroda cited by Hankamer (1979) which allows a node whose head has been deleted to be pruned (see page 337) is needed. This type of tree pruning is independently needed in conjunction reduction.

8. DeJmore and Dougherty (1972) propose that appositive NPs are generated by the base rule of the form:

NP \rightarrow NP (NP).

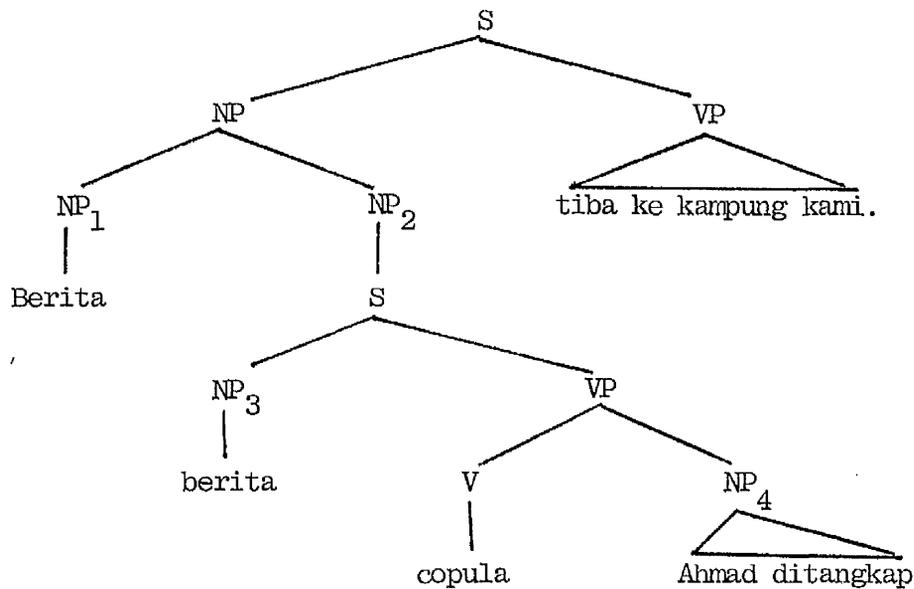
For arguments against this see Burton-Roberts (1975), Though he did not specifically discuss this analysis, his objections to NPs being Chomsky-adjoined to the head NPs apply with equal force. His main objection is that one of the properties of appositive NPs is that the NPs in apposition should have referential identity and coreference of NPs is incompatible with those NPs forming the immediate constituent layer of a higher NP.

9. The reason why NP-complement is dominated by N'' and not N'''

(NP) is, as I have argued earlier, that the determiner itu is the specifier of N' and not N''' (see section 1.11).

10. For full discussion see Stockwell et al (1973), pp 505-599.

11. This analysis was first proposed by Karim (1975) but rejected on the ground that such an analysis would make the wrong assumption that the NP head is identical to NP₂ which dominates the whole of the embedded sentence. Her example is:



I have modified this structure because if the embedded S is dominated by an NP node then no relativization can apply.

12. Adalah may occur in all type of copulative sentences whereas ialah is confined to only NP-NP constructions.

13. It seems that copula deletion is optional when it is immediately preceded by a noun and obligatory when there is no overt

noun immediately preceding it. That this is so is demonstrated by question and answer as in (7), conjunction reduction (8) and sentences like (9) where a null pronoun (see chapter 1V) is used to refer directly.

(7) Q. Siapa itu?

"Who is that?"

- A. a. Dia $\left\{ \begin{array}{l} \text{ialah} \\ \text{adalah} \end{array} \right\}$ guru saya.
b. $\left\{ \begin{array}{l} *ialah \\ \text{adalah} \end{array} \right\}$ guru saya.
c. Guru saya.

"(He is) my teacher".

(8)a. Dia ialah guru saya dan dia juga ialah kawan baik saya.

b. *Dia (ialah) guru saya dan ialah kawan baik saya.

c. Dia (ialah) guru saya dan kawan baik saya.

(9)a. *ialah isteri pengarah.

b. Isteri pengarah.

"(She is) the director's wife".

CHAPTER VI

CONCLUSIONS

6.0 By way of concluding, I will draw together the main conclusions that have been arrived at in this thesis and see what their implications are to linguistic theory in general.

6.1 Summary

I started, in Chapter I, by looking at the internal structure of Malay relative clauses and it was shown that Janet Dean's arguments in favour of the Nom-S analysis based on an entailment relation between the head noun and the relative clause get syntactic support from Malay. In a language like English, where the determiner appears before the noun, it is quite difficult to tell if an embedded sentence in a relative clause modifies the whole noun phrase or just the head noun, though it does seem that it modifies just the noun. In Malay, as we have already seen, the determiner appears after the embedded sentence and as illustrated by (1), if it appears before the embedded sentence, the sentence is ill-formed.

(1) *Orang itu yang berdiri baru sampai.

Person the that stand just arrive.

"The person who is standing has just arrived".

This shows that the embedded sentence does not modify the whole

noun phrase orang itu but just orang, and therefore the relativized element is not the whole noun phrase. The ungrammaticality of sentences like (2) provides strong evidence for such claim.

- (2) *Udara di tepi pantai yang nyaman itu begitu
Air at edge beach that cool the so
menyegarkan.
refreshing.

Chapter II and Chapter III argued against the wh-movement analysis in favour of a deletion rule. It was shown, in Chapter II, that not only is this standard analysis of relative clause formation unable to provide a satisfactory account of the Malay relatives, there is not even any motivation for having such a rule if yang introducing the relative clause is treated as a complementizer as adopted in this thesis. Chapter III provided further evidence against the wh-movement rule, in particular against Trace Theory. It was found, however, that only nominals in the left-most position of the embedded sentence may be deleted and if the relativized nominal does not occur in this position some fronting rules moving this element to the clause initial position have to apply before relativization applies. These rules are independently motivated and they characteristically leave behind a pronominal copy of the moved element.

The analysis proposed in Chapter II has been found to be capable of accounting not only for ordinary restrictive relatives but also for free relatives as well as non-restrictive relatives

discuss^{ed} in Chapter IV and Chapter V respectively. It was argued that since the only difference between a free relative and a full relative is that in the former the head is an indefinite noun which is not phonologically realized, free relatives may be derived in the same way as full relatives simply by making use of the element PRO. And because it was argued that PRO is an instance of a pronoun its interpretation is pragmatically controlled and this provides a natural way of explaining why sentence (3) can have a reading in which the subject of the embedded sentence refer to things other than beg, depending on the context.

(3) Beg ini lebih besar dari yang di dalam bilik itu.

Bag this more big than that at in room the.

"This bag is bigger than (the one) that is in the room".

In Chapter V it was shown that there are neither phonological nor syntactic differences between a restrictive and a non-restrictive relative clause. Since the only difference between these two is that a restrictive relative is essential in identifying the precise referent(s) of the head noun and that this can only be accounted for by non-syntactic consideration and since the analysis proposed for restrictives can equally account for the non-restrictive clauses, there is no motivation for position a different source for non-restrictives.

6.2 Theoretical Implications

Though this thesis has been concerned with problems specific

to the syntactic analysis of Malay relative clauses, some of the claims made have a wider implication for linguistic theory in general and for some existing theoretical frameworks in particular.

The conclusions in Chapter III not only refute Chomsky's claim that all unbounded dependencies may be handled by the wh-movement rule which moves the relevant element into the COMP position of the sentence, but they also provide evidence against the basic assumption of wh-movement itself. One of the basic assumptions of wh-movement as formulated in Chomsky and Lasnik (1977) is that deletion (apart from deletion of designated elements) may only take place in the COMP position. This claim cannot be maintained since we have already seen that the relativized element is not moved into the COMP position. It was further shown that the gap and other properties (which Chomsky considers as the diagnosis of wh-movement) is not a sure test that wh-movement has ever taken place since all the rules which have the effect of fronting NPs into the clause initial position characteristically leave behind the pronominal copy of the moved NPs nya (or a gap if the object of the sentence containing a non- me- type of verb is preposed). And it was shown that none of these rules involve wh-movement. The analysis proposed in this thesis also provides arguments against the claim made by relational grammarians that an analysis which makes use of linear configurations is incapable of accounting for Malay relative clause formation and that an account making use of grammatical relation is superior. On the contrary it was shown that a rule making use of linear configurations, if carefully formulated, can provide a more adequate account. In

particular it was shown that the claim that only subject NPs (and object NPs for some relational grammarians) may be relativized cannot be correct since such an analysis fails to account for the grammaticality of sentences of the type (4).

- (4)a. Orang yang kami menumpang di rumahnya itu baik.
Person that we stay at house-his the nice.
"The person with whom we stayed was nice".
- b. Rumah yang di depannya ada pokok kelapa itu
House that at front-it have tree coconut the
rumah guru saya.
house teacher I.
"The house which has a coconut tree in front
of it is my teacher's house.

On the other hand the analysis proposed here does provide some support for Bresnan's account in that the relativized nominal is deleted though a much weaker version of her account is required for Malay since it has been shown that deletion over variables cannot be maintained.

Finally I must mention that though the deletion analysis has been found to be the most adequate account of Malay relative clauses within the restricted transformational framework, I am in no way claiming that this will necessarily prove ultimately to be the most adequate account of relative clauses. In line with the general falsification methodology I have adopted, there may always be a further theoretical framework compatible with the data

presented here. Indeed, during the final writing of this thesis the phrase structure grammar of Gazdar (1980, 1981) has evolved and become publicly available. It would be interesting to see if a better account may be provided within this theoretical framework but this would obviously demand a separate thesis.

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