

Bangor University

DOCTOR OF PHILOSOPHY

Contrastive and error analysis : a case study

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Award date:
1992

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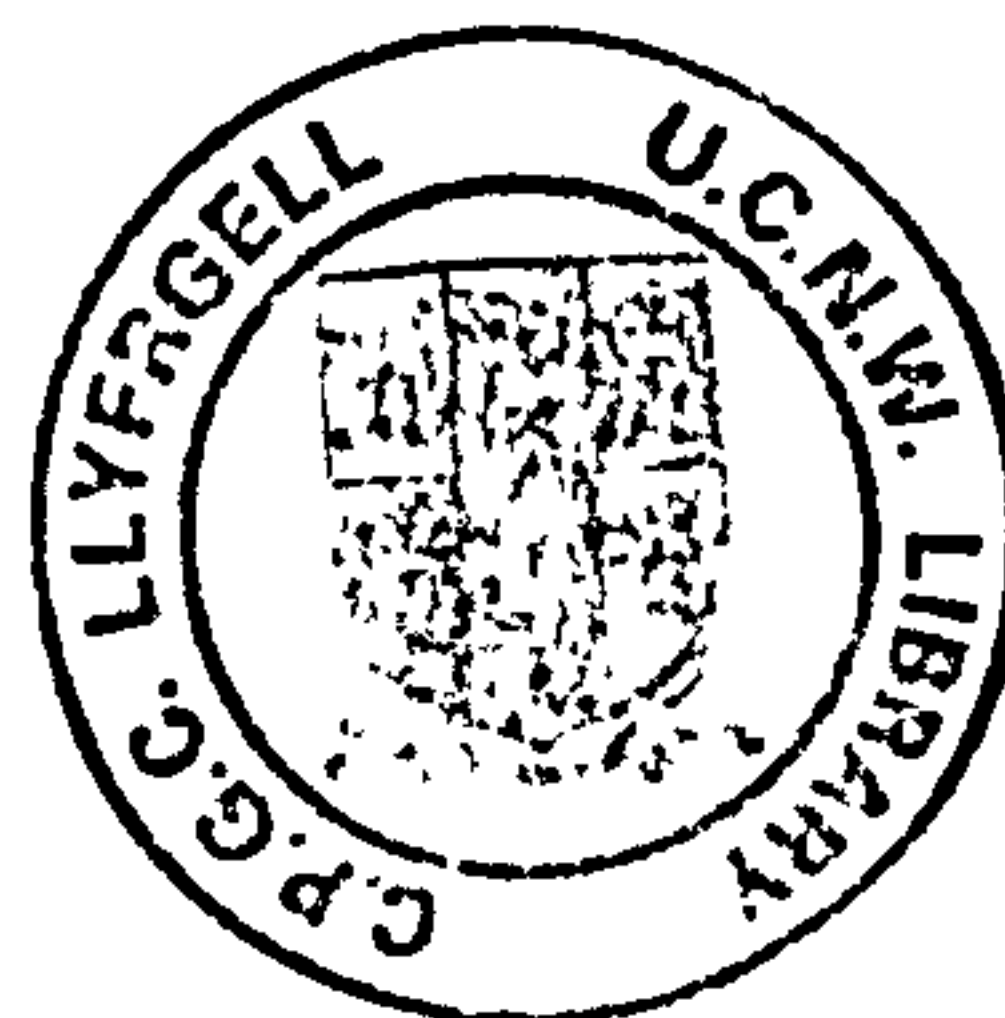
CONTRASTIVE AND ERROR ANALYSIS: A CASE STUDY

by

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In fulfilment of the requirements of the degree of
Philosophiae Doctor

**Department of Linguistics
University of Wales
Bangor
1992**



*To the Messengers of Genius
and Peace Whose Capacity
for Taking Pains is Infinite*

ACKNOWLEDGEMENTS

I am grateful to my supervisors Dr. Carl James and Dr. R. D. Borsley, who gave much time to discussions of this work.

I am also grateful to Professor Andrew Radford (University of Essex), the original supervisor of this thesis, who read and commented on drafts of chapters II, III and IV.

My thanks are also due to Mr. P.G. Scholfield, who provided valuable comments on chapters VI and VII.

I would further like to extend my appreciation to Professor Ian Roberts (Head of Linguistics Section, University of Wales) for holding a 'meeting of minds' in seminars and conferences, the benefit of which I treasure very much.

A word of thanks goes to Dr. C. J. Whitaker from the Mathematics Department, University of Wales for his advice on the statistics needed for this study.

My wife, Khadija AL-Haroun, deserves special thanks for her patience, support and encouragement to bring this piece of work to a good finish.

My gratitude and thanks go to Miss Angela Roberts and Dr. M. Aldridge for their assistance and moral support.

Finally I owe my indebtedness to friends and colleagues for their encouragement.

ABSTRACT

Chapter One: this chapter presents an up-to-date account of Contrastive Analysis (CA), and Error Analysis (EA).

Chapter Two: this deals with the syntactic descriptions of Inflectional Phrase (IP) in English and Syrian Arabic respectively. The descriptions of (IP) system are executed within the framework of X-bar syntax in the version outlined in Chomsky (1970 and 1986b), and Radford (1988). These descriptions focus on the various syntactic movements which take place within the maximal categories referred to as IP all of which play an important role in the formation of Y/N and Wh-questions. For the sake of this study, only three types of movement will be considered - i.e. I - movement, V - movement, and Wh - movement

Chapter Three: this chapter describes the syntactic movements which take place within the maximal categories referred to as Complementiser Phrase (CP) of the two languages within the same framework. The description focuses on I-to-C and Wh-movement.

Chapter Four: this deals with English Small Clauses (SCs) and Syrian Verbless Clauses (VCs) also within the same framework.

Chapter Five: this deals with contrasting the interrogative patterns of the two languages as identified in chapters 2, 3 and 4, and with formulating predictions on the basis of the contrasts identified.

Chapter Six: this highlights the methodology of the experiment conducted - i.e. data collection, design of the elicitation instruments, etc.

Chapter Seven: this consists of analysing the elicited errors in the light of my predictions. It compares CA predictions with the attested errors to evaluate the success of the predictions and hypotheses.

Chapter Eight: offers the discussion of disconfirmed predictions and errors irrelevant to predictions.

Chapter Nine: this contains conclusions, pedagogical implications and recommendation for further research.

ABBREVIATION

- A : Adj
- AP : Adjective Phrase
- ADV : Adverb
- ADVP : Adverb Phrase
- AUX : Auxiliary
- C' : C-Bar
- C" : C-Double-Bar
- C : Complementiser
- CP : Complementiser Phrase
- CA : Contrastive Analysis
- CAH : Contrastive Analysis hypothesis
- CLA : Child Language Acquisition
- CRP : Case-Resistance Principle
- D : Determiner
- DP : Determiner Phrase
- E : English
- e : empty
- ECP : Empty Category Principle
- EA : Error Analysis
- FLL : Foreign Language Learning
- GB : Government/Binding
- I, INFL : Inflection
- I' : I-Bar
- I" : I-Double-Bar
- IP : Inflection Phrase
- L1 : First Language
- L2 : Second Language
- N : Noun
- NP : Noun Phrase
- NL : Native Language
- Obj : Object
- P : Preposition
- PP : Preposition Phrase
- SA : Syrian Arabic
- SC : Small Clause
- Spec : Specifier
- SLL/A : Second Language Learning/Acquisition
- Subj : Subject
- t : trace
- +T : Positive Transfer
- -T : Negative Transfer
- TG : Transformational Grammar
- TL : Target Language
- UG : Universal Grammar
- V : Verb
- VC : Verbless Clause
- VP : Verb Phrase
- WHQ(s) : WH-Questions
- X' : X-Bar
- X' TG : X-Bar Transformational Grammar
- Y/NQ(s) : Yes/No Questions

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INTRODUCTION

The concern of this study is to present an up-to-date account of Contrastive Analysis (CA). It carries out a contrastive study of English and Syrian Arabic (SA henceforth) interrogatives and of the word order phenomena relevant to interrogative patterns, and the pedagogical implications of such an analysis. Its aim is to predict and investigate the learning problems which Arab learners of English face and the errors they commit in the acquisition of Y/N and Wh-questions. To that end, it tests a set of hypotheses formulated in relation to language learning by these specific learners.

This work has two major dimensions: descriptive and applied. The descriptive dimension is carried out within the framework of X-bar theory as outlined in Chomsky's Remarks on Nominalisation (1970), Barriers (1986b), and Radford's Transformational Grammar (1988).

0.1. The Hypotheses

Two hypotheses of learning language structure are being investigated in this study, with the purpose of seeking the extent to which the knowledge of L1 hinders/aids the learning of L2. The first hypothesis claims that when structures are similar in both Ls, this will result in the learner producing target-like structures. This will be referred to as positive transfer (+T). On the other hand, when structures are different in both Ls, this will result in the learner producing erroneous structures. This will

be referred to as negative transfer (-T).

The claim of the first hypothesis draws on CA's principal assumptions proposed by Lado (1957:2), who claimed that:

"The student who comes into contact with a foreign language will find some features of it quite easy and others extremely difficult. Those elements that are similar to his native language will be simple for him, and those elements that are different will be difficult."

And that:

"The teacher who has made a comparison of the foreign language with the native language will know better what the real learning problems are and can better provide for teaching them."

The second hypothesis concerns the stage level of learners. Since two groups of learners' interlanguage (IL) is intended for investigation, it is predicted that group 'A' learners (less advanced) will be less successful than their group 'B' (more advanced) counterparts in the sense that the former will predictably show more (-T) than the latter. This hypothesis has been formulated and founded on the assumption that increased exposure to English means decreased degree of (-T).

Thus, given that first language transfer is a crucial feature in the process of foreign language learning, in this study I will put the CA hypothesis of L1 transfer to two tests: a) Degree of contrast will correlate with degree of transfer; b) Grade level will reveal different levels of L1 transfer. The testing of these two hypotheses draws on the proposition that "there are valuable, but buried, SLA and IL hypotheses in the CA literature."

(Selinker, 1990:137).

It is worth mentioning that this study claims (and empirically tests out the hypotheses related to predicted IL data) the *strong* version of Wardhaugh's (1970) Contrastive Analysis Hypothesis (CAH) see section 1.1.7.)), which he divides into *strong* and *weak* versions.

0.2. General Background to the Experiment

As has been mentioned, this experiment involves the acquisition of English Y/N and Wh-interrogative structures by Syrian university learners. It seeks to investigate the following objectives:

- 1) Native language (NL) interference in the form of interlingual English errors and TL intralingual errors obtained within English itself.
- 2) The analysis of both types of errors according to their source and the consideration of unexpected as well as mixed sources of errors.

Six written tasks, involving two groups of University learners of both sexes, were conducted for the purpose of experimentally eliciting direct and embedded Y/N and Wh-interrogative patterns..

Tasks I and II attempted the transformational formation of the questions just mentioned, viz - they were production tasks. Task III was conducted to test for overgeneralisation. Task VI involved judgement, viz - manipulation task, where learners are required to distinguish the purposely incorrect interrogative

structure from the correct one. Task V is a multiple choice and Task IV is a translation task - i.e. from Arabic into English.

44 students divided into two equal groups carried out the six written tasks. Each group had had different numbers of boys and girls. The groups had to belong to two different levels of learning. This was determined by hypothesis Two - i.e. language proficiency variable - in order to discover whether or not there would be any statistically significant difference in transfer and performance between the less advanced (group A) and the more advanced (group B) students. Thus, the only variable of this experiment was to test exposure to English. All other variables such as age, sex, social situation are beyond the scope of the present research.

This experiment was conducted at the Department of English, University of Aleppo, Syria. All participants were speakers of the home language - Arabic, and had never lived in an English speaking country. This helps to avoid discrepancy and distortion in results.

0.3. Why Interrogatives?

The reason for choosing interrogatives -viz questions - as the area for this investigation rests upon the fact that questions and question asking are indispensable in human communication. In brief, questions are a behavioural reflection and serve a common functional intent, that is- 'to elicit a verbal response from the addressee.' (Chafe,

1972 quoted in Kearsley 1976).

0.4. Types of Interrogatives

A taxonomy of question forms is based on syntactic, semantic and functional criteria. It is often difficult to maintain this sort of taxonomy because the boundaries among the three criteria sometimes overlap. Kearsley (1976:357) suggests that this is so "partly because some aspects of form classification are semantic and some aspects are functional classification and are based on syntactic considerations, and partly because it is often difficult to distinguish the syntactic from semantic features of questions."

However, he distinguishes between nonverbal and verbal questions. He claims that nonverbal questions can further be broken down into overt and covert. The former are gestures which serve to elicit a verbal response. The latter are internally directed questions in the sense that we ask and answer them ourselves. Verbal questions, on the other hand, are grouped into direct and indirect questions. The indirect questions are "declaratives which contain an embedded partial interrogative phrase" (Baker, 1968 quoted in Kearsley *ibid*:358) as illustrated in (1):

(1) He doesn't know when they will arrive

Kearsley further divides direct questions into two kinds: open and closed. Open questions are taken to equal Wh-questions; thus they are labelled as Wh-questions which can be subdivided into simple (with a single Wh-word) and

complex (with two or more Wh-words) questions, e.g.

(2) a. **What** did you say to him?

b. **Who** plays **what** and **where**?

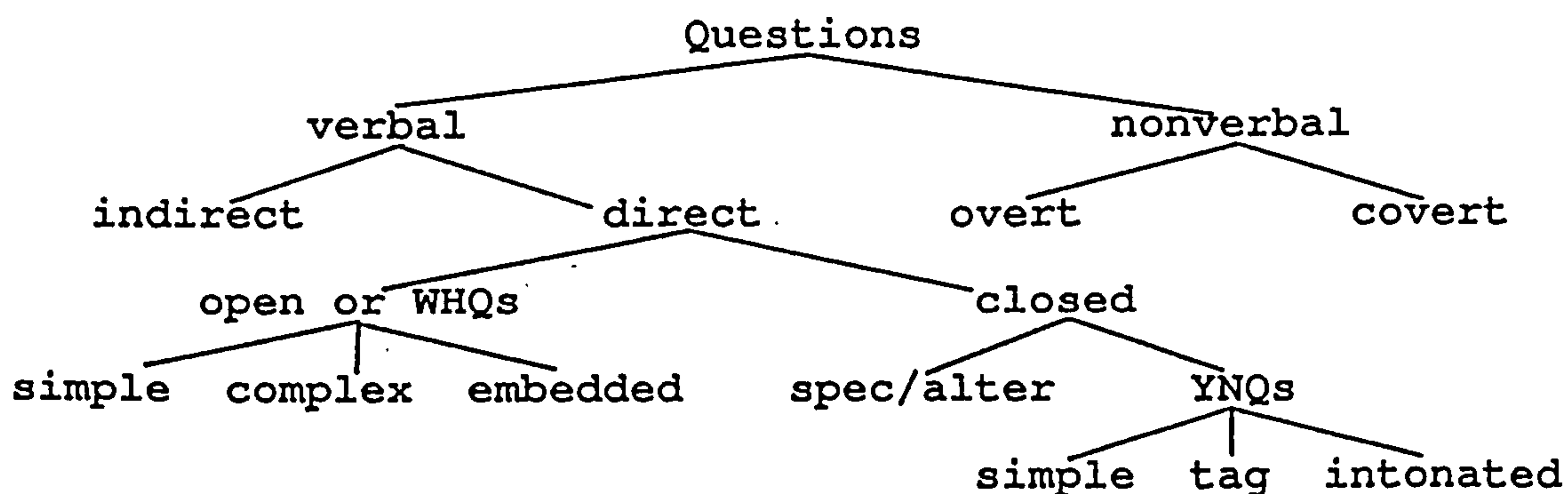
Closed form questions, on the other hand, are those which do not contain a Wh-word in their structure, and marked by the rising intonation. Closed questions can also be of two main types: specified alternative and Y/N forms. The first type is acceptable as an answer, e.g.

(3) are you working tonight in the Bar, in the Pub?

The second type involves those which require accentuating or nullifying the assertion of the question, e.g.

(4) are you working tonight in the Pub, in the Bar?

Kearsley's classification of questions leaves us with the following indicated form:



This work deals with only WHQs (to the exclusion of complex questions) and YNQs (to the exclusion of tag and intonation questions). It also disregards echo questions, which do not involve any movement processes.

CHAPTER ONE

Contrastive Analysis, Error Analysis and the Process of F.L. Learning

1.0. Overview

The concern of the present chapter is to discuss some considerations and controversies surrounding contrastive analysis (CA), its definition, historical background, aims, aspirations etc, and Error analysis (EA).

This chapter falls into five main sections: section 1.1. deals with contrastive analysis (CA), section 1.2. with error analysis (EA), section 1.3. with interlanguage (IL), section 1.4. with fossilisation, section 1.6. with linguistic theories in foreign language learning and section 1. 5. with language learning strategies.

However, prior to the discussion of these controversies, let's define CA.

1.1. Contrastive Analysis (CA)

1.1.1. What is (CA)?

Throughout the course of its development, there have been various definitions of CA. For Di Pietro (1971:2), CA is "the method whereby the differences between two (or, more rarely, among more than two) languages are made explicit." Note that in his definition of CA, Di Pietro labels it as 'method'. CA is not a method, not in the same sense of teaching method-i.e. how to do something. It is a linguistic science which draws on other disciplines. A slightly different definition was proposed by Fisiak

(1981:1) who said that Contrastive Linguistics may be roughly "defined as a subdiscipline of linguistics with the comparison of two or more languages or subsystems of languages in order to determine both differences and similarities between them." The second definition is different from the first in that the former refers to two or more languages whereas the latter to the subdiscipline or subsystems of two or more languages. James (1980:3), in his provisional definition of CA, pointed out that "CA is a linguistic enterprise aimed at producing inverted (i.e. contrastive, not comparative) two-valued typologies (a CA is always concerned with a pair of languages), and founded on the assumption that languages can be compared." Drawing a distinction between typological linguistics (which focuses on clusters of languages united by some common feature or features) and contrastive linguistics, for Krzeszowski (1990:9-10), "CA focuses on pairs of languages and explores similarities as well as differences between them."

No matter how different these definitions are, yet they converge on two key issues - i.e. 'languages' and 'contrast' which are the pillars of CA in predicting and investigating (in the sense of explaining) learning errors.

1.1.2. Historical Background

After defining CA, I try now to give a historical synopsis of it. The roots of CA can be traced back to as

early as ca.1000 A.D. when Aelfric wrote his Grammatica, a grammar of Latin and English (cited in Krzeszowski, 1990:1) in which he tacitly expressed the facilitating effect of knowledge of the grammar of one language in learning another. This work was later to be followed by other publications in the 17th century. John Hewes (1624) (cited in Krzeszowski, *ibid*:2) in his "*A perfect survey of the English tongue taken according to the use and analogies of the Latin*" made it clear to the effect that:

"the knowledge of the native grammar cannot only facilitate learning a foreign language but also interfere with it."

Many grammarians promoted this idea such as Howel(1) (1662), Coles (1675) and Mark Lewis (1670?) who wrote almost in the spirit of modern contrastive studies saying that:

"The most facil (sic!) way of introducing any in a Tongue unknown is to show what Grammar it hath beyond, or short of his Mother tongue; following that Maxime, to proceed onto ad ignotum, making what we know, a step to what we are to lean (sic!)"

(Krzeszowski *ibid*:2).

In any event, despite the fact that earlier works (i.e. than these) involved some sort of contrastive studies, they were (according to Fisiak, 1981:3) predominantly theoretical, e.g. Charles H. Grandgent (1892); Wilhelm Vietor (1894); Paul Passy (1912); Bogorodickij (1915); with only peripheral attention being paid to the applied dimension, e.g. Vietor (1903) cited in Fisiak (1981:4).

But the term "contrast" was first introduced and was the brain-child of James Pickborne (1789:18) (see Krzeszowski: ibid) who said ("I thought it would be useful to contrast [italics supplied] the English verb with the verb in other languages"). So, the ever-recurring idea of contrasting and confronting (an E. European term meaning something slightly different from 'contrastive') languages which preoccupies scholars and researchers is by no means a recent development but "it did not receive its present name until 1941." (Fisiak, 1981:3)

A more rigorous approach to contrastive study first appeared in the works of Yuen Ren Chao (1933) "A Preliminary study of English Intonation and Its Chinese Equivalents", Whorf (1941), and C. Fries (1945:9) who said that:

"The most efficient materials are those based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner."

cited in Krzeszowski (1990:2).

This was considered a milestone in the development of CA theory and was taken as an inspirational step which paved the way for contrastive theses, papers, dissertations and monographs, which gradually flourished to motivate the pedagogical use of contrastive studies by David Reed in (1948), Robert Lado, and Yao Shen (cited in Di Pietro, 1971:10). There is no doubt that Lado's publication of Linguistics across Cultures, in the words of Nickel

(1971:2) sparked "the real beginning of modern applied linguistics." Lado's publication was highly valued to the extent that it was taken to be "The first, and, up to now, the only book devoted totally to the methods of CA is Robert Lado's Linguistics across Cultures, published in (1957)." (Di Pietro, 1971:11).

In that very same year, Chomsky published his Syntactic Structures, and some linguists tried out the new transformational Grammar (TG) in CA (for the use of X' (TG) in this work, see section 2.1.). Among them was Robert Stockwell, A Contrastive Study of English and Tagalog, whose work was never published, but gave the impetus to many later publications which applied the principles of TG, together with Harris's transfer formulas, e.g. Paul Schachter's (1960), A Contrastive Analysis of English and Pangasinan was a precedent to other dissertations dealing with TG and CA such as William Dingwall (1964).

The objective of these studies was pedagogical. Lado (1957:2) stated that:

"the student who comes in contact with a foreign language will find some features of it quite easy and others extremely difficult. The teacher...will know better what the real learning problems are and can better provide for teaching them."

This clearly endorses the fact that the task of CA is to predict difficulties and to improve teaching materials, an idea which was subjected to endless comment and criticism, as we presently shall see.

The purpose of this brief historical review of

contrastive linguistics has been to pinpoint its dual nature - i.e. that there is a branch of theoretical contrastive linguistics, and a branch of applied contrastive linguistics which, in the words of Fisiak (1981:6), "have to be kept separate if further progress is to be made, and meaningless controversies avoided." However, Fisiak's view of keeping the two branches of linguistics separate seems defeatist and counterproductive and one which calls for a critical response. One compelling reason for the non-viability of maintaining separate CAs may be argued on the grounds of linguistic analysis which theoretical CAs provide for applied CAs. That is, a CA predictions of learners' problems will be based on the teachers' personal experience, which renders the aim of CA from a scientific study of two (or more) languages to a sort of personal testimony. Thus, theoretical and applied CAs cannot dispense with one another simply because "theoretical CA makes constant or recurrent reference to the universal *tertium comparationis* X: a direct applied CA is liable to lose sight of the contact between X and (?) - the L2 realisation - since it is mediated by y." James (1980:142) (cf Krzeszowski's 1990 Pedagogic Paradox: Introduction and Ch.5)

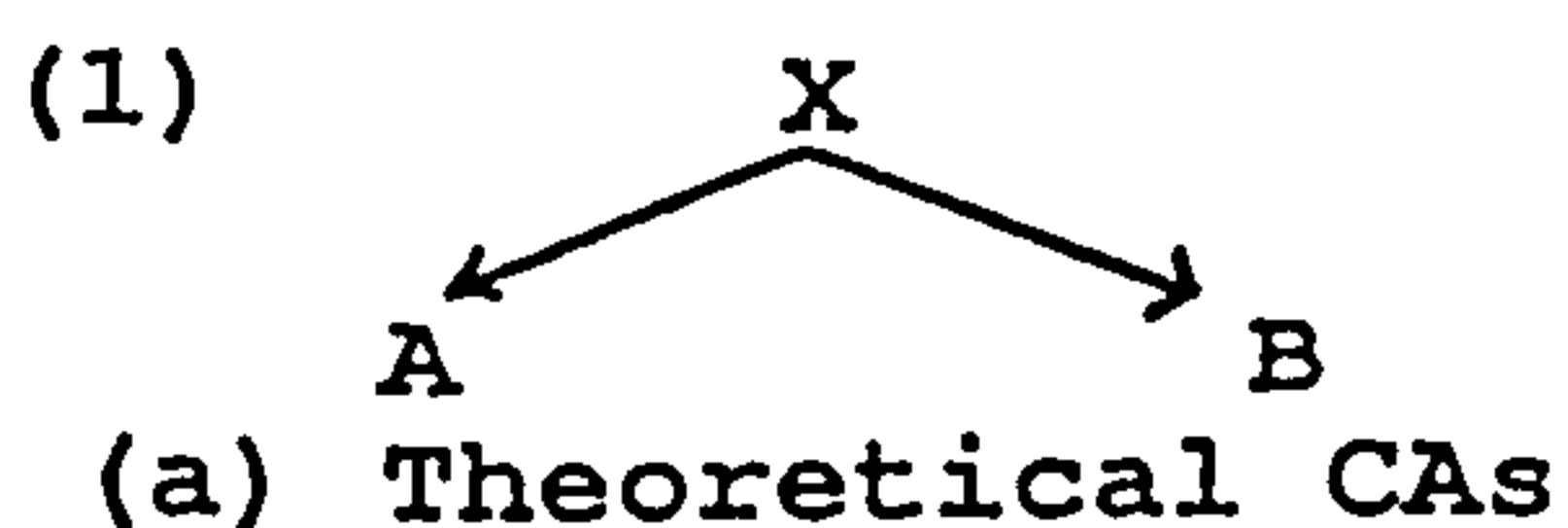
Another argument that runs counter to Fisiak's view of separate CAs is that a CA, be it theoretical or applied, may give results pertinent to teaching and other areas of attention because recent cognitive-based studies of

languages describe languages not as semanto-syntactic linearly ordered sentences, insomuch as a symbolic organisation inculcated in human experience and society (Krzyszowski, 1990, among others). Viewed from this perspective, this amounts to saying that CAs give results which are naturally relevant and important to both teaching purposes and other fields of practical use.

In his distinction between theoretical CA and applied CA, Fisiak (1981:2) has observed that:

"...theoretical CSs do not have a direction from A to B or visa versa. Applied CAs are preoccupied with the problem of how a universal category X, realised in language A as Y, is rendered in language B, and what may be the possible consequences of this for a given field of application."

Hence, the distinction between theoretical CAs and applied CAs means, as James (1980:142) suggests, that "applied CAs are unidirectional whereas theoretical CAs are static, since they do not need to reflect any directionality of learning", as the figures in (1) below illustrate:



No matter how distinct applied CA from theoretical CA is, "part of applied CA, especially when related to teaching, must necessarily depend not only on theoretical, descriptive, and comparative linguistics, but also on other disciplines relevant to teaching; among them are psycholinguistics, sociolinguistics, didactics, psychology

of learning, and possibly other areas" (Krzyszowski, 1990:10-11). Therefore, to meet its needs and wants: that is a satisfactory examination of any aspect of the learner's interlanguage, requires CA to carry out a study of certain areas of two (or more) languages.

As noted earlier, there are (according to Fisiak, *ibid*) two types of CA: theoretical CA or descriptive and applied CA or pedagogical. Theoretical CA deals with the comparison (of similarities) and contrasting (of differences) of languages, searching for linguistic universals and ultimately hoping to study the human mind. Applied CA, on the other hand, deals with the pedagogical aspect-i.e. how L1 affects L2 in foreign language learning FLL, which is my concern in this study.

The specification of the scope of theoretical CA and of applied CA does not, however, mean they operate independently of each other, for the simple reason that applied CA is a subdiscipline of linguistics. Or as Krzyszowski (1990:10) puts it:

"contrastive linguistics is an area of linguistics in which a linguistic theory is applied to a comparative description of two or more languages".

1.1.3. Pedagogical Orientation

Foreign language teaching has been the prime motivation for conducting CAs, for contrasting languages will identify the areas of difficulty and will enable the teacher to concentrate on these areas. To this end,

Krzeszowski (1990:10) points out "that originally, all contrastive studies were pedagogically motivated and oriented." This amounts to saying that the practical steps of teaching a foreign language resides in CA, which "was rooted in the practical need to teach a L2 in the most efficient way possible." (Ellis, 1985:23)

The aims of CA as a basis for teaching languages have been endorsed and emphasised time and again to the extent that "contrastive analysis originated as a branch of applied linguistics, the aim being to solve the practical problems of language teaching" (Ringbom, 1987:47). This position has been strongly stated by Nickel (1971:2) who sees the role of CA in connection with overall endeavours to rationalise foreign-language teaching and in the general framework of school-teaching, and describes it as being "the quite utilitarian aim of improving the methods and results of language teaching." Thus, there is almost unanimous agreement on the application of CA which should be dedicated for teaching and should cover other areas such as methodology, materials design and syllabus design. In this respect, Lado, as early as (1957:3), had given his account of CA, stressing the fact it should be considered a vehicle for language teaching and for preparing textbooks, which "should be graded as to grammatical structure, pronunciation, vocabulary, and cultural content." The importance of CA is also stressed by James (1980:8) who relevantly observes that "CA is concerned

with how a monolingual becoming a bilingual." Thus, CA is seen to play a potent role because "The information yielded by a CA is of great value not only to the teacher in planning his personal approach but also to the methodologist in writing materials for instruction." (Di Pietro, 1971:8).

1.1.4. Transfer

Researchers are very often interested in defining the term 'transfer' and distinguishing between the two kinds of it. James (1980:11), for example, defines 'transfer' as "The observation that prior learning affects subsequent learning."

It has, however, been pointed out that in foreign language learning, transfer operates 'negatively' when L1 and L2 are different. On the other hand, when L1 and L2 are similar, it is believed that transfer has a positive outcome (Ringbom, 1987, among others) as Lado (1964:40) has suggested:

"if the expression, content, and association are functionally the same in the native and the new language, there is maximum facilitation."

(cited in Krzeszowski, 1990:189).

The influential role of the mother tongue in FL learning has certainly been a matter of debate among linguists, but not of outright denial. Henry Sweet, for instance, who speaks of the strong influence of L1 on L2 by saying that "...it is a hindrance to any thorough knowledge, because of the constant cross-associations that

are sure to present themselves..." (cited in Ringbom, 1987:44).

The clearest evidence for the influential role of L1 manifests itself in the speech accent of L2 learners. In this connection, Cook (1988:185) points out that "adults...never lose their foreign accent." But the effect of the NL is not restricted to accent only, it includes all areas of the language to be learned. As Kellerman (1983:112) relevantly notes "It is also true that the L1 (or other Ls) may affect the L2 in ways that do not lead to convenient calques for the analyst." That is, learners may borrow a term from their L1 and translate this borrowed term into L2 (see Crystal, 1985:40). In his interpretation of L2 learning in terms of UG theory, Cook (1988:184) claims that "L2 learners use their L1 instantiations of UG as a stepping stone..." (note that UG stands for Universal Grammar). Exposing Lenneberg's (1967) position of language learning, Cook (ibid:186) maintains that "Lenneberg insisted that L2 learning was via the L1." A further compelling argument speaking of L1 effect in the learning process of L2 has been outlined by Corder (1983:90) who has said "second language learners not only already possess a language system which is potentially available as a factor in the acquisition of a second language,...". Hence, when faced with L2, it is not unreasonable to assume that a learner is in a state of ongoing mental process as how near, and

far the two languages are. It follows from this that the impact of the already inculcated language cannot be ignored because "he [the learner] will inevitably make comparisons with the language or languages he already knows." (Di Pietro, 1971:9).

In any event, the influence of L1 on L2 is believed to be greater when the two languages are linguistically unrelated (Ringbom 1987, Corder and Schachter 1983). That is, language distance may prolong the L2 learning. This amounts to saying that Arab learners of English (see Mukattash 1977 for interference coming from Arabic) may not be the same as, say, German or French learners of English mainly because there is little language distance between the latter and English while the distance is great between Arabic and English. To this end, Corder (1983:88) observes that "The more distant linguistically from the mother tongue the longer a language takes to learn.". This means that the effect of an unrelated language on the foreign language learner is greater than that of a related one. However, it has been pointed out that slight difference between L1 and L2 may be harder than great difference (see James, 1980:189, among others).

1.1.5. Psychological Basis of Transfer

The term Transfer in second language research is as problematic as in any other discipline. Its long-standing use has generated dissent among linguists and scholars (for those views and sources of transfer 'blind' and

'partial', see Odlin (1987) and Kellerman and Sharwood Smith (1986)).

Though the precise definition of the term transfer is hotly debated, its existence is uncontroversial. But the factors and the circumstances which prompt its occurrence are far from clear. As Sharwood Smith (1986:80) remarks, "that there is transfer is not disputed; however, the conditions on its occurrence and its range are by no means certain."

Thus, the assumption that there is transfer when two or more languages come in contact is not ruled out. James (1980:14) proposes that:

"CA is founded on the assumption that L2 learners will tend to transfer to their L2 utterances the formal features of their L1." And "to the utterances of TL speakers interpretation derived from similar mother utterances." (James, p.c.)

What is now open to discussion is the implications of transfer. The psychological and linguistic research conducted on transfer (Di Pietro, (1971) among others) seemed to hit at the very foundations of the behaviourist approach to second language learning - i.e. Skinner's (1957) stimulus-response model of how language learning proceeds. That is, the foundation of transfer is psychological, for the simple reason that "CA is a hybrid drawing on sciences of linguistics and psychology. This is inevitably so, since linguistics is concerned with the formal properties of language and not directly with learning, which is a psychological component." (James,

1980:11). Although little is known about how psychological factors affect FL learning, yet its importance stems from its focus on the study of the internal factors of learning phenomena because it considers learning a cognitive process. For this purpose, it draws on the application of psychological and psycholinguistic research, where the roots of acquiring language are thought to abide, to FL learning. As Mclaughlin (1987:133) points out "Cognitive theory is based on the work of psychologists and psycholinguists....It represents the application of a broader framework to the domain of second language learning..."

The idea that transfer from L1 into L2 in FL learning has its roots in psychology has gained widespread acceptance. Marton (1981:150) points out that "Taking a psychological point of view, we can say that there is never peaceful co-existence between two language systems in the learner, but rather constant warfare, and that warfare is not limited to the moment of cognition, but continues during the period of storing newly learnt ideas in memory." (cited in Ellis (1985:19).

This suggests that transfer from the mother tongue is not the only source of error, simply because structures transferred have psychological correlates embedded in the brain. As Meisel (1980) emphasises, "Transfer is a psychological process and only what is psychologically real can be transferred" (cited in Fisiak, 1981:111). In

this connection, James (1980:179) distinguishes between the 'mental' and 'psychological' reality of CAs as follows:

"Grammars are structural statements, i.e. they describe the principles on which languages must be organised and stored in the mind by humans. This is what we mean by saying they have mental reality. It is another thing altogether to say that a grammar describes the dynamic processes whereby utterances are synthesised and analysed. If they did, they would indeed possess psychological reality."

To conclude this section, we can say that the psychological interpretation of transfer seems to gather momentum in present day research because it "seems to be a very promising line of development in contrastive studies." (Waldemar, 1981:166).

1.1.6. Resurgence of Interest in Transfer Theory

In the early 1970s, interest in language transfer (i.e. L1 features affects FL learning and performance) was diminishing, if it was not dead altogether. This came as a consequence of the association of transfer theory with the behaviourist approach on which it was based.

The 1980s has, however, witnessed resurgence of interest in language transfer. This has taken place under a new paradigm - i.e. that of **CROSSLINGUISTIC INFLUENCE (CLI)** (or **TRANSFER THEORY**), which subsumes "under one heading such phenomena as 'transfer', 'interference', 'avoidance', 'borrowing' and L2-related aspects of language loss" (Sharwood Smith, 1986:1). Under this new paradigm, transfer studies have become both "respectable and fashionable" (Ringbom, 1987:1). This means that the

criticism of transfer studies has been and is "an exercise in futility" Levenston (1982:174).

The question one can ask here is whether this reappraisal to transfer is just 'old wine in new bottles'. Three reasons, at least, can be adduced to argue that this is indeed a new paradigm (see, for example, the papers in Gass and Selinker (1983) and in Sharwood Smith (1986). The first reason is that studies which refused to deal with transfer in the 1970s "Scarcely got beyond the grammatical morpheme and the acquisition of negation and WH-movement. This left very large areas of uncharted territory both within syntax and outside it where, in principle, L1 influence could play a significant role." (Sharwood Smith, 1986:6-7). The second reason is based on the cognitive mechanisms which underlie transfer. As Wode (1986:174) points out "transfer must be regarded as an important component of the cognitive system underlying the language processing abilities of human beings." The third reason is based on UG studies. There is a growing literature in the area of UG and transfer in F.L. learning. Given the assumption that UG is available in F.L. learning but cannot necessarily interact immediately with the L2 input, the learner's initial hypothesis about the L2 data is that the L1 parameter setting applies to it (cf Hilles 1986; White 1985c and 1986a). That is, the learner uses the L1 parameter value as a means of setting the L2 structures, resulting in transfer effects in the interlanguage (White

1989:80). Thus, the compatibility of transfer with UG and cognitive processes supports our claim that the interest in transfer has emerged under a new paradigm. In this respect, Gass and Selinker (1983:7) have rightly observed that "...one focus of much current work has been to reconcile a language transfer perspective and a cognitive perspective, in general" i.e. to cut the knot that used to bind Transfer to Behaviourist psychology.

1.1.7. The Contrastive Analysis Hypothesis (CAH)

Contrastivists have taken the position that structural contrasts between L1 and L2 are stumbling-blocks in the process of learning a new language (i.e. learners are required not only to learn of something new but also to suppress this in L1 which is already known and will be transferred). As a result errors are an inevitable part of this learning process given the interference of the learner's first language. Similarities between L1 and L2, on the other hand, are considered to work as an aid in the learning process of a second language (cf Zobl, 1982). That is, they make learning unnecessary and transfer profitable.

Given the assumption that L1 interferes with L2 and causes learning problems, supporters of CAH have differed and a yawning gap separated them. Some assume that almost all the difficulties which the language learner may encounter are reflections of his/her first language. This means that CA allows one to predict and identify errors.

Others claim that only a portion of the learner's errors is the result of interference from his/her first language and that CA does not predict but rather explains/diagnoses learner's errors. These opposite views are classified as the strong and the weak version of CAH (Wardhaugh (1970) in Schachter (1983:6-13)).

Lee, among others, cited in Ellis (1985:23), notes that:

"the prime cause, or even the sole cause, of difficulty and error in foreign language learning is interference coming from the learner's native language."

The staunchest advocates of the strong form believe in the possibility of predicting and describing the learner's difficulties if, and when, a systematic comparison of L1 and L2 aspects is carried out. Lado (1957:preface) points out that:

"The plan of the book rests on the assumption that we can predict and describe the patterns that will cause difficulty in learning, and those that will not cause difficulty, by comparing systematically the language and the culture to be learned with the native language and culture of the student."

However, CAH initially gained ground and popularity but soon this faded away when some research findings started to tip the scales and show that L1 has very little impact on L2 and the predictive ability of CAH became doubtful and thus:

"...held sway over the field of applied linguistics and second language teaching for over two decades. Even though it is currently giving way to a more positive view of the role of the first language in second language

acquisition."

(Dulay et al., 1982:96)

Among those who questioned the role of CA in predicting errors are Dulay et al. (1982:97), Snook (1971:18) and Littlewood (1984:19-20), among others. Littlewood, for example, has claimed that "in practice, the claim has not been strongly supported by the evidence." Because errors predicted by contrastive analysis have often not occurred, "whereas many actual errors would not have been predicted."

According to Ellis (1985:24), "The weak form of the hypothesis claims only to be diagnostic. A contrastive analysis can be used to identify which errors are the result of interference. Thus, according to the weak hypothesis, Contrastive Analysis needs to work hand in hand with an Error Analysis." Or as James (1980:184-5), in his exposition of the functions of the two versions of CAH, points out "While the two versions are equally based on the assumption of L1 interference, they differ in that.....The strong version is *a priori*, the weak version *ex post facto* in its treatment of errors."

In brief, then, CAH, drawing on the differences that emerge from CA (which has the predictive power and thus has to be strong versioned), can predict the items/features of the target language that will cause difficulty and the errors that the learner will commit as a result of the difficulty.

1.1.8. Procedures for CA

In contrasting the structures of two or more languages, CA usually follows the following procedures:

1) **Selection:** It is generally agreed that conducting a comparison of two or more languages in their entirety is not practical if not impossible. The alternative procedure, therefore, is the 'Firthian Polysystemic' approach which assumes that CAs specify areas/items of the languages prior to launching their study and investigation. In this respect, Jackson (1981:195) has pointed out that CA is "a systematic comparison of selected linguistic features of two or more languages". In this study, interrogatives have been selected as the area of investigation.

2) **Description:** This involves the description of the features of the two languages to be compared and contrasted. The description of the two languages should be carried out before the comparison and must be done independently but under the same framework. In this sense, Krzeszowski (1990:35) says the following "No comparison is possible without a prior description of the elements to be compared...all contrastive studies must be founded on independent descriptions of the relevant items of the languages to be compared...descriptions should be made within the same theoretical framework", etc, English and SA are described independently but each within X-bar syntax.

3) Comparison of the patterns/elements of the already described languages must be conducted in order to establish the areas of similarities and differences.

4) Prediction: This aims to pre-identify the structures which will cause TL errors and those which will not (cf section 1.1.7.).

However, the order in which we present the procedures for CA differs from the order followed by Ellis (1985:25-26), who allows description first and selection second, with which we disagree because the description of the two languages in their entirety is an impossible task. Thus, selection should come first.

We believe that each of the procedural steps discussed above is inseparable from the other in the sense that CA needs them all to formulate and extrapolate rules which are shared by and common to the two languages involved in our CA and those which are not. Such an endeavour will equip linguists and teachers with better ideas and techniques of teaching a language and will enable them to write materials accordingly, as has been "The task of the linguist, the cultural anthropologist, and the sociolinguist is to identify these differences. The task of the writer of a foreign language teaching programme is to develop materials which will be based on a statement of these differences; the task of the foreign language teacher is to be aware of these differences and to be prepared to teach them; the task of the student is to

learn them." (cited in Schachter, 1974:7-8).

1.1.9. Attack v Catalyst

By early 1970s, CA had been challenged and a lot of criticism had been levelled against its foundations and motives, which emanated from studies of language contact in bilingual and trilingual communities, and from foreign language teaching and learning. More generally, the predictive validity of CA came under attack from those who had seen little empirical evidence of L1 interference (Dulay et al., 1982). These criticisms had been voiced by linguists including Upshur (1962), Pit Corder (1967), Dirven (1976), Sanders (1976), Wilkins (1968), Lee (1968), Lieb (1978), Duskova (1976), among others.

These people pronounced their critical views when CA was still in full force then suddenly there was a serious crisis of confidence. As Selinker (1971:1) surprisingly declared "a serious crisis of confidence exists as to what it is" which led Wardhaugh (1970) to forecast a 'period of quiescence' for CA. Pinpointing the sources of these criticisms, Fisiak (1981:6) points out that:

"most of the criticism has come from those quarters which consider contrastive linguistics in toto as part of applied linguistics. This is a misunderstanding which stems partly from developments in the United States in the fifties and early sixties as well as from the lack of awareness of the history of contrastive linguistics and developments in the field both in West and East Europe (cf Corder, 1975; Dirven, 1976; Sanders, 1976; and Lieb 1978)."

As stated earlier, these criticisms had been directed

at the motives -i.e. the usefulness of CA in predicting errors and at the theoretical foundations upon which CA is established.

By the early 1980s, CA had gained a fresh impetus which revived its confidence. This revived confidence in CA can be attributed to various developments. The 'Chomskyan revolution' in linguistics deactivated the doubts expressed at the foundation of CA by claiming the existence of 'Universal Grammar' (1981). In doing so, Chomsky not only made "it [CA] possible for the comparisons to be more explicit and precise, but also giving it [CA] what seemed to be a more solid theoretical foundation by claiming the existence of 'language universals'" (Sridhar 1981:209)

One of the major criticisms made against the theoretical foundations of CA is Dickerson (1974) in Fisiak (1981:220), namely that "contrastive analysis, by denying the 'variability' (i.e. presence of a wide assortment of pronunciations) and the 'systematicity' characteristic of the learner's output, is necessarily forced to predict 'categorical' (i.e. non-variable) performance, which does not exist."

Sridhar (1981:220) describes Dickerson's criticism as:

"one of the most serious criticism levelled against CA and calls for a deliberate response. There is nothing in the contrastive analysis hypothesis that denies the learner's language systematicity: in fact, the very premise of predictability is the systematicity of the learner's performance. On the question of 'variability', it is true that none of the current models of contrastive analysis incorporates this feature. After all, variability still

remains a challenge to descriptive linguistics as well, and contrastive analysis can only be as good as the description on which it is based."

James (1990), defending the theoretical foundations of CA, rightly observes that it has been the influence of Chomsky's (1981) theory of 'Universal Grammar' and the associated idea that language particulars are the reflection of selections from a fixed set of parameters (e.g. pro-drop parameter) that has helped revitalise CA. Ascertaining the fact that CA's power is derived from the power of the theoretical basis on which it is established, James (ibid:206) goes on to say that:

"CA can only be as powerful as the linguistic theory upon which it is predicted: we now see that with the development of the Chomskyan syntax there is a scope for parallel development in CA. However, in view of the enormous technical sophistication of modern syntax, CA is no longer easy to do and is not for the faint-hearted."

On the issue of the second type of challenges levelled at CA's capacity to predict interference, James (1971;1980;1990), Fisiak (1981) and Ringbom (1987) among others, stood up to these challenges and disproved their claims and assumptions. From then on, CA appeared to take on a different tone. I will refer to a few of these major criticisms.

One of the major criticisms is that CA claimed that NL [Native Language] interference is the sole or only source of errors. James (1971) answers this criticism by saying that CA never claimed that NL interference was either the

sole or at least the main cause of learning difficulty.

The second criticism levelled against CA is that the predictions of students' errors in L2 made by CA are not reliable.

This criticism is identical to that of Wilkins' which involves 'unpredictable alternation between two potential substitutions'

James (ibid) also ably answers this criticism by pointing out that "The most regrettable feature of such criticism is that it imputes to CA claims that have never been made for it: CA has never claimed to be able to predict all errors, nor has it claimed linguistic omniscience about which choices speakers will make."

The third major challenge of CA is that CA only conceives of interference in one direction- i.e. from L1 to L2.

Once more, James (ibid) strongly refutes this challenge by saying that "CA has emphasised this direction of interference, and rightly so, since it is the form most prevalent in L2 learning, and after all, CA is interested in teaching the L2, not the L1."

The fourth major criticism of CA is that the results of CA have no immediate use in the classroom.

Fisiak (1981:8) challenges the validity of this claim which presents "several misunderstandings. Firstly, nobody wants to use the results of theoretical contrastive studies in the classroom. As Sanders (1976), cited in

Fisiak (ibid), has aptly put it "To use the results of CA (Contrastive Analysis) raw in the classroom is rather like presenting a customer in a restaurant with the ingredients and a recipe.' Secondly, even applied contrastive studies will have to select from a contrastive grammar the minimum that students at a certain age and with a certain educational and linguistic background can digest."

The fifth major criticism of CA is that many errors which do turn up are not predicted by contrastive analysis.

This sort of argument neither belittles the importance of CA nor invalidates its applicational and pedagogical goals. To this effect, Sridhar (1981:219) suggests that "the failure of the predictions of contrastive analysis in particular instances does not necessarily invalidate the theory itself. All that it shows is that we need a more precise characteristic of what type of, and under what conditions, prior linguistic knowledge is made use of." To those who have been and are less sanguine about the usefulness of CA to FL learning and teaching, Jackson (1981:197) has the following to say "Contrastive analysis will predict areas of potential error and explain actually occurring errors which are caused by interference from the mother tongue of the learner." In any case, suffice it to say that the relevance and importance of CA (despite the unfair criticisms that have been levelled against it) to pedagogical concerns is not seen in present day research

only, but it is also taken to be the future tool of these concerns. In this respect, Selinker (1990:137) declares the following "...no matter how hard some of us have tried, we have never been able to leave the contrastive perspective, nor can we."

1.1.10. Conclusion

From our discussion on CA, we conclude that in spite of all the severe criticism, CA has received the 'kiss of life' from Chomsky's publication on 'universal grammar' (1981), and the fervent defence of its staunchest adherents (e.g. James, Ringbom, Fisiak, Krzeszowski, Di Pietro, Selinker, among others) who argued that CA's validity stems from the fact that CA is no longer confined to dealing with the sentence level (see Fisiak (1990), but it has gone way beyond that and widened its perspective by covering areas like discourse and text analysis, contrastive rhetoric, pragmatics, and by dealing with the world's (non)major languages .

Moreover, the establishment of international conferences and symposia on theoretical and applied CA and its study of cross-linguistic influences and language teaching/learning has proved the catalyst of CA against all the invalid and sometime unjust critical voices which were trumpeting the 'a posteriori' version of CA - i.e. they were stressing the explanantory value of CA rather than the 'a priori' or predictive version. If this were so, one is really left to wonder as to why CA is included

in the methodology of error analysis, as Sridhar (1981:219-220)) has pointed out that "recent developments in the theory and methodology of error analysis and interlanguage have explicitly incorporated the assumptions and methodology of contrastive analysis in their models. Saying that contrastive analysis should be only one component among others of target language methodology is not a criticism of contrastive analysis *per se*- after all, it was meant to be exactly that." In brief, CA is not and cannot be a panacea accounting for all learning errors.

1.2. Error Analysis (EA)

The investigation of the FL learners' errors has been the perennial concern of linguists, researchers and curriculum developers alike. In order to account for these errors, CAs have been conducted, but it is soon realised that CAs can account for only a small proportion of these errors (i.e. those resulting from interlingual disturbance) and also that there are errors which could neither have been predicted nor explained by CAs. Then, on this basis, a serious interest began to be taken in traditional EA, which, in the words of Krzeszowski (1990:190) was:

"an *ad hoc* attempt to deal with the practical needs of the classroom teacher. It was confined to impressionistic collections of "common" errors and their classification into various categories, such as phonetic errors, grammatical errors, stylistic errors etc. More sophisticated error analysis would attempt to analyse the source of errors [e.g., source language interference, overgeneralisation, etc..].

This serious interest in EA emanated perhaps from the

fact that the scope of EA is broader than CA, in that the former also accounts for errors which are non-contrastive in nature. It highlights the learner's strategies (see R. Oxford, 1990), which are, allegedly, not catered for by CA. EA focuses on the learner rather than the teacher, because it is the learner who is actually committing (non)interlingual errors regardless of the teaching method. Krzeszowski (1990:191) notes that:

"A new approach to error analysis emerged when the focus was shifted from teaching to learning, as a consequence of the idealization that learning strategies do not necessarily correspond to teaching strategies."

Moreover, EA was considered to be free of the severe theoretical problems discussed in section 1.1.9. here (e.g. equivalence, Wardhaugh (1970) which have surrounded CA. Furthermore, EA has allegedly offered a refreshing alternative to errors, which had been looked upon as 'sin' (Brook, 1960). As Dulay et al. (1982:141) state:

"It [EA] has succeeded in elevating the status of errors from complete undesirability to the relatively special status of research object, curriculum guide, and indicator of learning stage."

It was, then, these considerations which endorsed the usefulness of conventional error analysis vis-a-vis contrastive analysis in planning pedagogical material and undertaking therapeutic lessons and exercises.

However, EA with its claim of accounting for learning errors more effectively than CA, has recently been shown to be otherwise. Studies conducted by Doskova (1969), Banathy and Madarasz (1969), Richards (1971b), Schachter

(1974), and Celce-Murica (1978) concluded that:

"there are those that do not surface in error analysis, and that error analysis has its role as a testing ground for the predictions of contrastive analysis as well as to supplement its results"

(Sridhar, 1981:223)

Along these lines, Ringbom (1987:71) says:

"Error analysis is not sufficient on its own, but it may yield a better understanding of what is going on in the learner's mind, especially if it is combined with other types of investigation, such as frequency counts, contrastive analysis"

Stressing the fact that EA has its own shortcomings and that it should complement CA, Waldemar (1981:165) notes that "Error analysis itself does not explain anything explicitly, it only shows what types of error occur but not why they occur". Thus, there is considerable evidence to indicate that EA cannot cater for learning problems and that not a great deal is expected to be gained from studies carried out using EA alone. In other words, the results and role of EA are seen to supplement that of CA.

In any event, it has been stressed that errors will occur in the process of learning a language. The occurrence of these errors has been attributed to sources (Corder in (Schachter, 1974)). The first school of thought maintains that the shortcomings of the learning method are responsible for the occurrence of the learner's errors. The second school of thought is that as long as we live in an imperfect world, learning errors are bound to occur, no matter what.

1.2.1. What is an Error

Living in an environment requires a language learner to communicate. It is in the process of the communication (composition or conversation) that a learner produces those utterances which do not conform to the rules of the native speaker's language. The end result, therefore, is an error -i.e. "any deviation from a selected norm of language performance, no matter what the characteristics or causes of the deviation might be" Dulay et al. (1982:139).

Given the inevitability of the occurrence of learning errors, errors have been eyed with interest and considered as a healthy sign for learning, Corder (ibid), Edge (1989), James (1990), and Dulay et al (1982). To this effect, Ellis (1985:9) points out that:

"errors are important source of information about SLA, because they demonstrate conclusively that learners do not simply memorize target language rules and then produce them in their own utterances. They indicate that learners construct their own rules on the basis of input data."

This suggests that the language-learner's language is in the process of development. Corder (in Schachter (1974)) observes that errors are systematic deviations due to the learner's still developing knowledge of the L2 rule system.

Errors can also be defined in terms of 'input' and 'output'. For George (1974), whenever the 'input'-i.e. the learner's potential 'knowledge' of the target language through his teacher or course material- does not match

'output' -i.e. the learner's own written or spoken production- errors occur. He (ibid:158) illustrates this point with the following:

IN-----black box-----OUT

The input stands for the student's knowledge of the target language which he intakes from the environment. The black box stands for the student's brain, where knowledge or information of the target language is stored. The output stands for the student's performance of the target language, which can be faulty because of time pressure between input and output, memory lapses, slips of the tongue, etc. Thus, whenever, input did not match output, the result was an error, and visa versa. George (ibid) claims that "It is by observation of the difference between input and output that we deduce their [errors] nature and manner of functioning."

1.2.2. Procedures for EA

- 1) Collection of a corpus of data which involves extracting errors from the learner's composition or conversation, examination scripts, or using special elicitation procedure.
- 2) Identification of errors, which consists in describing the nature of the errors, e.g. sequence of tenses, etc.
- 3) Classification of errors into types: whether they are learner-internal (i.e. overgeneralisation) or learner-external (inadequate teaching).
- 4) The frequency of errors be stated in relative terms.

- 5) Identification of the areas of difficulty in L2.
- 6) Therapy.

To these steps, linguists such as Doskova (1969), Rossipal (1971) add the following:

- 1) Investigation of the source of these errors-i.e. L1 interference, overgeneralisation, incomplete application of rules, etc.
- 2) Evaluation of the degree of the difficulty caused by the error.

1.2.3. Classification of Errors into Types

The frequent occurrence of errors motivated researchers to distinguishing and to classifying errors according to their types. The first type of classification and distinction is often drawn between 'errors of performance' and those of 'competence'. Errors of performance are so-called because they are triggered by physical tiredness, inattention etc, which Chomsky (1965) labelled as 'performance factors'. Errors of competence however are ascribed to the lack of the underlying knowledge of the language.

The difference between the first type and the second type of errors is that the former is 'unsystematic' while the latter is 'systematic'. Moreover, the former is referred to as 'mistakes', while "reserving the term error to refer to the systematic errors of the learner from which we are able to reconstruct his knowledge of the language to date - i.e., his transitional competence"

(Corder in Schachter (1974:168)).

Because of their importance to language learning, we can elucidate the difference between 'mistakes' on the one hand, and 'errors' on the other. Following Corder (1974:168), "mistakes are of no significance to language learning" (cf Johnson's (1988) view that it is only 'mistakes' that need concern us, not 'errors')). This is because of the fact that under strong emotions and time pressure a (non)native are alike in the sense that both make mistakes in this sort of circumstances. Moreover, given that mistakes are unsystematic means that "the learner will be able to recognise the mistake himself and correct it afterwards." (Littlewood, 1984:32)

Errors, on the other hand, are systematic. Their occurrence reflects the developmental process of the L2 learner. This means that they are of relevance and of importance to acquiring a language. Corder (ibid:168-9) observes their relevance and importance, which we can summarise as follows. Firstly, depending on them, we can gauge the learner's development as how far he has come in the path of learning, and how far he has still to go along that path. Secondly, they highlight the ways and means of learning a language- i.e. what tactics and strategies the learner uses in acquiring the L2. Finally, they are a crucial aspect of the learning process, because their occurrence indicates that learners must be testing hypotheses about the nature of the language being learnt

by both children as well as foreign language learners.

However, the distinction between 'mistakes' and 'errors' entails that even competent native speakers make mistakes of which they are immediately aware, e.g. He wroted which is instantly corrected into he wrote. In this sense, my concern is the investigation of errors in the English of Syrian learners.

There is another type of incorrect use of forms which can neither be called mistakes nor errors. It is called Lapses (Norris, 1983:8). Given that Lapses result from fatigue, both (non)natives are thought to make them, e.g. * we went to Snowdon and ate ghetto instead of we went to Snowdon and ate gateau.

The classification of errors in FL learning is also carried out with regard to the two major taxonomic categories they fall into - i.e. whether they are developmental or interlingual.

Developmental errors are those which result from the application of false hypotheses to L2 presumably because of the inadequate exposure to it. Children's acquisition of their first language as the target language is seen as developmental errors (Dulay et al. 1982:165), e.g.

(2)* Dog eat it

Richards (1974:274) points out that the reason for calling this type of error developmental "comes from noting similarities to errors produced by children who are acquiring the target language as their mother tongue."

Interlingual errors, on the other hand, "simply refer to L2 errors that reflect native language structure, regardless of the internal processes or external conditions that spawned them (Dulay et. al, 1982:171)". That is, the L2 learner's application of L1 structures which have no equivalent in L2 results in Interlingual errors. According to Dulay et, al (1982), the research findings, they cite, show that most of the errors made by L2 learners are developmental.

There are some errors which are classifiable neither as developmental nor as interlingual because they exhibit the characteristics of both FL learning and CLA. These have been classified as 'ambiguous' errors (and I can classify them as 'hybrid' errors) simply because they "reflect the learner's native language structure, and at the same time, they are of the type found in the speech of children acquiring a first language, as in (3), (Dulay et al. (1982:172)).

(3)* I no have a car

Errors are further classified according to the way learners produce L2. These errors may involve the 'omission' of certain prerequisite items, or the 'addition' of some other superfluous ones. They may also involve the 'misformation' or even 'misordering' features of the L2 which they attempt to learn.

1. Omission

Omission errors are characterised by the nonoccurrence

of an obligatory element in a syntactically well-formed structure, e.g.

(4)* He in the kitchen

the ungrammaticality of the above example results from the fact that the learner has omitted the copular 'is' from the sentence - hence it is ill-formed. The disappearance of 'is' is referred to as the omission of 'grammatical morphemes' which "play a minor role in conveying the meaning of the sentence (Dulay et al., 1982:155), in contrast to 'content morphemes' (i.e. nouns, adjectives, verbs) which "carry the burden of meaning". It has been noticed that "Language learners omit grammatical morphemes much more frequently than content words (Dulay et al., *ibid*).

2. Addition

Addition errors are just the opposite of omission errors in that they are characterised by the appearance in a grammatical structure of an element which should not appear. This type of error can be subdivided into three categories: double markings, regularisation, and simple additions.

(a) Double markings involves the simultaneous assignment of the same feature to two elements. Some L2 learners assign the tense feature (past or present) to AUX as well as lexical verbs, e.g.

(5)* Did you went home?

"These errors are good indicators that some basic rules

have been acquired, but that the refinements have not yet been made (Dulay et al., 1982:156).

(b) Regularisation involves the application of a certain rule of regular forms on those irregular. Regularisation errors affect mainly the classes of 'verbs' and 'nouns', as the following illustrate:

(6)a.* He eated the apple

b.* The sheeps are in the field

The erroneous form of these examples results from the fact that in English a certain class of verbs (e.g. irregular ones) and nouns (e.g. collective ones) do not take a past tense marker (ed), or a plural marker (s).

(c) Simple additions: whenever errors cannot be characterised as being instances of double markings or regularisation, they are labelled as 'simple additions'. In general, simple addition errors refer to the existence of an element in a well-formed structure, as in (7):

(7)* You cannot asked me this question

3 Misformation errors: are marked by the supplement of the wrong morpheme or structure, e.g.

(8)* I went to see the doctor hissself

where the learner instead of correctly using 'himself' as the reflexive pronoun, he mistakenly opts out for 'hissself'.

4 Misordering errors: refer to the incorrect positioning of words or morphemes in a clause. It affects both simple and embedded clauses. For instance, in my study of the

acquisition of English Y/N and Wh-interrogatives, learners are anticipated to misorder the positions of the main verb and the subject, as shown below:

(9) a.* [_vBought] [_s John] a car?

b.* I do not why [_vbought] [_sJohn] a car

Zobl (1983) argues that the transfer of word order varies with the chronological age in which a foreign language is acquired.

Having categorised errors in accordance with the taxonomic classifications they fall in, we will now look at the sources of these errors. For Krzeszowski (1990), Doskova (1969), Richards (1974), among others, the source of these errors lies in: mother-tongue interference, over-generalisation, false application of rules, which means that there is more than one source to errors made by L2 learners (Ellis, 1985).

1.2.4. Overgeneralisation

Over-generalisation means that the L2 learner extends an already acquired rule. In other words, overgeneralisation is interference from other (known) forms of L1 to cases in L2 where it does not apply. For instance, the L2 learners in my study are expected to overgeneralise the use of if to include whether, as we shall see in chapter 7. The strategy of overgeneralisation suggests two things: Firstly, overgeneralisation errors are an inseparable part of the learning process. Secondly, errors of overgeneralisation occur regardless of L2

background.

From the learnability standpoint, transfer and over-generalisation are one and the same thing. Both are used by the L2 learners as a strategy of learning. Along these lines Littlewood (1984:25) has suggested the following:

"Transfer and overgeneralisation are not distinct processes. Instead, they represent aspects of the same underlying strategy....In the case of overgeneralisation, it is his previous knowledge of the second language that the learner uses. In the case of transfer, the learner uses his previous mother-tongue experience as a means of organising the second language data."

1.2.5. Avoidance

Avoidance (Schachter, 1974) means that L2 learners avoid using certain TL forms (lexical or syntactic) in a given task. In this investigation, for instance, some cases of avoidance in the formation of Y/N and Wh-interrogatives are predicted and the predictions put to the test.

What exactly triggers recourse to the avoidance strategy is not known yet. But one reason reinforces of its use might be that the TL structure does not exist in L1. Another reason might be 'covert cross-linguistic' factors -i.e. unanalysed knowledge and gaps of knowledge between L1 and L2 (Ringbom, 1987).

1.3. Interlanguage

In learning a foreign language, the language learners language (i.e. interlanguage = IL) goes through sequential linguistic patterns. In describing these patterns, Selinker (1969) was the first to introduce the term

'interlanguage' and to hypothesise "the existence of a separate linguistic system based on the observable output which results from a learner's attempted production of a TL norm" (Schachter, 1974:176).

Since then, a number of labels have been used to refer to the learner's linguistic systems. Of these Corder's (1971a) 'transitional dialects'; Nemser's (1971a) 'approximative systems'; James' (1980) 'interlingua'.

Selinker identifies five major (and some minor) processes which determine the formation of interlanguage in FL learning. These processes are as follows:

- 1) Transfer from the source language.
- 2) Transfer of training, which refers to IL form that originated in the way in which drills and exercises are presented (cf Zobl 1982).
- 3) Strategies of second language learning, which consists in the tendency to reducing the target language to a simpler system which often results in omission errors (R. Oxford 1990; O'Malley & Chamot 1990).
- 4) Strategies of second language communication (Faerch & Kasper, 1989), which consists in the tendency to ignore certain grammatical items which the learner feels are not crucial for communication.
- 5) Overgeneralisation of target language linguistic rules, which consists in stretching the use of certain linguistic form to cases in which they do not apply.

According to Widdowson (1975b:12), Selinker's five

central processes amount to a simplification strategy which helps the learner in reducing the L2 into manageable proportions, presumably to internalise it, as Widdowson (ibid) remarks:

"all of the processes which Selinker refers to are tactical variations of the same underlying simplification strategy"

From Selinker's definition, it becomes obvious that the learner's IL is a distinct linguistic system from L1 and L2 despite the fact that its grammar and phonology are moulded by L1 and L2 patterns. This distinction is emphasised by Nemser (1974:54), who claims that "the frequent and systematic occurrence in non-native speech of elements not directly attributable to either LS [source language = L1] or LT [target language = L2]."

1.4. Fossilization

The term 'fossilization' was also introduced by Selinker (1969). It refers to some linguistic features and rules of L1 which become, so to speak, sedimentary in the learner's 'interlanguage' and lead to errors. "Sedimentary" in the sense that the L2 learner retains them in his/her 'interlanguage' regardless of his/her age and amount of time received for instruction. Among the errors, for instance, which has almost become fossilised in the 'interlanguage' of Arab learners of English is the resumptive pronoun, e.g.

(9)* The lady that we met her in town got married

Other instances of fossilised errors which are frequently mentioned in the literature include the French uvular /r/ in English interlanguage (Selinker, 1974:177). According to Ellis (1985:48) errors of fossilisation are not persistent and a learner may well be able to use the target language correctly, but only when confronted with meaning that "he will 'backslide' towards his true interlanguage norm."

1.5. Language Learning Strategies

In their attempt to learn a FL\SL, learners are believed to solve problems (especially L1 transfer) that may arise as a result of gaps in their vocabulary (Varadi, 1983) in L2 linguistic knowledge, and as a result of hypothesis forming/testing which learners establish as they go about learning their L2 (Faerch & Kasper, 1983). To solve these problems, learners use learning strategies whose roots research findings trace to cognitive psychology. James (1991:321, reviewing O'Malley and Chamot, 1990), remarks that "The book sets itself two targets: (i) to establish a connection between work in cognitive psychology and in second language acquisition research." Note that I am concerned with the first target only.

Strategies of Language learning are defined as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to new situations."

(James 1991:323). As the definition states, learners employ strategies not just for overcoming problems and gaps in their L2 knowledge, but also for creating the sort of more palatable and favourite way via which L2 learning becomes 'easier and effective' adoptable in situations learners are not familiar with.

Strategies used for language learning fall into three macrostrategies (according to Tarone 1980) and into two macrostrategies (according to Oxford 1990).

Tarone's three macrostrategies are: **learning strategies**, **production strategies**, and **communication strategies**. Each of these is further subdivided into microstrategies.

Learning Strategies are used by the L2 learner to process the input data of L2. The microstrategies into which these fall are 'memorising' and 'overgeneralisation'.

Production Strategies are employed by the L2 learner to put what he has already acquired into practice: use L2, say, in delivering a short talk about the learner's country.

communication Strategies, L2 learner uses these strategies more to ask questions about meaning than anything else. Perhaps because he does not possess enough vocabulary and grammar of the target language as yet. In this connection Corder (1983) points out that "they [communicative strategies] are a systematic technique employed by a speaker to express his meaning when faced

with difficulty."

Oxford's macro-strategies, on the other hand, are **direct strategies** and **indirect strategies**.

Direct strategies are so called for two reasons. The first is that these are directly related to L2. The second is that L2 requires 'mental processing'. Direct strategies are subdivided into the following micro-strategies:

1) **memory strategies**, which help the learner to retain and bring up input data.

2) **cognitive strategies**, which aid him to comprehend and produce L2 linguistic knowledge.

3) **compensation strategies**, which benefit him in overcoming the gaps of his information in communication.

Indirect strategies are so called because these supposedly do not bear direct and immediate relation to L2. The subbranching of these into further sets is as follows:

1) **metacognitive strategies**, which refer to L2 learner's control of his learning process.

2) **affective strategies**, which enable the L2 learner to stabilise and regulate emotions, motivations, and attitudes.

3) **social strategies**, which refer to L2 learning through interaction with others. Asking questions is the major feature of social strategies.

However, while strategies discussed in Tarone (1980) and those discussed in Oxford (1990), among others, are

seen as vital to FLL in that L2 learners find them facilitating , perhaps the unconvincing side of Oxford's classification of Language Learning Strategies into 'direct' and 'indirect' is that the latter, together with its subdivision into (metacognitive, affective and social) is of no immediate relationship to L2. This statement seems unreasonable. James (1991:324) rightly notes that "Since the human being functions as a psychological entity and as a number of variables such as age, sex, personality and motivation is said to affect the choice of both of them, it is only logical that they overlap."

1.6. Linguistic Theory in Foreign Language Learning

There has been masses of studies in F.L learning. These studies have progressed impressively in the past six years or so using the GB framework and exploring ideas about movement (Flynn and O'Neil 1988, Eubank 1989, White 1989, among many others). These studies have committed itself to a practical goal, namely how best to teach languages.

Using the GB framework outlined in Chomsky (1981), White (1989) tries to explore the potential relationship between linguistic universals and second language acquisition. White's particular concern is with principles and parameters approach to UG. Thus, the driving force for UG lies in the description and examination of the final products - i.e. adult (and child) grammar in all its complexity. However, to say UG consists of principles, rules and prarmeters does not mean UG is intended to

account for all aspects of learning. Properties that are specific to a language will have to be learned. That is, third person singular -s in English is language specific and has to be learned.

Current foreign language learning research using the theory of UG as expounded in Chomsky (1986) has, in the words of Flynn and O'Neil (1988:1), led to "important theoretical and empirical advances in the field of adult second language (L2) acquisition..". The fundamental reason for this development can be attributed to the linguistic research which shifted focus "from behaviour or the products of behaviour to states of the mind/brain of the person who knows a language" (Chomsky, 1986:3).

The purpose of UG approach to L2 acquisition has been to examine the extent to which UG is useful in explaining the L2 acquisition process. By using X-bar, a subtheory of GB (more on this will follow in Chapter Two), Flynn (1988, 1988:76-89) has experimentally tested the hypothesis that UG most directly characterizes the L1 acquisition process and does not make explicit predictions about the adult L2 acquisition process. Her results suggest that the adult learner can still access principles of UG in the development of the L2 grammar.

The aim of this section has been to pinpoint the usefulness/application of a specific linguistic theory and its consequences as a base, e.g. GB to which we will turn in Chapter Two.

1.7. Summary

In this chapter, I have characterised the essentials of CA and EA in a preparation for two later chapters, in particular: chapter 5, where I execute a predictive CA and chapter 7, where I analyse the errors (using standard EA procedures) elicited from the same subjects.

In a word, in this study, EA serves as a validation instrument for CA.

CHAPTER TWO

The Structure of IP in English and Syrian Arabic

2.0. Overview

This chapter consists of the following main sections. Section 2.1. offers preliminaries to the descriptive part of this thesis. Section 2.2. deals with English IP clause structure. Section 2.3. discusses the distribution of constituents within the English IP. And finally section 2.4. considers the IP system in SA. Each main section is divided into subsections.

2.1. Preliminaries

i) Why X-bar Theory?

Mention was made in the Introduction of the fact that the descriptive work in this study is formulated within the framework of X-bar theory. X-bar theory has been chosen as the framework of this investigation for various reasons. First, the theory in question is highly developed and dominates the scene in present day syntax research in terms of phrase structure. Second, it is viewed as the best model for conducting contrastive studies because of the mediation of transformational rules between abstract 'underlying' structures and their surface counterparts. In other words, X' is so rich because it combines phrase structure with transformations, as we shall presently see.

ii) Why is X' Relevant to the Applied Linguist?

The notion of 'head' is at the centre of X-bar theory. It claims that every phrase contains a corresponding

'head'. The 'head' in X-bar theory is the 'one obligatory element of a phrase. For instance, the head noun [N] 'lion' in (1) is an element that we cannot delete, e.g.

(1) The [_Nlion] is in the cage

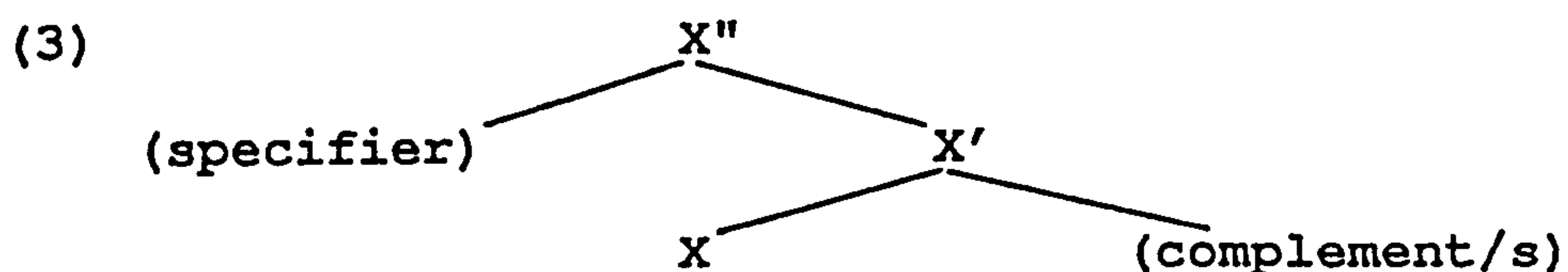
Cook (1988:87) says that the phrase structure of sentences like in (1) "is a hierarchy that proceeds from the largest constituent in the sentence downwards, each constituent successively consisting of other constituents, until only single items are left." This means that the sentence in (1) can successively be broken down into its smaller components in the manner indicated in (2) below:

- (2) (a) |-----|-----|
 |NP the lion |VP is in the cage |
 (b) |-----|-----|-----|
 |Det the |N lion |VP is in the cage |
 (c) |-----|-----|-----|-----|
 |Det the |N lion |V is |PP in the cage |
 (d) |-----|-----|-----|-----|-----|
 |Det the |N lion |V is |P in |NP the cage |
 (e) |-----|-----|-----|-----|-----|-----|
 |Det the |N lion |V is |P in |Det the |N cage |

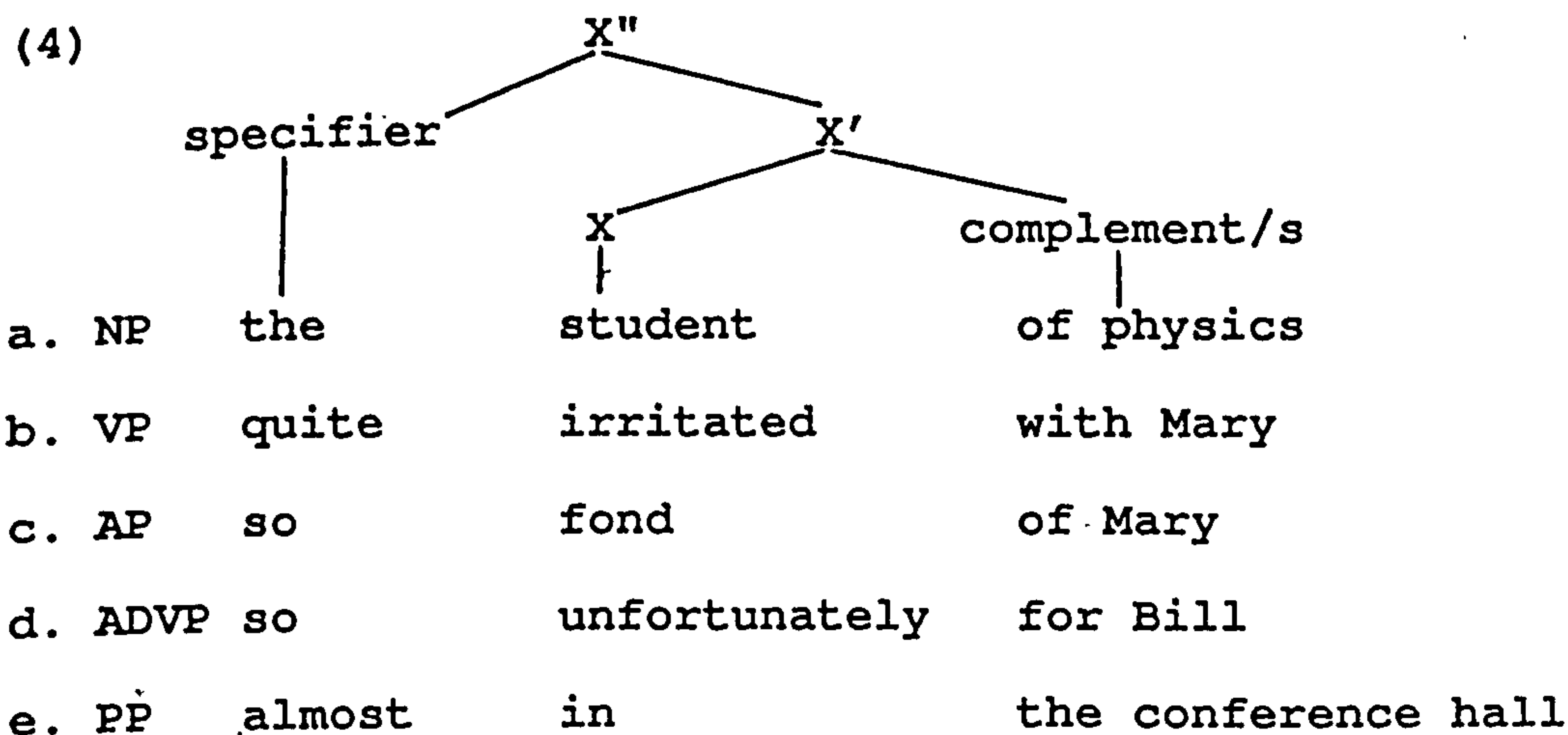
Thus, the [N] 'lion' is the obligatory element of the phrasal constituent NP in (2a). The [V] 'is' the obligatory element of the phrasal constituent VP in (2b). The [P] 'in' is the obligatory element of the phrasal constituent PP in (2c), and so on. In other words, these phrasal constituents contain 'heads' "upon which the other elements of the constituents in question are dependent." (Horrocks, 1987:63).

Instead of saying [N] is the of NP, [V] is the head of VP, etc, we can use the variable X which stands for any

phrasal or lexical category within X-bar theory. Chomsky in Remarks on Nominalisation (1970) assigned the following structure to phrases:



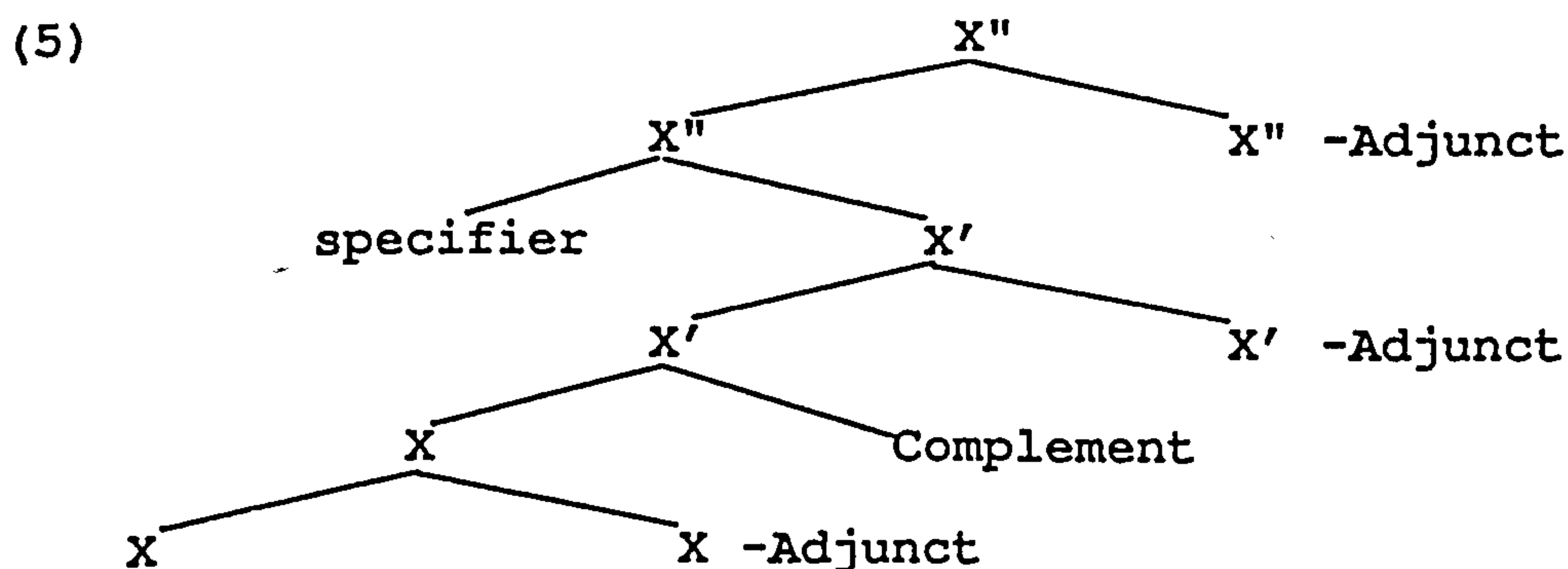
This means that the head or lexical category X in the X-bar schema can be expanded into X' by a following complement or complements, and into X'' by a preceding specifier. Stated somewhat differently, X-bar theory provides principles for how lexical categories can be projected into phrasal categories; and formulates a general principle -i.e. the Projection Principle, which requires the projection of lexical properties onto all levels of syntactic representation, e.g.



As is evident, a phrase of any category consists of two layers: X'' together with an immediately following X' form one layer. And X' together with an immediately following X form another. Cook (1988:100) remarks that "X-bar theory

proposes that all phrases in all languages (the underlining is mine) share a simple cell-like structure with two levels, one of which (X'') consists of the head (X') and possible specifiers, the other of which (X') consists of the head (X) and possible complements."

Note that the X-bar schema in (4) above does not make provision for *Adjuncts*, which, according to Radford (1988:255) have the function of recursively expanding a given category into another category of the same type. Radford (ibid) claims that there may be three different types of *Adjuncts*: double-bar *Adjuncts*, single-bar *Adjuncts* and zero-level *Adjuncts*. All three types can attach at different categorial levels as schematised in diagram (5) below:



One way of looking at the differences between *Adjuncts* and *Complements* is that *Adjuncts* (according to Borsley 1991:61-5) are not associated with specific lexical categories as is the case with *Complements*. Another difference between *Adjuncts* and *complements* is that the latter tend to be obligatory in contrast to the former, which are always optional. The following examples

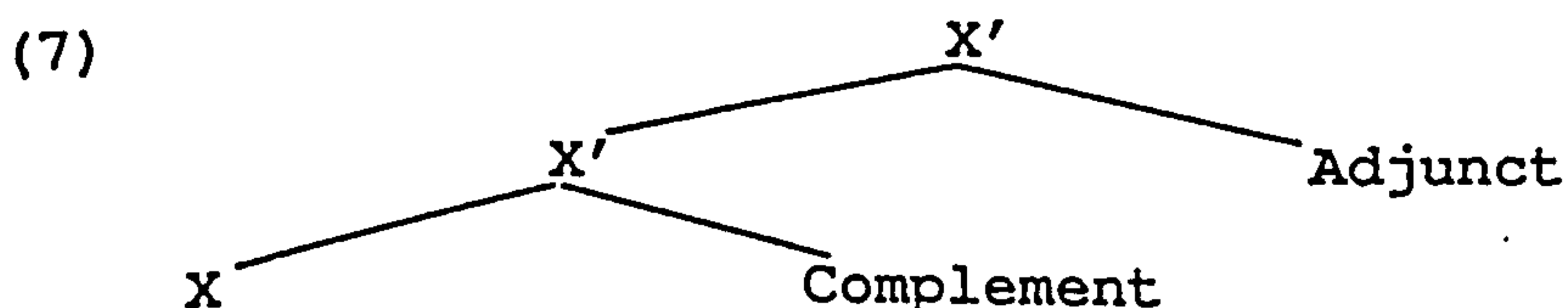
illustrate this:

(6) a. John saw Mary in the pub

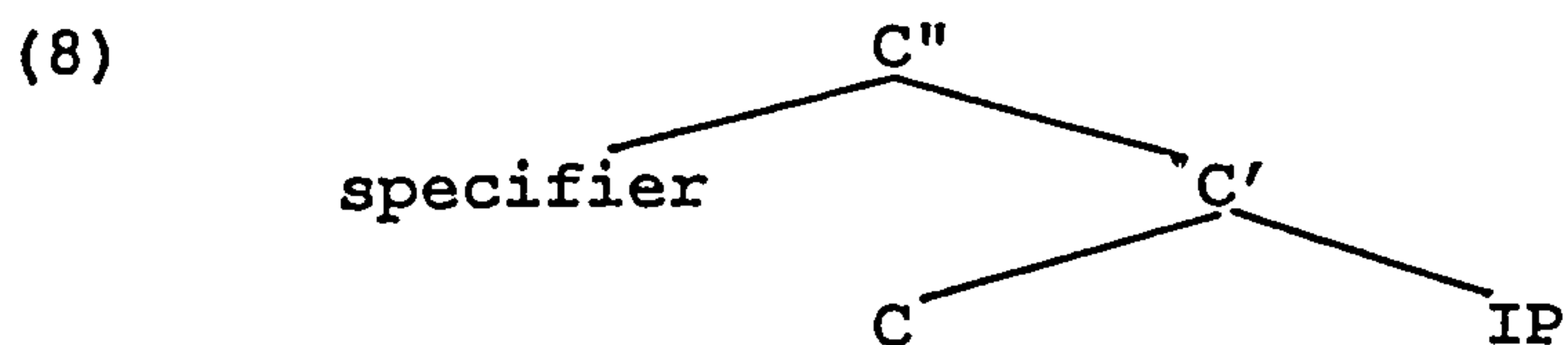
b. *John saw in the pub

The reason why Mary in (6a) is obligatory is because it is a Complement. Similarly, the reason why in the pub is optional is because it is Adjunct.

Insofar as a structural contrast is concerned, the general assumption (Borsley *ibid*) is that Complements combine with a lexical category to form a related intermediate phrasal category in contrast to Adjuncts, which combine with an intermediate category to form the same intermediate category as in (7) below:

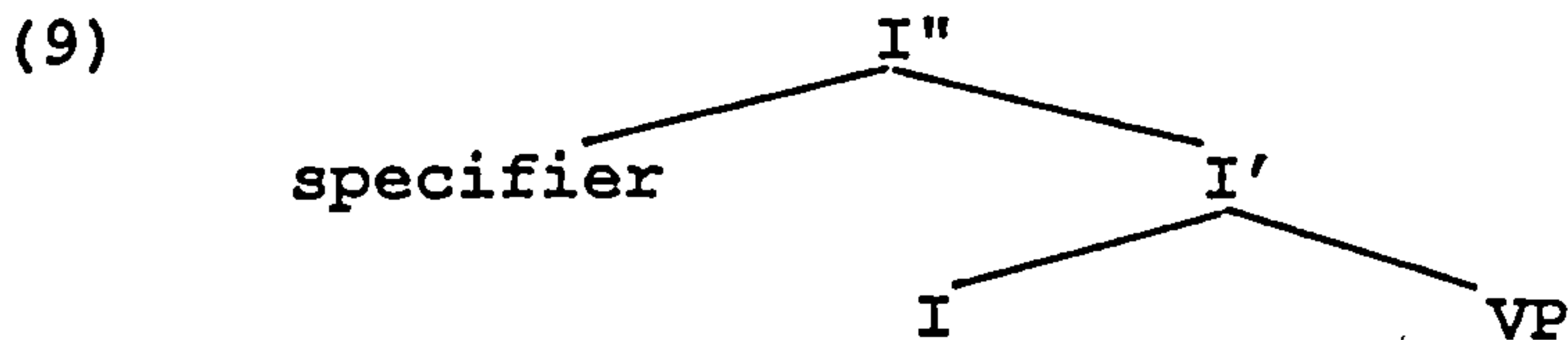


In Barriers (1986b), Chomsky argues that clauses have essentially the same type of constituent structure as phrases. That is, he takes the complementiser and infl respectively to be the heads of expressions like, e.g. that John left and Mary has arrived. He argues that C like any other head category can be expanded into C' by selecting a following IP complement, and into C'' (the equivalent notation is CP) by a preceding specifier, as shown in (8) below:



More on this will follow in chapter III.

Similarly, the head I category can be projected into I' by adding a following VP complement and can further be projected into I'' (IP) by adding a preceding specifier, as indicated in (9) below:



This type of structure will be discussed in detail in the present chapter.

The theoretical part of this work deals with ordinary clauses and Verbless Clauses (VCs) (which apparently have no I and C elements in their constituent structure) and aims to account for learning problems simply because the movement processes, which form the basis for interrogatives, take place within ordinary clauses. As for (VCs), they are taken to be CPs, as Fehri (1988) argued for, and thus, by definition, they are introduced by WH-interrogative words. In other words, the fact that VCs in Arabic contain I constituent and are introduced by wh-words, on which interrogatives are based, underlines their importance to this work. More on this will follow in chapter IV.

In addition to the centrality of the head concept, and a symmetrical relationship between phrases and clauses—viz the assimilation of clauses to phrases, X-bar syntax posits two different levels of syntactic structure: d-

language acquisition since acquisition is an art of cognition (CJ: personal communication). As Cook (1988:1) has pointed out, "UG is a theory of knowledge, not of behaviour; its concern is with the internal structure of the human mind. The nature of this knowledge is inseparable from the problem of how it is acquired."

UG, for Chomsky, is a totality of subsystems, parameters, rules and principles: "UG consists of various subsystems of principles...Many of these principles are associated with parameters...The parameters must have the property that they are fixed by quite simple evidence, because this is what is available to the child." (1986a:146). The significance of these and of X-bar theory (being a sub-theory of UG) emerges from the observation that "Acquiring language means learning how these principles apply to a particular language and which value is appropriate for each parameter." (Cook, *ibid*:2). One of these principles is the Projection Principle, which integrates lexical properties into larger syntactic representations, and is taken to be "a built-in feature of the mind." Cook (*ibid*:11). If this is so, then language theories contribute to our understanding of language processing and language production.

Furthermore, UG involves three vital and inseparable biological components, viz- grammar, which is regarded as "psychologically real" (Horrocks, 1987: 277) mind and acquisition. As Cook (*ibid*:2) remarks "the importance of

UG is its attempt to integrate grammar, mind, and acquisition at every moment." A study conducted by Bley-Vroman (1989) on the operation of UG in L2 acquisition suggests the involvement of UG in this regard. As White (1989:77) points out "UG must be accessible in some form". Thus, the evidence cited may reveal the close relationship between language learning and the theories initiated for that purpose.

As far as CA is concerned, one of the advantages of X-bar theory is that it is one part of a Transformational Generative model of Grammar - i.e. TG grammar. The particular TG grammar model adopted here is Government/Binding theory (GB), with X-bar being its sub-theory. The importance of X' (TG) stems from the fact that it involves a set of transformational processes which has, due to developments of linguistic theory, come to replace other models and approaches such as the structuralist approach. In this respect, Sajavaara (1981:40) writes "the structuralist approach of the early analyses is replaced by a transformational grammar model."

The approach adopted here is a contrastive one, using TG (more specifically its GB variant) as a descriptive model. A number of earlier approaches using alternative models (e.g. structural, relational grammar, stratificational, traditional grammar, etc) in the words of Nickel (1971:4), "suffer from a general defect: the traditional grammar on which they are based is not

sufficiently explicit to permit exact analyses." As a result of the inadequacy of the previous linguistic models, TG has come to be more widely used in contrastive work, because it "has made explicit the intricate problems facing contrastive analysis which had not previously been appreciated....." Sridhar (1981:214). To say that TG is explicit is to say that it is generative and it specifies which utterances are grammatical and which are ungrammatical, and that the ungrammatical ones are by definition omitted from the grammar (James, 1980).

Highlighting the second advantages of X' (TG) for contrastive analysis, Nickel (1971:4-5) writes: "One advantage is that differences between languages are formulated as differences between systems and domains of rules. This approach often reveals divergences much finer than those detectable by previous methods of description." "A further advantage is the conception of 'deep structure' and 'surface structure' in TG....a deep structure feature common to both languages may be manifested differently in the surface structure of the languages and visa versa." "A further point in favour of using TG in contrastive investigations is the current preoccupation of TG grammarians with linguistic universals, i.e. with linguistic statements which include all languages in the scope."

Illustrating the third advantages of (TG) approach to CA, James (1980:45) suggests that the usefulness of TG

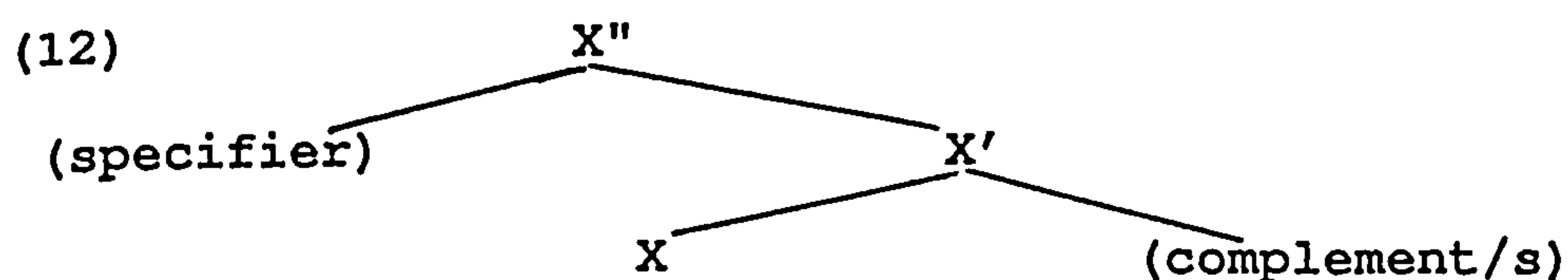
stems from the fact that it brings to the fore negative elements that might have otherwise remained hidden in the deep structure. For instance, comparative structure such as: *Mary is thinner than John* derives from another structure like: *Mary is thinner than John is NOT thin*. In other words, James' idea of comparative structure leads to the insight of d-structure, which X'TG aims to explore in depth.

After this brief survey of the relevance of X'TG to language learning and CA, we turn now to analyse the morphosyntactic structure of English and Syrian Arabic IP clause systems. We will deal with the two systems separately within the framework of Chomsky's (1970) Remarks on Nominalisation and Barriers (1986b) monographs. While discussing the constituent structure of this type of clauses, we will demonstrate (following Chomsky) how the X-bar system can be extended to clauses (and clauses can be analysed as phrases) highlighting the theoretical and descriptive problems posed for earlier X-bar work. We will then argue that IP is a separate constituent from CP, give evidence for I-bar, and discuss the internal structure of IP in a rather more detail. More specifically, we will try to argue that in English an IP clause can be finite and nonfinite, and that the head I can either be filled or left empty. For both possibilities, we put forward a number of arguments illustrating how the tense and agreement features of I are realised. In this context, we

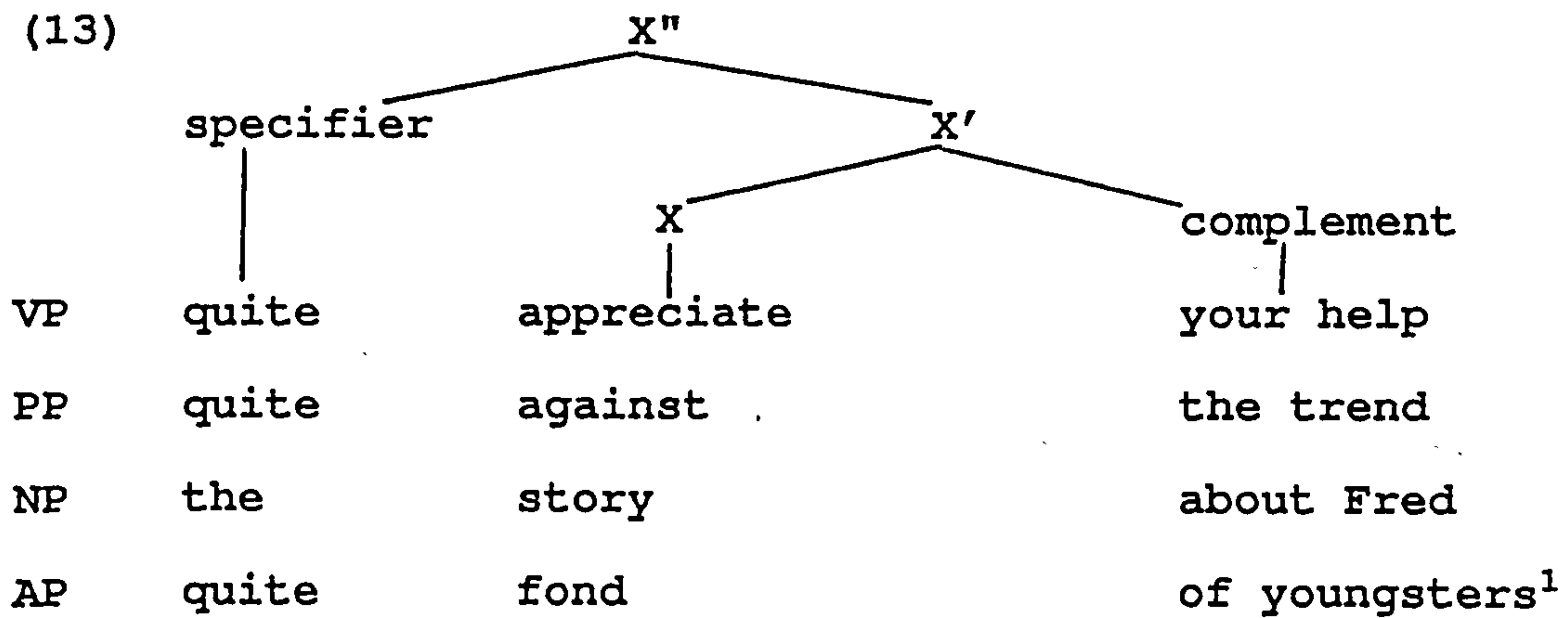
will refer to Koopman (1984), Chomsky (1981, 1986b), and Radford (1988b). We will also consider the claim (Radford, 1988b) that Nonmodal Auxiliary verbs are underlyingly in V, and superficially positioned in I.

2.2. The English IP Clause System

Chomsky (1970) argued that all lexical categories have two levels of phrasal projections. More specifically, any head lexical category X has two phrasal projections into X' and X". Given that X" is the largest type of phrasal projection of a head category X, it is known as the maximal projection of X (and is equivalently designated as XP). And given that specifiers are (generally) optional constituents, and complements are optional (unless required to satisfy the selectional requirements of the head), it follows that the only strictly obligatory constituent of XP is the head category X. The overall X-bar schema for phrases can be diagrammed as in (12) below:



The expansion of lexical head category X into X' by adding optional complements, and into X" by adding an optional specifier within the X-bar schema, can be schematically illustrated as in (13) below:



However, earlier X-bar work focussed on the structure of phrases (where heads are lexical categories) (NP, VP, PP, AP, etc), with little attention being devoted to clauses. The earliest X-bar account of clauses was Bresnan (1970). Under her analysis, a bracketed complement clause such as that in (14):

(14) I wonder [whether he will manage it]

would have a structure along the lines of (15):

(15) I wonder [_{S'} [_C whether][_S he will manage it]]

However, such an analysis posed both theoretical and descriptive problems. Among the theoretical problems is the anomalous status of S', S, C, and AUX (= I). That is, Bresnan (discussed in Radford 1988:293) proposes that both C and S form a larger clausal unit which she labels S-bar (=S'). As Radford points out (1988:507-8), this S-bar analysis of clauses does not fit in with the X-bar schema on four counts. Firstly, though it is a maximal

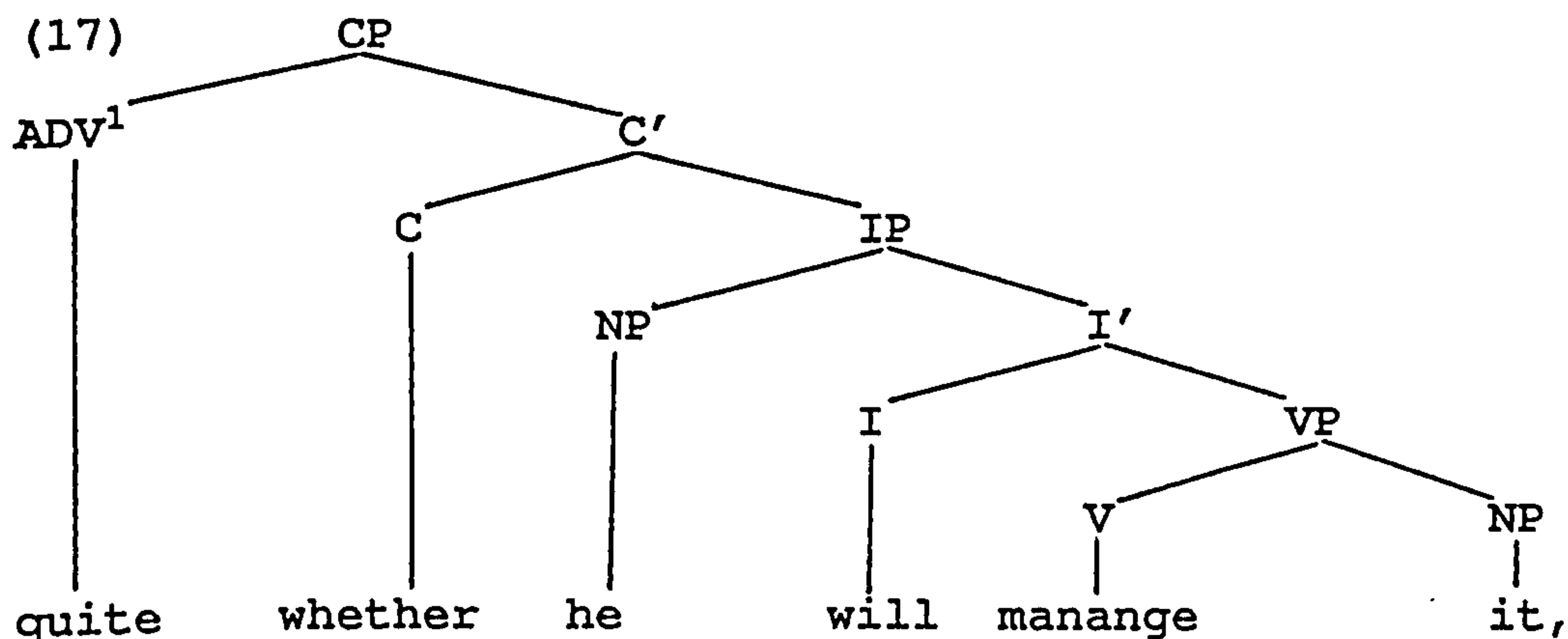
 1. Note that in [quite which person [he talked to t] the constituent [quite which person] looks like a problem, but it isn't if we analyse it as a Determiner Phrase (DP) which would be illustrated as [_{DP} [_{spec} quite [_D [_D which][_{NP} person]

projection, it is not on a par with other maximal projections, for it is only a single-bar projection of its head category (S), and not a double-bar projection (e.g. PP is a double-bar projection of P, etc). Secondly, a single-bar category in English consists of a head followed by a postmodifying complement, but an S-bar consists of a head preceded by a premodifying complementiser constituent, which is a head category contrary to the 'Modifier Maximality Constraint' which specifies that modifiers are maximal projections. Thirdly, the S-bar analysis makes C and AUX/INFL an anomalous category, because it does not expand into single-bar and double-bar phrasal projections, simply because there is no C-bar and C-double bar constituents. Finally, the S-bar analysis makes S an anomalous category, too, because to analyse S as the head of S-bar means the violation of the obvious principle that the ultimate head of any constituent larger than the word is a word-level category. The S-bar analysis also raises descriptive problems in that there is no provision is made for pre-complementiser constituents such as 'quite', as in (16) below:

(16) I wonder [quite whether he will manage it]

On the basis of considerations such as these, Chomsky in Barriers (1986b) argued that the X-bar schema should be extended from phrases to clauses, so offering the twin advantages of symmetry between (i) lexical and nonelexical categories on the one hand, and (ii) between phrases and

clauses on the other. Thus, within the Barriers framework, a clause such as that in (16) above could be analysed along the lines indicated in (17) below:



This alternative analysis of ordinary clauses as double-bar projections of a head complementiser constituent or a head inflection constituent is in conformity with the general schema (13) above, and consequently it enables us to achieve maximal uniformity across categories in respect of the set of bar-projections which the various different categories permit. For, just as N can be projected into N-bar, V into V-bar, P into P-bar, A into A-bar etc, so too C and I have two phrasal projections into C-bar and CP, I-bar and IP respectively. Moreover, in line with other categories in English, the specifier precedes the head and the complement follows it, so that we can achieve a category-neutral statement of canonical word-order in phrases and clauses, namely that complements follow, and

 . Note that this proposal (i.e. to base-generate ADVP in CP spec. position) is Radford's and not Chomsky's.

specifiers precede their heads. However, it should be emphasised that our concern is to argue for a constituent ((in (17) above)) which includes everything except C, and that the nature of this constituent is an IP.

2.2.1. Arguments for IP as a Separate Constituent from CP

In the discussion above, we assumed that IP and CP form separate categorial subsystems. But what empirical evidence is there in support of such an assumption? Part of the relevant evidence comes from 'shared constituent co-ordination' (alias right node-raising) facts as in (18) below:

(18) The police can only surmise that- but cannot confirm whether-[_{IP} the girl is missing]

The fact that the bracketed IP can function as the 'shared constituent' in this type of coordination structure provides us with evidence that it must be a separate constituent from CP- given the assumption made in Bresnan (1970), discussed in Radford (1988:293), that the shared sequence in this type of structure must be a constituent.

A second piece of evidence in support of a separate IP can be related to 'coordination facts' (Radford, *ibid*) as shown in (19) below:

(19) People wonder whether [_{IP} John hates statistics] and
[_{IP} Mary likes linguistics]

Given that only identical constituents can be coordinated, it follows that the two conjoined strings are IP constituents.

A third piece of evidence supporting the postulation of IP as a separate categorial system comes from a phenomenon known as 'gapping' (Radford 1988:294):

(20) I wonder whether [_{IP} John likes coffee] and [_{IP} Mary
O tea]

We notice that the verb 'likes' has undergone ellipsis in the second conjunct of (20) leaving a 'gap' behind. Given the fact that 'gapping' is possible only when two IP constituents are conjoined, and impossible when CP constituents are conjoined, cf, e.g.

(21)* I wonder [_{CP} whether John likes coffee] and [_{CP}
whether Mary O tea]

It follows that our example in (20) must be evidence for two conjoined IP clauses.

2.2.2. The Internal Structure of IP

Having argued that IP forms a separate categorial subsystem from CP, we now turn to examine the internal constituent structure of IP. Let's consider first the evidence for the claim that I is the head of IP in the following two structures:

(22)a. He is anxious that [_{IP} the plane should arrive on
time]

b. He is anxious for [_{IP} the plane to arrive on time]

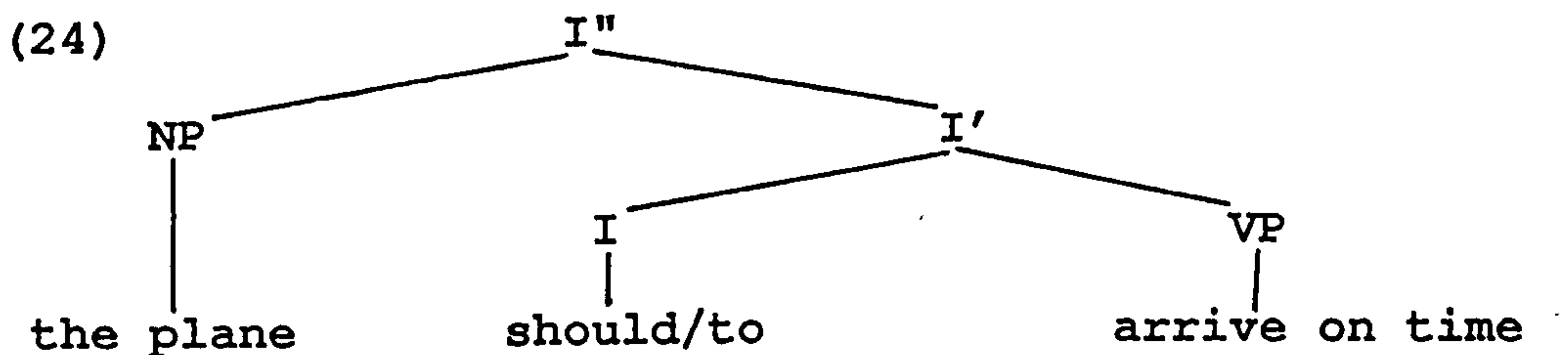
both bracketed IP clauses have the same subject NP [the plane] and same VP complement [arrive on time]. But a closer look will reveal that these two IP clauses are different in nature. The difference lies in the fact that

in (22a), the bracketed clause is finite, whereas in (22b), it is nonfinite. The finiteness of (22a) is attributable to presence of the finite Modal Auxiliary 'should', whereas the nonfiniteness of (22b) stems from the infinitival particle 'to'. It therefore follows that it is the nature of I which determines the (non) finiteness of IP and this is one reason for positing that I is the head of IP. Moreover, since it is a property of heads that they impose subcategorisation restrictions on their complements, it is interesting to note that both 'Modals' and 'to' impose parallel restrictions on their own choice of complement, insofar as both subcategorise an infinitival VP complement, e.g.

(23)a. He is anxious that [_{IP} the plane should arrive/*arrived on time]

b. He is anxious for [_{IP} the plane to arrive/*arrived on time]

We have argued above that within the X-bar schema maximal projections are double bar expansions of their heads. It follows that if we take I as the ultimate head of IP, then IP will be a double-bar projection of I - i.e. IP has the status of I" (Radford 1988a: ch.9). If IP conforms to the generalised X-bar schema (X), then I with its VP complement will form an I' (I-bar) constituent, and I-bar with its Specifier (i.e. the subject NP) will form an I" (I-double bar). This can be represented as in (24) below:



The key point to be observed here is that the VP complement follows and the specifier precedes the head, as with other categories in English.

2.2.3. Arguments for an I-Bar Constituent

One of the key claims embodied in (24) is that I together with its VP complement forms an 'intermediate' I-bar projection, larger than I but smaller than I-double bar. But what evidence is there to support the claim that I-bar is a constituent? The first piece of evidence comes from 'phonological' facts. Chomsky Logical Structure (1955) 1975:229) notes that the major intonational boundary in sentences comes after the subject NP, as indicated by the asterisk in (25) below:

(25) The match next week* may go Liverpool's way

Where the intonation break divides the sentence into two major constituents: the NP subject and the predicate I-bar.

A second piece of evidence supporting the claim that I together with its VP complement forms a constituent involves 'coordination' facts, as illustrated in (26) below:

(26) Mary wants John [to become a priest] and [to convert people]

Given the assumption that only identical constituents can be conjoined (Radford, 1988:295), it follows that [to become a priest] and [to convert people] must both be constituents, and both have the status of I-bar constituents.

The third piece of evidence showing [I VP] as one constituent comes from 'shared coordination' facts. For instance, consider a sentence like in (27) below:

(27) Mary wants John and Jean wants Jim [to become a priest]

Where the sequence [to become a priest] functions as a 'shared' constituent of the two coordinated subject NPs showing that [I VP] is one constituent - i.e. an I-bar (Radford 1988:511).

2.2.4. The (Non)finiteness of an IP Clause

Having briefly outlined the internal structure of IP, we will now consider in turn the range of constituents which can occupy the various positions within IP- viz the head, complement and specifier positions. For the time being, we will confine ourselves only to a discussion of the head position of the IP system. Specifically we will consider how the tense/agreement features of head I are realised on the first verbal stem - i.e. the location of finite nonauxiliary verbs, and will take up the detailed discussion of constituents which appear in the three positions together with the principles which determine them in section 2.3.

2.2.4.1. The Head I Position

(a) Nonfinite I

I can either be finite, or infinitival. When I is infinitival (nonfinite), it carries no (positive) tense/agreement features, and is obligatorily filled by the base-generated tenseless and agreementless infinitival particle *to*, for *to* is invariable in form - i.e. it carries neither tense nor agreement inflections-hence the impossibility of forms such as **toed*/**toes*, as in (28) below:

(28)a.* I/she/ wanted [John *toed* settle down]

b.* They/we believe [Mary *toes* be concerned]

The ungrammaticality of (28) shows that when I is nonfinite, it cannot be inflected for tense and agreement properties.

(b) Finite I

Alternatively, If I is finite, it can be filled by a base-generated Modal, or by the finite dummy I constituent *do*. When a finite I is filled in this way, the tense/agreement features of I are realised on the item contained in I, as illustrated in (29) below:

(29)a. She/he/it [_I *does*] eat food

b. We/they/I [_I *do*] wish you good luck

c. They/we/she/he [_I *did*] come home early.

Thus, the Modal *does* is a present tense form which agrees with a third person singular subject, whereas *do* is a present tense form agreeing with subjects other than third

person singular ones, and *did* is a past tense form covertly agreeing with all subjects.

However, where *I* is finite, we assume that UG specifies that constituents can either be underlyingly filled or underlyingly empty. This in turn would lead us to expect that a finite *I* can be underlyingly empty (i.e. not contain a base-generated *Modal* or *do*), in which case the relevant finite inflections are realised on the head *V* of *VP*, e.g.

(30) He [_I e] works at home

Therefore, finite clauses which lack a 'Modal' are headed by an empty finite *I*. Empirical evidence for this claim relates to 'co-ordination' facts, as in (31) below:

(31) [the president [_I e] mistrusts the Ruskies] and
[he [_Iwill] never talk turkey with them]

Thus, we see that an *IP* clause containing *I* can be conjoined with another *IP* clause apparently lacking *I*. Given the assumption that finite clauses are headed by *I*, and that only constituents belonging to the same category can be conjoined (Radford, 1988:295), it follows that the first clause must likewise be an *IP*, and thus be headed by an *I*. But since there is no overt *I* constituent in the first clause, it must be headed by an empty *I*'.

Another piece of evidence for positing that 'Modal-less' finite clauses are headed by an empty *I* can be formulated in relation to 'subcategorisation' facts, as illustrated in (32):

(32)a. I wonder if [_{IP}he [_I did] [_{VP} win the race]]

b. I wonder if [_{IP}he [_I e] [_{VP} won the race]]

Here, 'if' takes two types of finite clause complements. One headed by a filled I (32a), and the other by an empty I (32b). Our subcategorisation entry for 'if' will be simplified if we specify that it always subcategorises an IP complement- but this requires us to analyse complements lacking a 'Modal/do' as having the status of an IP headed by an empty finite I.

2.2.4.2. The Location of Finite Nonauxiliary Verbs

In our discussion of the contents of I, we have claimed that the relevant tense/agreement features of an empty I are realised on the V of the VP complement. The question is how this happens.

There are two alternative views. On the one hand, there is the claim made by Koopman (1984), and adopted by Chomsky (1986b) that the head V of VP moves into an empty finite I and thereby acquires the relevant tense/agreement features by a rule of V to I movement. On the other hand, there is the claim made by Radford (1988b) (in relation to finite verbs in post subject position) that (i) 'Modals' originate underlyingly and superficially in I, (ii) Nonauxiliary verbs originate underlyingly and superficially in V, (iii) and finite Nonmodal auxiliary verbs are underlyingly in V, and superficially in I. Insofar as the first view is concerned, let's consider the verb 'play' in a sentence such as (33) below:

(33) Mary plays chess

Obviously, this is a finite clause which contains no 'Modal' in I. Although I will be left underlyingly empty in order to satisfy the 'endocentricity' requirement that IP must be headed by I, nonetheless I will carry tense/agreement features. It follows that the underlying form of (33) above is as indicated in (34):

(34) Mary [_I e] [_{VP} play chess]
pres 3sg

The relevant tense/agreement features are the property of I, and I is underlyingly empty- i.e. it contains no verbal stem. Under Koopman's analysis the head V of VP will move from V into I by a rule of V-to-I movement as schematised in (35) below:

(35) Mary [_I e] [_{VP} play chess]
pres ↑ 3sg ↓
 └--V-to-I--┘

When the head V of VP gets moved into I, then the tense/agreement features will be realised on the verb 'play' in the form of the bound suffixes. Thus, we derive the resultant superficial syntactic structure of (35) above as illustrated in (36) below:

(36) Mary [_Iplays] [_{VP} ----chess]

(36) shows that the tense/agreement features of I are being realised as an inflectional suffix on the V-stem which has been adjoined to I.

An alternative account for handling assignment of

tense/agreement features to finite nonauxiliary verbs is proposed in Chomsky's LGB (1981d:256) "there is a rule - call it R- which assigns the elements of INFL to the initial verbal element of VP. Assume R to be, in effect, a rule of AFFIX Movement." The essence of this AFFIX Movement rule could be that tense/agreement features, which are underlyingly assigned to I, would be reassigned to the leftmost V of VP. In other words, what Chomsky proposes in LGB is that I be adjoined to the right of V. Then the derivation of (34) above would be as in (37) below:

(37)a. Mary [_I e] [_{VP} play chess]
 ↓pres 3sg ↑
 AFFIX-Movement

b. Mary [_I e] [_{VP} plays chess]

If this rule is interpreted as adjoining I to the right of V, then it will result in a derived structure such as, e.g.

(38) Mary [_Iplays] [_{VP}----chess]

However, the essential difference between Koopman's and Chomsky's analyses, as Radford (1988a:403) points out, is that "....under the AFFIX Hopping analysis (37) the relevant inflected verb 'plays' remains within VP, whereas under the V movement analysis (35) the inflected verb 'plays' ends up as a constituent of IP."

Following Radford (1988b), we shall refer to these two analyses as the I analysis and the V analysis

respectively. The key empirical issue which arises here is thus whether there is evidence that finite Nonauxiliary verbs superficially positioned in I (as claimed in Chomsky (1986b), or superficially positioned in V (as claimed in Chomsky (1981d)). What we shall suggest here, following Radford (ibid), is that there is strong empirical evidence against the claim that Nonauxiliary verbs are superficially positioned in I in English (=I analysis), and in favour of the claim that they are superficially positioned in V (= V analysis). Part of the relevant evidence relates to the traditional negation properties. For example, consider (39):

(39)* Mary [_I plays] not [_{VP} ---- chess]

This is ungrammatical because Nonauxiliary verbs do not permit a following NOT particle. Hence, 'NOT' prevents the movement of 'play' and as a result 'do' is inserted. So, negation facts suggest that the I analysis is defective.

A second piece of evidence (Radford 1988b) relates to the syntactic distribution of adverbs. In general terms, English makes a distinction between IP adverbs such as certainly and VP adverbs such as completely. IP adverbs are immediate constituents of IP (in the sense that the first maximal projection containing such adverbs must be IP). Similarly, VP adverbs are immediate constituents of VP. Given the assumption that certainly is an IP adverb, the V analysis correctly predicts that (40a) below is

grammatical, but wrongly predicts that (40b) is also grammatical:

(40)a. [_{IP} Mary certainly [_I plays [_{VP} [_V e] chess]]

b.*[_{IP} Mary [_I plays certainly [_{VP} [_V e] chess]]

Thus, the point is that the I analysis wrongly predicts that (40b) is ungrammatical, since the IP adverb certainly is maximally contained within IP, as required.

The V analysis, on the other hand, claims that finite Nonauxiliary verbs are superficially and underlyingly positioned in the head V position of VP the complement. This claim can again be supported by IP and VP 'adverb distribution' facts, e.g.

(41)a. [_{IP} Mary certainly [_I e [_{VP} stays at home]]

b.*[_{IP} Mary [_I e [_{VP} stays certainly at home]]

The ungrammaticality of (41b) above can be related to the assumption that IP adverbs such as certainly should be immediate constituents of IP and not of VP. Similarly, a VP adverb such as completely should be an immediate constituents of VP, as in (42):

(42)a. [_{IP} Mary [_I e [_{VP} depends completely on herself]]

b. [_{IP} Mary [_I e [_{VP} completely depends on herself]]

c.*[_{IP} Mary completely [_I e [_{VP} depends on herself]]

The assumption that completely is a VP adverb accounts for the contrasts between (42a and b), on the one hand, and (c), on the other. That is, being a VP adverb, completely cannot be 'an immediate constituent of IP - hence the ungrammaticality of (42c).

Thus, we have noticed that the I analysis wrongly predicts that (40b) is ungrammatical. By contrast, the V analysis correctly predicts that (41) and (42) are grammatical. Thus, according to 'adverb distribution' facts, the V analysis supports the claim that finite Nonauxiliary verbs are superficially and underlyingly positioned in the head V position of VP as against the I analysis which falsely claims that finite Nonauxiliary verbs are superficially positioned in I.

A third piece of evidence in favour of the V analysis and against the I analysis comes from Radford (1988b) who claims that the I analysis wrongly predicts that Nonauxiliary verbs can undergo preposing into C in 'inversion' contexts (e.g. direct questions), whereas the V analysis correctly predicts that no such preposing of Nonauxiliary verbs is possible. Let us first consider the I analysis, as given in (43) for instance:

(43) [C e [IP Mary [I plays [VP ---- chess]]
 ↑ ↓
 --verb-preposing--

The prediction of the I analysis is that this is a grammatical sentence assuming that one maximal projection does not constitute a barrier to movement. But the I analysis would have to stipulate that only an 'Auxiliary' in I is preposed into C (just as the V analysis stipulates that only an 'Auxiliary' in V is preposed into I). Conversely, the V analysis correctly predicts that a Nonauxiliary verb cannot be 'inverted' in this way, since

to do so it would have to move from V to C, across two intervening maximal projections (VP and IP), in violation of the bounding condition that movement is possible only out of one containing maximal projection, as (44) below illustrates:

(44)* [_C e] [_{IP}Mary [_I e [_{VP}plays chess]]
 | | | | |
 |---←---verb-preposing---←---|

Hence, (44) is ungrammatical because movement out of two maximal projections is not allowed.

Thus, the overall situation is that facts relating to negation, adverb distribution, and inversion, support the essential claim of the V analysis in that Nonauxiliary verbs are underlyingly and superficially positioned in V.

So far, we have argued that when a finite I is underlyingly empty of 'Modals' UG requires transference of tense/agreement properties onto the first verbal stem of VP - i.e. from I to V. Hence, the relevant properties are transferred from the head of VP to the head of the corresponding lexical projection VP.

We earlier claimed (following Radford, 1988b:35-36) that 'Nonmodal auxiliary verbs - i.e. 'Have/Be' originate in the head V position of the VP complement of I, but end up positioned superficially in I. First, let's examine the claim that the Auxiliaries in question originate in V. In connection with this claim, we will forward a number of arguments for positing that 'have and be' originate in V. These forms of verbs ('be' is an auxiliary in all its

uses, whereas 'have' has a triple status: in some uses it is only auxiliary, in others it is only V, and in yet others it can be either a V or an auxiliary) which serve as auxiliaries in different forms, e.g.

- (45) a. You were an idiot
b. We have done it
c. He has a car

are assumed to be similar to Nonauxiliary verbs in that they originate in the head V position of VP, but they are similar to Modals in that their finite forms end up positioned in I. But first of all, let's provide arguments that they originate in the head V position of VP. The first argument is that 'have/be' (in their infinitive use) immediately follow the infinitival particle 'to' in structures such as in (46) below:

- (46) a. You ought to [have eaten your lunch]
b. How nice it would have been to [have known you long ago]
c. He hates to [be called by his stage name]
d. We would prefer you to [be on our side]

Recall that we posited that 'to' is a nonfinite I constituent and that each IP contains only a single head I constituent (and more generally, each XP contains only a single head X constituent). Given these assumptions, it follows that 'have/be' originate within VP as heads. But what evidence is there to suggest that they are heads? One piece of evidence comes from 'subcategorisation' (Radford

1988b:36) in that 'to' requires an infinitival VP complement, and, moreover, according to the 'Endocentricity Principle' an infinitival VP must be headed by an infinitival V. And this is exactly the case in (46) above. Hence, 'have/be' are the heads of their VPs.

A second piece of evidence supporting the assumption that 'have/be' originate as heads of VP relates to 'subcategorisation' facts (Radford, *ibid*) in that 'have/be' subcategorise complements almost in the same way as a typical Nonauxiliary verbs such as 'GET' -cf:

- (47)a. I shall be attending your birthday party
- b. They have managed to do it
- c. He wants me to get working on my thesis
- d. They get rewarded for hard work

This, in effect, would mean that Nonauxiliary verbs such as 'get'; and Nonmodal auxiliary verbs such as 'have/be' are essentially the same in that they originate as the head of VP.

Secondly, to substantiate the claim that the Auxiliaries concerned end up superficially positioned in I, we shall refer to some arguments taken from Radford (*ibid*). The first argument is 'negation-related. That is, the finite forms of 'Nonmodal auxiliary verbs' when in I are negated by a following negative particle 'not' (Radford, *ibid*:37), and this is precisely the case in (48) below:

- (48) a. We [_Ihave] not eaten
 b. He [_Ihas] not a car
 c. She [_Iis] not working
 d. They [_Imay] not call for a general election
 e. You [_Iwill] not join them

This shows that all I constituents are in fact post-negated by 'not' by virtue of their syntactic properties as finite auxiliary verbs.

A second argument for the claim that 'auxiliary verbs' are superficially positioned in I comes from 'adverb distribution' facts (Jackendoff (1972:75-76)). As we have argued in (40) and (41) above, certainly is an IP adverb - i.e. it is an immediate constituent of IP, and not of VP. It follows that if certainly is an immediate constituent of IP, then all the constituents in I are also immediate constituents of IP, e.g.

- (49) a. [_{IP} we [_Ihave] certainly [_{VP}eaten our lunch]]
 b. [_{IP} she [_Iis] certainly [_{VP}working hard]]

(49) suggests that have/is/could, etc are indeed positioned in I.

Moreover, the distribution of adverbs such as completely leads to the same assumption that auxiliaries end up in I, taking into account that an adverb like completely is an immediate constituent of VP, and not of IP, e.g.

- (50) a. [_{IP}she [_Ihas [_{VP}completely relied on herself]]]
 b.*[_{IP}she completely [_Ihas [_{VP}relied on herself]]]

which can be sharply contrasted with (51) below:

(51) [she [_Imay][_{VP}completely have relied on herself]

However, (50b) is ungrammatical because the adverb completely is not an immediate constituent of VP but rather of IP breaking the stipulated requirement for VP adverbs. This ungrammaticality then indicates that auxiliaries are positioned in I.

A third argument supporting the claim that auxiliaries are superficially positioned in I comes from 'inversion' facts. The fact that auxiliaries can be freely inverted into pre-subject position crossing only one barrier (i.e. two maximal projections form a barrier-viz VP and IP) provides evidence that they are in I, e.g.

(52)a. [have] [_{IP}they] [_I e] [_{VP}done it]]?

b. [has] [_{IP}she] [_I e] [_{VP}gone home]]?

c. [are] [_{IP}we] [_I e] [_{VP}going on holiday]]?

A final argument in support of the claim that auxiliaries are positioned in I can be based on 'have' cliticisation. Radford (1988:407) argues that there are two conditions under which 'have' can be contracted down to the monosegmental (nonvocalic) form /v/. The first is phonological: cliticisation is only possible when 'have' follows pronouns ending in vowels or diphthongs, e.g.

(53) They've/ we've / you've eaten

The second is syntactic: namely that this kind of cliticisation is possible only between a head and its specifier (I and spec-I, or C and spec-C, e.g. [_{CP} who [_C've

][_{IP} they][_I e][_{VP} arrested]? not when it is positioned in V (note that although in "they've very little money" 'have' is a transitive verb, yet it is positioned in I and hence cliticised onto 'they'): thus, when a Modal in I with a VP complement headed by 'have' undergoes ellipsis, it is not possible for the 'have' in V to cliticise onto the subject pronoun as the ungrammaticality of (54c) below illustrates:

- (54) a. You should have done it now, and they should have done it later
- b. You should have done it now, and they 0 have done it later
- c.* You should have done it now, and they've done it later

This suggests that cliticisation is only possible between a pronoun subject and 'have' when 'have' is positioned in I, and not when in V. However, it could well be argued that this is because 'have' only contracts to /v/ when finite; since it is infinitival in these examples, there is no cliticisation.

Having argued that 'have/be' originate in the head position of VP complement, and end up positioned in I, we will now consider how they come to end up positioned in I. Radford (1988:406) claims that assuming an empty finite I has a VP complement headed by the finite auxiliary forms of 'have/be', an operation of head-to-head movement can move 'have/be' from their original V position into

the finite empty I position. The operation of this rule can be shown along the lines of (55) below:

(55) a. [_{IP}You [_I e] [_{VP} [_V have] worked hard]]

↓
 ---Have/Be
 ↓

b. [_{IP}You [_I have] [_{VP} [_V--e--] worked hard]]

Overall, we have shown (following Chomsky and Radford) how the X-bar system can be extended to clauses. We have also shown that IP is a constituent separate from CP, and that I-bar is also a constituent. We have, moreover, discussed the issue of tense/agreement realisation when I is empty and when it is filled. In this regard, we presented the view held by Koopman-Chomsky on the one hand, and an alternative view held by Radford on the other and by Pollock and Chomsky in recent work. Furthermore, we argued that auxiliary verbs are superficially in I, and underlyingly in V.

So far, we have given a detailed structural account of the English IP system. Specifically, we have considered the (non)finiteness of an IP clause structure, the location of finite nonauxiliary verbs, the realisation of tense/agreement features and the superficial as well as underlying position of 'Have/Be'. In the next section, our primary concern will be the distribution of the range of constituents which can appear in the three positions: head, complement, and specifier within IP, and the principles which determine the appearance of these constituents.

2.3. The Distribution of Constituents Within IP

2.3.1. The Head Position

A variety of constituents can appear in the head position. Of these, the base-generated Modals will/would, shall/should etc when I is +T +A, and the base-generated infinitival particle to when I is -T -A. For instance, consider (56):

- (56) a. They consider [_{IP}John [_Iwould] [_{VP}be an idiot]
b. They consider [_{IP}John [_Ito] [_{VP}be an idiot]

Moved constituents such as have/be can also appear in the head I position as illustrated in (57):

- (57) a. [_{IP}she [_Ihas] [_{VP} finished]]
b. [_{IP}he [_Iwas] [_{VP} at work]]

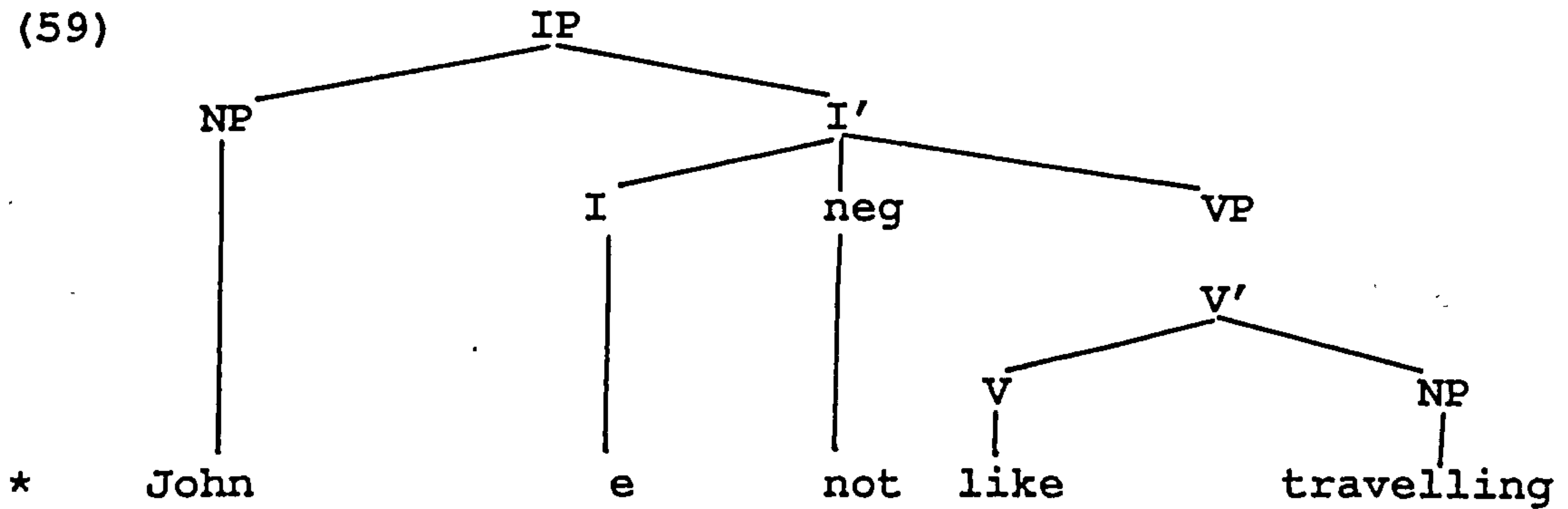
The head I position can be base-generated empty of overt constituents, as in (58):

- (58) Mary [_I e] twists the facts

Here, though I is left empty of lexical elements, it still heads the given structure in (58), and its features are realised on the following V, as a consequence of the requirement for tense/agreement features to be overtly expressed on a verbal stem.

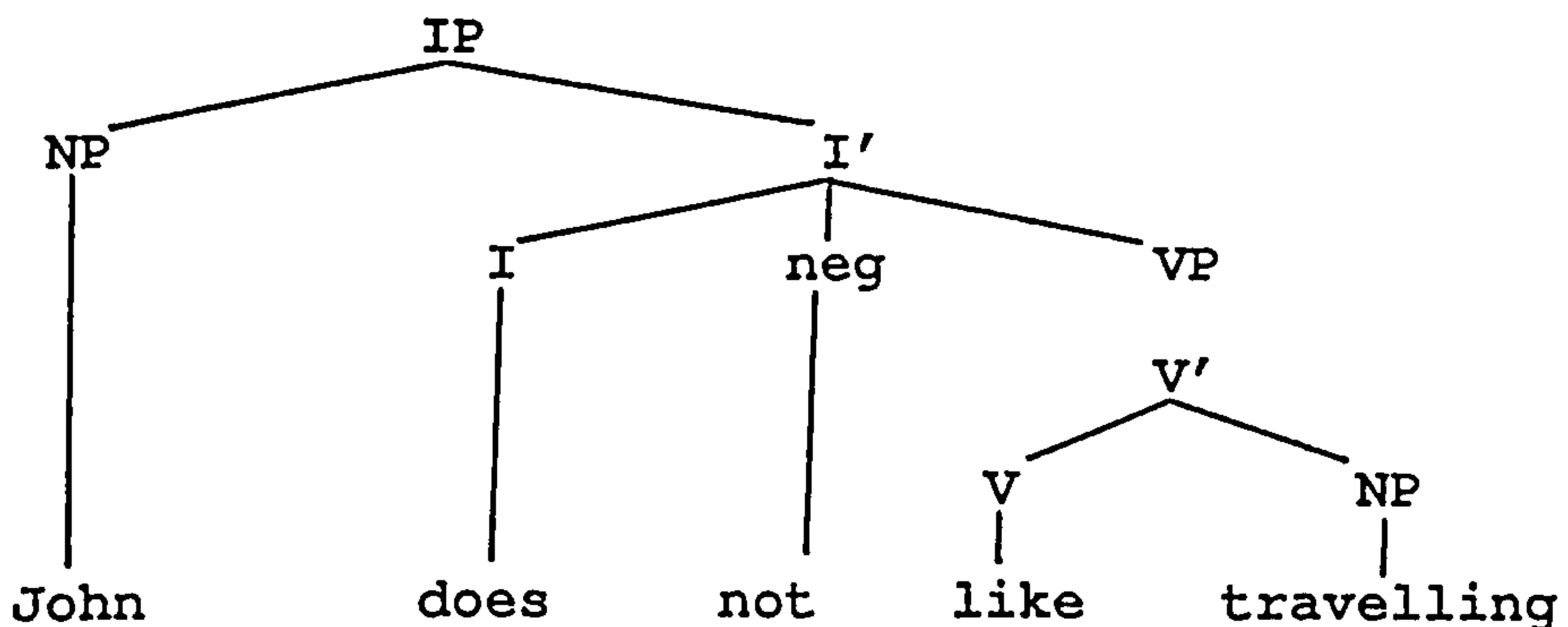
Moreover, the dummy constituents such as do can appear in the head I position to allow +T+A features to be realised, e.g.

(59)



The ungrammaticality of (59) can be attributed to the fact that the tense/agreement properties of I are not realised on 'like' because of the fact that whenever "not" intervenes between an empty I and a V, it prevents the properties of tense/agreement from being realised on the head V of the VP complement (Akmajian and Heny 1976:187, Jacobson 1977:276, and Coopmans 1988:16). If this is so, then the only way in which (59) can yield a grammatical outcome is by inserting the 'dummy' element do in the head I position to realise the relevant properties of +T +A, as in (60) below:

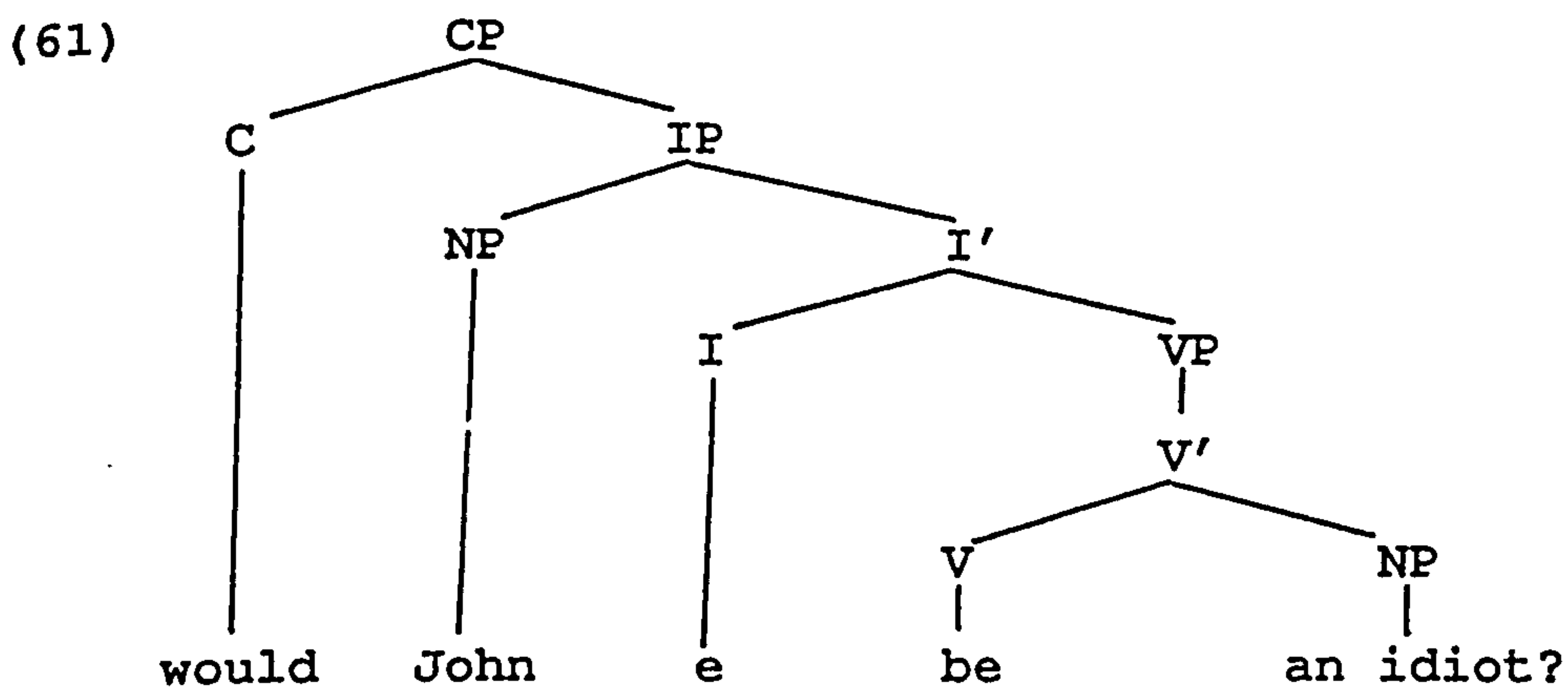
(60)



Thus, (59) can only be well-formed when the dummy do is generated in I to satisfy the conditions of tense/agreement realisation in English.

Furthermore, a trace can appear in the head I position.

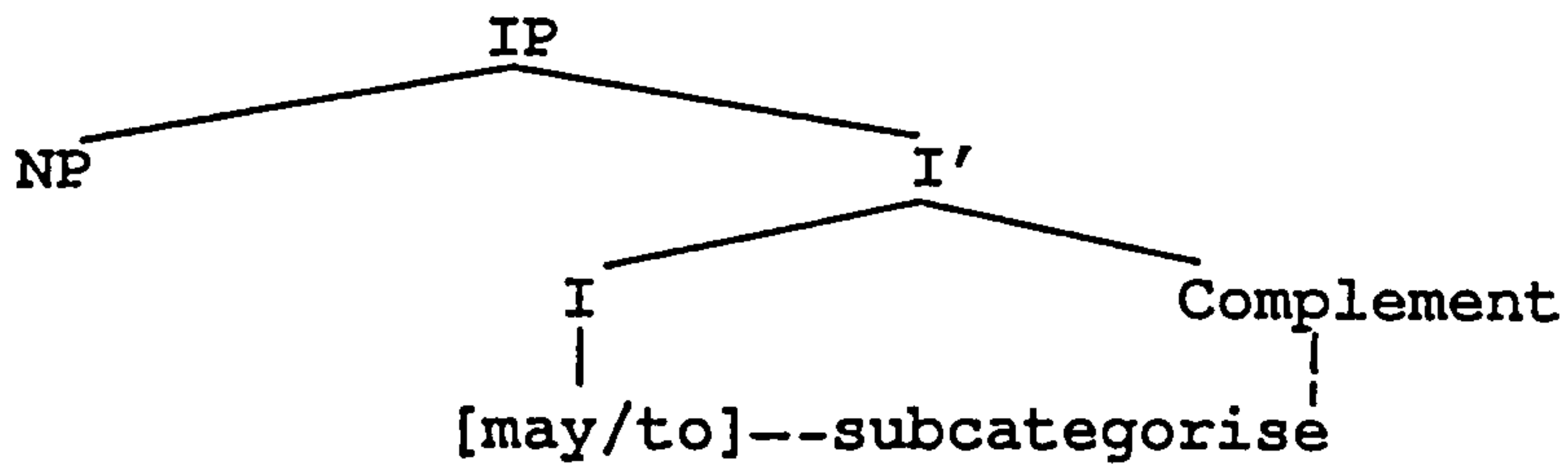
This comes about when the constituents which appear in I are moved into C, by I-to-C movement, leaving a trace behind (i.e. at the position from which they were extracted). In other words, UG provides for the possibility that any constituent can be filled or left empty. If filled, it may be filled by a base-generated constituent, or as a result of transformational movement operation; if empty, it may be either base-generated empty, or may become empty as a result of transformational movement operation. We can illustrate the appearance of a trace in I in our previous examples-(56a), (57) and (59), as in (61) below:



2.3.2. The Complement Position

We now turn to consider the range of constituents which occupy the complement position in IP. Abney (1987) argues that VP is universally the complement of I. Two pieces of evidence can be adduced in support of Abney's assumption. Firstly, following Radford (1988a, ch.7) we posit that one such possibility is related to subcategorisation facts:

(62)



This is to say that when I is filled by base-generated elements such as may/to, a following VP complement becomes obligatory, e.g.

(63)a. John is anxious that [Mary may finish with him]

b. John is anxious for [Mary to finish with him]

Secondly, the claim that I is followed by a VP complement is implied from the claim that the properties of tense/agreement associated with I must be realised on an overt verbal stem in English (Radford, 1988b:30). However, this second possibility, in turn, involves two situations: when I is filled by base-generated elements such as may, then the relevant properties will be realised on may.

Alternatively, when I is underlyingly empty, its properties cannot be realised on any element in I. Thus, I must be followed by a VP complement to satisfy the requirement of tense/agreement realisation, e.g.

(64) she [I e] [VP believes in ghosts]
 ↓ ↑
 -AFFIX-Movement

The following VP can, in turn, either be headed by a nonauxiliary (as in (64) above), or an auxiliary as in (65) below:

(65) a. She [_I e] [_{VP} have believed in ghosts]]

↓
Have/Be-Movement

↓
b. She [_I has] [_{VP} [----believed in ghosts]]

Given the possibilities discussed above favour the form [NP I VP], we can then predict that structures of the form:

(66) NP I AP

NP I NP

NP I PP

are ruled out as ungrammatical in English, whether I is finite or nonfinite, because of the assumption made above- i.e. TAG features of a finite I can only be realised on a verbal stem, and nothing else.

2.3.2.1. The Factors which Determine The Nature of the VP Complement

Having discussed the factors which determine the nature of complement of I (i.e. that it is a VP), we will turn to discuss the factors which determine the nature of the VP complement itself. Under appropriate discourse conditions, the VP complement of an underlyingly filled I can be left empty, as we see from examples such as:

(67) I do not know whether he will [_{VP} e], but I do not want him to [_{VP} e]

The main constraints on the empty VP is that its contents should be recoverable from the context. The context supplying the contents of the empty VP may be linguistic, as in (68):

(68) I know you have to go there, but I do not want you to
[_{VP}e].

However, in a situation such as the following:

(69) (Mary sits picking her nose)

John (disgusted) says 'I do wish you wouldn't [_{VP}e]'

The contents of the missing VP are recoverable from the discourse context, not from some linguistic antecedent (Radford, p.c.).

Moreover, the VP can be empty as a result of movement, as we see from examples such as in (70):

(70) He said he will go there, and go there he will [_{VP}e]

Where the whole VP is moved. It is, therefore, crucial to differentiate at this point between the empty VP position in (67), and the one in (70). In (67), the VP is a base-generated empty constituent, while in (70) the VP is a transformationally derived empty constituent.

2.3.3. The Spec-I Position

Thus far, we have discussed the range of constituents which can appear in head and complement positions of the English IP system. We will now turn to discuss the range of elements which can appear in the specifier position. We will specifically try to give an account for the claim that only NP can appear in the I-specifier position, and that other categories (such as PP, CP, IP, AP, ADVP, etc) cannot appear in the I-specifier position.

First, let us discuss the appearance of base-generated NPs, PRO, and pro in the I-spec position. The notion of

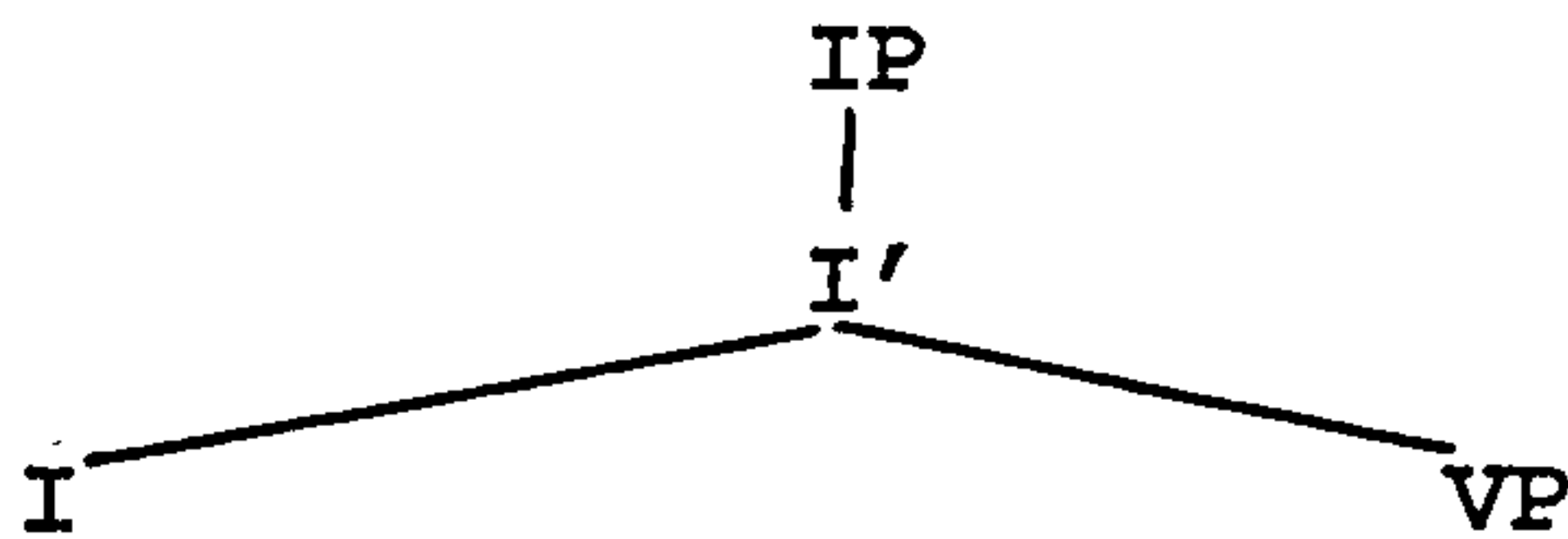
licensing will play a significant role in determining whether a structure appears in the NP constituent within a given syntactic structure, if that structure is to be grammatical. Thus, following Chomsky (1986a:93), "Every element that appears in a well-formed structure must be licensed in one of a small number of available ways". For a constituent to be licensed, it must satisfy all the relevant linguistic principles which specify the occurrence of a constituent in a clause. For instance, properly headed structures are licensed by the endocentricity principle in X-bar Theory (Radford, 1988c:17). In this connection, it is interesting to note that Chomsky (1982:10) argues that clauses require subjects. Accordingly he postulates a "requirement that a clause has a subject position". Unlike Chomsky, Rothstein (1983) argues that subject requirement of clauses associated with the predication principle in that "all non-argument maximal projections [= all predicates] require syntactic subjects" (1983:130). Following Radford (ibid), we refer to the rather different approaches adopted by Chomsky and Rothstein as "subject principle" which we can summarise as in (71) below:

Subject Principle:

- (71)a. A clause is licensed only if it has a syntactic
subject (Chomsky)
- b. A predicate is licensed only if it has a syntactic
subject (Rothstein)

(71), therefore, rules out a subjectless IP of the form:

(72)



However, (72) says nothing about what range of elements can serve as subjects. But in this connection, consider clauses such as those bracketed in (73):

(73)a. They wondered whether [_{IP} they should leave early]

b. They wondered whether [_{IP} PRO to leave early]

Given the subject principle in (71), in (73a) the bracketed complement clause contains the lexically realised NP subject 'they'. (73b), on the other hand, at first sight, seems to contain no subject - i.e. to be subjectless. But given the 'subject principle' in (71), this cannot be the case. (73b), therefore, must contain a PRO subject which is not lexically realised, but rather taken to be a null subject. Thus, if 'they' is the subject of (73a), and PRO is the null subject of (73b), then the occurrence of the NP and PRO subjects in (73) above must be determined by certain conditions - i.e. licensing conditions. One of the licensing conditions which determines the occurrence of overt NPs is the Case-Filter which specifies that:

(74) A lexical NP is licensed only if assigned an

appropriate case.

(Radford *ibid*)

Similarly, the licensing condition which determines the occurrence of PRO is the PRO condition which specifies

that:

(75) "PRO is licensed to occur only in an ungoverned position"

This is a consequence of Binding Theory. That is, PRO occurs in an ungoverned position because it is both pronominal and anaphoric.

(75) is a modified version of Chomsky's (1986a:74) case-filter that "every phonetically realised NP must be assigned (abstract) case" -i.e. nouns such as 'Mary' are covertly marked for nominative/objective case, whereas pronouns such as 'she' are overtly marked for nominative/objective case, as we see from (76) below:

- (76) a. Mary went home (nominative)
 Don't believe Mary (objective)
- b. She went home (nominative)
 Don't believe her (objective)

If case-assignment varies according to the position of the case-marked constituent in a given sentence, then the distribution of nominative/objective case can be handled by case rules such as the following:

(77) a. Nominative Case Rule:

An NP is assigned Nominative case if it is governed by a finite I.

(77) b. Objective Case Rule:

Following Radford (ibid), an NP is assigned objective case if it is governed by an adjacent transitive case-assigner (V, P, or C). Following Radford (ibid) we can give a

formal working definition of government, which would be:

(78) "X governs Y iff X is a governor, and Y is dominated by the maximal projection of X, and there is no barrier containing X but not Y (informally, n (n>1) maximal projections can be said to constitute a barrier)".

2.3.3.1. Government and Spec-I Position

Having surveyed the nominative/objective case rules in (77), and the definition of government in (78), let's now turn to consider whether base-generated elements in the I-specifier position are governed or ungoverned. For instance, observe (79):

(79) [_{IP}they [_Ishould [_{VP}claim responsibility for doing
it]]

'They' is assigned nominative case because all government requirements are satisfied - i.e. 'they' is dominated by the maximal projection of 'should', which is IP, and because 'should' and 'they' are immediately contained within the same maximal projection IP. Moreover, there are no barriers protecting 'they' from 'should' which means that 'should' governs 'they'. And according to (77a), a finite I (but not a nonfinite one) is a case-assigner as well as governor, hence 'they' gets nominative case from 'should'.

Although a finite I constituent assigns case to its subject, a nonfinite I constituent lacks this property - cf, e.g.

(80)a. They were asked about [_{CP}what e [_{IP}they should do]]

b.*They were asked about [_{CP}what e [_{IP}they to do]]
The subject NP 'they' gets nominative case because it is governed by the finite I element 'should' in (80a), whereas in (80b) the infinitival particle to cannot assign case to its subject. If this is so, then (80b) violates the Case Filter in (74), and -by contrast- satisfies the PRO condition in (75). This amounts to saying that the (b) example can only be grammatical when the subject of the bracketed IP clause is PRO - cf, e.g.

(81) They were asked about [_{CP}what e [_{IP}PRO to do]]
The grammaticality of (81) supports the assumption that the PRO condition is met - viz PRO can occur only when in an ungoverned position. In other words, PRO in (81) cannot be case-marked either internally, or externally (internally because the nonfinite I - i.e. to is not a case-assigner or a governor; and externally because the intervening two maximal projections - CP and its constituent IP- constitute a barrier to government of PRO by 'about'). This suggests that PRO is licensed to occur as a null subject of (80b) and (81). By contrast, 'they' in (80a) is licensed to occur as a lexical NP subject because it receives its nominative case internally from the finite I constituent - 'should'.

The question to ask at this point is: how can the subject of a nonfinite I receive case? Following Standard GB assumptions, we suggest that the only way through which the subject of a nonfinite I can receive case is from a

case-assigner external to IP. This external case-assigner of an infinitive subject can be of two types: a transitive C or a transitive V as we see from (82) below:

(82)a. We are keen [_{CP} [_Cfor] [_{IP}her to succeed]]

b. We [_{VP} [_Vknow] [_{IP}her to be honest]]

Here, the conditions of objective case-marking are met-namely; the requirement set out in (77b). By way of contrast - cf, e.g.

(83)* I really wonder [_{CP} [_Cwhether] [_{IP}she/her to succeed]]

(83) is ungrammatical because the case filter requirement is not met, since the complementiser 'whether' is not a case-assigner or a governor. In consequence, the infinitival subject NP in (83) remains caseless; and hence ungrammaticality results. Moreover, the NP subject of a nonfinite (infinitival) IP remains caseless when the C-position is empty of an overt complementiser. This is because empty complementisers are 'featureless' (Chomsky 1986b:47); thus they neither carry grammatical features, nor act as governors or case-assigners - hence the ill-formedness of (84) below:

(84)* I am anxious [_{CP}[_C e] [_{IP}she/her to succeed]]

The ungrammaticality of (84) is attributable to the fact that it violates the case filter in (74) in that the NP subject of the infinitival IP clause is not assigned case and so is not licensed to occur. This would mean that (84) requires a PRO subject, for PRO is not assigned case and

so is licensed to occur, as we see from (85):

(85) I am anxious [_{CP}[_C e] [_{IP}PRO to succeed]]

Here, PRO occurs in an ungoverned position - i.e. it cannot receive case from to because to is tenseless and agreementless, or from the adjective 'anxious' because of the assumption that two intervening maximal projections (CP and IP) form a barrier to government.

The discussion of PRO draws attention to another type of null subject, which is 'pro'. 'pro' is like PRO, but it differs from PRO in that the former occurs in governed positions, and in that it is [-anaphoric] i.e. it is a pure pronominal. It has been claimed that 'pro' cannot occur in any position of a given structure in English on the assumption that English 'is not a pro-drop language', and hence English does not permit the use of a 'pro' subject because English has been characterised as having 'an extremely impoverished system of verbal morphology' (Radford, 1988c:36). Nonetheless, Radford (ibid) argues that English imperative sentences allow 'pro' subjects.

Syntactically, the following imperative sentence:

(86) shut up !

must have a 'pro' subject as a requirement of the subject principle (71), and projection principle in that the verb 'shut' requires an 'Agent'. Evidence for positing that (86) has a 'pro' subject comes from 'tag' facts in that the pronoun copied in the 'tag' must be correferential with the subject. For instance, consider the following:

(87)a. You do this sort of job, will you/*she/*we/*they?

b. Please shut up, will you/*she/*we/*they?

Here, the ungrammaticality of pronouns other than a second person (you) in the tag suggests that 'you' is the only pronoun which matches the subject of the sentence in (87).

Semantically, the interpretation of 'pro' in:

(88) Please don't pro leave me alone, will you?

might carry the inherent properties of a second person, since 'pro' cannot be identified by grammatical agreement with the imperative verb because there is no inflection on the verb. Moreover, Radford (ibid) proposes that imperative structures in English are "headed by finite I constituent", as we see from:

(89) Don't you dare contradict me

and consequently formulates the following generalisation:

(90) 'ro is licensed only if case-marked by an imperative I'

which restricts the occurrence of a 'pro' subject to imperative clauses in English.

Thus far, from the discussion of base-generated NPs, PRO, and 'pro' in terms of case-marking in adult English, we see that verbs, prepositions, and prepositional complementizers assign case to the right (i.e. to a following NP), whereas INFL assign case to the left (i.e. to a preceding NP). Since V, and P are lexical categories, whereas I is a functional category, this, in turn, suggests that the directionality of case-marking in

English is determined by the categorial status of the case-assigner, in the manner outlined in (91) below:

(91) Case-Directionality Principle

Lexical categories which assign case do so to the right, whereas functional categories assign case to the left - i.e. objective case-marking is right-wards, others leftwards. Or, transitive case-assigners do so rightwards, others leftwards."

Genitive case-marking in English supports the claim that the functional categories in I assign case to the left, e.g.

(92) [_{DP} [_{NP} Mary] [_D [_{D^S}] [_{NP} attack on John]]]

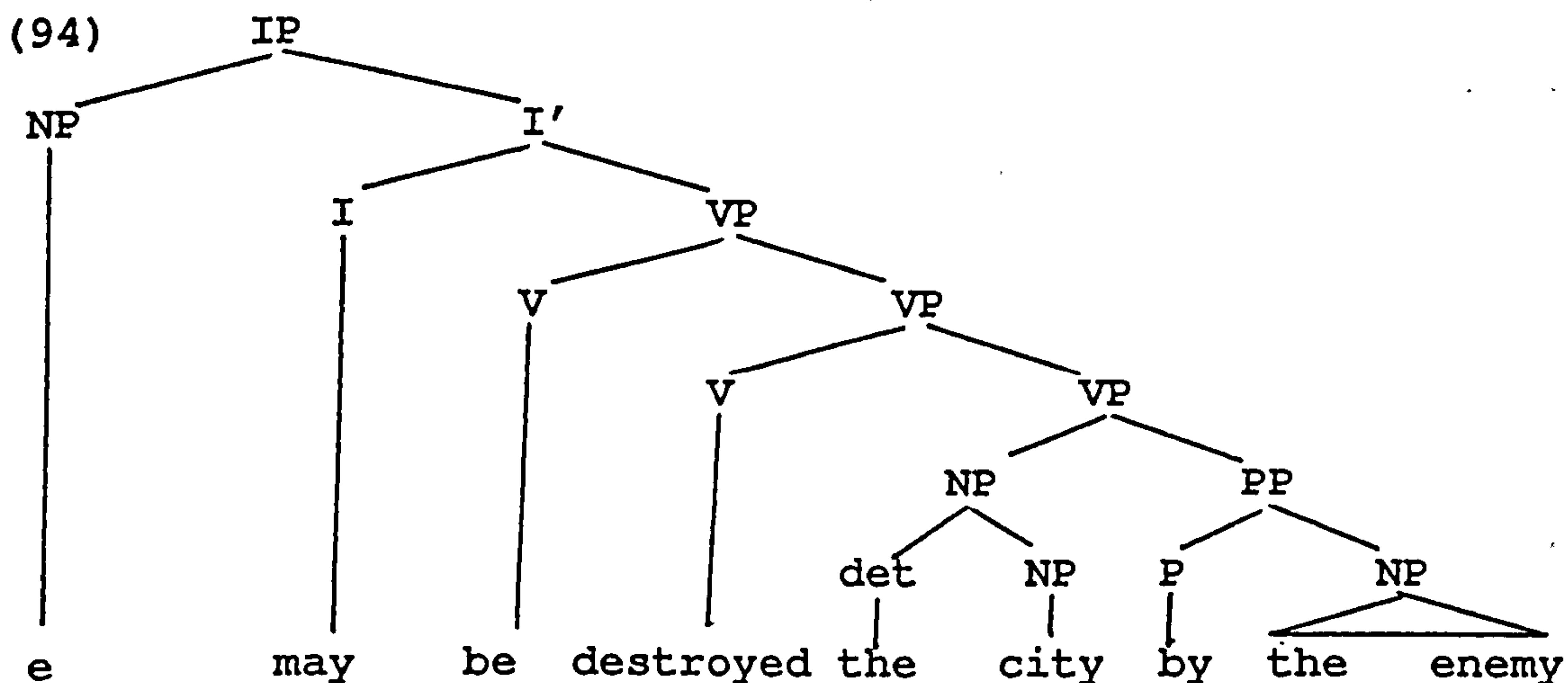
Under this analysis of determinate NPs (note that here we have introduced a DP analysis just to support the argument that functional categories assign case leftwards), the genitive s (which is a functional category in D) case-marks the NP subject 'Mary' to its left in much the same way as does a modal auxiliary such as 'will' to a pronoun subject (e.g. he'll) (Radford 1988c:17). This suggests that D/I assign case leftwards. By contrast, C assigns case rightwards when it contains for, e.g.

(93) We are anxious [_{CP} [_C for] [_{IP} her/*she to succeed]]

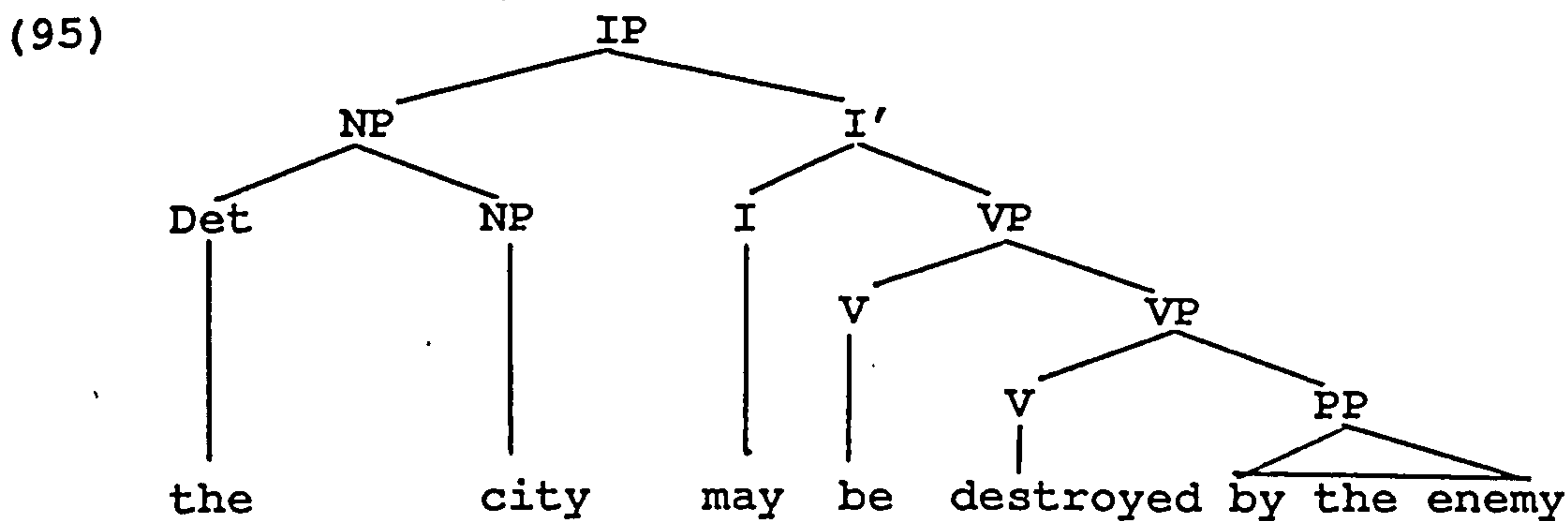
(93) tells us that the complementiser 'for' assigns objective case to the specifier of the bracketed IP clause which occurs to its right.

In addition to overt base-generated elements and empty base-generated elements such as 'PRO' and 'pro' which fill

the specifier position of IP, moved elements can also fill the given position. As an example, we will consider passive and raising structures. First, let's consider a passive structure involving an NP-movement operation, e.g.



On the basis of 'subcategorisation' facts, we assume that the object NP 'the city' originates in the postverbal position, and in consequence of NP-movement it gets moved to the empty subject position as schematically shown in (95) below:



Here, the appearance of the NP 'the city' in the spec-I position comes about transformationally - i.e. through NP movement.

Subject raising in raising structures is a second

transformational way which can fill the I-spec position, as we see from (98) below :

(96) [_{NP} e] seems [_{IP} John to have failed his test]
 | |
 |←-NP-movement-←|

If we posit that 'John' is the underlying subject of the embedded subordinate clause in (98), then the NP movement operation known as *subject raising* (Radford 1988:422) can raise the subject 'John' to become the subject of the main clause, e.g.

(97) [_{IP} [_{NP} John] [_{VP} seems to have failed his test]]

(97) illustrates how the IP-spec position is filled by moving (or raising) an embedded NP subject to become the subject of the overall clause.

In the same way as spec-I can be transformationally filled, it can also be transformationally emptied, e.g.

(98) [_{CP} [_{NP} who] [_C would] [_{IP} you imagine [_{NP} t] could refuse such an offer]]?

Assuming that the wh-NP 'who' is the subject of the embedded clause, then in consequence of the application of wh-movement, the wh-NP 'who' ends up positioned before the overall sentence in (98) leaving an empty NP trace behind. This empty NP trace is in effect the empty subject position of the embedded clause as noted above. What this suggests is that spec-I position can be left empty in consequence of movement operations. This NP trace, in turn, according to 'ECP', must be properly governed (Chomsky 1981), but the presence of an overt C blocks this

(hence the that-trace effect).

2.3.3.2. The Spec-I Position and Categories other than NPs, PRO and pro

Having discussed the appearance of base-generated, moved, and empty occurrences of elements in the subject position of IP, an obvious question to ask at this point is that: what categories can appear in the relevant position? We know that some PP's can't. Stowell (1981) says this is because of the Case-Resistance Principle CRP which says that certain categories including certain pp's cannot be case-marked. However, there is evidence in Jaworska (1986) that some PP's not only can but must be case-marked.

Thus, given Stowell's position, the PP (in the summer) cannot appear in the subject position of the following example:

(99)* [_{IP}[_{PP}in the summer] [_I might rain]]

which prevents the requirement that case must be discharged in English from being fulfilled. That is, INFL in (99) cannot case-mark the PP (in the summer) to its left because it doesn't govern it. In other words, Stowell's general claim is that the CRP prevents the 'PP' from appearing in the subject position because PP's cannot have case, unless this appearance is a peculiarity of copular constructions - i.e. with be (Stowell *ibid*: 225n.43, and p.268).

However, Jaworska (1986:355-374) argues that "The

positions of subject and object in simple active sentences, and object of a preposition are normally filled by NP's but they can also be filled by pp's." Consider, for illustration, Jaworska's own examples of PP's as subjects of active, raising and passive sentences respectively in (100) below:

- (100) a. Between six and seven suits her fine (p.355)
b. Between six and seven seems to suit her fine
(p.355)
c. Until Christmas was planned in detail (p.356)

And Quirk, Greenbaum, Leech Svartvik's examples (1972:305;1985:658) presented in Jaworska (ibid:356):

- (101) a. Between six and seven will suit her fine
b. On Thursday will be fine
c. In March suits me
d. etc etc..

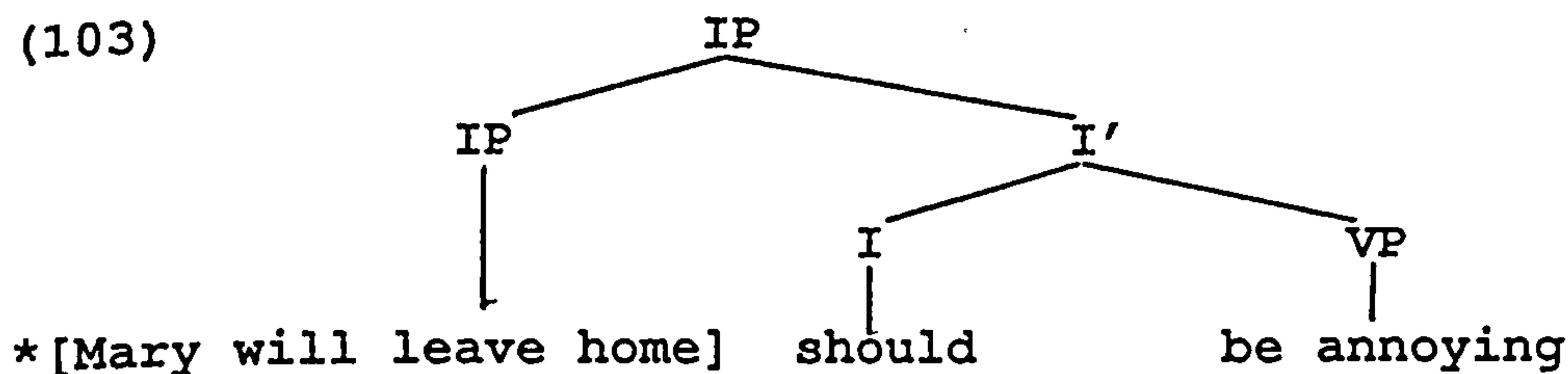
Assuming that raising and passive structures are the result of $\text{Move}\alpha$ - i.e. from a caseless position to a case marked position, and assuming that PP's as the subjects of these structures are also the result of movement rules which must take place, for PPs are moved, because like NP's, they require case" (Jaworska 1986:363), the suggestion (following Jaworska) is that Stowell's (1981) Case Resistance Principle seems to be undermined simply because given raising and passive data "Some PP's not only can bear case but actually require it". (Jaworska ibid:363).

Extending Jaworska's analysis of pp's subjecthood, we would expect to find some AP's and Adv's functioning as subjects (and thus they require case) of different types of sentences. Consider the examples taken from Jaworska (ibid):

- (102) a. [_{AP} tall and slim] is how John likes his girlfriends
- b. [_{AP} rather plump] is thought [_{IP} t to be how he likes his girlfriends]
- c. [_{ADV} very slowly] is how Mary likes to walk

IP, however, cannot occur in subject position, as outlined in (103) below:

(103)



The resultant ungrammaticality of (103) is due to the fact that the requirement that the finite I (will) must discharge its case onto the sequence in spec-I position is not satisfied. This is because IP is a case-resistant category (Stowell 1981).

Moreover, some CPs cannot occur in the position concerned, while some others can. Consider the data given in (104) and (105) below:

- (104) a. * [_{CP} I consider [_{CP} that she is an idiot] to be obvious]
- b. [_{CP} That she is an idiot] is obvious

c.* Is [_{CP} that she is an idiot] obvious?

The ungrammaticality of (104 a & c) can be attributed to the claim that some CPs cannot occur in subject positions; but in Topic positions they can, e.g (104b) (Stowell 1981).

(105)a. I consider [_{CP} whether or not Chomsky is right] to be the most important issue that we face.

b. Is [_{CP} whether or not Chomsky is right] the most important issue that we face?

Which suggests that only an interrogative nominal clause constituent can appear in the spec-I position (Radford, 1989: seminar).

Overall, we have discussed the distribution of constituents which can (and cannot) appear in specifier, head, and complement position of IP clause system together with the factors which determine this appearance.

2.4. The SA IP Clause System

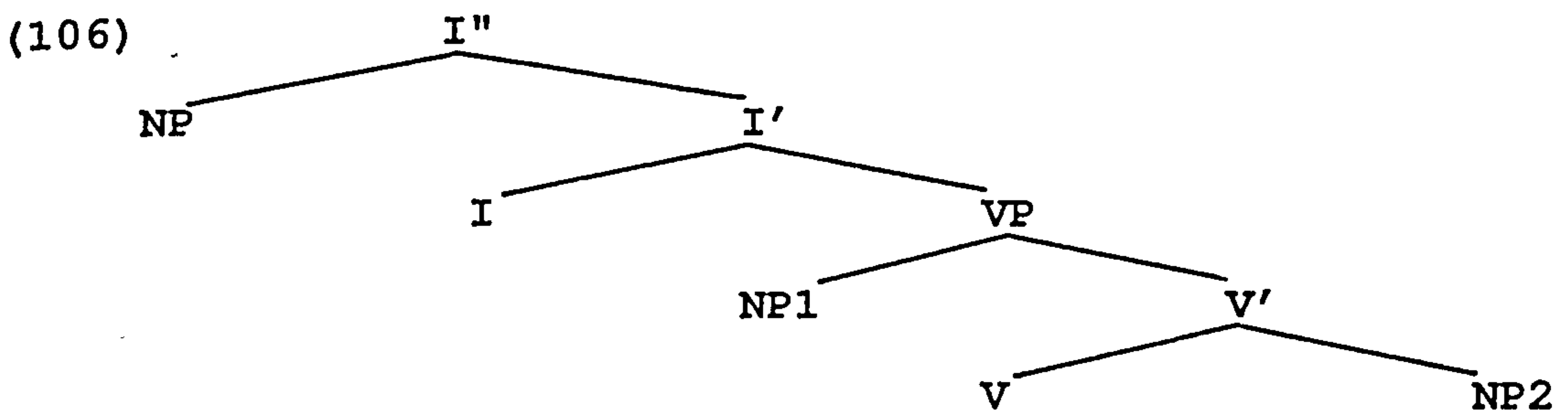
2.4.0. Overview

In this section, we will look at the analysis of clausal structure of SA maintaining the same line of analysis as used for the English IP. Since this section focuses only on the Inflectional Phrase (IP) of SA, then our main concern is to illustrate the sort of analysis we will be arguing for, and how we argue for it. In doing so, we try to give evidence for a constituent which is IP, and not just a VP. We also try to give evidence for a constituent including everything except C. We also give

evidence for an I-bar constituent. In the final part of the present section, we highlight the nature of the IP specifier position, and illustrate SA as a Null-Subject Language (NSL for short).

2.4.1. Syrian Arabic

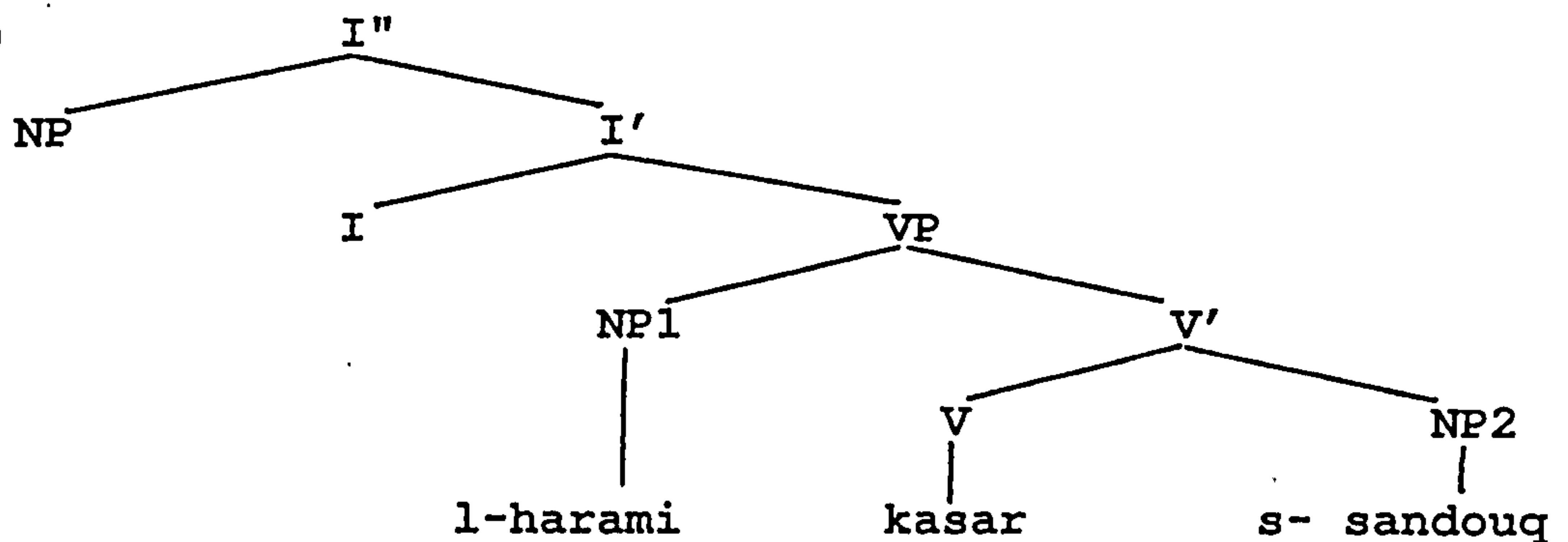
SA is a variety of Standard Arabic. It is an SVO language, but it also allows VSO freely. The derivation of VSO word order from underlying SVO structure can be brought about through certain transformations which will become clear as we proceed. For the time being, we start by examining the IP system of SA which (following Fehri (1988) and Ouhalla's (1991) papers on Standard Arabic) gives an X-bar categorial expansions such as in (106) below, which we will argue for throughout this section:



this shows that V has its own complement and specifier - i.e. NP2 and NP1. This can be exemplified with (107) and its corresponding underlying structure in (108) below:

(107) kasar l- harami s- sandouq
 break past the burglar the casket
 'The burglar broke the casket'

(108)

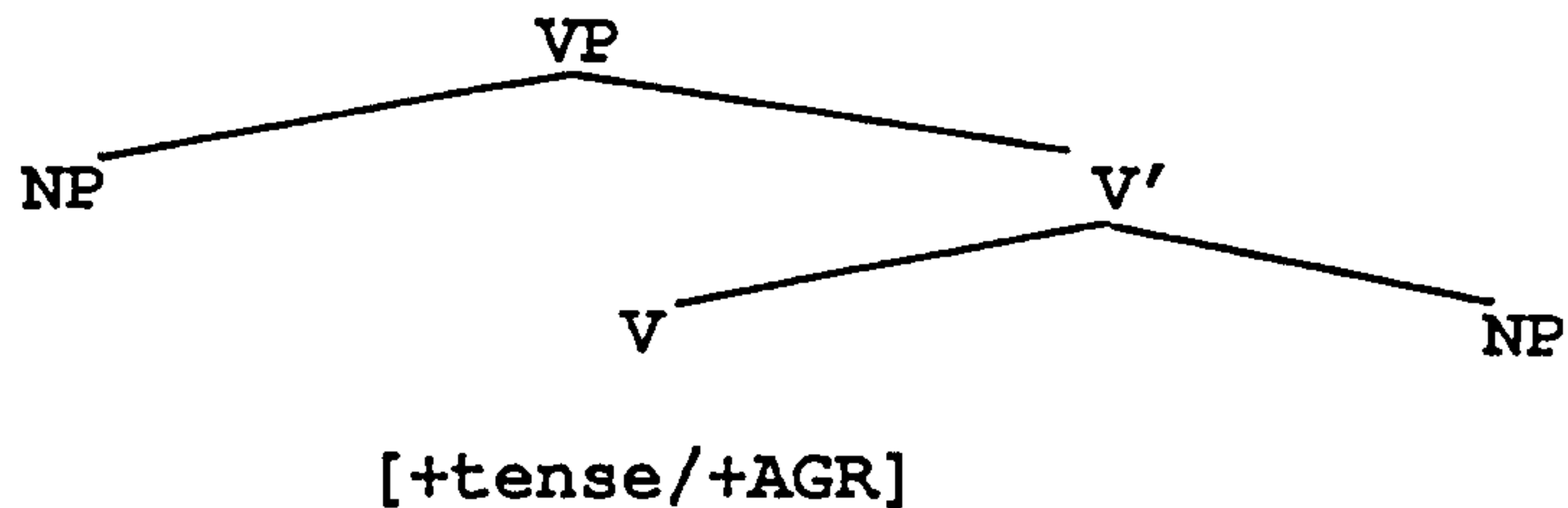


This shows that the VP complement of I consists of a V' with a complement contained within it (= NP2), and a preceding specifier (=NP1).

We assumed that the structure in (108) above is an IP clause, and not just a VP. Our assumption is based on the fact that the verb in clauses with VSO word order must move to I to get the features of tense and agreement associated with I. So, the fact that we have V in the I position suggests that it is an IP clause. Now, if the VSO clause in (107) above is an IP, this entails that the SVO in (108) must also be an IP. This means that the features of tense and agreement which are associated with I are adjoined to V in clauses with SVO as Chomsky (1981) suggests.

However, contrary to what we have suggested for taking tense/agreement features originate on I as the head of IP, let's assume that the relevant features just originate on V, and not on I, an alternative analysis which we are going to reject. This in effect means (apart from C) that the finite constituent structure of an IP clause in SA would be as indicated in (109) below:

(109)



But this sort of analysis seems to be disadvantageous on the grounds that it causes problems for the derivation of VSO from SVO - i.e. we cannot move (or adjoin) V to VP because of the fact that the former being a head category and the latter a phrasal category. In other words, the adjunction of lexical categories to phrasal ones is generally assumed to be impossible. Thus, in order to front the V, which is a zero level category and the head of VP, and for head - to - head movement to take place, there must be a head I constituent in the sort of structure in (109) above, otherwise it cannot be maintained for the forementioned reasons.

2.4.2. Evidence for an IP Constituent Separate from CP

We assumed in (109) above that finite IP clause in SA is a constituent. But what evidence is there to support this assumption? Part of the relevant evidence relates to what Radford (1988:293) calls 'shared constituent coordination' (alias Right Node Raising) facts, as illustrated in the manner of (110) below:

(110) Nabeel takked inu - w Nura takkdet inu [_{IP}kasar l-harami s- sandouq]

Nabeel make-past sure that and Nura make-past sure that [break-past the burglar the casket]

'Nabeel made sure that-and Nura made sure that the burglar broke the casket'

The fact that the bracketed IP in (110) serves as the 'shared sequence' of the two conjoined structures gives evidence that it must be a constituent in its own right in this type of structure.

A second piece of evidence supporting the claim that IP is a separate constituent comes from 'ordinary co-ordination' facts (Radford 1988:295), e.g.

(111) dreet inu [axad axi l-motor] w [axdet exti l-biskleit]

learn pres lsm that [take pas brother the bike] and [take pas sister the bicycle]

'I have learnt that [my brother took the bike] and [my sister took the bicycle]

Since, in general, only constituents belonging to the same category can be conjoined in this manner (Radford, 1988:295), it follows that the two co-ordinated IPs must be constituents.

A final piece of evidence for the claim that IP is a separate constituent from CP can be attributed to a sort of 'Ellipsis' often referred to as 'gapping' (Bresnan 1976a:17), e.g.

(112)a. ma ba9rif iza [axi byhib s-sai] w [exti 0 l-qahwa]

neg know lsm pres if [brother lsm like pres the tea] and [sister 0 the coffee]

'I do not know if my brother likes tea and my
sister coffee'

b.* ma ba9rif [iza axi byhib s-sai] w [iza exti 0 l-
qahwa]

neg know lsm pres [if brother like pres the tea]
and [if sister 0 the coffee]

'I don't know if my brother likes tea and if my
sister coffee'

We notice that whereas it is possible for the verb (byhib) to undergo ellipsis in the second conjunct of (112a), it is not so in the second conjunct of (112b). What this suggests is that 'gapping' is possible only when two IP constituents are conjoined but not two CPs.

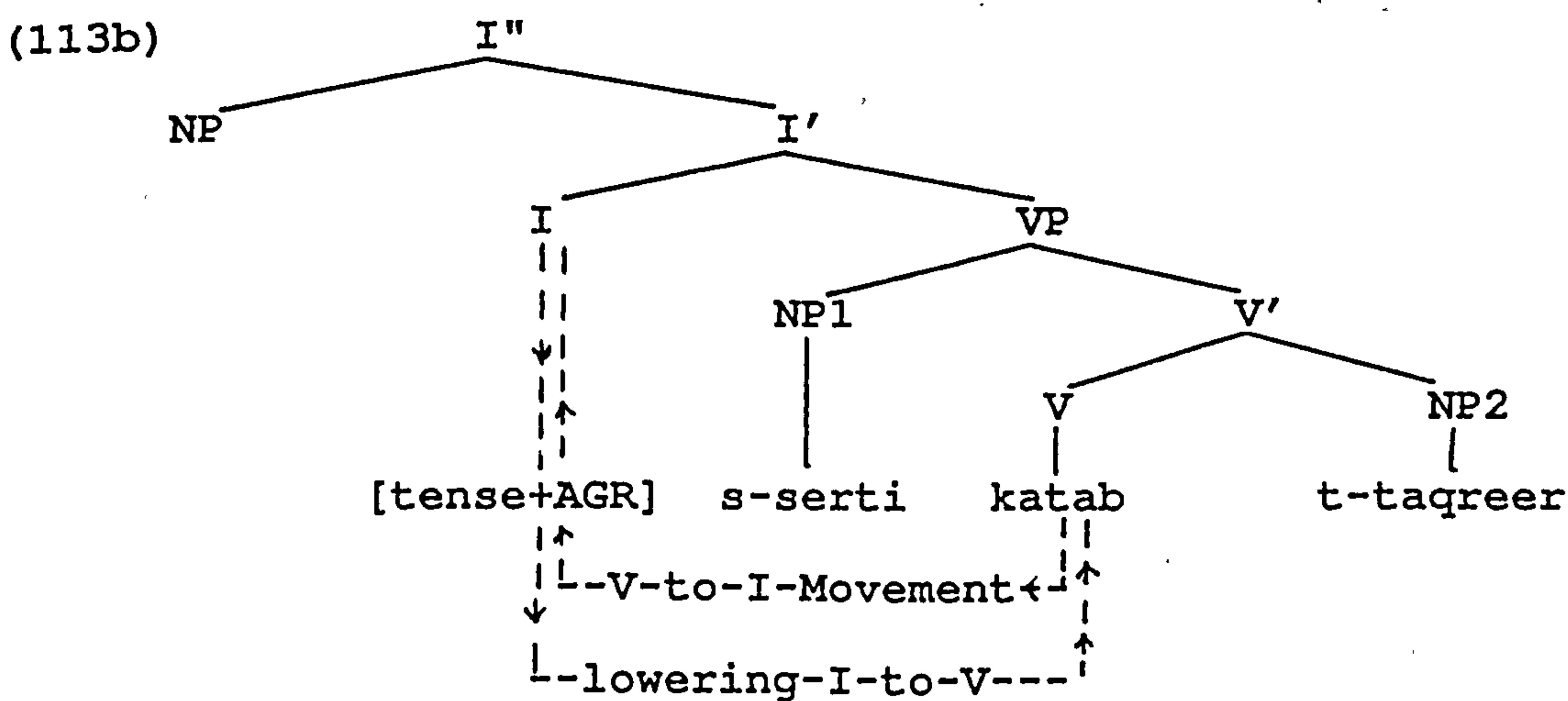
2.4.3. The Internal Structure of IP

2.4.3.1. Arguments for Taking I as The Head of IP

Having shown that IP is a separate system from CP in SA, we will now turn to examine the internal structure of the IP clause system in SA. More specifically, we will try to see why I is the head of IP. One reason for this is that the relevant tense/agreement features are associated with I (Radford, 1988: ch.8). Another reason is that verbal items (except for those base-generated in I) must acquire the relevant tense/agreement properties from I (either by movement of V into I, or by the lowering of the I-features down onto V: the former would give VSO, the latter SVO word order, as we shall presently see). Thus, considering the foregoing reasons, we are justified in

taking the I as the head of IP. This we can illustrate in relation to (113a) and its corresponding D-structure in (113b) below:

(113a) katab s - serti t- taqreer
 write past the police the report
 'The police wrote the report'



both movement operations account for the assumption that it is the I which heads IP because it possesses the determining features of inflection, and any verb in a given finite clause remains tenseless/agreementless unless it gets the relevant I-features for inflection purposes.

Now turning to the point we raised earlier - viz word order, we suggest that there are two different analyses insofar as SVO is concerned. We label them as the 'lowering' analysis (Chomsky, 1981), and the 'double raising' analysis Pollock (1989) and Fehri (1988).

The 'lowering' analysis is a simple one. It simply suggests that the head V of VP remains within V' and acquires tense/agreement properties via an adjunction

process. The 'double raising' analysis, on the other hand, suggests that there are two movement operations involved: V-to-I and Spec-VP to Spec-IP.

Support for the claim that V remains within its original position can be formulated in relation to data such as:

(114)a. Istagrabit inu [mnein Nabeel jab hal haki]

wonder past 1sm that where from Nabeel bring past this story

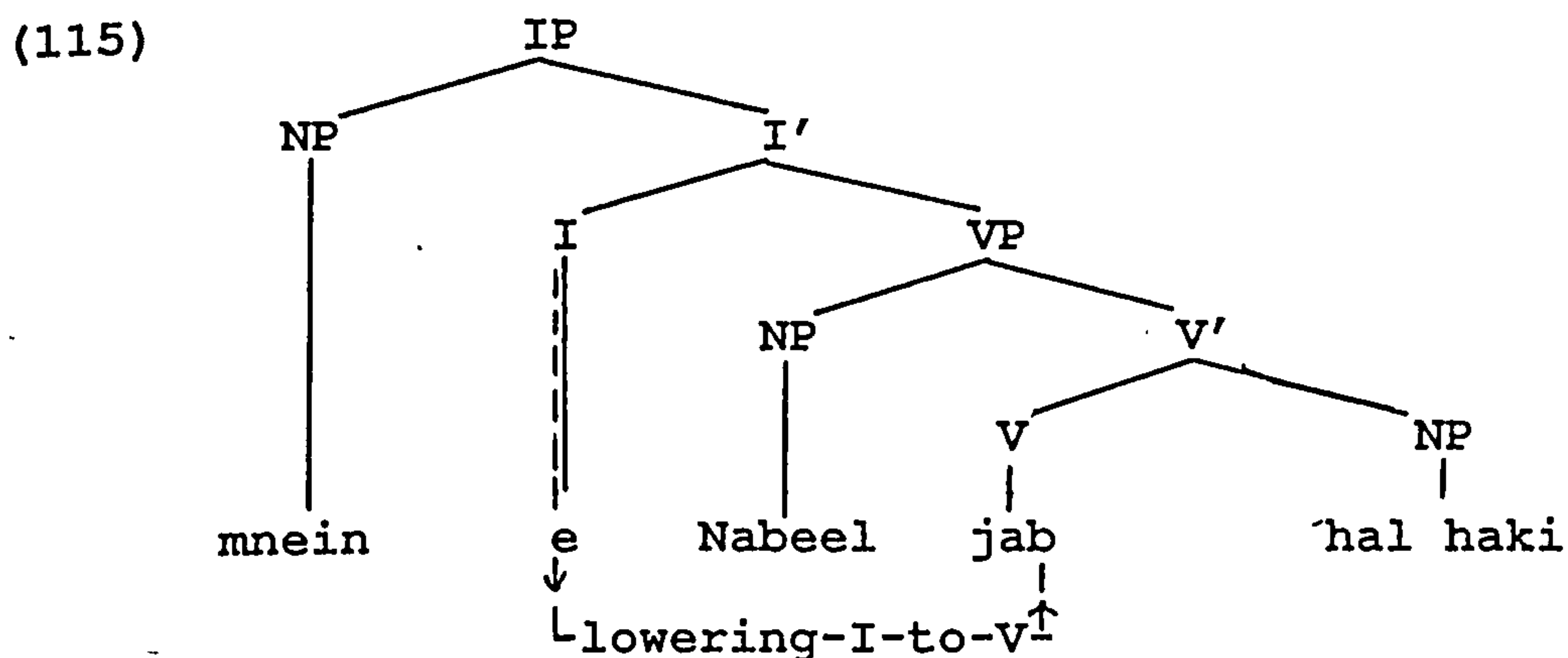
'I wondered that where Nabeel got the story from'

b. 9rifna inu [emta Nura safit al-harami]

know-past-1pl that when Nura see-past the-burgular

'we knew that when Nura saw the bugular'

The subordinate IP clause in (114) can be represented as in (115) below:



The argument which we are trying to underline here is that the intervening two nominal categories (a wh-word and subject) between the comp. and the verb show that V must be within VP and not in I.

A second argument supporting the claim that V remains

within VP can be established on the basis of 'adverb distribution' facts (Jackendoff, 1972:75) cited in Pollock (1989:Vol:20). This argument simply states that adverbs like 'completely, 'always' etc are VP adverbs, and thus restricted to occur in a pre-verb position, and not in a pre-Infl position, e.g.

- (116) Hal bint daiman tohrob minal madrase
this girl always run pres. from the school
'This girl always plays truant'

The 'double raising' analysis suggests that there are two movements involved. First, if the main verb has to receive tense/agreement properties, then it must move to I as in French. Second, the spec VP must move to spec IP. This analysis seems untenable because the spec I position in Syrian is filled by Wh-phrases, as the examples in (114) illustrate.

A number of reasons seems to favour the 'lowering' analysis. Firstly, the data provided is solid, which is very important. Secondly, since the framework of our work is concerned with transformations, then lowering process is quite relevant to it because it is quite simple and basic, and it involves one movement only.

2.4.3.2. Evidence For I'

Having argued that I is the head of IP, we now turn to argue that I' (= I-bar) is also a constituent in its own right. Or, to put it another way, we will try to argue that a head I' followed by a VP complement is a

constituent. To do so, let's assume that we have VSO word order. Now, assuming that we have VSO, then what arguments can be devoted to substantiate the claim that I-bar is a constituent? The first argument to show that I-bar is a constituent can be formulated in relation to 'ordinary co-ordination' facts, e.g.

(117) ma 9rifit inu leis [tarak Nabeel al-madrased] w

[gattet Nura 9lei]

neg-know-past-1sm-that why leave-past Nabeel the-school and cover-past Nura on 3sm.

'I did not know that why Nabeel left school and Nura covered up on him'

Since only identical structures can be co-ordinated, it follows that the two conjoined structures are I-bar constituents.

The second argument in support of positing that I-bar is a constituent can be based on 'shared constituent co-ordination' facts, e.g.

(118) Nabeel 9rif-w Nura 9rfit inu emta [le9eb Nabeel futbool]

Nabeel knew and Nura knew that when played Nabeel football

Given that the key requirement of this type of construction is that the 'shared sequence' must be a constituent, so it follows that [le9eb Nabeel futbool] is an I-bar constituent.

Thus far, we have provided argument in favour of the

claim that I is the head of IP, and that this head I can be expanded into I-bar by the addition of a following VP complement.

Now, this I-bar, in turn, can be expanded into I" (I double-bar) by adding a specifier as in (121) below:

(119) dreena inu [Jaritna rebhet l-jaize]

learn past 3pl that neighbour 3pl win past the
prize

'We've learnt that our neighbour won the prize'

2.5. The Distribution of Constituents Within IP

2.5.1. The Head I Position

As far as the head I position is concerned, it seems that it is left empty of overt items, and thus able to host verbal elements, through head to head movement, for inflection, and for the derivation of the superficial VSO order from underlying SVO word order.

2.5.2. The Spec-I Position

We have seen earlier that the VP complement of I has its own specifier (=NP1), and its own complement (=NP2). These constituents seem to be base-generated in these positions. But it is equally important to note that the spec-I' position is base-generated empty of overt constituents, presumably to act as the landing-site for moved material. If that were so, we would then expect to find wh-phrases moved into spec-I', and therefore, positioned after C, as illustrated in (120) below:

(120)a. Istagrabit inu [_{IP}su [_Isaf] [_{VP}Nabeel---]]

wonder past 1sm that what see past

'I wondered that what saw Nabeel'

b.*Istagrabit [_{CP}inu [_{CP}su [_Cinu [_{IP}saf Nabeel]]

wonder past 1sm that what that see past Nabeel

'I wondered that what that saw Nabeel'

the ungrammaticality of (120b) shows that we do not have a C with a CP complement when a wh-phrase follows 'inu'.

The fact that wh-phrases can appear in the IP specifier position can be supported by data such as:

(121)a. Istagrabit inu meen [_{IP}saf Nabeel]

wonder past 1sm that who see past Nabeel

'I wondered that who saw Nabeel'

b. Istagrabit inu meen [_{IP}haka Nabeel ma9u]

wonder past 1sm that who talk past Nabeel with 3sm

'I wondered that where Nabeel brought this story from'

which shows that the wh-phrase (who) functions as the object of a verb, and a preposition respectively.

2.5.3. The Complement Position of IP

Having examined what goes into the head I position, and the 'spec-I' position, we are now in a position to look at what can or cannot go into the complement position of IP. Following Fehri (1988), we would assume that I-features are optionally discharged (i.e. morphologically realised) in SA. That is, if the following complement is verbal in nature, then I-features are obligatorily discharged as in

(122) below:

(122) [_{IP}Nura [_I e] [_{VP}rahēt 9a Halab l-sbou9 l-maadi]]

Nura go past 3sf to Aleppo the week the last

'Nura went to Aleppo last week'

But if the following complement of I' is not verbal in nature, then I-features would not be realised, as in (123) below:

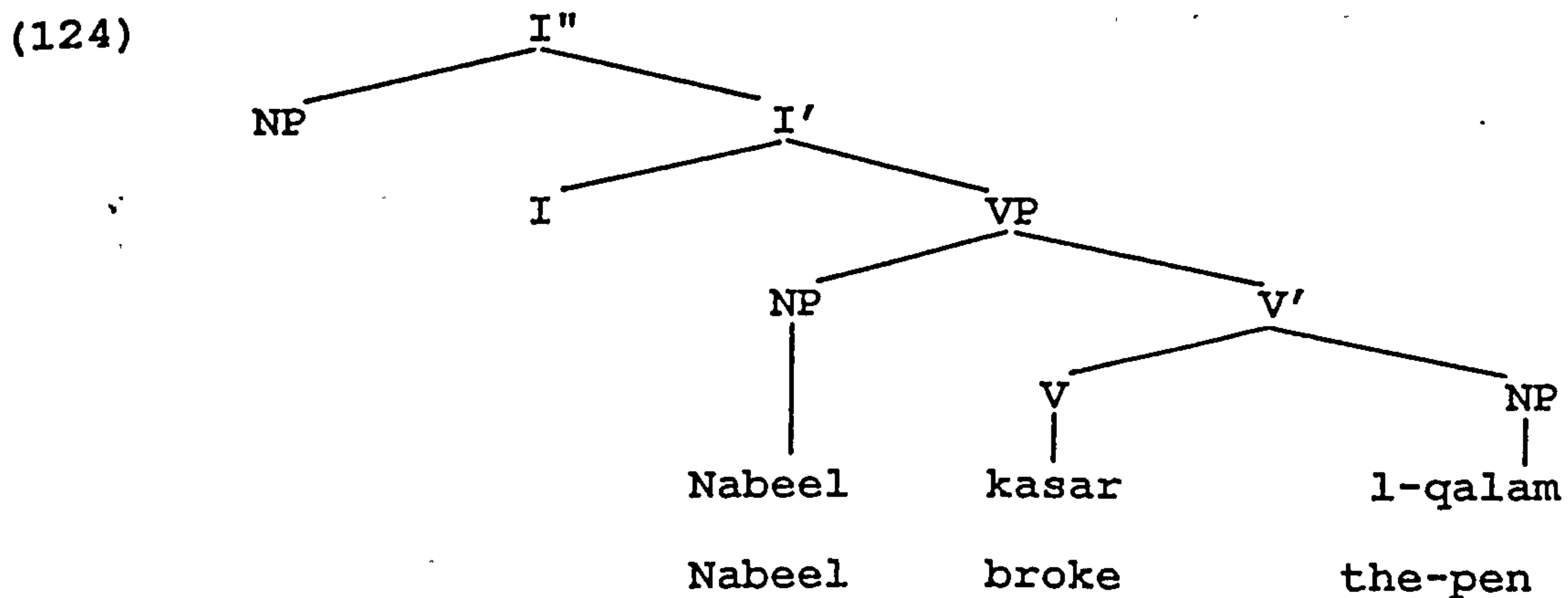
(123) [_{IP}Nura [_I e] [_{PP}fi-l matbax]]

Nura in the kitchen

'Nura is in the kitchen'

2.5.4. Case Parametrization in SA

Having briefly surveyed the appearance of various constituents in permitted positions within a given IP clause in SA, we will now turn to consider what determines the appearance of these constituents. Following Fehri (1988:197), we would assume that 'case directionality' is uniformly to the right in SA. In other words, grammatical as well as lexical categories assign case to the right. For instance, consider (124)



According to Fehri's (ibid) argument of 'Case

Directionality Principle', the head I (which contains tense and AGR) governs and assigns nominative case to the NP 'Nabeel' to its right. Likewise, the verb 'kasar' governs and assigns accusative case to the NP 'l-qalam' to its left.

2.6. SA as a Null Subject Language (NSL)

Having briefly illustrated the appearance of various constituents in permitted positions within a given finite IP clause in SA, we will now turn to look at a phenomenon referred to in the GB literature as 'Null Subject Parameter' or 'pro-Drop parameter' (Perlmutter 1971, Chomsky and Lasnik 1977, Chomsky 1981-2). To do so, we need to consider, first of all, some of the essential features of Null Subject Languages (NSLs for short) as put forward by Chomsky (1981), then investigate finite clauses in SA as involving an empty category in subject position, the appearance of which may be triggered by a 'feature agreement principle'.

2.6.1. Essential Features of (NSLs)

Three (of the five) features suggested by Chomsky (1981:253) in relation to NSLs may be taken to categorise SA as a pro-drop language. These are as given in (125) below:

- (125)a. missing subject
- b. free inversion in simple sentences
- c. apparent violation of the *[that-t] filter

It is worth mentioning that Chomsky's data was taken from

Italian, but for the intent of this paper the data will be taken from SA, e.g.

(126)a. srib-t l-mai

drink 1sm past the water

'I drank the water'

b. akl-u min s-sajra Nabeel w Nura

eat 3sm pl past from the tree Nabeel and Nura

'Nabeel and Nura ate from the tree'

c. meen btiftiker inu saraq l- ktaab

who think 2sm past that steal past the book

'who do you think (that) stole the book?'

Unlike English, SA has no overt subject in (126a). This suggests that the subject in SA can be a covert one. In the (b) example, the subject becomes inverted (=undergoes inversion). The (c) example illustrates the *[that-trace] effect does not hold in SA.

After this brief survey of the properties of NSLs, we will now turn to look at the distribution of this empty subject in SA, its interpretation (=when it is taken to be arbitrary, expletive, or definite), and finally the factors which determine its distribution, such as 'case-licensing.

Given the essential features of NSLs stated in (127) above, SA allows a Null Subject in clauses containing finite verbs. Note the examples in (127) below:

(127)a. sif-na l-qamar

see past 1plm the moon

'we saw the moon'

b. 9abar-u l-bahr

cross past 3plm the sea

'they crossed the sea'

The subject-verb agreement in (127) accounts for the non-realisation of the phonetic form of the subject. This is because SA requires agreement in gender, number, and person. In other words, the richness of verb morphology in SA makes clear the identity of the missing subject.

As far as the identification of 'pro' is concerned, the claim is that 'pro' can be considered as a 'definite' pronoun, because of the fact that overt 'definite' pronouns bear grammatical properties of number and person. Radford (1988c:34), following Rizzi (1986:520), assumes 'pro' to be assigned the relevant grammatical properties along the lines in (128) below:

(128) 'pro' is assigned the relevant person/number features of the head category which licenses it.

To illustrate person/number features on a finite verb in relation to SA. Consider the examples in (129) below:

(129)a. Ana thammam-t mbarha

I bath past yesterday

'I bathed yesterday'

b. ante thammam-t mbarha

'you [sm] bathed yesterday'

c. Inti thammam-ti mbarha

'you [sf] bathed yesterday'

- d. Huwe thammam mbarha
'he bathed yesterday'
- e. Heyye thammam-et mbarha
'she bathed yesterday'
- f. nihni thammam-na mbarha
'we bathed yesterday'
- g. intu thammam-tu mbarha
'you[pl/m] bathed yesterday'
- h. henne thammam-u mbarha
'they bathed yesterday'

The underlined items are regarded as 'definite' pronouns in their emphatic use. Moreover, the finite verb (in the past tense) copies the person/number inflections of the subject - i.e. the morphological agreement of the verb is compatible with the relevant subject. But it is important to emphasise that in the absence of the emphatic use of definite pronouns in SA, 'pro' is the covert subject of clauses containing finite verbs- cf:

- (130) a. pro thammam-t mbarha (I bathed yesterday)
- b. pro thammam-t mbarha (you[sm] bathed yesterday)
- c. pro thammam-ti mbarha (you[sf] bathed yesterday)
- d. pro thammam mbarha (he bathed yesterday)
- e. pro thammam-et mbarha (she bathed yesterday)
- f. pro thammam-na mbarha (we bathed yesterday)
- g. pro thammam-tu mbarha (you[pl/m] bathed yesterday)
- h. pro thammam-u mbarha (they bathed yesterday)

Thus, the inflection for person and number would suggest

that 'pro' carries the relevant grammatical properties which are realised on the verb concerned.

In addition to the appearance of 'pro' in main clause subject position, SA allows the occurrence of 'pro' in the subject positions of relative and complement clauses, e.g.

(131)a. l- batal illi pro byederb-u

the hero who beat pres 3sm

'the hero who (he) beats him'

b. ma ba9rif iza pro saa9ad Nabeel

neg know pres 1sm if help past 3sm Nabeel

'I do not know if (he) helped Nabeel'

However, Null Subjects¹ in SA are not restricted to occurring in contexts where person/number is involved, since they can also occur in other constructions. For instance, in the absence of the morphological agreement on the verb, expletive subjects can be phonologically unrealised, e.g.

(132)a. pro behemni inu Nabeel masgool

concern-pres-1sm that Nabeel busy

1. In Lectures (1981), Chomsky attributes the difference between NSLs and nonNSLs to the fact that in the former 'PRO' may be used instead of a pronoun in subject position, assuming that the constituent which can appear in the position concerned in NSLs may be ungoverned. But in Concepts and Consequences (1982), Chomsky rejects his former analysis of the empty subject position being occupied by 'PRO' in reconciliation with the fact that 'PRO' is a pronominal anaphor to the effect that the conditions of A and B of the Binding Theory are applicable to it. In pursuit of an alternative element which can occur in the empty subject position of NSLs, Chomsky identified this element as an EC (=empty category) which carries the relevant properties of [-anaphor +pronominal], to which he gives the label 'pro'.

'(it) concerns me that Nabeel is busy'

b. pro yabdo inu Nura mabsoota

seem-pres that nura happy

'(it) seems that Nura is happy'

Thus, the richness of verb morphology in Arabic plays a crucial role in deciding whether or not 'pro' can be regarded as a definite or expletive pronoun.

2.6.2. The Licensing Conditions of 'pro'

Having looked at the distribution of 'pro' in SA, we will now turn to consider the licensing factors of 'pro' - i.e. the notions of government and case-marking. In this respect, Rizzi (1986:546) discussed in Radford (1988c:32) assumes 'pro' to be formally licensed via case-marking by a 'designated head'. Radford (following Rizzi:ibid) formulates the following:

(133) pro is licensed only if case-marked by an
appropriate head

Radford (following Rizzi) claims that the head categories which license 'pro' may vary from language to another. For instance, 'pro' in SA is governed and case-marked by a finite head I containing AGR, or by a transitive verb hosting a clitic, as given in (134) below:

(134) pro qatal-a
kill past 3sf (He killed her)

Moreover, transitive prepositions in SA such as 'ma9a' as well as 'Nouns' can act as governors and case-assigning categories of 'pro' if hosting a clitic, e.g.

(135) a. ma trooh ma9u

neg go pres 2sm with 3sm

'Do not go with him'

b. Nura axdet surt-u

Nura take past picture 3sm

'Nura took his picture'

This suggests that 'pro' in SA can be licensed by I, V, P, and N. In other words, the defining property of SA as a 'pro-drop language' is that it has four licensors for 'pro': I, V, P, and N. Or as Radford (1989:33) puts it "in language L, is 'pro' licensed through case assignment by I, and/or V, and/or by P. etc ?", And we found out that in Arabic 'pro' is licensed by all four categories.

CHAPTER THREE

The Structure of CP in English and Syrian Arabic

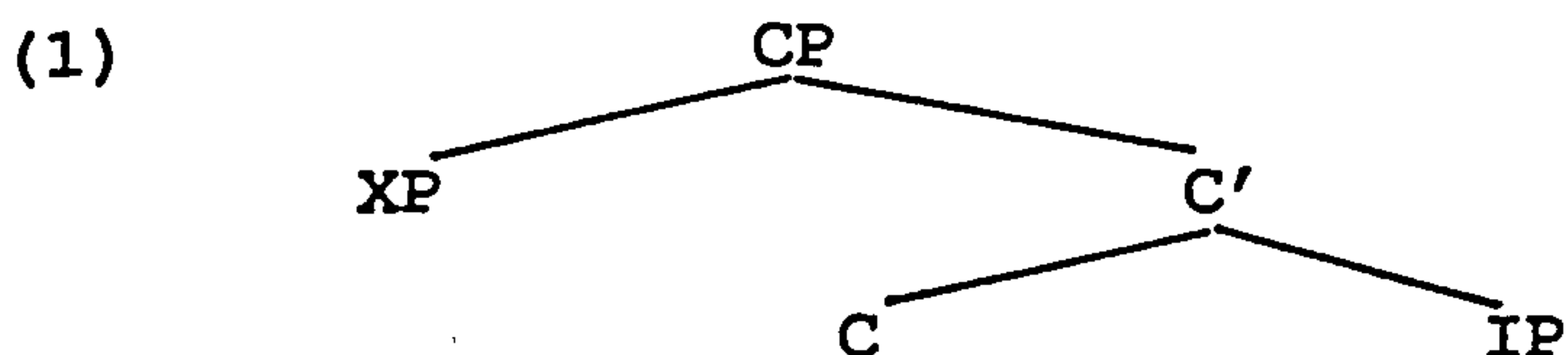
3.0. Overview

In the preceding chapter, we looked at the morphosyntactic structure of English and SA IPs within the framework of X-bar theory. In this chapter, we will give a structural account of the CP of English and SA.

This chapter is divided into two main sections: 3.1. and 3.2. Section 3.1. discusses the CP of English, and section 3.2. discusses the CP of SA. Each of these sections is further divided into subsections. First, let's look at the English CP clause system.

3.1. The English CP system

The complementiser system of English consists of CP, C', and C as outlined in (1) below:



We assume that the head constituent C of CP has as one of its functions that it can contain complementisers i.e. particles which typically introduce complement clauses as indicated in (2) below:

(2) They believe [_{CP} [_C that] [_{IP} they would do it]]

where the underlined particle that introduces the bracketed IP they would do it.

The analysis in (1) above assumes that CP is a

constituent. But what evidence is there for saying this? Part of the evidence comes from 'preposing facts' in relation to examples such as in (3) below:

(3) a. [_{CP} whether Mary will marry John], we couldn't really say.

b. [_{CP} that John will come tonight], everybody knows.

The fact that complement clauses can be preposed in this way provides empirical evidence that CPs are constituents, given the assumption that only constituents can be moved.

A second piece of evidence showing that CPs are constituents is based on 'shared constituent-coordination' facts. This we can illustrate as in (4) below:

(4) I eventually found out - though I didn't realise at first- [that Blunt was a Soviet agent]

The significance of this is that the shared sequence of the two conjuncts must be a constituent. So, it follows that the string that Blunt was a Soviet agent is a constituent.

A third piece of evidence in favour of the claim that CPs are constituents can be formulated in relation to the fact that CPs can function as 'sentence fragments', as illustrated in (5) below:

(5) a. what is your worry?

b. [_{CP} that the committee might cut back on income support]

The occurrence of (b) as an independent utterance suggests that CPs are constituents, for only maximal projections

can serve as sentence fragments or be preposed. These arguments are taken from Radford (1988).

3.1.1. Arguments for taking C as the head of CP

Having established that CP is a constituent, we now turn to argue that the overall constituent is a maximal projection of C, and thus has the status of CP: if so, then it follows that C is the head of CP. But what arguments are there to show that C is the head of CP? One piece of evidence comes from 'subcategorisation facts'. C imposes subcategorisation restrictions on its choice of following IP complement. For example, consider (6) below:

(6)a. Mary knows that [_{IP}John does drink a lot]

b.* Mary knows that [_{IP}John to drink a lot]

This shows that the underlined complementiser that permits only a finite IP complement such as that bracketed in (6a), but not an infinitival IP complement such as in (6b). This amounts to saying that only particular type of IPs can function as the complement of a given complementiser. Since subcategorisation restrictions hold between a head and its complement, and since this type of restriction holds between C and IP in (6a) above, then the claim that C is the head of CP seems to be substantiated, with IP functioning as the complement of C.

A second reason for positing that C is the head of CP derives from the fact that it is the nature of C which determines the nature of CP (Haegeman, 1991:106). For instance, if the complementiser is the finite

interrogative indicative complementiser if, then the overall CP is a finite, interrogative, indicative clause. But if the complementiser is the infinitival non-interrogative complementiser for, then the overall clause is a non-interrogative infinitive. Given that C determines the nature of the overall clause (CP), it follows that a CP headed by if can only be used as an argument of a predicate which selects an interrogative complement: cf, e.g.

(7) a. I wondered if he was coming

b.* I ordered if he was coming

Given the endocentricity property (see chapter two), it follows that CPs will inherit the properties of their head C constituent, so that a CP headed by for will be non-interrogative and infinitival.

3.1.2. Arguments for a C-bar constituent

Having shown that C is the head of CP, we now turn to consider what evidence there is that C (like other head categories) permits two distinct phrasal projections, namely C-bar and C-double bar - i.e. CP. Since we have already presented evidence that CP is a constituent, we will now turn to look at evidence for positing a C-bar constituent distinct from CP. The relevant evidence comes from 'ordinary co-ordination' facts, and more specifically from examples such as in (8) below:

(8) [_{CP}Quite [_Cwhether he will turn up]] or

[_Cwhether he will stay at home]], we couldn't really

tell.

Given the assumption that only constituents belonging to the same category can be co-ordinated (Radford, 1988:295), it follows that (8) above contains two co-ordinated C-bar constituents. It is important to note here that both conjuncts are understood as being within the scope of quite. This co-ordinated C-bar constituent can further be expanded, within the X-bar schema, into C-double bar by the addition of a specifier such as quite, as in (8) above.

3.1.3. The C position

Having shown that C is the head of CP, and that C has two separate projections: C-bar and C-double bar, we now turn to consider in rather more detail the range of constituents which can fill the various positions within CP. We will begin by looking at the constituents which can occupy the head C position of CP. We assume that UG allows for the dual possibilities that C can either be filled or left empty, and that if filled, C can be filled either by a base-generated constituent, or by a transformationally moved constituent. As an illustration of a base-generated constituent filling C, consider the examples in (9) below:

- (9) a. Mary is anxious [that John should sign the letter]
b. Mary is anxious [for John to sign the letter]
c. Mary doubts [if John will sign the letter]
d. Mary wonders [whether John will sign the letter]

We assume (following the standard analysis) that the

underlined complementisers are base-generated in C.

A second possibility is that the head C position of CP can be underlyingly left empty of overt complementisers. Given that the endocentricity principle requires CP to have a head, it follows that a CP which lacks an overt complementiser must be headed by an empty constituent, as would be the case with the bracketed CP complement in (10) below:

(10) Mary knows [_{CP} [_C e] [_{IP} John will sign the letter]]

Empirical evidence in support of the claim that clauses lacking an overt complementiser still have the status of CP constituent headed by an empty C comes from the fact that a complement clause lacking a complementiser can be co-ordinated with another complement clause having an overt complementiser: cf, e.g.

(11) Mary knows [_{CP} [_C e] [_{IP} John will sign the letter]]

and [_{CP} [_C that] [_{IP} Hilary will post it]]

Given the constraint that only constituents belonging to the same category can be co-ordinated¹, it follows that the first bracketed complement clause in (11) above has the status of a CP introduced by an empty complementiser, since it is co-ordinated with a (second) clause which clearly has the status of a CP headed by the C that.

1. The constraint that co-ordination requires identical categories is subject to exceptions given examples like (John is ill and in bed and I did it slowly and with great care) Borsley: personal communication.

3.1.4. Syntactic Constraints on C Position

Having shown that the head C position of CP can either be filled by a base-generated complementiser, or be left empty, the obvious question to ask is under what conditions C can be filled or be left empty? Consider first the question of when an overt complementiser can be used to head a CP. In general, overt complementisers occur in subordinate clauses when a predicate selects a CP headed by the type of C in question. We can represent this in the case of the complementiser that as in (12) below:

(12) we think [_{CP}[_Cthat] [_{IP}he is innocent]]

where the occurrence of that is licensed by the fact that the lexical verb 'think' selects a CP headed by that. Thus, the ungrammaticality of (13) below:

(13)* That he is innocent

results from the fact that that is not selected by a predicate and that overt complementisers cannot be used to introduce main clauses.

However, overt complementisers seem to be subject to certain restrictions in the sense that they cannot generally occur (except that) in the complement position of prepositions, e.g.

(14)a.* He is anxious about [_{CP}[_Cthat] [_{IP}she may not turn up]]

b.* We are sorry about [_{CP} [_Cfor] [_{IP}you to have been kept working]]

the ungrammaticality of (14) may be explained by assuming

that prepositions, in general, do not allow clauses with overt complementisers (Borsley, personal communication). But at least one preposition in can take a that clause: cf, e.g.

(15) John is unsuitable for the job in[_{CP} [_Cthat] [_{IP} he
he does not understand people]]

In this sense, the complementiser whether seems to be an exception in that it can occur in prepositional complements: cf, e.g.

- (16) a. They debated [_{CP} [_Cwhether] [_{IP} Thatcher should go]]
b. We are not certain [_{CP} [_Cwhether] [_{IP} he will come]]
c. We are not certain about [_{CP} [_Cwhether] [_{IP} he
should pay cash]]

3.1.5. Semantic Constraints on C Position

So far, we have looked at syntactic constraints on the occurrence of overt complementisers in C. We will now turn briefly to look at semantic constraints (i.e. selection restrictions). A distinction must be drawn between subcategorisation restrictions and selection restrictions. According to Radford (1988:370) "subcategorisation restrictions are purely syntactic (more precisely *category*) in nature, whereas selection restrictions are semantic/pragmatic in nature". Thus, C selects a following IP complement, and the form of the selected IP will be determined by the subcategorisation properties of C which must be governed by a predicate which, in turn, selects the relevant kind of complement. For instance, emotive and

desiderative predicates can select for infinitive clauses, and interrogative and dubitative predicates can select interrogative clauses, etc. This can be illustrated as in (17) below:

(17)a. Mary is dying/*screaming [_{CP}[_Cfor][_{IP}John to marry her]]

b. They ask/*prefer [_{CP}[_Cwhether][_{IP}you can help them]]

3.1.6. The Complement of C

Having looked at when C can be filled by complementisers, we shall go on to look at constraints on what can occur in the complement position of a given CP. In the light of our examples so far, we see that IP always occurs in the complement position of a C, as Abney (1987) argues that C universally subcategorises an IP complement. This is determined by the (categorial and semantic) selectional restrictions imposed by the head C of CP. For instance, that requires a following finite complement, and whether requires a following yes/no interrogative complement, as shown in (18) below:

(18)a. You know [_{CP}[_Cthat][_{IP}he is an idiot]]

b. You wonder [_{CP}[_Cwhether][_{IP}he works hard]]

From (18), we predict that the IP complement of C is obligatory.

3.1.7. C Position Filled Transformationally

Having looked at the range of base-generated constituents which can fill the head C position - i.e.

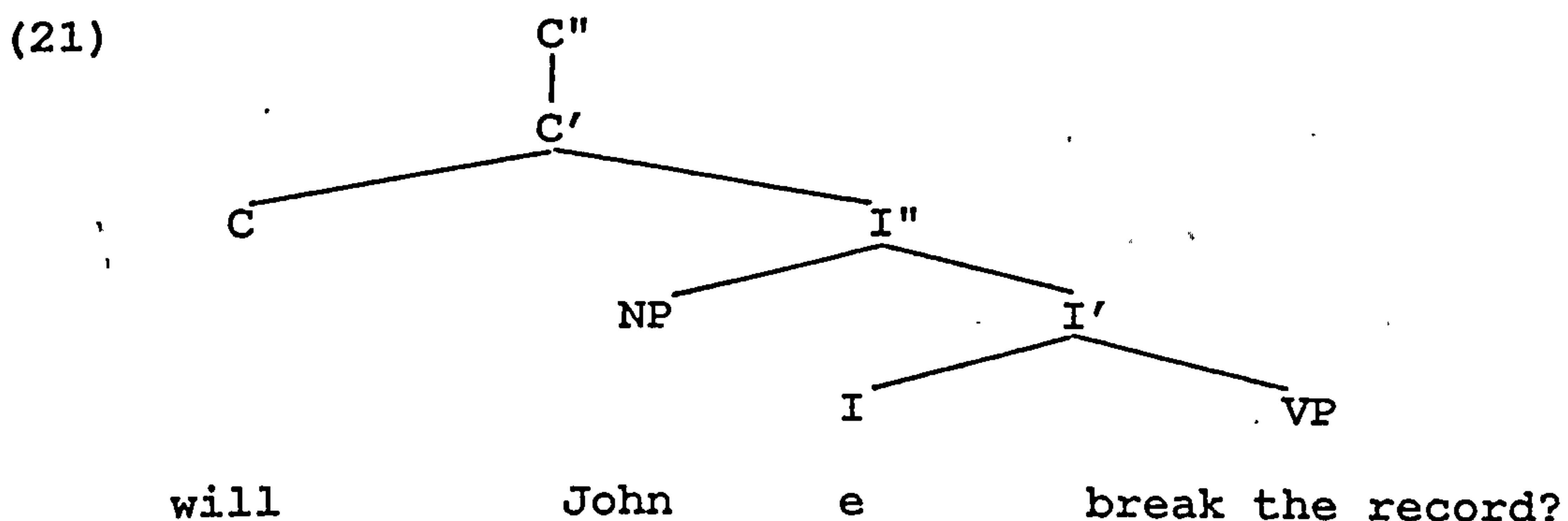
when C is underlyingly and superficially filled by complementisers as permitted by UG, we shall now look at cases where the head C of CP is underlyingly empty, and is transformationally filled by movement of an auxiliary out of I into C, so giving rise to the phenomenon often referred to as 'Subject-Auxiliary Inversion' (as we discussed in chapter two). We assume that I is the superficial position of Modals and other auxiliaries such as 'may/might', 'will/would', 'shall/should', 'can/could', 'must', 'be', as well as 'do', 'need' and 'dare' in their auxiliary uses. In this connection, consider the sentence in (19) below:

(19) John will break the record

By the movement of I to C, this can be transformed into the structure in (20) below:

(20) [_Cwill [_{IP}John [_Ie] [_{VP}break the record]]?

The movement of auxiliaries from I to C (e.g. which plays a central role in the formation of direct questions) can be schematically represented in the manner of (21) below:



In (19), the Modal will originates in I between the subject NP John and the VP complement break the record. As

a result of I to C movement, the Modal will ends up positioned in the empty C position, as indicated in (21) above.

3.1.8. C as the Landing-Site for Moved Auxiliaries

We have seen in the immediately preceding section that C can be filled transformationally. Now we will look for arguments that can be adduced for positing that C is the landing-site for preposed auxiliaries. Part of the relevant evidence (Emonds, 1976:25 and Cook, 1988:128) relates to the fact that while it is possible to have preposed auxiliaries into C when C is left empty in embedded complement clauses (22a below), it is not so when C is filled by an overt complementiser (22b), for the obvious reason that a C position cannot be doubly filled (Cook, *ibid*): cf, e.g.

(22) a. They wondered [_Cwould] Mary [_I e] succeed]]

b.* They wondered [_Cwhether/would] Mary [_I e]
succeed]]

c. They wondered [_Cwhether] Mary [_I would] succeed]]

The ungrammaticality of (22b) results from the presence of an overt complementiser in C position which blocks the movement of the auxiliary would into the same position.

Another piece of evidence for the claim that C is the landing-site for preposed Modals can be based on facts from 'conditional clauses' which give further evidence that where a clause is introduced by an overt complementiser, movement is impossible (Rizzi, 1984:123

discussed in Radford, 1988:416), as given in (23) below:

(23)a. [if] you should go there

b. [should] you go there

c.*[if/should] you go there beware of the dogs

This amounts to saying that the I to C analysis correctly predicts that complementisers and pre-subject auxiliaries are mutually exclusive; and in turn lends support for the claim that C is the landing-site for preposed auxiliaries.

If, as suggested here, inversion in English involves movement from I to C, then it follows that we should not expect finite non-auxiliary verbs positioned underlyingly and superficially in the head V of VP to undergo inversion i.e. since non-auxiliary verbs do not appear in C they do not appear in I either (Pollock, 1989:365-425) as we see from:

(24)a(i). [_C e] [_{IP}Mary][_Ican][_{VP}play the violin]

└I-to-C-movement┘

(ii). [_Ccan] [_{IP}Mary][_I e] [_{VP}play the violin]

b(i). [_C e] [_{IP}Mary][_I e] [_{VP}plays the violin]

└--V-to-C-movement--←┘

(ii).* [_Cplays] [_{IP}Mary][_I e] [_{VP}---the violin]

the relevant data can be accounted for in a straight forward fashion if we assume that a moved constituent can cross only one maximal projection (e.g. IP in 24a), but not two or more (viz VP and IP in 24b). Put somewhat differently, this sort of data can be standardly accounted

for by the head Movement Constraint which says that a head can only move to the nearest c-commanding head position. This is standardly seen as a result of the ECP.

C, moreover, can be filled by auxiliaries only if ungoverned (Radford, 1989). For example, consider (25) below:

(25) a. [_Ccan] [_{IP}you] [_Ie] [_{VP}do it]?
 ↑ ↓
 I-to-C-movement

b.* We are not sure about [_{CP}[_Ccan] [_{IP}you do it]]

One possibility is that certain categories cannot occur in case-marked positions because they are case-resistant. By the same token, auxiliaries and verbs are also case-resistant. Thus, the ungrammaticality of (25b) can be attributed to the fact the bracketed CP gets Case from the transitive preposition about. This Case percolates down onto the head C of CP - i.e. can. But, can cannot be Case-marked because it is an auxiliary - i.e. Case-resistant - hence the ungrammaticality of (25b). Alternatively, if the head C of CP contains a Case receiving element, such as the complementiser whether then the transitive preposition about will assign Case to whether as in (26) below:

(26) We are not certain about [_{CP}[_Cwhether] [_{IP}you can do it]]

Assuming that we have the structure in (27) below:

(27)* We are not certain about [_{CP}[_Ccan] [_{IP}you do it]]

Where the ungrammaticality arises from the fact that the preposition about governs and Case-marks can. This would

mean that auxiliaries are not Case-resistant, but on the contrary, they are government-resistant (Radford, *ibid*).

From the ungrammaticality of the occurrence of auxiliaries in the embedded C position, we would assume that complementisers in English are not governors (except for), because if we assume that they are, they would govern auxiliaries through the intervening IP, as in (28) below:

(28) We are not certain [_{CP} [_C whether/that] [_{IP} he can do
it]]

In (28), can cannot be governed by the complementiser whether because whether cannot act as a governor, since it allows PRO subjects.

One possible explanation for the nonoccurrence of auxiliaries in the embedded C position stems from the fact that we do not get movement to C in selected CPs - i.e. complement and subject CP's although we do in main clauses and adjunct CP's (Borsley, *p.c.*). This would mean we have the following:

| | |
|-----------------|-----------------------------|
| (29) i. that/ e | declarative complementisers |
| ii. whether/if | yes/no complementisers |
| iii. for | infinitival complementisers |
| iv. e | wh-question complementisers |

All are restricted to occurring in complement clauses. The fact that C is filled by overt/covert complementisers would then block preposing auxiliaries into C, except in main clauses where there are never any (overt/covert)

complementisers in C.

So far, we looked at two possibilities allowed by UG: (i) C is underlyingly and superficially filled - i.e. when the head C of CP is occupied by base-generated complementiser; (ii) and C is underlyingly empty, but superficially filled i.e. when the head C of CP is occupied by I to C movement. We will now consider a third possibility allowed by UG - i.e. C is underlyingly and superficially empty. For example, consider the following:

(30)a. John knows [_{CP}[_C e] [_{IP}Mary is angry at him]]

b. It is clear [_{CP}[_C e] [_{IP}it will rain tomorrow]]

Following Stowell (1981), we assume that C can be empty only if properly governed by a lexical category,¹ e.g.

The empty C in (30) is properly governed as required by the ECP, as Chomsky notes in his Lectures (1981):

(31)a. is properly governed if and only if is governed by a X other than AGR or a coindexed category

b. ECP: [e] must be properly governed

Given the definition of 'proper government' and 'ECP', the suggestion is that C can be left empty when governed by a lexical category, and when a clause (according to ECP) is in an object position, its complementiser can be properly governed. cf, e.g.

(32)a. She admitted [_{CP}[_C e] [_{IP}she was guilty]]

1. But this analysis cannot be maintained given the position taken by Chomsky in Barriers (1986b), where he in fact rejects this analysis.

b. She admitted reluctantly [_{CP} [_C that/*e [_{IP} she was guilty]]]

Note that an empty C is only possible in complement position and that it must be adjacent to a governor (that is what (32b) shows) cf, e.g.

(33) She told me [_{CP} [_C e [_{IP} she was guilty]]]

Though the empty C is not adjacent to its lexical governor i.e. (told), yet it is argument-adjacent - i.e. it is not separated from it by an argument, nor is it by a non-argument as in (32b). Radford (p.c.) suggests that only a finite indicative or Wh-interrogative C can be empty if properly governed by an argument adjacent, and semantically appropriate V. or A.

When a clause is in a subject position, its complementiser cannot be properly governed (it will be governed by an I which is not a lexical category), and hence it cannot be left empty as in (34b) below:

(34)a. [_{CP} [_C that [_{IP} it will rain tomorrow]]] is certain

b.* [_{CP} [_C e [_{IP} it will rain tomorrow]]] is certain

This suggests that if a complementiser is not properly governed, it cannot be left empty.

C, moreover, cannot be left empty when the governing category is a noun or a verb lacking a subjunctive complement. The following illustrate this:

(35)a.* My certainty [_{CP} [_C e] [_{IP} he was innocent]] proved wrong

b. The judge demanded [_{CP} [_C that/*e] [_{IP} football

hooligans should be punished]]

This suggests that only indicative C can indeed be left empty when governed by an argument-adjacent V or A. But this assumption is undermined by the fact that 'colourful predicates' (Stowell, 1981) do not permit an empty C to head a given CP, as illustrated by the following:

(36)* The soldier groaned [_{CP}[_C e] [_{IP}he was wounded]]

The ungrammaticality of examples such as (36) would seem to somehow correlate with the semantic 'colourfulness' of predicates like 'groan'. This indicates that it is proper government by a semantically appropriate V predicate, which is the key point. Moreover, the complements of verbs like 'groan' are islands in the sense that nothing can be extracted from the complement position of such verbs (Borsley, p.c.). For instance, we do not have examples:

(37)* Who did he groan that he was?

which is perhaps related to the impossibility of an empty C.

However, C can never be left empty when a complement clause is introduced by the yes/no complementiser whether:

(38)a. I doubt [_{CP}[_Cwhether] [_{IP}he will get it]]

b.*I doubt [_{CP}[_C e] [_{IP}he will get it]]

On the other hand, it is equally important to note that C must be empty when a Wh-word moves into the C specifier position, as illustrated below:

(39)a.* I doubt [_{CP}where [_Cwhether] [_{IP}he will get it]]

b.* I doubt [_{CP} e [_C e] [_{IP}he will get it]]

The ill-formedness of the data above can be accounted for by assuming that a Wh-interrogative C must always be empty if there is a Wh-phrase and never empty if there is not.

3.1.9. The C-Specifier Position

Having considered the various possibilities allowed by UG with regard to head C position, we will now turn to consider the C-specifier position and the range of constituents that can occur in this position. The C specifier position can be:

- (40) i. filled in the base
- ii. transformationally filled
- iii. left empty

Insofar as the first possibility is concerned, the pre-complementiser position can be occupied by base-generated constituents such as the adverb 'quite' in (41) below:

- (41) [_{CP} quite [_C whether] [_{IP} he will win the race]], we
could not really say

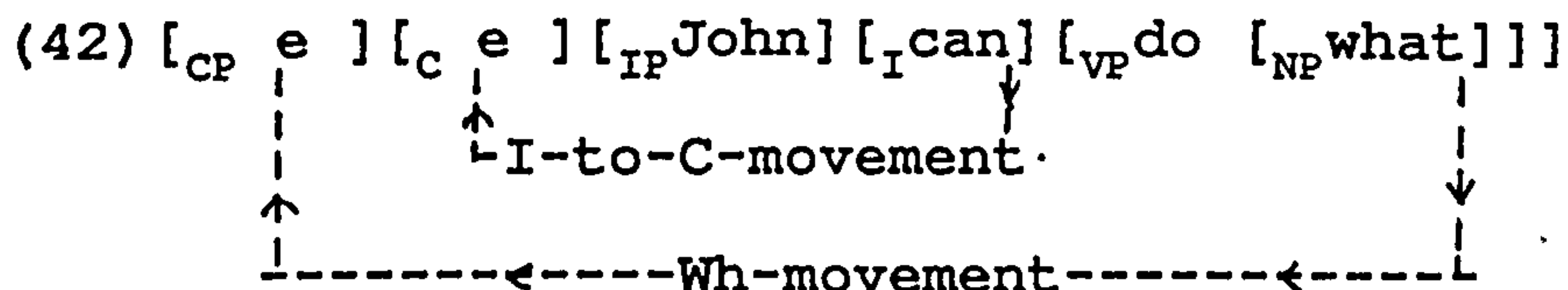
This possibility seems to exist only when C is also filled by a base-generated complementiser.

The second possibility identified above is that the specifier position in CP can be filled transformationally. Among the constituents which can be transformationally moved into the CP specifier position are: Wh-phrases, topic-phrases, negative phrases, and consecutive phrases.

3.1.9.1. Wh-Phrases

We can illustrate how Wh-phrases can be moved into the CP specifier position in terms of the following schematic

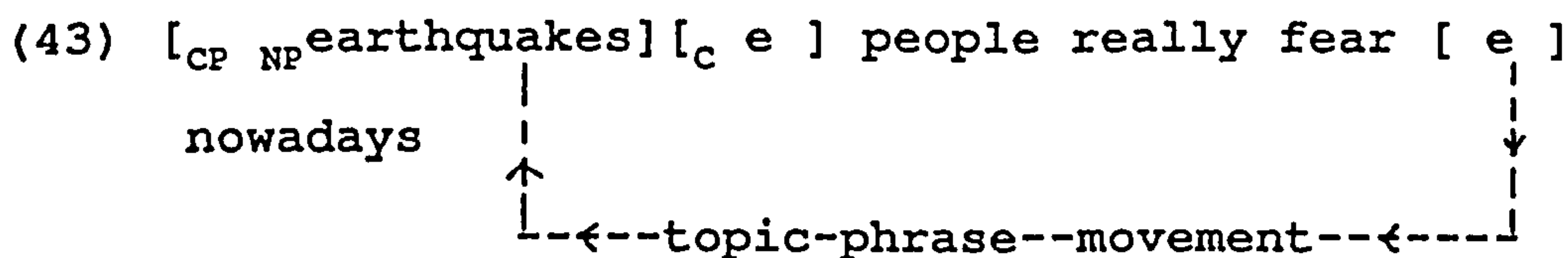
derivation:



(42) illustrates, in addition to I to C movement, how the NP Wh-word 'what' is preposed from its original position within IP in the D-structure to end up positioned superficially in the pre-complementiser position.

3.1.9.2. Topicalisation

Another movement process which raises constituents out of IP into C-specifier position is known as 'topicalisation'. We can illustrate its operation in terms of (43) below:



where [e] indicates the original position occupied by the moved constituent [NP earthquakes] before being moved into the C-specifier position. Empirical support for the claim that 'topicalised' constituents occupy the C-specifier position comes from structures such as:



This structure (which is taken from Radford 1988:530) shows that the preposed constituent is positioned somewhere to the left of C. If this were so, then on what grounds are we claiming that 'topicalised' constituents

undergo movement into the C-specifier position? Following Radford (1988:530), we assume that if both topics and Wh-phrases occupy the CP specifier position, then they will be mutually exclusive. And this is the case, as we see from (45) below:

(45)* when that sort of scheme do you think will be adopted?

This ungrammaticality of (45) can be accounted for by positing a restriction that heads have unique specifiers (* e.g. John Bill did it, or * the a dog, which becomes relevant only if determiners are specifiers), and that the specifier position within CP can be transformationally filled either by a 'topicalised' or a Wh-phrase, but not by both.

At this point a distinction must be drawn between 'topicalised' and 'dislocated' constituents. The former are preposed to the C-specifier position, whereas the latter are not, which means that 'dislocated' constituents do not undergo any movement operation as indicated in (46) below:

(46) This house, my parents used to live in it

Two reasons can be adduced for positing that 'dislocated' constituents do not undergo movement. Firstly, unlike 'topicalised' constituents, 'dislocated' ones never leave a gap behind at their presumed extraction site within IP; but rather always associated with a resumptive nominal or pronominal NP, e.g.

(47) [fish] I really like the dear little creatures
Since there is no known type of transformation in natural language which can leave behind a full nominal such as 'the dear little creatures' as its trace, a transformational analysis of 'dislocated' constituents is implausible (Radford: lecture notes). Secondly, the claim that 'dislocated' constituents are not transformationally generated can be supported by facts from case theory. Transformationally generated constituents are assigned case at S-structure through their traces, e.g.

(48)a. She, I think will be there

b. Her, I think we will see

But dislocated constituents by contrast are assigned an invariable case (= objective), which may be different from that assigned to the resumptive NP, e.g.

(49)a. [ME/*I], I cannot stand fish

b. I cannot stand fish, [ME/*I]

In spite of the fact that the resumptive pronoun in (49) is nominative, the dislocated NP is assigned objective case. Thus case-marking facts argue against a transformational derivation for 'dislocated' constituents.

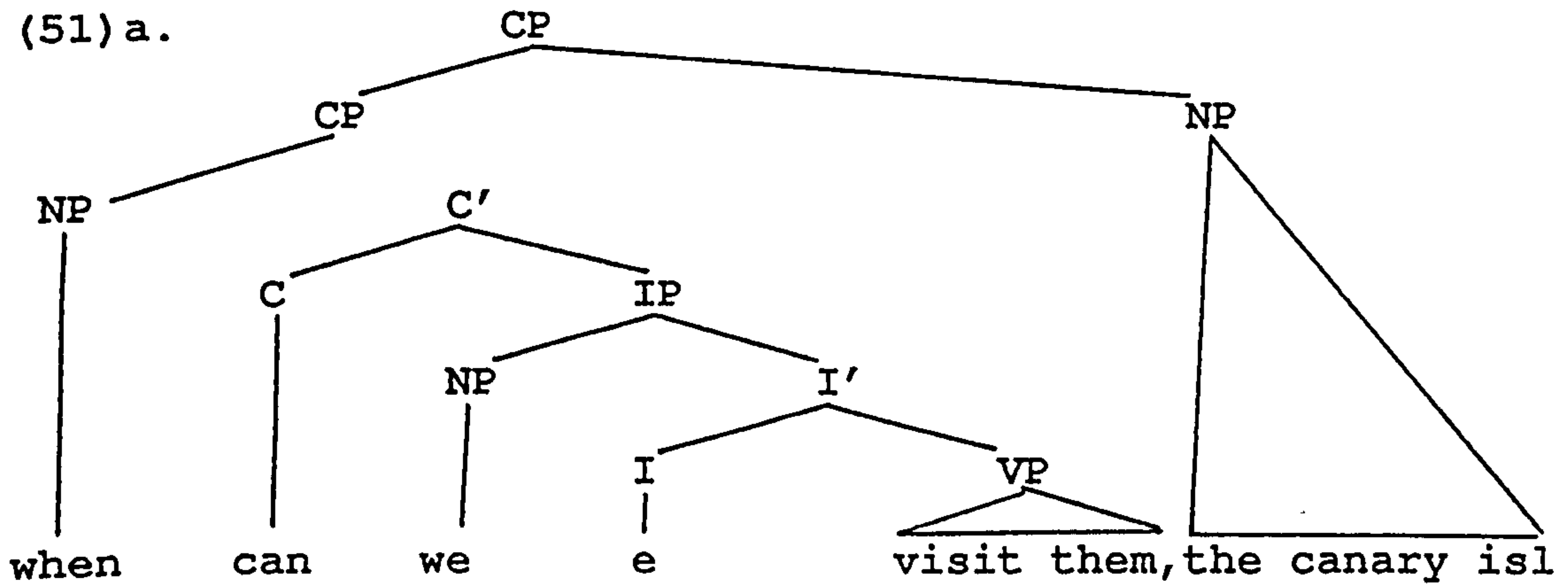
Recall that 'dislocated' constituents cannot be transformationally derived; thus it is important to note that they can be base-generated to the right or left of their containing clauses. We assume, following Radford (1988:530), that they are adjoined to CP, and can be positioned to the left or right of CP, as in (50) below:

(50) a. When can we visit them, the canary islands

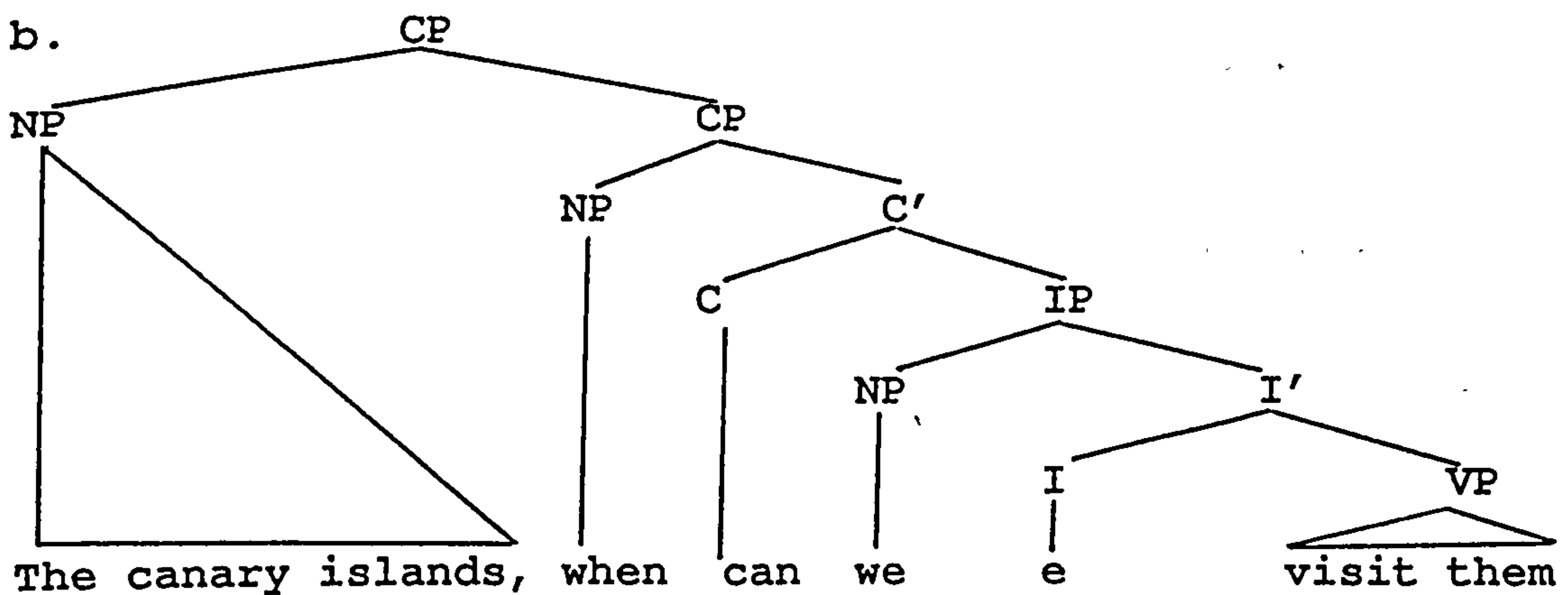
b. The canary islands, when can we visit them

which can be represented as in (51) below:

(51) a.

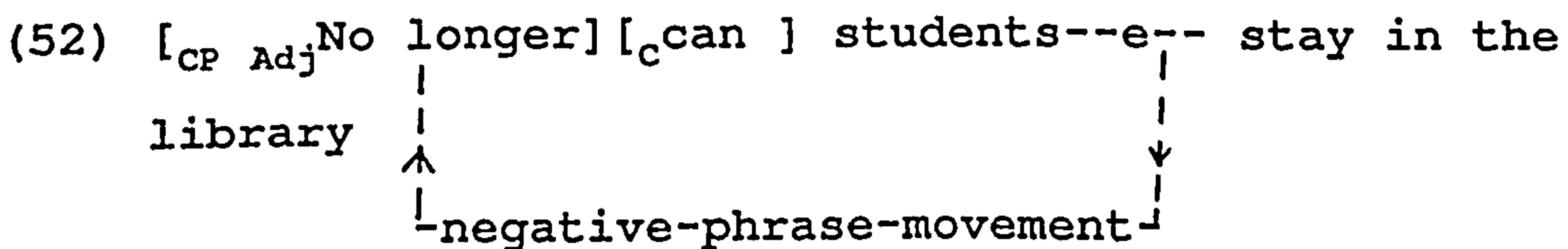


b.



3.1.9.3. Negative Phrases

Among the various constituents which can be moved into C-specifier position, as Radford (1988:528) suggests, are 'negative phrases', as we see from examples such as in (52) below:



Now, if we assume that preposed constituents originate within IP in --e--, then get moved outside of IP into C-specifier position, and if we further assume that I constituents are moved into C position, and that the C-specifier position is the pre-C position, then we would come to conclude that 'negative' preposing rule raises negative phrases from within IP into the C-specifier position, as sketched in (52) above.

3.1.9.4. Consecutive Phrases

In much the same way, 'consecutive or resultative' constituents can also be moved into the C-specifier position as schematically show in (53) below:

(53) [_{CP} such a talent [_C did] the pianist show --e--
 that he | received rapturous applause
 ↑
 |-----←---consecutive-phrase-movement---←---|

To sum up, we have given an account of the CP system in English. We have considered the conditions under which C and CP-specifier position can (or cannot) be filled. We have suggested that a number of constituents can be moved into CP-specifier position. These include: Wh-phrases, topicalisation, negative and consecutive phrases. The assumption that these elements can indeed be positioned transformationally in the CP-specifier position is supported empirically by the fact that they are mutually exclusive - i.e. the occurrence of one of these elements in a given position means the nonoccurrence of the other in the same position.

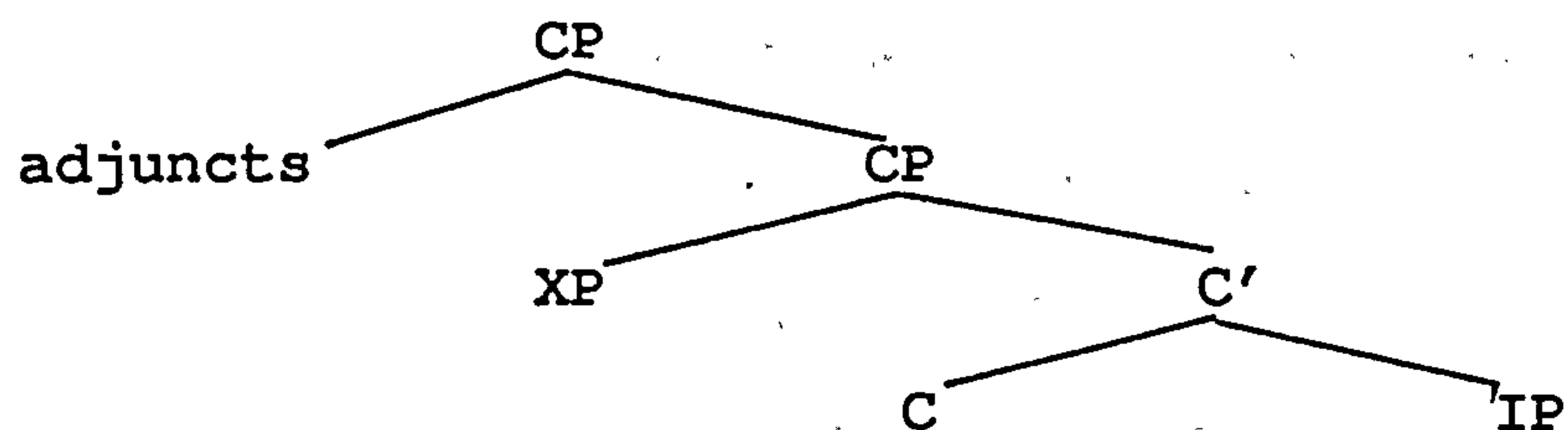
3.2. The SA CP Clause System

3.2.0. Overview

In the previous section, we considered the structure of CP clause system in English within the X-bar schema. In this section, we will consider the structure of CP clause system in SA. More specifically, we will try to argue that CP in SA is a constituent, that particles such as inu/iza and mshan, which introduce complement but not main clauses, are complementisers, and that C is the head of CP. We will also argue for the conformity of SA CP to the general X-bar schema - i.e. we will highlight the expansion of C into C' and C'', and give evidence for C'. We will then discuss the constituents which are permitted to occupy all the relevant positions within a given CP clause.

The CP clause system in SA can be schematised as in (54) below:

(54)



We posit that the head constituent C is the position which hosts complementisers - i.e. particles which introduce complement clauses. This can be illustrated as in (55) below:

- (55)a. 9rif- na [_{CP} [_C inu][_{IP} Nabeel tarak l-balad]]
 know past lpm that Nabeel leave past the country
 'we knew that Nabeel had left the country'
- b. ma takkad-na [_{CP} [_C iza][_{IP} Nabeel reje9 wella la]]
 neg sure past lpm if Nabeel return past or not
 'we did not make sure if Nabeel cameback or not'
- c. xattat-na [_{CP} [_C mshan][_{IP} Nabeel yetruk l-balad]]
 plan past lpm for Nabeel leave pres. the country
 'we planned for Nabeel to leave the country'

Such data shows that the complementisers inu/iza/ and mshan can introduce an IP complement clause such as the bracketed Nabeel tarak l-balad etc. However, it should be made clear that the complementiser mshan/for is not a prepositional complementiser taking an infinitive complement, but rather a finite one.

3.2.1. Motivation for a CP Constituent in

Contradistinction to IP

The assumption we implicitly made in (54) above is that CP is a constituent. What arguments can be adduced to substantiate such an assumption? Part of the relevant evidence relates to 'preposing facts' in the sense that CP complements can be preposed (note that I am using exactly the same arguments as in the English section), in the manner illustrated in (56):

- (56) [_{CP} inu Nabeel tarak l-balad], kelna 9rifna
 that Nabeel left past the country, all know past lpm

'we all knew that Nabeel had left the country'

Thus, the fact that complement clauses can be preposed in this way supports the claim that they are constituents, and indeed maximal projections because only maximal projections (and zero level categories) can be moved in this way as Chomsky suggested in Barriers (1986).

A second argument in support of the same conclusion comes from what Radford (1988:511) calls 'shared constituent co-ordination' facts and what others call 'right node raising'. For instance, observe (57) below:

(57) 9irfit temaman-bass ma ?alit [_{CP} inu Nabeel tarak-a]
know past 3sf but neg say past that Nabeel left 3sf
'she knew exactly-but she did not say that Nabeel
left her'

The key requirement is that the shared sequence in the two conjuncts must be a constituent. This means that the CP inu Nabeel tarak-ha is indeed a constituent because it is shared between the two conjuncts 9irfit temaman-bass ma ?alit in the sense that it functions both as the complement of the verb '9irfit' and as the complement of the verb '?alit'.

A third argument for positing that CP's are constituents can be based on the fact that CP's can serve as "sentence fragments", e.g.

(58)a. shu ?alit ?
what say past 3sf
'what did she say ?

b. [_{CP} inu l-madrasa msakra l-yom]

that the school closed the day

'that the school is closed today'

This suggests that CP's are maximal projections because only maximal projections can function as independent constituents.

3.2.2. Motivation for taking inu/iza and mshan as complementisers

The obvious question which arises now is this: what evidence is there to show that the particles which introduce the complement clauses in (55) above are indeed complementisers? We shall use the morpho-syntactic criteria presented in Radford (1989:225-235) to argue that these particles are indeed complementisers.

Insofar as the morphological characteristics are concerned, Radford (ibid) points out that complementisers (in languages like French) are typically invariable monomorphemic particles which do not carry gender, number, person or case inflections. This assumption applies to SA particles, as in (59) below:

(59)a. halaf [_{CP} [_C inu] [_{IP} ma shaf l- lis]]

swear past 3sm that neg see past 3sm the thief

'He swore that he did not see the thief'

b. Nasihti [_{CP} [_C inu] [_{IP} tdeer balak 9a haalak]]

my advice that pay 2sm attention on yourself

'my advice that you should take care of yourself'

As for the syntactic properties of complementizers, C

is identified as being restricted to occurring in embedded clauses as a property typical of many complementisers, e.g.

(60)a. dree-na [_{CP} [_C inu] [_{IP} Salwa jaabet walad]]
learn past 1pm that Salwa give birth past baby boy
'we learnt that Salwa gave birth to a baby boy'

b.* [_{CP} inu Salwa jaabet walad]
that Salwa give birth past baby boy
'that Salwa gave birth to a baby boy'

The ungrammaticality of (60b) is attributable to the fact that complementisers typically do not introduce main clauses, and can only occur in complement clauses.

Moreover, complementisers have the property of being optional in complement clauses in many languages including SA, e.g.

(61)a. ?al [_{CP} [_C inu] [_{IP} Sameer stara beit jdeed]]
say past 3sg that Sameer buy past house new
'He said that Sameer bought a new house'

b. ?al [_{CP} [_C e] [_{IP} Sameer stara beit jdeed]]
say past 3sm Sameer buy past house new
'He said Sameer bought a new house'

A further argument in support of analysing the particles which introduce complement clauses in SA as complementisers pertains to distributional restrictions. That is, complementisers are subject to a very severe distributional restrictions with respect to the types of clauses they can introduce (Haegeman, 1991:106). For

instance, the complementisers inu and mshan can in SA introduce declarative complement clauses, e.g.

(62)a. btestehe? [_{CP} [_C inu] [_{IP} ma hakitak]]
deserve 2sm that neg talk past 3sf
'you deserve that she did not talk to you'

b. taxaxr-na [_{CP} [_C mshan] [_{IP} Nabeel yelhaqna]]
wait past 1plm for Nabeel join pres. 3plm
'we waited up for Nabeel to join us'

The complementiser iza, on the other hand, can introduce interrogative complement clauses, e.g.

(63) bshik [_{CP} [_C iza] [_{IP} byenjah ha-sine]]
doubt pres.1sm if pass pres.3sm this year
'I doubt if he will pass this year'

Thus, in the light of the criteria suggested by Radford (ibid), and the exemplification we have presented so far, we believe that it is reasonable to treat these particles as complementisers.

3.2.3. Arguments for taking C as the head of CP

Having argued that CPs are constituents (and indeed maximal projections), and that the particles which introduce complement clauses are complementisers, we will now turn to look at arguments in support of the claim that C is the head constituent of CP. One such argument can be formulated in relation to 'subcategorisation facts' (note that here also I am using the same arguments as with English) in that there are strong co-occurrence restrictions on the choice of complement which each

complementiser permits. These restrictions can be illustrated by data such as the following, e.g.

(64)a. Nabeel ?al inu [_{IP}Nura safarit 9a London]

Nabeel say past that Nura travel past to London

'Nabeel said that Nura went to London'

b.* Baxabrak inu [_{IP}l-wulad byaklu heik akle
wella la]

'Nabeel neg know past that the boys eat pres.such
food or not'

'Nabeel did not know that the boys eat such type
of food or not'

What this suggests is that the complementiser inu can only take a finite non-interrogative complement clauses as in (64a). For this reason, (64b) is ruled out as a complement of inu because it is a finite but interrogative for the simple reason that 'or not' is a feature of interrogative complement and not non-interrogative. Since subcategorisation restrictions hold between a head and its complement, and since this is the case between C and IP in (64a), it then follows that C is the head of the constituent CP.

A second argument supporting the view that C is the head of CP stems from the fact that it is the C which determines the nature of CP. That is, if the complementiser is the finite interrogative indicative iza, then the whole CP is a finite, interrogative, indicative clause, and so can only occur as the complement of a

predicate which selects an interrogative complement. On the other hand, if the complementiser is the finite non-interrogative inu/that or mshan/for, then the whole CP is a non-interrogative finite clause, and so can only occur as the complement of a predicate which selects a non-interrogative finite complement. This can be illustrated by the example in (65) below:

- (65) tsa?alet iza/*inu/*mshan [_{IP}Nabeel byakol wella la] .
 wonder past 3sf if/that/for Nabeel eat pres 3sm or not
 'she wondered if/*that/*for Nabeel will eat or not'

The fact that the verb 'wonder' selects an interrogative complement, taken together with the fact that its CP complement in (65) can only be introduced by the interrogative complementiser iza/if (and not by the non-interrogative complementiser inu/that, or mshan/for) determines whether or not CP is interrogative and thus provides strong evidence that C is the head constituent of CP. Given the endocentricity property that XPs assume the properties of their head X constituent, it follows that a CP headed by iza/if will be a finite interrogative clause.

A third argument in favour of the claim that C is the head of CP stems from the fact that C selects a specific type of clausal complement and determines the morphology of the head V (subjunctive or indicative), and in turn be selected only by a specific class of predicates. For instance, many of the subjunctive in complement clauses are introduced by the complementiser inu/that after overt

predicates of exhortation, suggestion, wish, fear, intention, etc (Cowell, 1964:345), e.g.

- (66)a. l-malek amar [_{CP} [_C inu][_{IP}yetla9u l-masajeen]]
 the king order past that release pres.the prisoners
 'the king ordered that prisoners should be released'
- b. btestehi [_{CP} [_C inu]][_{IP}ma yzoorak]]
 deserve 2sm that neg visit 3sm
 'you deserve that he does not visit you'
- c. fi xatar [_{CP} [_C inu]][_{IP}ma ysafir l-yom]]
 in danger that neg travel pres.3sm the day
 'there is the danger that he doesn't leave today'

The indicative, on the other hand, in complement clauses can be introduced by the complementiser iza following generally predicates of knowledge, interrogative, dubitative, etc, e.g.

- (67)a. ma ba9rif [_{CP} [_C iza]][_{IP}byakol laham halal]]
 neg know pres.1sm if 3sm eat pres. meat halal
 'I do not know if he eats halal meat'
- b. sa?alt-u [_{CP} [_C iza]][_{IP}bya?rif ustazi]]
 ask 1sm past 3sm if 3sm know pres. teacher
 'I asked him if he knows my supervisor'
- c. bistagrib [_{CP} [_C iza]][_{IP}byeji has-sine]]
 wonder 1sm pres. if 3sm come pres. this year
 'I wonder if he comes this year'

3.2.4. Evidence for a C-Bar Constituent

Having argued that C is the head of CP, we now argue that C projects into C-bar and C-double-bar. First let us

look at evidence for positing a C-bar constituent separate from C-double-bar. The relevant evidence can be derived from 'Ordinary Co-ordination' facts, cf, e.g.

(68) dree-na [_{CP} [_C,inu Huda nejhet] w [_C,inu Nura rasbet]]

know past 1Plm that Huda success past and that Nura fail past

'we knew that Huda passed and that Nura failed'

This shows that C and its IP complement form a C-bar, and that C-bar can be expanded into CP by the addition of a preceding base-generated adverbial, or a transformationally moved wh-phrase which both function as specifiers of C, as we shall presently see when we discuss the CP specifier position.

3.2.5. The Range of Constituents which Can Appear in Head C Position

Having given a brief outline of the internal structure of CP, we will now turn to discuss in rather more detail the range of constituents which can fill each of the position within CP. We start off by examining the constituents that can fill the head C position of CP. Following standard GB assumptions we assume that UG permits two possibilities: the head C position can either be filled or left empty. We also assume that UG permits (in principle) that a given constituent position can be filled either by a base-generated constituents, or a transformationally generated constituent (i.e. moved from

elsewhere to occupy the relevant position). We likewise assume that UG also permits two possible ways in which a constituent can be superficially empty, namely either as a result of being base-generated empty (and not being transformationally filled subsequently), or as a result of being left underlyingly empty and subsequently filled transformationally (by the movement of lexical material out of the relevant position). The obvious question to ask here is which of these various options is permitted in SA? It seems that UG allows for the possibility that C can be filled by a base-generated complementiser, and SA is no exception in this regard, as we see from (earlier examples) and examples such as given in (69) below:

(69) a. metakdeen [_{CP} [_C inu] [_{IP} Nabeel dakhhal l-masfa]]

sure lplm that Nabeel enter past the hospital

'We made sure that Nabeel entered the hospital'

b. Nura betshik [_{CP} [_C iza] [_{IP} Nabeel byerja l-yom]]

Nura doubts pres. if Nabeel come pres. early

'Nura doubts if Nabeel will comeback early today'

c. taxxaret [_{CP} [_C mshan] [_{IP} Nabeel yesoof-a fil-beit]]

3sf wait past for Nabeel see pres3sf in the house

'She waited for Nabeel to see her in the house'

The fact that the underlined complementisers occur embeddedly introducing complement clauses as above suggests that they are base-generated complementisers in SA which appear in the head C position of CP.

Insofar as the base-generated complementisers are

concerned, they can occur not only as the complements of As and Vs (e.g. 69 above), but also as the complements of Ns and Ps, Ps are optional, as illustrated in (70) below:

- (70) a. N-nazariya [_{CP}[inu] [_{IP}asel l-insan qird]]
the theory that ancestor the man ape
'the theory that the ancestry of man is ape'
- b. Ana wasiq min [_{CP}[inu] [_{IP}l-harb kan mestamer]]
I confident from that the war be past continue
'I am confident that the war was continuing'
- c. Ana wasiq [_{CP}[inu] [_{IP}l-harb kan mestamer]]
I confident that the war be past continue
'I am confident that the war was continuing'
- d. Wafaq 9ala [_{CP}[inu] [_{IP}Marwan yeshtigl fi l-haql]]
agree past 3sm that Marwan work pres in the field
'He agreed that Marwan should work in the field'
- e. L-waqt kafi b [_{CP}[inu] [_{IP}kel wahid yexallis ktabe]]
the time enough that everyone finish writing
'the time is enough for everyone to finish writing'

Such examples show that the predicates in question can take a PP, or a CP complement. Moreover, the data in (70) brings the following point into focus: the fact that a CP headed by inu/that can be used as the complement of a preposition. On the other hand, what applies to the complementizer inu (in the sense that it occurs as the complement of a preposition behaving like English whether in this respect) does not seem to apply to other

complementisers in SA - i.e. iza/if and mshan/for, cf, e.g.

(71) a.* ma ba9rif min\9ala [_{CP}[_Ciza][_{IP} Nadia ijit]]
neg know 1sm pres.of/on if Nadia come past
'I do not know if Nadia came'

b.* stannei-na 9ala/min [_{CP} [_Cmshan] [_{IP}tishtriy-a]]
wait past 1plm on/of for 2sm buy pres. 3sf
'we waited for you to buy it'

This ungrammaticality may be attributable to the fact that what is possible with the complementiser inu is not so with the complementisers iza and mshan in the sense that the former can be introduced by a preposition while the latter cannot.

A second possibility is that the head C position of CP can be left underlyingly and superficially empty of overt lexical material, so giving rise to structures such as the following in (72) below:

(72) Nura qtarhet [_{CP} [_Ce] [_{IP}lazim nijtime9 l-yom]]
Nura suggest past must meet 1plm the day
'Nura suggested we should meet today'

Support for this empty [_C e] heading a given CP clause comes from the fact that it can be co-ordinated with another CP headed by a filled C, e.g.

(73) Nura qtarhet [_{CP}[_C e] [_{IP}Nabeel yakol ma9na]]
Nura suggest past Nabeel eat pres.3sm with us
w [_{CP} [_Cinu] [_{IP}l-baqeen yaklo sawa]]
and that the rest eat together
'Nura suggested Nabeel will eat with us and that the

rest will eat together'

Since, in general, only identical sequences can be conjoined, hence the first bracketed complement clause is on a par with the second - i.e. it has the status of a CP simply because it is conjoined with another CP introduced with inu/that which acts as the head of this second clause. This amounts to saying that the first CP must be headed by an empty C.

3.2.6. The Complement Position of C

From the data we have looked at so far, the complement position of a CP system can be filled by an IP complement clause. The nature of the IP complement is determined by selectional restrictions of the head C of CP on the following complement. In other words, whereas the complementisers inu/mshan take a following finite non-interrogative complement clauses, the complementiser iza takes a finite interrogative complement clause, as in (74) below:

(74) Nura bitshik [_{CP}[_C*inu/*mshan/iza] [_{IP}Nabeel byiji
wella la]]

Nura doubt pres.*that/*for/if Nabeel come pres or not

'Nura doubts *that/*for/if Nabeel comes or not'

Following Abney (1987) we assume that C universally takes a following IP complement.

3.2.7. The C Position and the Notion of Government

So far, we have considered the permitted base-generated complementisers in C in SA that they can appear in C only

if they are governed by a predicate which selects a CP complement headed by the relevant kind of C. Following Chomsky (1981), we assume that all major lexical categories (N.V.A. except prepositions) act as potential governors which can select a CP complement. This assumption seems to hold true of SA as well. For instance, consider (75)

(75) ba9tiqid [_{CP} [_C inu] [_{IP} l-ilm fatah afaaq jdide]]
 believe pres.1sm that the science open pas horizon
 new

'I believe that science opened new horizons'

The fact that inu is licensed to occur in this kind of structure can be attributed to the fact that inu is governed by the lexical verb 'ba9tiqid' and that this verb is subcategorised as taking the relevant kind of CP complement.

However, where a complementiser is not governed by an appropriate selecting predicate, the resulting sentence is ungrammatical. It follows from this that overt complementisers cannot be used to introduce main clauses in SA, as we see from the ungrammaticality of structures such as in (76):

(76) a.* [_{CP} [_C inu] [_{IP} l-ilm fatah afaaq jdide]]
 that the science open past horizon new
 'that science created new horizons'

b.* [_{CP} [_C iza] [_{IP} mattaret]]
 if rain pres. 'if it rains'

This is because the complementisers inu and iza are not governed by a selecting category.

3.2.8. The Conditions Under which C Can/Cannot be Left

Empty

Having argued that the head C position of CP can be filled by base-generated constituents, and can be base-generated empty of overt elements, we will now turn to consider the conditions under which the position concerned can/cannot be left empty of overt elements. Following Stowell (1981), we assume that the complementiser position can be null if it is governed by an appropriate predicate-i.e. lexical category, e.g.

(77)a. Nura ?alit [_{CP} [_C e] [_{IP} Nabeel 9am yakol]]

Nura say past Nabeel eat pres.

'Nura said Nabeel is eating'

b. Mbayyen [_{CP} [_C e] [_{IP} attaq 9am yebrod shwai]]

clear the whether pres get cold a bit

'it is clear the whether is getting colder'

The empty C position in (77) is licensed by virtue of the fact that the verb '?al', and the adjective 'mbayyan' properly govern this empty category in terms of the definition of 'proper government', and 'ECP' (see the section on English).

It is, however, important to note that this empty c principle does not seem to apply to derived nominals, as shown in (78):

(78)a.* Imani [_{CP} [_C e] [_{IP} heyye atlit jawz-a]]

my belief she kill past 3sf husband 3sf

'my belief she killed her husband'

b.* Yeqini [_{CP} [_C e] [_{IP} Nabeel baree?]]

my certainty Nabeel innocent

'my certainty Nabeel is innocent'

nor to nouns, e.g.

(79)a.* fi xatar [_{CP} [_C e] [_{IP} l-harb rah yestimer]]

in danger the war continue

'there is the danger the war will continue'

b.* il-ihtimal al-aswa? [_{CP} [_C e] [_{IP} yexsar Nabeel l-wazeefa]]

the possibility the worst pres. loose Nabeel the job

'the worst possibility is that Nabeel will loose the job'

Presumably because a noun is not a proper governor.

Moreover, there cannot be an empty C where iza applies because iza like if has a semantic content, e.g.

(80)a. Bistagrib [_{CP} [_C iza] [_{IP} Nabeel binjah hassane]]

1sm pres wonderif Nabeel pass past this year

'I wonder if Nabeel will pass this year'

b.* Bistagrib [_{CP} [_C e] [_{IP} Nabeel binjah hassane]]

1sm pres wonder Nabeel pass past this year'

'I wonder Nabeel will pass this year'

The resultant ungrammaticality of (80b) could be because SA does not allow an empty C because of a universal restriction and presumably one which is semantic in nature - i.e. universally an embedded Y/NQ requires some Y/N

particle to identify it as Y/NQ. Or, put rather differently, an interrogative complementiser has semantic content whereas non-interrogative complementiser has not (Borsley, p.c.).

The obvious question which suggests itself now is: can C itself be transformationally filled in SA? Our suggestion is that the relevant position cannot be filled by transformationally moved constituents given data such as illustrated in (81) below:

- (81)a. If had seen you, I would have said hello
 b. Had I seen you, I would have said hello
 c.* If had I seen you, I would have said hello

we conclude from these and similar examples that in English pre-subject auxiliaries are in the C position which cannot host two different elements at the same time; hence the ungrammaticality of (81c) above. But SA allows overt C and pre-subject verbs, e.g.

- (82)a. l-murasil ?al [_{CP} [_Cinu] [_{IP}xiser l-fareeq l-mubaraa]]

the reporter say that loose past the team the match

'the reporter said that the team had lost the match'

- b. l-murasil ?al [_{CP} [_Cinu xiser] [_{IP}l-fareeq l-mubaraa]]

'The reporter said that lost the team the match'

We conclude from the examples (82 a & b) given above that pre-subject verbs in SA are not in C for two reasons: firstly, a given position cannot be doubly filled - i.e.

the C position in the (b) example cannot host two different elements at the same time - namely the comp.inu, and the verb xiser. Secondly, the verb xiser cannot be positioned in C simply because C is not a verbal position, given the occurrence of particles such as inu, iza, and msan in the relevant position. Hence, there is no reason to think that C in SA is transformationally filled.

3.2.9. The CP Specifier Position

3.2.9.1. Adverbials

Having argued that there is a constituent CP, that it is headed by C, and that C takes a following complement, we will now turn to argue that if CP conforms to the general X-bar schema, we would then expect that C can take not only a following complement, but also a preceding specifier. The suggested source of possible specifiers (Radford, 1989:lecture notes) is that when C is filled by a base-generated complementiser, C-spec.position can be filled by a base-generated adverbials. For example, consider (83):

(83) [bheis iza dreet ayya shi], bxabra- k

in case if learn pres.1sm any thing tell pres. 2sm

'in case if I have learnt anything, I will let you know'

This shows that the adverb bheis, which is optional is a base-generated constituent, which arguably plays the role of a C-specifier. The fact that this adverbial is base-generated in the C-spec position follows from the ungrammaticality of (84):

(84)a.* [iza bheis dreet ayya shi], bxabra-k
if in case I learnt anything, I let you know

b.* [iza dreet ayya shi bheis], bxabra-k
if I learnt anything in case, I let you know

this shows that the adverb bheis cannot follow iza on the surface. This would probably mean that bheis has not originated elsewhere within its containing clause and then been transformationally moved to the C-spec position, but rather has been base-generated in the pre- C position.

3.2.9.2. Wh-Phrases

Moreover, the CP specifier position can be transformationally filled. Consider, the examples in (85) below:

(85)a. ma ba9rif [_{CP}emta [_Ce] [_{IP}Sameer tzawwaj]]
neg know pres. 1sm when Sameer marry past
'I do not know when Sameer got married'

3.2.9.3. Dislocation

As far as 'dislocated' constituents are concerned, SA allows dislocated structures as we see from examples such as in (86) below:

(86)a. l-kasaat, emta Nura gasliton
the cups, when Nura wash past 3pl
'The cups, when did Nura wash them?'
b. emta Nura gasliton, l-kasaat?
when Nura wash past 3pl, the cups
'When did Nura wash them, the cups?'

Following Radford (1988, ch.10), we will argue that

dislocated constituents are not transformationally generated, but rather base-generated in the relevant position. The relevant evidence comes from the fact that dislocated constituents do not leave a gap behind but rather a resumptive expression (nominal or pronominal) i.e. the pronoun them in (86) above. However, this resumptive expression can be non-pronominal in dislocation structures in SA, e.g.

(87) jar-na, ma shift ha-shakhs abadan

neighbour lplm neg see past the man at all

'our neighbour, I've never seen the man'

The reason we assume that dislocated constituents are adjoined to CP but are not moved into the pre-comp position relates to structures such as in (88) below:

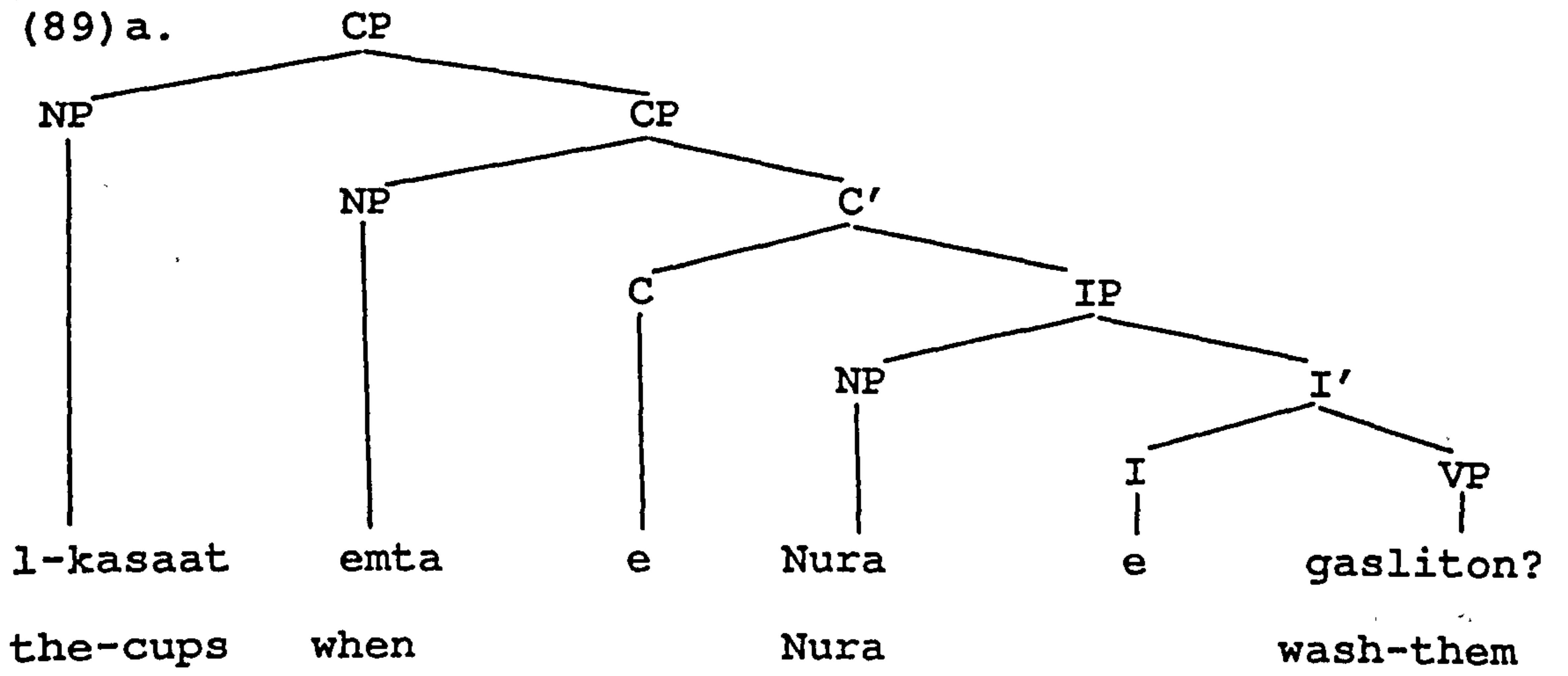
(88) [hanu mna-ssuf][_{CP}[_{NP}emta][_Ce] [IP wagaft sugl-u]]

this sort of wool when stop past work 3sm

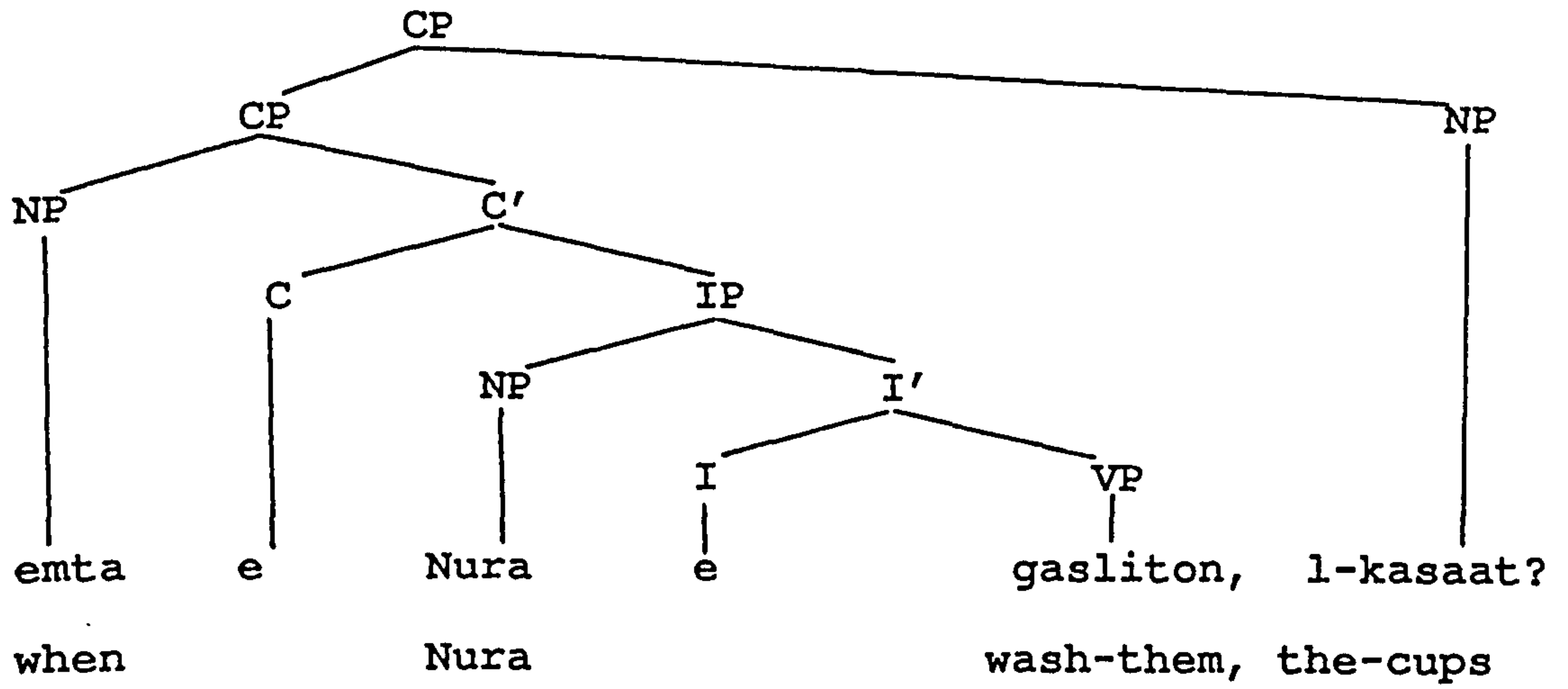
'this sort of wool when did you stop manufacturing it'

This shows that the C-spec position is occupied by a wh-phrase (emta) leaving no room for dislocated constituents, which end up adjoined to CP. This nontransformationality of dislocated constituents, as it were, suggests that they are adjoined to CP and thus enjoy right-left freedom of occurrence, as we see from (89) below:

(89) a.



b.



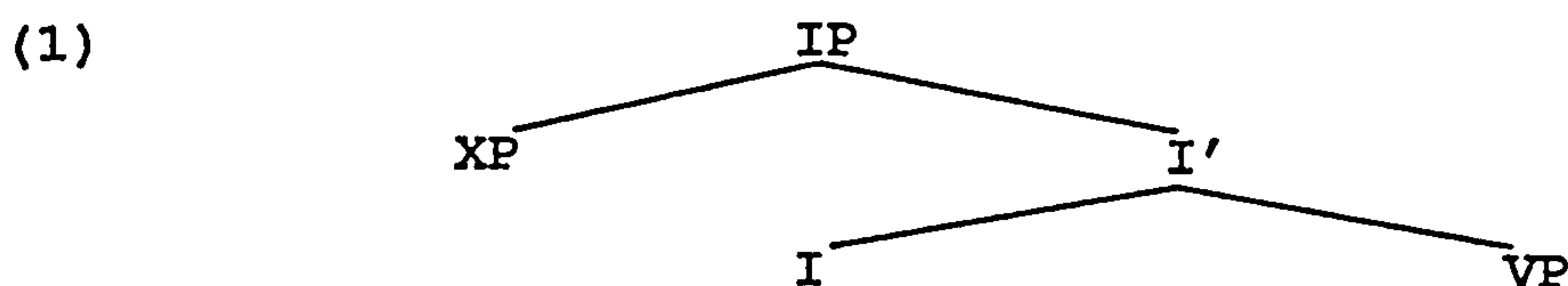
CHAPTER FOUR

Verbless Clauses in English and Syrian Arabic

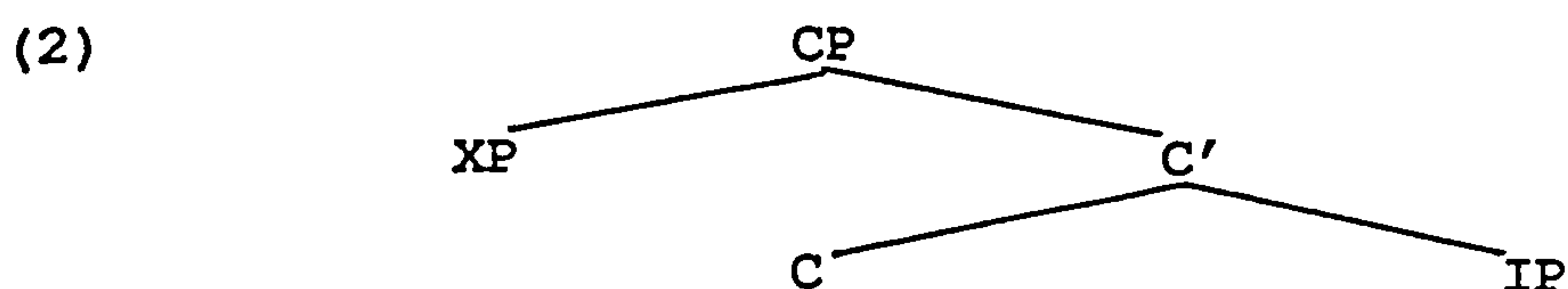
4.0. Overview

Since I am investigating the role of L1 in L2, the crucial aspect of VCs stems from the fact that they are in Arabic, unlike English, introduced by wh-words and contain I element in their constituents structure, which play a significant role in the formation of interrogatives, as I have pointed out in Chapter Two.

In the preceding two chapters, we looked at the analysis of two types of clauses in English and SA: IP and CP. We argued that an IP clause has the canonical structure outlined in (1) below:



And that a CP clause has the canonical structure schematised in (2) below:



In this chapter, we will look at a third type of clause in English and SA. This type of clause is often referred to as 'Small Clauses' in English and 'Verbless Clauses' in SA (henceforth SCs, VCs). Thus, the main focus of this chapter is SCs, which we will discuss in section 4.1. and VCs, which we will discuss in section 4.2.

4.1. Small Clauses in English

Radford (1988:324) argues that the defining property of SCs in English is that they lack an I-system, and a C-system and are of the schematic form in (3):



Where NP is the subject, and XP is any phrasal category such as NP, PP, AP, ADVP, and VP (Radford, *ibid*).

4.1.1. Small Clauses as Complements of Verbs

Small Clauses can function as complements of a subset of transitive verbs. Their use as complements of verbs can be illustrated by examples such as the following:

- (4) a. We want [_{SC} the earth protected]
b. You should not let [_{SC} the children behave so badly]
c. They consider [_{SC} Mary very diligent]
d. The war diverted [_{SC} the economy into destruction]
e. The train crashes made [_{SC} commuters extremely anxious]

Assuming that the postverbal structures are SCs of the form [NP XP], then what evidence is there to substantiate the claim that the underlined elements in (4) are clausal subjects?

4.1.2. Evidence for the Constituency of the Subjecthood of NPs in SCs

The first piece of evidence can be related to a discussion on *floating emphatic reflexives*. Radford (1988:325), quoting Napoli (1987, chapter 6, p.54), argues

that the antecedent of a final floating emphatic reflexives can occur "only in Grammatical Function subject position", e.g.

(5)a. The carpenter told me himself.

b.*I told the carpenter about it himself.

Here the ungrammaticality of (5b) suggests that 'the carpenter' is not a SC subject, but rather an object of 'told', and hence supports the claim that only subjects can be associated with a floating emphatic reflexives (Borsley p.c.). If this is so, then following (Radford, *ibid*), we assume that in structures such as in (6) below:

(6) We saw [the carpenter do it himself]

'the carpenter' is the antecedent of 'himself'. Hence, it must be an NP subject. Moreover, since the bracketed structure is of the form [NP XP], then it is apparently a SC functioning as the complement of the verb 'saw'.

A second piece of evidence that NPs serve as subjects of SCs follows from facts related to *Ordinary Reflexives*. Radford (*ibid*) argues that in structures such as:

(7) She needs [_{sc}you near her/* herself]

the use of the reflexive pronoun 'herself' is ungrammatical because of the restriction that a reflexive and its antecedent must be 'clause-mates'. That is, for (7) to be grammatical, 'she' and 'herself' would have to be constituents of the bracketed complement clause itself. Obviously, this restriction is violated in (7).

4.1.3. Small Clauses as the Complements of Prepositions

Having argued that NPs can occur as subjects of SCs, and that SCs can serve as complements of verbs, we will go on to argue that SCs can also serve as complements of prepositions, as in (8) below:

(8)a. With [_{SC}Mary in the boat], we won't capsize.

b. With [_{SC}him behind us], we will win the elections.

Where, following Radford (ibid), we assume that the bracketed structure is a SC of the formula [NP XP] and the NP which occurs right after the preposition is not the object of the preposition with, insomuch as it is the subject of a SC.

4.1.4. Arguments For SCs as Having Neither C nor I-System

Recall the assumption we made following Radford (1988:324) that SCs lack C and I systems. This assumption accounts for the ungrammaticality of (9) below:

(9)a.* We did not know [_{SC}that relations sour]

b.* She does not know [_{SC}if your eyes on her friend]

c.* They did not consider [_{SC}whether the summit
successful]

d.* We are sorry [_{SC}for the chairman having criticised]

This suggests that SCs are not IPs, and hence that they lack an I system. Moreover, they never contain that etc. This suggests they are not CPs, and hence they lack a C system. A number of reasons can, however, be adduced to account for the ungrammaticality of (9) above. For one thing, the SC complements cannot be introduced by complementisers because of the claim that they do not

contain a C-system, and thus have no head C constituent. Support for such a claim comes from the availability of the subject of the SC to case-marking (Borsley p.c.) in structures such as (10):

- (10) a. With [_{SC} him behind us], we will win the elections.
 b. I thought [_{SC} him a fool].

Here, clearly shows that the subject of a SC being assigned objective case. Now, if the bracketed clauses in (10) were CPs, the underlined subjects would not be able to get case simply because CP in English is a barrier to case assignment.

Moreover, if SCs lack a head C position in their system, then it follows that they lack a C-spec position as well (Radford 1988c). For instance, consider (11) below:

- (11) a.* I thought [_{CP} what an idiot] [_C e] [_{SC} him----]
 b.* I can't think [_{CP} how a fool] [_C e] [_{SC} the
 driver--]

Where the dotted position within the SC means the original position of the Wh-phrase (what an idiot, how a fool, which act as the predicate phrase of the SCs in (11)) which are moved outside of the bracketed SC to occupy 'wrongly' the position in front of C-position. Thus, this 'wrong' movement of the wh-phrase into C-spec position yields the resultant ungrammaticality of (11) above because logic dictates that if there is no C-position in SCs, then there is no C-spec position either. This ungrammaticality

of (11) can be resolved only if we take or analyse SCs as CPs.

The argument that SCs contain no C-system, can, further, be substantiated by the fact that the subjects of a SC predicates can undergo 'passivisation' (Radford, *ibid*). This can be represented by data such as in (12) below:

(12) a. The summit is considered [_{sc}---- unsuccessful]

b. The police are held [_{sc}---- responsible]

c. A prisoner was acquitted [_{sc}---of a killing offence]

This shows that the underlined NPs originate in the dotted position as the subjects of the bracketed SCs, and are then moved to function as the subjects of main clauses in consequence of 'passivisation'. Now, it is very crucial to note that where there is a C-system in a given clause, the 'passivisation' operation is not possible, cf, e.g.

(13) a.* The hijackers were requested [_{cp}[_cthat][_{ip}---would release the sick passengers]]

b.* The policy was planned [_{cp}[_cfor][_{ip}----to cope with the standard of living]]

This ungrammaticality of 'passivisation' (note that such examples are ungrammatical even if there is no overt C) follows from the consequence of the assumption that it is the existence of a C-system which blocks the movement of the underlined NPs from within to outside of its containing clause, the movement which involves crossing two clausal boundaries i.e. CP and IP, the thing which

Bounding Theory does not permit. Thus, the conclusion to be drawn from the present data that SCs in English seem to have no C constituent, otherwise (13) above wouldn't have been ungrammatical.

Having argued that SCs cannot contain a C element in their constituent structure, we will now turn to argue that they cannot contain an I element either. This is so because they cannot contain the infinitive particle *to*, or a *Modal* as the ungrammaticality of (14) shows:

(14)* I consider [_{sc}your answer to/can absolutely wrong]

4.2. Verbless Clauses in Syrian Arabic

4.2.0. Overview

This section describes in the X' framework what are referred to in the literature of Arabic as VCs (see Fehri 1988), and which superficially appear to resemble the so-called SCs in English. It is logical to ask the following questions: firstly, is the distribution of these clauses restricted or not? Secondly, what is the content of these clauses - i.e. do they contain/lack C and I? Thus we shall obtain answer to the question of whether SA VCs are (dis)similar in their distribution and their content to English SCs.

In an attempt to answer these questions, we shall analyse verbless constructions in SA which we can illustrate as in (15) below:

(15) a. Nabeel tabib
 Nabeel doctor

'Nabeel is a doctor'

- b. Nabeel t- talib al-afdal
Nabeel the-doctor the best

'Nabeel is the best student'

- c. Nura mreida
Nura sick

'Nura is sick'

- d. Sara fil-matbax
Sarah in the kitchen

'Sarah is in the kitchen'

- e. ba9rif inu [Nabeel talib]
I know (that) Nabeel student

'I know that Nabeel is a student'

- f. d-de9ayei inu [Nabeel haraami]
the-rumour that Nabeel burglar

'the rumour that Nabeel is a burglar'

- g. Nabeel ma mettakked inu [Nura mreida]
Nabeel neg sure that Nura sick

'Nabeel is not sure that Nura is sick'

Note that the clauses in (15) are not restricted in their distribution in the sense that they occur as independent main clauses as well as complement clauses of verbs, Nouns and Adjectives (e.g. 15e, f, and g). Note also that the predicate phrase in such sentences can be NP, DP, AP, and PP. Furthermore, note that the examples in (15) seem to have no verbs (15e has a main verb), for which we shall offer explanations. In fact, we will show that the clauses

in question not only have an underlying I constituent, but can also be introduced by a complementiser. But first let's try to substantiate our postulate that VCs contain an I element in their underlying structure.

4.2.1. The Adverbs Argument

The claim that structures such as illustrated in (15) (i.e. VCs) contain an INFL constituent in their underlying system can be empirically substantiated in relation to the distribution of 'temporal adverbs', (Fehri, 1988:199) as given in (16) below:

(16)a. Fadia za9lane halla /*mbarha/*bekra

Fadia angry now /*yesterday/*tomorrow

'Fadia is angry now /*yesterday/*tomorrow'

b. Fadia kanet mabsuta mbarha/*halla/*bekra

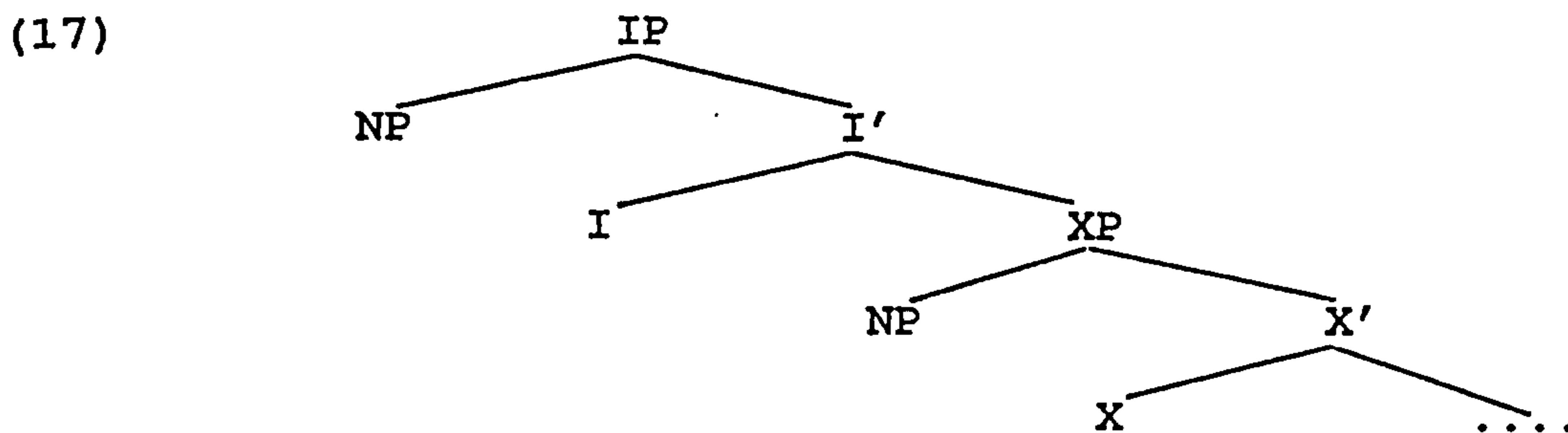
Fadia was happy yesterday/*now/*tomorrow

'Fadia was happy yesterday /*now /*tomorrow'

From data such as (16b), we see that the tense of I determines the range of temporal expressions which can occur in IP (e.g. if I is past, the clause can only contain past time expressions). However, we see from examples such as (16a) that a verbless independent sentence in Arabic can only contain a present time expression, not a past or future one. The most natural way of accounting for this would be to posit that verbless clauses are headed by an empty I which is intrinsically specified as present tense. Under this analysis the ungrammaticality of (16a & b) would be attributable to the

fact that an empty I and (a past or future tense) temporal adverbs are mutually exclusive.

However, if VCs in SA contain an I position, which can either be empty or filled, depending on its tense, then the schematic structure of the examples in (15) above can be designated as having the IP system as in (17) below:



Given the postulate (Fehri, 1988) that I-features are optionally discharged in Arabic - i.e. the head I constituent can be followed by categories other than VP (see the examples in 16), then the complement of I can be anything as in (17).

4.2.2. The Negation Argument

The claim that structures such as those illustrated in (15) are IPs can be empirically substantiated in relation to 'Negation Facts'. There are two negative particles in SA, one (ma) used in verbal sentences, and the other (mu) used in verbless sentences; thus, as Cowell (1964:383) notes, "the most common negative particles are ma, used mainly with verbs and a few other expressions, and mu, used mainly with non-verbal predicates." The use of these two different particles can be illustrated in relation to the examples in (18) below:

- (18) a. Layla *mu/ma kanet sitbeit
 Layla neg was wife-house
 'Layla was not a housewife'
- b. Layla *ma/mu sitbeit
 Layla neg wife-house
 'Layla is not a housewife'
- c. Muneer *ma/mu gaby
 Muneer neg stupid
 'Muneer is not stupid'
- d. Muneer *ma/mu bil matbax
 Muneer neg in the kitchen
 'Muneer is not in the kitchen'

These data show that verbal predicates are negated by using ma, while non-verbal predicates are negated by using mu. One reason for this could be that the negative particle ma is used in negating a filled I - i.e. it is a clausal negative, and mu in negating an empty I - i.e. it is a phrasal negative. Thus, we conclude that what look like VCs are indeed IPs in SA.

4.2.3. Verbless Clauses Introduced by a Complementiser

Having argued that VCs in SA contain I in their constituent structure, we now turn to argue that they can be introduced by a complementiser. This complementiser is the indicative non-interrogative inu/that, which can introduce verbless clauses as well as clauses containing finite verbs. Let us first show inu introducing clauses containing finite verbs. For example, see (19) below :

(19) ba9tiqid inu [_{IP} l-haqiqa ma btitshawwah daiman]
 I believe that the- fact neg distorted always
 'I believe that facts will not always be distorted'

(19) represents a finite clause introduced by a comp. inu.
 In addition to finite clauses, the comp inu can optionally
 introduce VCs, e.g.

(20)a. l-mudarrib bzin (inu) [r-riyada mufeeda]
 the coach thinks that the-sport useful
 'the coach thinks that sport is useful'

b. d-de9ayei inu [Nabeel haraami]
 the- rumour that Nabeel burgler
 'the rumour that Nabeel is a burgler'

c. Nabeel mu metakked inu [Nura muhamiyeyi]
 Nabeel neg sure that Nura lawyer
 'Nabeel isn't sure that Nura is a lawyer'

This shows that VCs in SA can function as complements of C when they occur as complements of verbs, nouns and adjectives. In other words, the clauses in question can be introduced by a complementiser, and the fact that they can appear as complements of C suggests that they are IPs - i.e. they have an I, an argument which ties in with 'negation and adverb facts' in support of the same conclusion.

4.2.4. Verbless Clauses Introduced by Wh-Phrase

If VCs in SA really have a C-system in their constituent structure, then they should allow preposed wh-phrases, for the simple reason that the specifier of CP

acts as the landing-site for preposed constituents. The fact that this is exactly the case in SA can be substantiated by examples such as in (21) below:

(21)a. b-ay siyasi Nabeel mu9jab?

of-which politician Nabeel admirer?

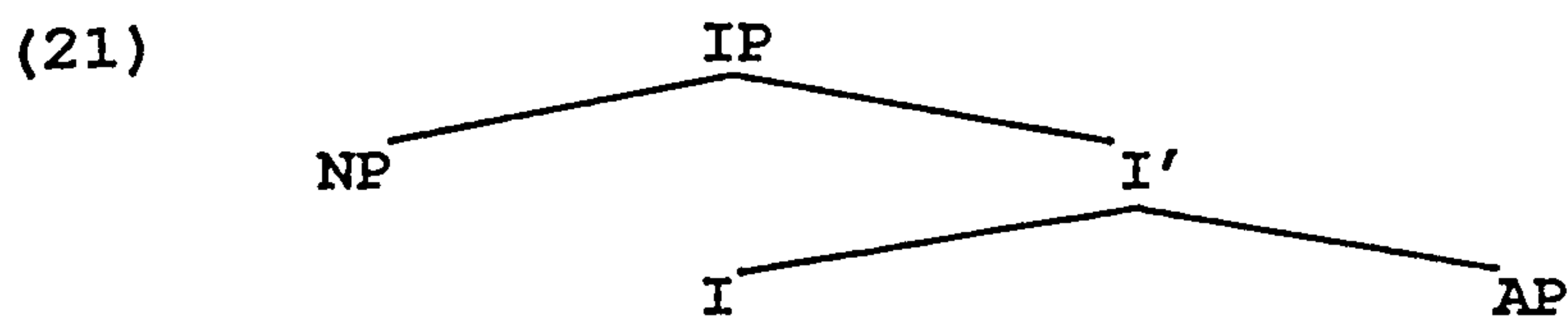
'of which politician Nabeel (is an) admirer?

b. ay medina Nura fi- ya?

which town Nura in it?

'which town Nura (is) in it?'

Having looked at the analysis of the constituent structures of VCs as involving an I as well as a C system and occurring independently in SA, and assuming Fehri's (1988) position on the analysis of VCs in Standard Arabic to the effect that 'believe' type verbs take verbless clause complements (as well as CP complements, (19) above), we suggest that the bracketed constituents in (20) are VCs of the form [NP I AP], as outlined in (21):



(where I is an empty constituent and consequently it is restricted to occurring with present time adverbials) functioning as the complement of an epistemic verb like 'zanna' which can take not only adjectival VCs, but a prepositional and nominal as well, as we see from examples such as in (22) below:

(22)a. ba9tiqid [Nura bil-matbax]

I believe [Nura in the kitchen]

'I believe Nura is in the kitchen'

b. ba9tiqid [Nabeel mudeer]

I believe [Nabeel manager]

'I believe Nabeel is a manager'

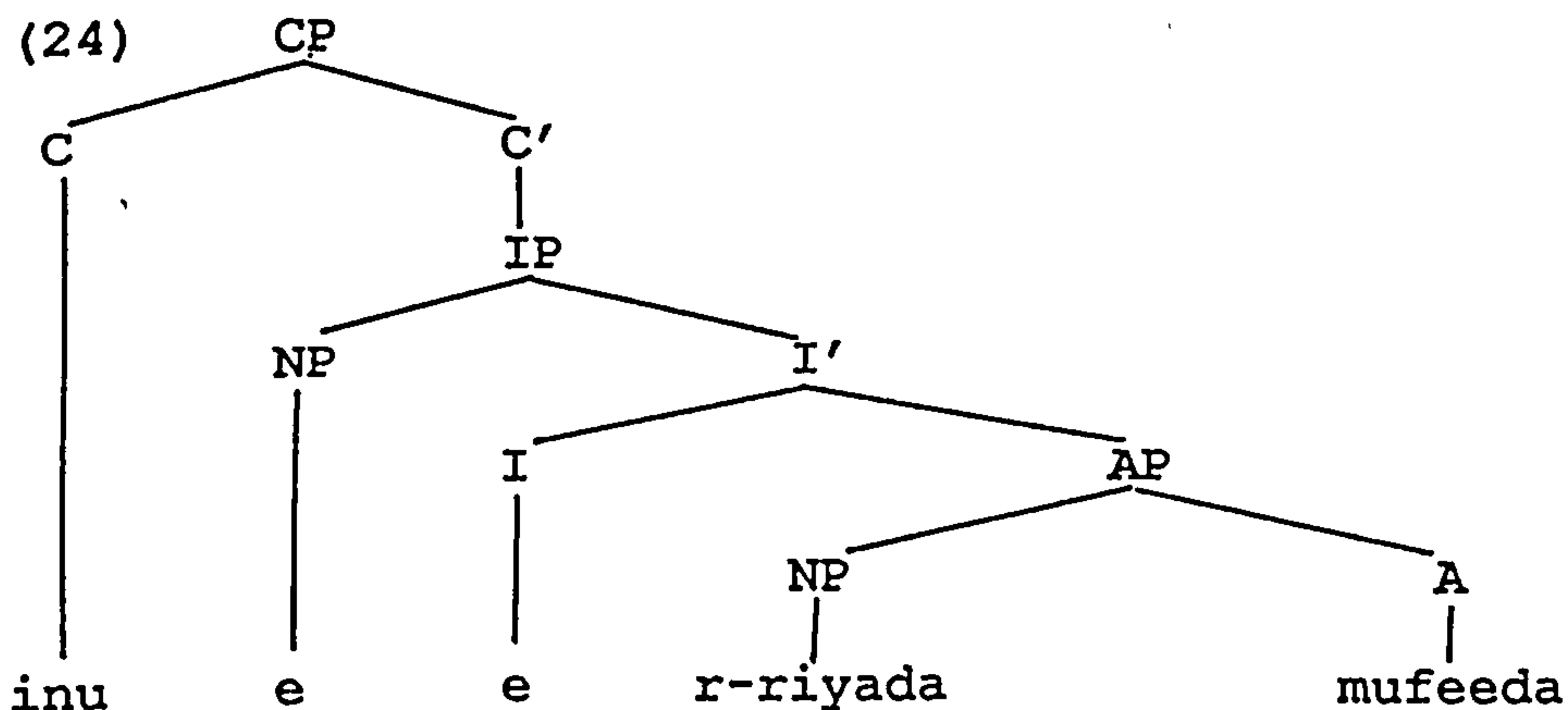
Thus far, we have put forward a number of arguments in support of positing that VCs in SA have a C and an empty I system (when sentences are in the present tense) in their constituent structures, and that these types of structures can function independently as well as in complement positions.

4.2.5. Case-Marking

Now, if this is so, then let us look at the case-marking of the subjects of these clauses. First let us consider the case-marking of the verbless complement clause in (23):

(23) l-mudarrrib byeftikir (inu) [r- riyada mufeeda]
the-coach thinks (that) [the sport useful]
'the coach thinks that sport is useful'

which can be schematically indicated as in (24) below:



If I takes AP as its complement and case is assigned uniformly to the right in Arabic (see Fehri:1988), then the subject NP 'r-riyada' will receive nominative from I and not from the preceding verb 'byeftikir' because of the intervening three maximal projections-viz CP, IP and AP. Subject-Adjective agreement, in turn, can be accounted for in terms of two possibilities. These are: raising and lowering. The raising possibility through which I combines with A seems untenable because the resultant VC will be of the form Adjective + Subject which is ungrammatical in SA, e.g.

(25)* mufeeda r-riyada
 good the-sport
 'sport is useful'

Given the ungrammaticality of structures like those in (25) above, the suggestion (following Pollock 1989:365-425) is that UG allows for Affix Movement, a lowering rule, to the effect that in SA I is lowered in VCs (and ordinary SVO clauses) to combine with As for agreement purposes. That is, the agreement features contained in I will be lowered onto A to give subj + Adj.

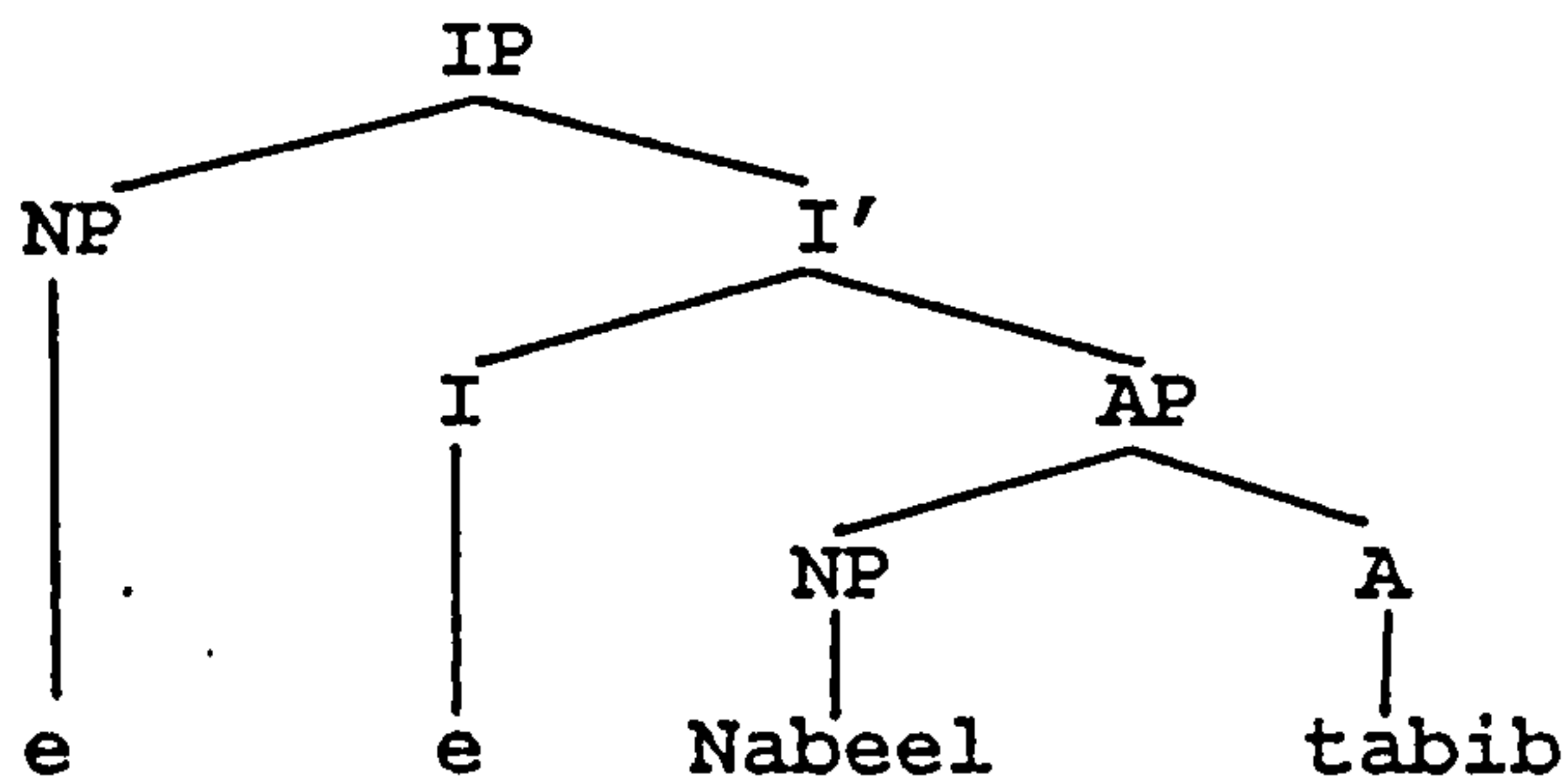
Furthermore, assuming the position taken by Chomsky (1980) On Binding, where he proposed that nominative case is assigned by Tense contained in I, then in structures such as those in (15) repeated here for convenience, e.g.

(26) Nabeel tabib
 Nabeel doctor

'Nabeel is a Doctor'

which can be sketched along the lines of (27) below:

(27)



The subject NP 'Nabeel' is governed and assigned nominative case by the tense contained in I, the functional head I category. The A - i.e. 'tabib', in turn, would be supported via lowering process.

4.3. Summary

Thus far, we have shown that VCs in SA occur in root sentences as well as in complement clauses. We have put forward a number of arguments in support of the claim that what rather look like VCs have in fact an I as well as a C-system. We have finally discussed the case which determines the subjects of these clauses.

CHAPTER FIVE

Contrastive Analysis

5.0. Overview

In the previous three chapters, we presented the descriptive analyses of English and Syrian Arabic IP, CP, and SC systems within the framework of X-bar syntax. We labelled the SA counterpart of English SCs VCs because these appear to resemble English SCs only superficially.

The aim of this chapter is to identify and explicate the structural contrasts - i.e. similarities and differences. Note that we shall pursue the same line of descriptive analyses of the clausal systems in question in this chapter. That is, we shall restrict ourselves to the contrasts of head, specifier, adjunct, and complement positions in the relevant structures. We will lay particular emphasis on the first two positions (i.e. head and specifier), for their prime importance to our study. The importance of these two positions stems from the fact that most of the contrasts reside at the head and specifier positions. This is so because movement processes are relevant to these positions.

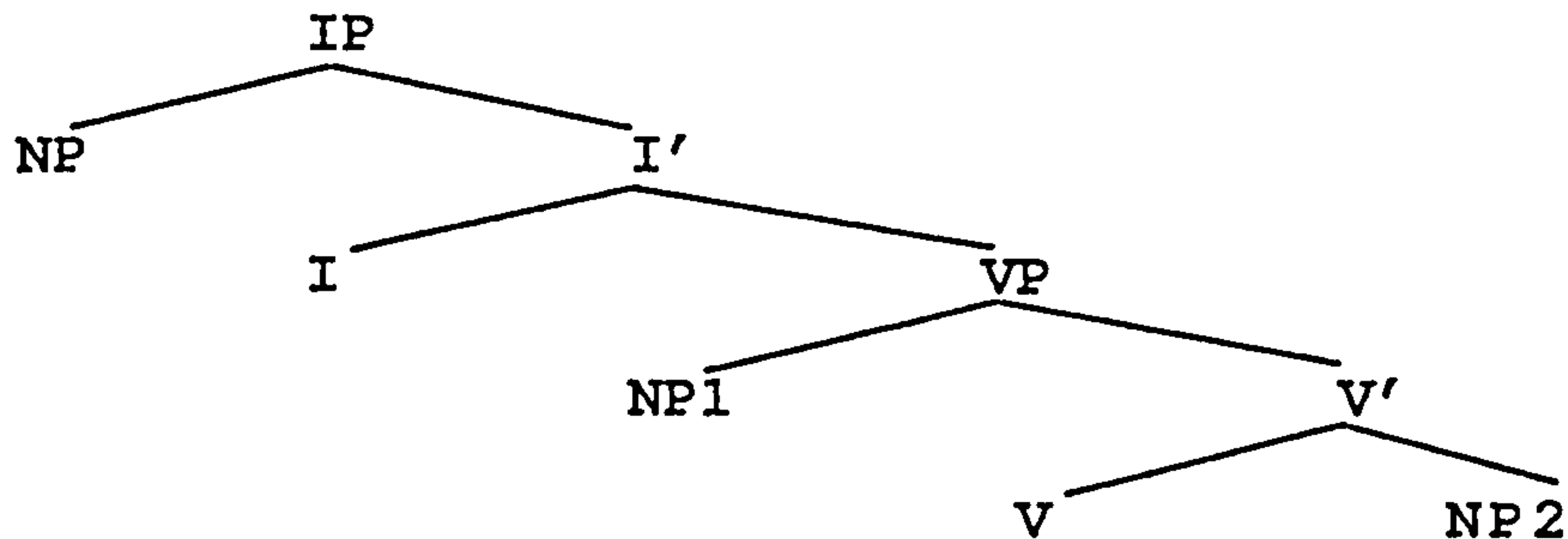
The material in this section is organised into three main parts: IPs, CPs, and SCs. Each part presents the discussion of similarities first and differences second.

5.1. The Structure of IP

5.1.1. Interlingual Similarities of IP Structures in Y/NQs and WHQs

i) Both English and SA conform to the X-bar categorial expansions in the sense that I allows a VP complement which has its own specifier (NP1) and a complement (NP2) contained within V'. Both languages have the structure in (1) below:

(1)



Thus, to have expanded structure within the VP complement of I is a common factor between the two languages.

Given the structure (1) above, we can move on to look at the distribution of categories which fill the various positions of IP structures of the two languages. The two languages differ in many respects.

5.1.2. Interlingual Differences of IP Structures in Y/NQs and WHQs

i) NP (Spec of I') Movement

The contrast lies in the fact that movement processes are obligatory for English but not for SA in the type of structure given in (1) above. This is because of case-marking. That is, since I in English assigns case leftwards, then the NP in the Spec of VP must move to the position where it gets case. Obviously, the only position where it can get this case is the spec of I'. I in SA, by contrast, assigns case rightwards. Therefore, movement of

Spec VP is not necessary

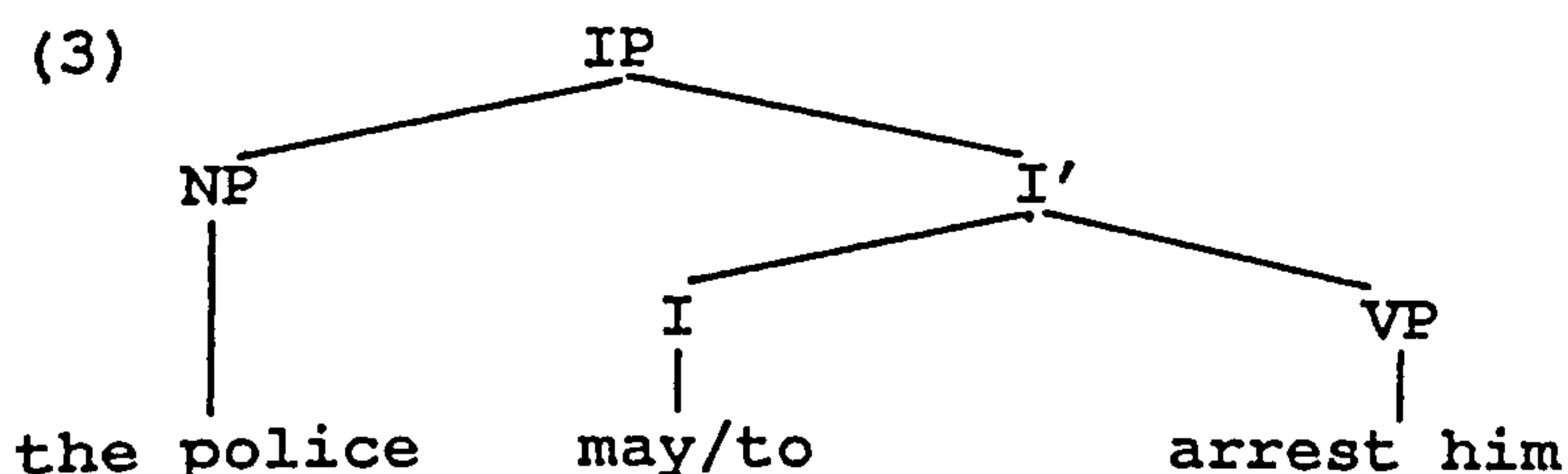
ii) Base-generated constituents

The head I position in English is filled by base-generated constituents such as Modals and the infinitival particle to. And so is the complement of I: viz by a VP constituent. The specifier of I, on the other hand, is left empty to be transformationally filled by nominal (NP) constituents. Consider the examples given in (2) below:

(2) a. We are anxious that [the police may arrest him]

b. We are anxious for [the police to arrest him]

which illustrate the configuration as in (3) below:

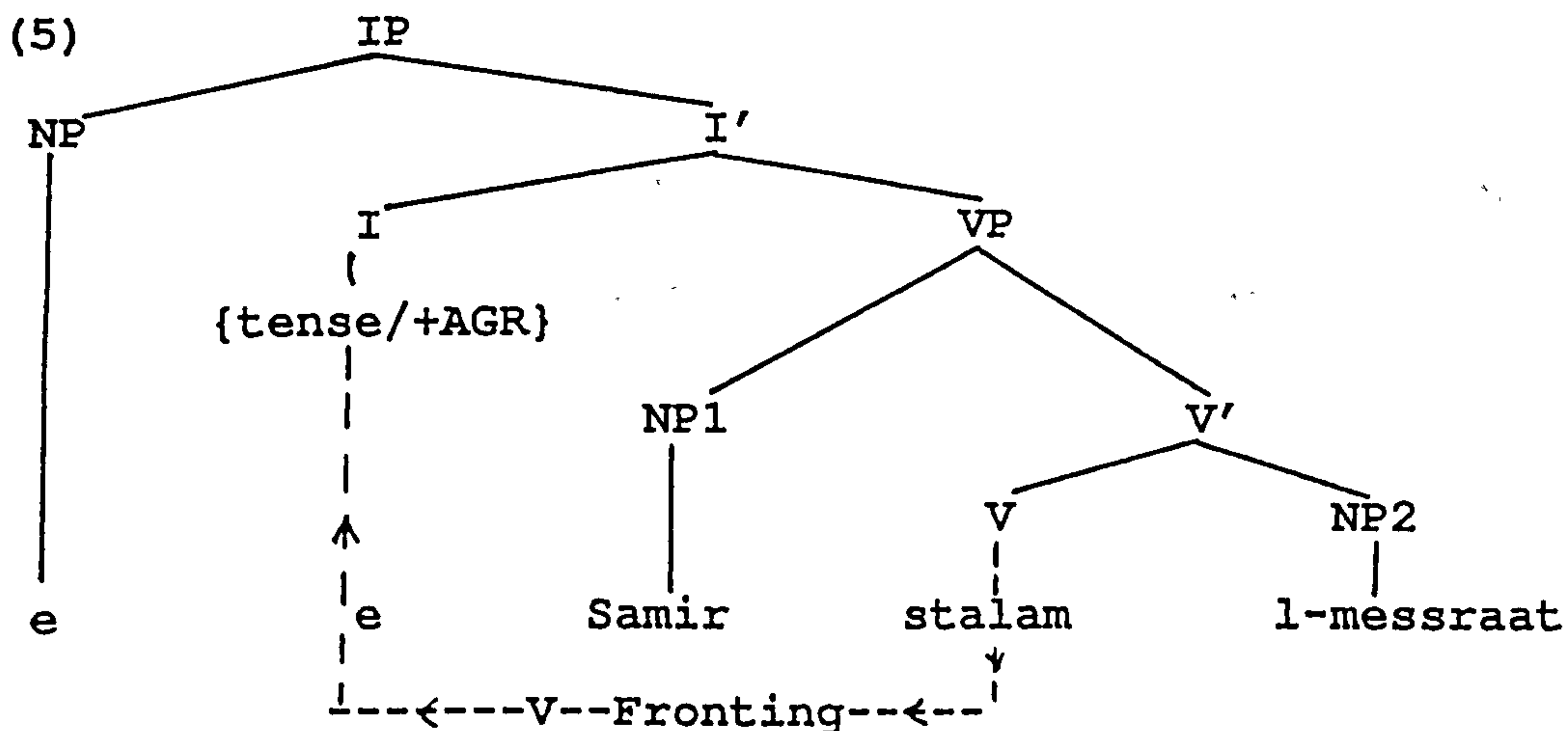


In SA, by contrast, the head I position is underlyingly left empty, and so is its specifier (to act as a landing-site for transformationally moved constituents such as topics, Wh-phrases, etc, as we discussed in chapter three). The VP complement of I can be base filled by VPs. Consider the data in (4) and its schematic structure in (5) below:

(4) Samir stalam l-messraat

Samir receive-past the-money

'Samir received the money'

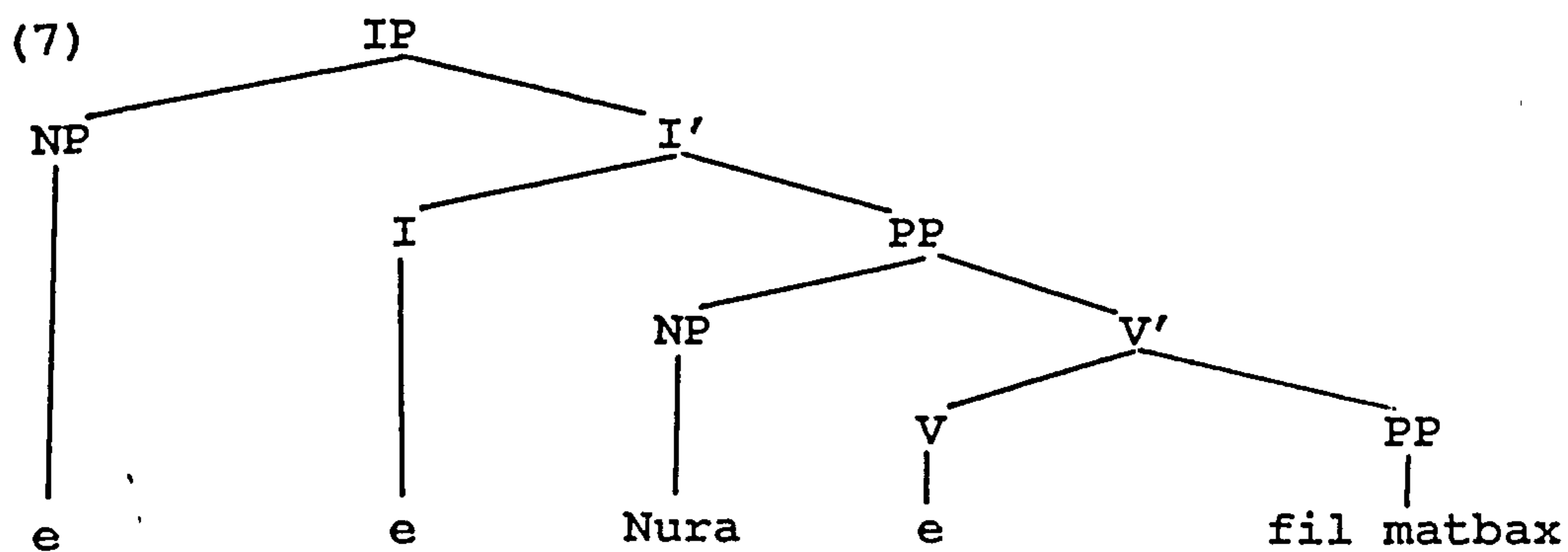


The relevant position can also be base filled by categories other than VPs -i.e. I can have categories other than VPs. This is so because the morphological realisation of tense/agreement features is optional in SA.

Consider the data in (6) below:

- (6) Nura fil- matbax
 Nura in-the kitchen
 'Nura is in the kitchen'

which have the structure in (7) below:



iii) V - Movement

Recall that English does not allow a V movement into an empty I, except with Have/Be, cf, e.g.

(8)a. [_{IP}she[_Ihas/is] [_{VP}[_Vt] a good friend]]

b. [_{IP}she[_Ie] [_{VP}[_Vlikes] a good friend]]

SA, by comparison, allows V movement. In fact, there are two alternative possibilities. Verbs in SA could be said either to move into an empty I for the simple reason that movement allows verbs acquisition of tense and agreement features and at the same time supports I, because I in SA must be supported. Or they remain within their VP constituent and acquire tense and agreement by the lowering of I. The significant consequence of the movement analysis is that it brings about a different word order. That is, it brings about the derivation of VSO from underlying SVO. Therefore, it is the movement of finite nonauxiliary verbs into an empty I which provides a principled account for SA VSO as opposed to English SVO word order, cf (ex.4 & 5 above).

5.1.3. The Nature of Specifier IP Position

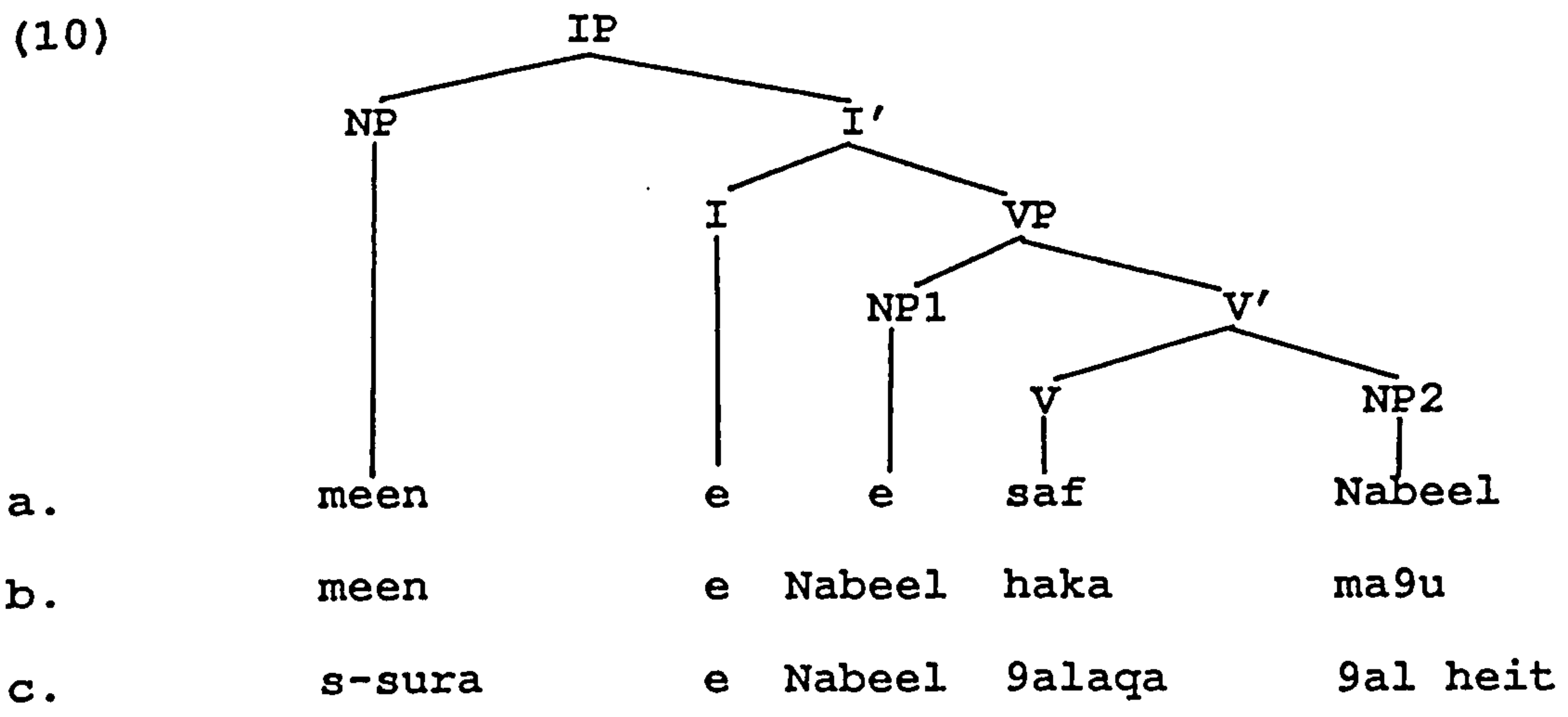
i) Similarities

In our discussion of base-generated elements, we pointed out that the specifier I' position in English is base-generated empty, and subsequently transformationally filled by nominal constituents. This holds equally true for SA. In other words, the relevant position in SA is left empty to be able to act as landing-site for moved material. For example, observe the data in (9) below:

- (9) a. Istagrabit inu [meen saf Nabeel]
 I wonder-past that [who see-past Nabeel]
 'I wondered who saw Nabeel'
- b. Istagrabit inu [meen Nabeel haka ma9u]
 I wonder-past that [who Nabeel talk-past with-3sm]
 'I wondered who Nabeel talked to'
- c. [s-sura Nabeel 9alaqa 9al heit]
 [the-picture Nabeel put-past 3sf on the wall]
 'Nabeel put the picture on the wall'

The data in (9a & b) shows that Wh-phrases can occupy Spec IP position. The data in (9c) shows that topics do so. For the schematic structure of the data in (9), consider

(10) below:



ii) Differences

Notably, the specifier position of IP in SA is filled by topics and transformationally moved elements, namely Wh-phrases. As (9b & c) respectively show. By contrast, in English the relevant position is filled by nominal NPs only.

5.1.4. pro- Subjects

The two languages seem to present a contrast in relation to their restrictions on the distribution of IP clause subjects. English clauses accept lexical NP subjects only where the subject can be assigned an appropriate case and accept PRO subjects when it is ungoverned (as we discussed in chapter two). These two requirements are exemplified in (11) below:

- (11)a. They should leave the class now
b. We do not know whether PRO to go there now
c.*John hopes Bill to like Mary
d.*John believes PRO to be clever

The underlined items in (11a & b) are licensed to occur because they satisfy the subject and PRO conditions, while those in (c & d) are not because they obviously violate the specified requirements. That is, the Case Filter specifies that a lexical NP and NPs with phonetic content must be assigned an appropriate case, which is not so in (c), hence its ungrammaticality. And contrary to the PRO theorem, which requires PRO to be ungoverned, PRO in (d) is governed by the preceding verb 'believe', hence, the resultant ungrammaticality.

By contrast, SA is a Null Subject Language (NSL). The most essential characteristic of a NSL (among other ones) is a (superficially) missing subject in simple finite clauses, e.g.

(12) tarak-na l-beit
 leave-1pl-past the- house
 'We left the house'

Thus subject pronouns in SA can be left unrealised in tensed clauses in consequence of the richness of subject-verb agreement in person, number, and gender.

However, for the purpose of this contrastive analysis, we will not go into further detail of pro subjects in SA, as we did in the section on IP. Suffice it to say that pro, unlike PRO, must appear in positions where it is governed and associated with agreement.

5.1.5. Case Parametrisation

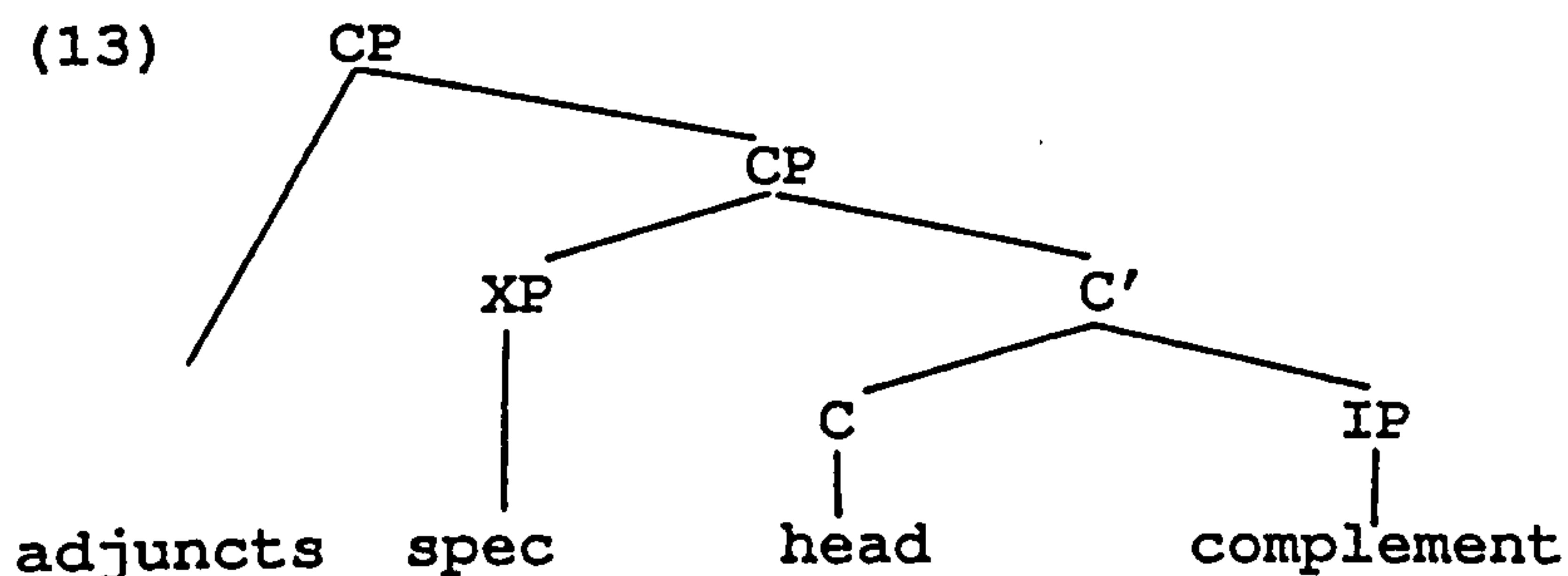
Thus, in the light of this contrast between the two languages, it is important to note that the case-marking principle operates uniformly rightwards in SA as compared to English in which functional categories assign case leftwards, whereas lexical categories do so rightwards. Hence, lexical subjects must precede I in English because functional categories (of which I is one) assign case leftwards, unlike SA.

5.2. The Structure of CP

5.2.1. The head C position

5.2.2. Interlingual Similarities in Y/NQs and WHQs

In the CP system in both languages complements follow the head and specifiers precede it. Thus, the schematic structure in (13) below:



reflects similarities expressible in the X-bar framework i.e. the head category C can be expanded into X' and X". In other words, i) CP has the standard X-bar structure. ii) in both Ls the head C position is obligatorily empty in indirect WHQs, e.g.

(14)a. The police did not know [_{CP} who [_C

e/*that/*whether][_{IP} killed the manager]]

b. S- sarta ma 9irfit [_{CP} meen [_C e/*inu/*iza] [_{IP} saraq l-mesraat]]

the-police neg know-past who steal-past the-money

'the police did not know who stole the money'

iii) Furthermore C must be empty in declarative main clauses in both languages. English emptiness of C comes from the fact that English main clauses do not allow a filled C position. For instance, consider the examples in (3) below:

(15)a. [_{CP} [_C e] [_{IP} I have heard that]]

b.* [_{CP} [_C that] [_{IP} I have heard that]]

Indeed, the only possibility for the C position of English declarative sentences to be filled is when a 'semi negative' such as one of the adverbs 'never, hardly, scarcely, barely, etc' is there in the structure, as in

(16) below:

(16) Never [_C [_C have] [_{IP} I heard anything so stupid]]

Similarly, SA emptiness of C position stems from the fact that declarative main clauses in SA must always have their C position left empty, e.g.

(17)a. [_{CP} [_C e] [_{IP} axad Nabeel d- doctoraa]]

take-past Nabeel the-doctorate

'Nabeel got the Ph.D.'

b.* [_{CP} [_C inu] [_{IP} axad Nabeel d- doctooraa]]

that take-pas. Nabeel the-doctorate

'that Nabeel got the Ph.D.'

iv) Both languages show similarities in relation to base-generated complementisers since finite indicative (not subjunctive in English) C can be optionally left empty in embedded CP in English and Syrian, e.g.

(18)a. I knew [_{CP} [_C e] [_{IP} John would do it]]

b. 9rift [_{CP} [_C e] [_{IP} Nabeel negeh bshadet swaqa]]

1sm know-pres. Nabeel pass-past driving cetificate

'I know Nabeel had passed his driving test'

v) The head C position is obligatorily filled in embedded Y/N questions. For example:

(19)a. I wonder [_{CP} [_C whether/*e] [_{IP} he will go home]]

b. Bxabro [_{CP} [_C iza/*e] [_{IP} sift-u l-yom]]

1sm-pers. tell if 1sm-see-pres. 3sm the-day

'I will tell him if I see him today'

vi) With reference to the structure of Wh interrogatives, both languages involve movement rules. In fact, Wh-

movement is obligatory in embedded WH-interrogatives as in:

(20) a. Mary does not know which car John liked most ---
 |
 |---←---Wh-movement-----←|

b. Nabeel ma 9irif ayya sayyara Nura starit ---
 |
 |---←---Wh-movement---←---|

Nabeel neg know-past which car Nura buy-past

'Nabeel did not know which car Nura bought'

5.2.3. Interlingual Differences in Y/NQs and WHQs

i) Infinitival C (for and whether) exists in English, but does not exist in SA, e.g.

(21) a. She is anxious [_{CP}[_Cfor][_{IP}John to go there]]

b. She wonders [_{CP}[_C*if/whether][_{IP}PRO to go there]]

(22) a. Stannei-na [_{CP}[_C^{msan}][_{IP}Nabeel yelhaqna]]

wait-past-3pl for Nabeel join-pas. us

'We waited for Nabeel joined us'

b. Stannei-na [_{CP}[_C^{msan}][_{IP}yelhaqna]]

we waited for 3sm join-pas. us

'We waited for him joined us'

Thus, in contrast with English, SA has no non-finite verbs (e.g. the subordinate clauses of (22a & b) involve finite verbs, although they are introduced by the complementiser msan/for) and hence no PRO because SA has only finite clauses, as we established in chapter three.

ii) C in English direct Y/NQs can be transformationally filled by I-to-C Movement, but not in SA, e.g.

(23) a. [_{CP} [_C e] [_{IP} John will win the race]]?
 ↑_{I-to-C-movement} ↓

b. [_{CP} [_C e] [_{IP} Nabeel tarak l- madrasa]]
 ↑_{I-to-C-movement} ↓

The ungrammaticality of (23b) results from the fact that SA has no I to C movement rule, and that verbs only move from V to I, (see chapter 3). Yet there are clauses in SA which appear to involve I to C movement. Consider (24) below:

(24) [_{CP} [_C e] [_{IP} sirib Nabeel s- say]]
 drink past Nabeel the tea
 'Nabeel drank the tea'

In clauses of this kind i.e. verb-initial clauses, the subject remains in the VP specifier position. This suggests that the pre-subject verb is not in the C position.

iii) As for base-generated complementisers in SA, unlike English, CPs with their head position filled can occur as complements of some optional prepositions. That is, the omission of the preposition does not affect the grammaticality of the clause, cf, e.g.

(25) a. Nabeel wasiq (min) [_{CP} [_C inu] [_{IP} l-harb kanet
 mudammra]]
 Nabeel confident from that the-war be-past
 'Nabeel is confident of that the war was destructive'

b. Nabeel wafaq (9ala) [_{CP} [_C inu] [_{IP} l-mubaraa kanet
 qasiye]]

Nabeel agree-past on that the-match was rough

'Nabeel agreed on that the match was a bit rough'

c.* John is sure about/of that war will continue

iv) With reference to direct WHQs, the contrast lies in the fact that while Wh and I to C movements must both take place in English direct Wh questions, this is not so in their SA counterparts, for the simple reason (stated in (23) above) that there is no I to C movement in SA. Consider the illustration of the movement rules concerned given in (26) below:

(26) a. [_{CP} e [_C e] [_{IP} John will buy which car]]?

b. [_{CP} e [_C e] [_{IP} Nabeel stara ayya sayyara]]?

5.2.4. The C Specifier Position

5.2.4.1. Interlingual Similarities in E and SA

Having illustrated Y/N and Wh- question contrasts at the head C position, we will turn to examine the Y/N and WHQ contrasts at the C specifier position in the two languages. i) Both languages allow base (adverbs) and transformationally (Wh) generated constituents in the relevant position. For base generated constituents, consider (27) below:

(27) a. [_{CPAdv} quite [_C whether] [_{IP} he will do it]],
we could not really say.

b. [_{CPAdv} bheis [_C iza] [_{IP} ija l-yom]], xabro

in case if 3sm-come pres. the-day 2sm-tell-pres.3sm

'in case if he comes today, tell him'

For transformationally generated constituents, note (28) below:

(28) a. I do not know [_{CP} who [_C e] [_{IP} they will meet]]

b. ma ba9rif [_{CP} su [_C e] [_{IP} naqasu fil mu?tamar]]

neg know-1sm pres what discuss-3pl-past in the
conference

'I do not know what they discussed at the conference'

ii) Both languages allow dislocation to the left or right of the CP system. To avoid repetition, we will illustrate dislocated constituents being adjoined to the left of CP only, e.g.

(29) a. [_{CP} Our friends [_{CP} when [_C can [_{IP} we [_I e]
visit them]]]]]?

b. [_{CP} al-kasaat [_{CP} emta [_C e [_{IP} Nura [_I e]
rah tigsilon?

'the cups, when Nura will wash them?'

iii) Moreover, both languages permit topicalised constituents, as in (30) below:

(30) a. [_{CPNP} Earthquakes] [_C e] people really fear-----
nowadays.

b. [_{CPNP} har-rabiye] [_C e] ta9awwadna nitla9a ----
btufulitna.

Lit: 'this hill we used to climb in our childhood'

5.3. English SCs v SA VCs

5.3.1. Distributional Similarities

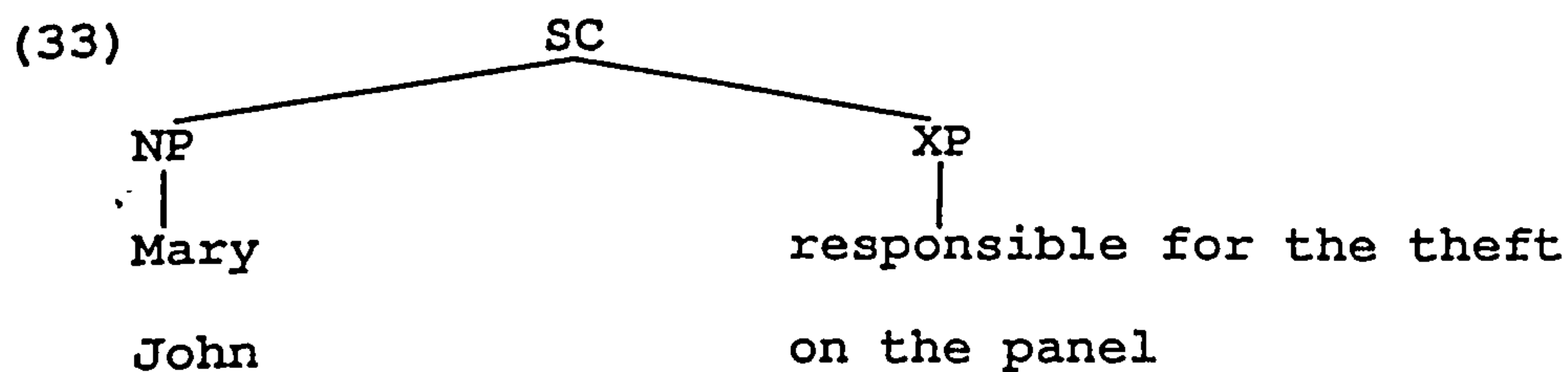
These clauses occur as complement clauses in both languages, cf, e.g.

- (31) a. They believe [_{sc} Mary to be innocent]
b. With [_{sc} Mary on our side], we would never lose
c. Ba9tigid [_{vc} Nura mreida]
believe-1sm-pres. Nura sick
'I believe Nura is sick'

5.3.2. Differences in Distribution and in Internal Structure

Turning to contrasts, English SCs have two main characteristics. First, they can occur only in complement positions of a subset of transitive verbs and prepositions. For instance, note the examples in (32) and their respective schematic structures as indicated in (33) below:

- (32) a. They thought [_{sc} Mary responsible for the theft]
b. With [_{sc} John on the panel], she has no chance of success.



Second, English SCs lack both a C-system and an I-system as the ungrammaticality of (34) below shows:

- (34) a.* We didn't know that/if/whether [_{sc} the relations

sour]

b.* We are sorry for_{[sc} the team having hammered]

Evidence for the ungrammaticality of such examples was discussed in chapter 4.

In contrast to English SCs, SA VCs can enjoy considerable freedom of occurrence. They occur wherever ordinary clauses can occur. This means that they have the following syntactic distribution:

(i). main clauses.

(35)a. Nura mreida

Nura sick

'Nura is sick'

(ii). preceded by a complementiser.

b. d-de9ayei inu [_{vc} Nura mreida]

the-rumour that Nura sick

'The rumour that Nura is sick'

(iii). preceded by a Wh-word.

c. Nabeel ma bye9rif leis [_{vc} Nura mreida]

Nabeel neg know-pres why Nura sick

'Nabeel doesn't know why Nura is sick'

(IV). complements of V, N, and A.

(36)a. Nabeel bye9tigid (inu) [_{vc} Nura bil-masfa]

Nabeel believe-pres (that) Nura in the-Hospital

'Nabeel believes that Nura is in Hospital'

b. d-de9ayei inu [_{vc} Nabeel majnoon]

the-rumour that Nabeel crazy

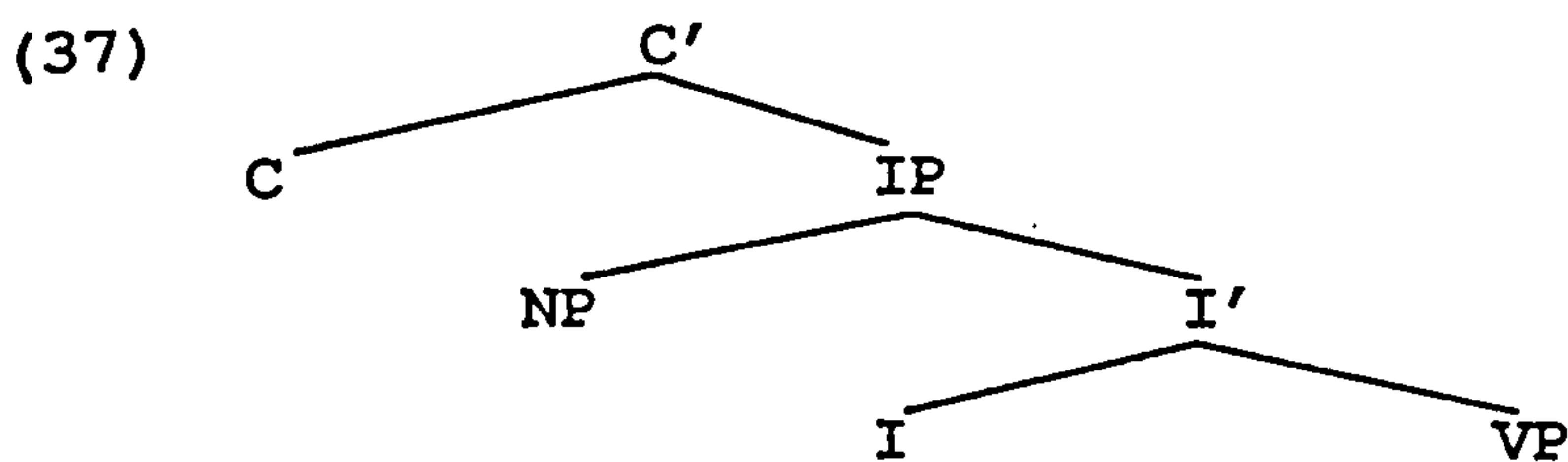
'The rumour that Nabeel is crazy'

c. Nabeel ma metakked (inu) [_{VC} Nura mreida]

Nabeel neg sure (that) Nura sick

'Nabeel isn't sure that Nura is sick'

Thus, example (35a) shows that, unlike English SCs, SA VCs can equally occur as independent main clauses. Example (b) shows that they are introduced by a complementiser, which is obligatory with Nouns and optional with other categories. Example (c) indicates that, unlike their English counterparts, SA VCs can be preceded by a WH-phrase. Finally, examples (36a, b, and c) highlight the occurrence of SA VCs in the complement positions of verbs, nouns and adjectives (but not prepositions) respectively. Now if VCs have the same structure as ordinary clauses (e.g. IPs), then they can be assigned the following schematic structure:



To sum up, in the light of this contrastive analysis, we have seen that there are both similarities and differences relating to Y/N and WHQs on the CP system, but only similarities relating to the C specifier position. On the IP system, we have seen that both languages have the same X-bar structure in that I permits a VP complement which has its own specifier and complement contained within V'. But the two languages exhibit differences in

movements, the specifier of I' position, pro-subjects and case-parametrisation. Finally, contrasting English SCs with SA VCs, both languages have shown identity on the occurrence of these clauses in complement positions. But the difference resided in the fact that this occurrence is limited to only a subtype of transitive verbs and prepositions in English while it extends to almost all verbs, nouns and adjectives (but not prepositions) in SA. Moreover, English SCs lack both C and I systems in their constituent structures, whereas SA has both of them.

5.4. Predicting Difficulties Encountered by Syrian Learners of English Interrogatives

5.4.0. Overview

Having carried out a contrastive analysis (CA) of English and SA interrogative structures, we will move on to consider the source of learning errors in the acquisition of English interrogative clause structure by Syrian university learners. As a result of the specified differences in the structure of the two languages which we presented earlier on, one can predict certain learning difficulties relating to Y/NQs, and WHQs. Thus, in investigating these points, we will try to establish to what extent Syrian university learners of the English C-system show evidence of L1 transfer (positive and negative).

Our only concern in this work is the investigation of Y/NQs, WHQs and aspects of VSO word order that impinge on

interrogative structures. This means that echo questions are beyond the scope of this study, because they do not exhibit specific movement.

Moreover, any interrogative that does not conform to the syntax of target language Y/NQ and WHQ (i.e. error) is investigated to establish whether it is the consequence of negative transfer. And any interrogative that conforms to the syntax of target Y/NQ and WHQ (i.e. non-error) is treated as a possible positive transfer, which hints at the existence of identical structure in the L1. However, there might be errors that are not due to negative transfer alongside those that are. In other words, it is important to note that some errors made by a language learner may not stem from interference of the native language, in so much as they could be a reflection of a state-of-'being; e.g. memory lapses, teaching deficiencies, etc.. as Di Pietro (1971:7) relevantly points out "Not every error made by the language learner has its origins in the contrasts between native language and language being learned..some errors are due to factors such as memory retention....." This entails that there are 'non-transfer' errors, as we shall see in chapter 7.

The following set of predictions fall into two main types: those relating to word order features of Y/NQs on the one hand, and to WHQs on the other. We will predict positive transfer (non-errors) first, and negative transfer (errors) second,

5.4.1. Indirect Y/N Questions

5.4.1.1. Positive Transfer (non-errors)

Since the head c position is obligatorily filled in E and SA learning difficulty is not predicted, cf:

(38) a. I wonder whether/*e it will stop raining.

b. ma ba9rif iza/*e byehki terki

neg know-pres.1sm if speak-pres.3sm Turkish

'I do not know if he speaks Turkish'

5.4.2. Direct Y/N Questions

5.4.2.1. Negative Transfer (error)

i) Sentences of the type given in (39) below, with SVO word order, are used as interrogatives (with intonational modifications) in SA. Hence, students may avoid inversion and use subject-initial sentences as interrogatives, e.g.

(39) a.* John went home?¹

b.* Nabeel tarak l-madrasa?

Nabeel leave-pas. the-school

'Nabeel left the school'

Thus, in cases like those above, students may attempt to produce interrogatives without movement. That is, (i) an error type comes from non-movement. ii) A second error will result from their moving a lexical verb, e.g.

(40)* went John home?

1. Note that ordinary spoken English Y/NQs without movement do occur as non-echoes, e.g. you're coming? you'll come? They are pragmatically marked and 'special' compared with usual Are you coming? They expect the answer 'yes'. So, learners' errors in using (39a) are more negative semantic/pragmatic transfer than syntactic transfer.

The source of such ungrammatical output (i.e. an error which comes from wrong movement) may be correlated with the input of verb-initial interrogatives, with VSO word order, which are extensively used in SA, e.g.

(41) Tarak Nabeel l-madrasa?

leave-pas.Nabeel the-school

'Left Nabeel the school?'

Thus, Syrian students may transfer their L1 knowledge into their English IL by using Y/NQ with an empty C.

5.4.3. Indirect Y/N Questions

A number of errors are anticipated on Y/NQs involving the infinitival C. i) The first type involves using the finite Y/N complementiser *if* followed by the infinitival particle *to*- i.e. the use with an infinitive of the finite complementiser *if*, e.g.

(42)* I wonder *if* to go there.

The plausible source of this kind of error can be both (from *iza*) and 'internal analogy to English' (from *whether*) - i.e. the learner is drawing a false analogy between *whether* and *if*. In other words, the learner is equating *if* with *whether*, i.e. assuming that it has the same distribution. Therefore, it is 'ambiguous' error, as described in Chapter One (P.42).

ii) The nonfinite use of *whether* may cause a problem for Syrian learners. The problem resides in the fact that *whether* licenses the appearance of a PRO as a subject of its complement clause, unlike in SA, which does not have a

PRO. Accordingly, errors like that (43) below might occur:

(43)* I asked whether John to go home

iii) Moreover, since the SA *iza* (counterpart of **whether**) can introduce SVO as well as VSO complement clauses, then we predict the occurrence of **whether** in sentences such as:

(44)* I asked whether went John home

5.4.4. Direct WH-Questions

5.4.4.1. Positive Transfer (non-error)

i) The first prediction involves direct WHQs in which the Wh-word functions as a subject, e.g.

(45) Who told you this story?

This is so because the identical structure is used in SA, cf, e.g.

(46) meen hakalak hal qessa?

who tell-past 2sm this story

'who told you this story'

5.4.5. Indirect WH-Questions

5.4.5.1. Positive Transfer (non-error)

i) Learners are expected to correctly use English embedded WHQs because SA has a similar structures, cf, e.g.

(47)a. We did not know which car John bought

b. ma 9rifna ayya sayyara Nabeel stara

neg know-past 1pl which car Nabeel buy-pas

'We didn't know which car Nabeel bought'

5.4.6. Direct WH-Questions

5.4.6.1. Negative Transfer (error)

i) The first type of error is likely to arise from the fact that in English direct WHQs, wh-movement and I-movement must both apply. Whereas SA lacks the latter movement (i.e. I movement), learners are expected to move only the former (i.e. Wh-phrase), e.g.

(48) a.* Which car John will buy?

b. Ayya sayyara Nabeel stara

which car Nabeel buy past

'Which car Nabeel bought'

ii) We also predict that errors will occur in structures with a Wh-phrase used with no be forms as finite verbs, e.g.

(49)* Where your book?

The reason for this prediction relates to clauses which are used in their verbless form in SA when they are in present tense, e.g.

(50) Wein ktaabak?

where book-2sm

'Where is your book?'

iii) Transfer errors are also predicted to occur in Wh-structures which require do support. Since SA has neither the do support requirement (because it has no dummy elements), nor I-to-C movement, learners are expected not to produce the relevant structures correctly, e.g.

(51)* Where you went last night?

but assuming that learners have partial knowledge of the

English do support requirement, then they might produce errors like:

(52)* Where did you went last night?

This illicit filling of the head C position might occur not only in direct WHQs, but also in indirect:

(53)* I do not know where did you went last night

The fact that the present tense in SA is always derived from the past could have a bearing on the realisation of tense features on both the C constituent and the main verb **went**. In other words, SA would use the past tense of verbs indicating present actions. As to the reason for this error it could be overgeneralisation from English direct WHQs in which both movements are obligatory, e.g.

(54) Which car will you buy?

5.4.7. Indirect WH-Questions

5.4.7.1. Negative Transfer (errors)

i) Word order errors involving the use of direct (and indirect) WHQs will predictably be of the form:

(55)* I do not know what bought the girl

simply because an identical structure is used in SA, cf, e.g.

(56) ma ba9rif su starit l-bint

neg know pres lsm what buy past the girl

'I do not know what the girl bought'

Here, the Wh-word is questioning the object of a VSO clause.

ii) Furthermore, learners may produce errors like that

in (57) below because SA does not allow PRO subjects, e.g.

(57)* I asked what John to do next

On the basis of our preceding discussion, we can give a summary of the main predictions. Note the plus (+) stands for a prediction of +T.

5.5. Summary of Main Predictions

+ 1- The use of Y/NQs in embedded clauses, e.g.

I do not know if/whether you can help me.

+ 8- The use of a Wh-word functioning as a subject in direct clauses, e.g.

Who broke your leg?

+ 9- The use of WHQs in embedded clauses, e.g.

He is not sure which book is recommended

2- The use of subject-initial sentences as interrogatives

* John kicked the ball?

3- The use of verb-initial sentences as interrogatives:

* kicked Jchn the ball?

4- The infinitival use of the complementiser *if* (overgeneralisation), e.g.

I wonder *if to retire now

5- The non-finite use of Y/N complementiser with a lexical subject, e.g.

* They are not sure whether Mary to eat now

6- The finite use of Y/N complementiser introducing VSO sentences, e.g.

* She does not know whether went Mary home

7- Illicitly filled head C position in embedded WHQs, e.g

- * They did not say when could we meet them again
- 10- Difficulty with I movement in direct Y/N and WHQs:
 - a.* When he will join the party?
- 11- The direct and indirect use of a Wh-word with no verb form involved, e.g.
 - a.* Why Bill in hospital?
 - b.* Nobody knows why Bill in hospital
- 12- Difficulty with Do support, e.g.
 - * What you do with a book?
- 13- Double tense marking (i.e. marking on aux. and non-aux.), e.g.
 - * Did you went home yesterday?
- 14- The use of VSO sentences in indirect WHQs, e.g.
 - * We do not know what bought the girl
- 15- The use of WHQs with a lexical subject in non-finite embedded clauses, e.g.
 - * Mary asked what John to do next year.

Notably, some predictions are parallel but not the same for Y/NQs and WhQs, e.g. 2, 10; 6, 14 and 5, 15. it is worth mentioning here that prediction 2 is about do-support and prediction 10 is about I movement.

CHAPTER SIX

The Empirical Study

6.0. Overview

In chapter five, I carried out a CA of English and SA interrogative patterns. In the light of this CA I predicted the interrogative features which cause problems to Syrian learners of English Y/NQs and WHQs.

As pointed out at the outset of this thesis, the aim of the present study is to give an account of the empirical investigation of my predictions and hypotheses in relation to production of English interrogative patterns by Syrian learners. In this sense, movement processes, which form the basis for interrogative structures, are of paramount importance specially I-movement, and Wh-movement, as we have shown in chapter 2, 3 and 4. In addition to interrogatives which involve movements, this investigation also deals with base-generated Y/N interrogatives in embedded clauses, as we have discussed in chapter 4.

This chapter deals with the description of the elicitation experiment - i.e. subjects, hypotheses, material, tasks, and procedure.

6.1. Arab Learners of English

Teaching English as a (first) foreign language in Syrian schools starts at the age of thirteen. The learner spends five 45-minute periods learning English per week. This continues invariably until the learner finishes his/her secondary schooling at the age of 18. The English

received at this stage, namely between 13-18, is from Arab teachers of English who have little genuine use of English language as a means of communication, let alone the teaching side of it. In addition, the learner sometimes regards English as a 'school subject'. That is, s/he does not have the interest and motivation to learn the language other than just to pass the exams, usually with a low mark. This means that a learner proceeds to a further stage of learning English without having really and truly learnt what he should have.

In the very recent past, the Ministry of Education has decreed that English be taught from the age of nine - i.e. the second half of the elementary school. This process has been applied only in some schools but is intended to cover all schools of the country. This reform in the teaching system of English is encouraging and rewarding. In addition, it is expected that it will raise the standard of learning by overcoming the age factor, which is very crucial in language acquisition terms (Cook, 1991:83-6, among others). On the other hand, it may lessen the influence of L1 in learning L2 to some extent.

At the University level (English Department), where my subjects study, the situation is different in the sense that English is the only medium of instruction. It follows from this that the learner has more exposure to English which s/he receives this time from experienced teachers. In other words, given the fact that teachers at the

University level are holders of PhDs in most cases in applied linguistics, they have the know-how and techniques of teaching: presentation, drilling, learner-centered, approaches. Despite this situation, problems arise and will continue to do because one cannot ignore the impact of the native language.

Theoretically at least, learners must be proficient in comprehension and production. In practice, this may not be the case because it is very hard for the learners, especially first year, to bridge the gap between five 45-minute periods per week coupled with the inadequacies of teaching at the pre-university stage and thereafter, where the learner is exposed to an all-out use of English. In other words, the lesson does not equip the learner to cope with the jump from knowing the very basics to encountering full scale and sophisticated use of English.

However, one a priori reason for the inapplicability of this experiment to secondary level Arab learners of English is that some of the structures I am investigating here are not really begun to be learnt at school. A further reason is that learners at the pre-university level are difficult to get hold of.

6.2. The Hypotheses

Two hypotheses are being tested in this investigation. The first hypothesis is in two parts. It assumes that when the relevant structures of both languages (E & SA) are the same, then this will result in learners producing correct

structures in the target language, English. In other words, this will yield positive transfer (+T). On the other hand, when structures of the L1 are different from those in the L2, negative transfer (-T) is predicted to occur - i.e. errors that reflect structure of the L1 will be produced.

The second hypothesis claims that the learner's level of attainment/proficiency will have an effect on her use of L1 transfer: she will achieve more (+T) and less (-T). Hence two groups of subjects (each N=22) were tested-viz A & B. Group B subjects were expected to produce less negative (and more (+T) transfer) than group A because the former is more advanced in learning than the latter. In other words, to say that group B will show less negative transfer than group A is to say that the higher the level of intensity of learning the more the negative transfer will have been overcome by learning the right forms either from exposure or instruction. This means that to have less negative transfer is to be more successful. However, it is reported (Da Torre, 1985) that the proportion of negative transfer errors increased in the more advanced learners of Portuguese.

6.3. Subjects

A group of forty four students from the English Department, University of Aleppo, Syria, were randomly selected to carry out this elicitation experiment. They were all native speakers of Arabic and of both sexes. The data collected was restricted to University educated

subjects, because of the reasons given in section 6.1., and because of the availability of these subjects. The group of forty four students were randomly selected from two groups to represent two different levels of study. The reason for selecting two groups (A & B) was to test expectations of differences in the performance (specifically, differences in use of L1 transfer as an L2 learning strategy) at these two levels, which I aim to test out in this investigation (cf, Hypothesis Two).

Students of the first group (group A) were in their first year of learning English at university. This group included 10 girls and 12 boys. Their ages varied between 18 and 21 years. During this year, they had been taught grammar, comprehension, composition, translation and English literature.

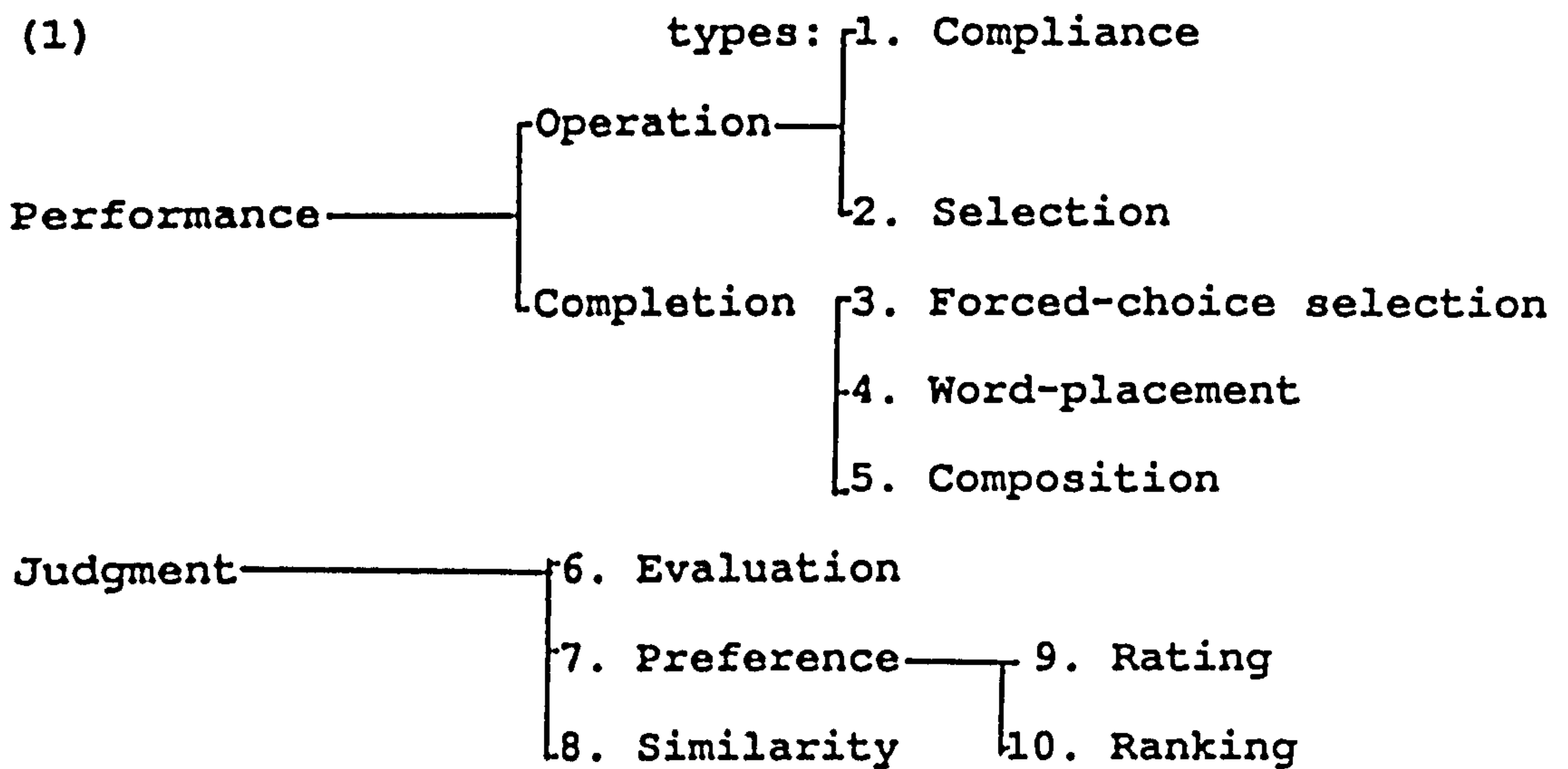
Students of the second group (group B) were in their third year of learning English. They had had more exposure to English than their group A counterparts. Thus, they were called the 'advanced' group. This group included 9 girls and 13 boys. Their ages varied between 21 and 24 years. In their third year, students of this group had been taught grammar, and introduced to linguistics, composition, translation, and English literature.

6.4. Elicitation Types

Corder (1981:61) defines elicitation procedures as "any procedure which causes a learner to make a judgment about the grammatical acceptability of a form or provoke him

into generating a linguistic response". What we need in our attempt to characterise learners' linguistic competence is an investigation of what they are able to produce as well as judge. Thus, we distinguish between two types of data: 'performance' data and 'intuitional' data. The former refers to the learner's ability to produce. The latter refers to the learner's ability to judge. These two types of data are equally important in the elicitation of the learners' interlanguage.

In order to generate responses on the interrogative features of this investigation and to obtain a sufficiently wide representation of errors and non-errors needed for that purpose, this study was made up of six written tasks. These tasks were prepared to meet Greenbaum and Quirk's (1970:3) description of two major type of tasks, namely performance and judgement. According to Greenbaum & Quirk (1970), performance tasks are methods of eliciting the learner's production, and judgment tasks are methods of eliciting the learner's attitude/intuition. Each method complements the other. In this connection, my elicitation experiment took place within the Greenbaum & Quirk (ibid) taxonomy of elicitation types, as reproduced in (1) below:



As evident, my performance tasks consist of operation tasks (in which learners are prompted to intervene by making some alteration in a given sentence), and completion tasks (in which learners are prompted to intervene by making some addition to a given sentence).

In this experiment, my performance tasks (i.e. types 1-5) involved Wh-questions (task I), Y/N questions (task II), gap filling (task III), selection (task V) and translation (task VI).

A Judgment (recognition) task was used to elicit the learner's attitude. Task IV of this experiment was a judgment task. It was of an assessment type (i.e. type 6). Learners were asked to identify which of the questions given in this task were correct and which were not. Although task IV was of a judgment type, it was also a performance task with a forced-choice selection (i.e. type 3) or controlled elicitation because learners were asked

to choose from a fixed set the correct interrogative structures for the incorrect ones.

6.5. Tasks

In this investigation, the six tasks were in written form. Below is the description of each.

Task I

This was a performance task. More precisely, it was a compliance task (i.e. type 1), in which some deviance was predicted to occur in the sentences given to the learners as a result of the change they were asked to make and upon which they were focussing. It involved turning 8 statements into 8 corresponding Wh-questions. A Wh-word was provided alongside each statement (see section 6.8.). This type of test, according to Heaton (1988:46), is considered to be "extremely useful for testing ability to produce structures in the target language".

Task II

This was another performance task. It involved turning 4 statements into 4 corresponding Y/N questions. In this task, learners had to concentrate on the VP constituent structure of the sentences simply because the movement processes in question depend on the structure of the VPs contained.

The first statement/item of this task contained a VP with two modal auxiliaries 'should' and 'have' and the main verb 'write' (in its past participle form). The second item contained a VP with 'work' as the main verb

preceded by the NP 'he'. The VP structure of the third item was of the form 'will+come'. The last item contained VP with 'visit' (in the past tense), being the only element of its constituent.

The first and the third items of this task were eliciting data related to the transformation anticipated for every item: viz whether it involved a subject auxiliary-inversion, as in (2) or whether it required a dummy auxiliary 'do', as in (3):

(2) You might have asked her for an apology (items 1, 3)

(3) He studies chemistry (items 2, 4)

Task III

This was a multiple choice slot filling task. It contained 10 items. Learners were asked to fill the slots with elements provided, viz 'if', 'whether', 'which', and 'what'. The last two were used as distractors. The task was prepared to test the learners' ability to distinguish the finite use of the Y/N complementiser 'if' from the nonfinite use of the corresponding complementiser 'whether', as in (4) below:

(4) I was not sure whether/*if to ask her

Task IV

This was a judgment test. It contained 30 items. They were presented in two forms: target language form and native language form as far as items for which negative responses were expected. Testees were required to distinguish the correct form from its incorrect version

(see section 6.8.).

Task V

This was a multiple-choice judgment test. Testees were required to select one out of three options, which were also presented in target and native language forms (see section 6.8.). This type of test "can prove useful in measuring student's ability to recognise correct grammatical forms, etc. and to make important discriminations in the target language. In doing this, multiple-choice items can help both student and teacher to identify areas of difficulty." Heaton (1988:27).

Task VI

This was a translation test. It involved translating a text from L1 into L2, reflecting the directionality of the learning. The text contained interrogative structures testing both positive and negative predictions. Each interrogative structure was tested twice. Below are the interrogative structures tested in task VI:

- Y/NQs in embedded clauses
- Subject-initial sentences as interrogatives
- Verb-initial sentences as interrogatives
- Finite complementiser 'whether' introducing VSO clauses
- Wh-words functioning as a subject
- WHQs in embedded clauses
- Difficulty with I movement
- Direct and indirect use of a Wh-word with no 'be' used or moved

- Difficulty with 'do' support
- VSO clauses in embedded WHQs

Given the nature of some of the tasks and the structures to be tested, it became rather difficult to restrict a particular test item to a particular prediction. That is, some of the items were testing two predictions simultaneously. For example, in Task V, which is Multiple Choice M/C (see section 6.8.), item No 3 was testing predictions 1 and 6; and item No 6 was testing predictions 9 and 14. In this case, I scored each response twice, for its confirmation, not for each prediction separately. Admittedly, this, to some extent, may have affected the degree of confirmation of prediction, as we shall see in chapter 7.

Overall, we had 15 predictions to test. These predictions were predicting the learners' transfer of the rules of their L1 into L2. Two types of transfer investigated: +T and -T. Accordingly, we had two different types of prediction: +T predictions and -T predictions. When the former type was involved, it was predicted that learners will correctly produce and judge L2 forms. Conversely, when the latter type was involved, it was predicted that learners will have difficulty in producing or judging the correct/incorrect forms of L2 because of L1 impact.

After the description of the tests, I will give the distribution and frequency of +/- predictions tested in

the tasks.

The distribution and frequency of +/- predictions tested in tasks.

| Prediction | Tasks | | | | | | Total |
|------------|-------|----|-----|----|---|----|-------|
| | I | II | III | IV | V | VI | |
| +1 | | | | 2 | | 2 | 4 |
| +8 | 2 | | | 2 | | 2 | 6 |
| +9 | | | | 2 | 1 | 2 | 5 |
| -2 | | | | 2 | | 2 | 4 |
| -3 | | | | 2 | | 2 | 4 |
| -4 | | | 5 | 2 | 1 | | 8 |
| -5 | | | | 2 | 1 | 2 | 5 |
| -6 | | | | 2 | 1 | | 3 |
| -7 | | | | 2 | 1 | | 3 |
| -10 | 2 | 2 | | 2 | | 2 | 8 |
| -11 | 2 | | | 2 | 1 | 2 | 7 |
| -12 | 2 | 2 | | 2 | | 2 | 8 |
| -13 | | | | 2 | 1 | | 3 |
| -14 | | | | 2 | 1 | 2 | 5 |
| -15 | | | | 2 | 1 | | 3 |
| Total | 8 | 4 | 5 | 30 | 9 | 20 | 76 |

As the table shows, the distribution of predictions was uneven in the tests. The only test in which I was able to test all the predictions was test IV. The reason for such an unbalanced frequency of predictions was mainly due to the nature of the tests (see section 6.8.).

6.6. Procedure

Before setting out for Syria for the collection of data on interrogatives, I carried out a pilot study of my tests on Arab learners at different departments of Bangor University. The aim was two fold. First, to gain some insight into how best to administer the test and to revise any unsuitable test items. Second, to test out the validity of my predictions. Indeed, the feedback I received from these informants helped me a lot in administering the test more efficiently back in Syria.

Following arrangements between the Linguistics Section in Bangor and the English department in Aleppo, I set out for Syria in October 1990 for the collection of data concerned. There I found the department approved and decreed the mission. The only thing to think about was the sequence in which to administer the six subtests constituting the test. To this end, I administered the test in an ordered way and in various timed sessions.

The order was as follows: translation (task VI), gap filling (task III), Wh-questions (task I), judgment (task IV), multiple-choice (task V) and Y/NQs (task II). My objective in following this order was: to elicit the material as naturally as possible, to conceal the fact of dealing with interrogative structures, and to gather as much spontaneous data as possible.

The experiment took two weeks. Within these two weeks, learners performed the six tests in various intervals in

class periods. The period of two weeks was not a long enough period for the learners to develop in syntactically, but long enough to allow breaks which eliminated fatigue and hopefully reduced the practice effect.

It is worth mentioning that the test material of the experiment was neatly wordprocessed on clean sheets. It consisted of 6 pages with clear and concise instructions in English. Test number VI of the experiment was a translation test. It was wordprocessed on a separate sheet in SA. All tests were prepared in such a way that learners would find enough space for their responses- see section 6.8. for example.

After being introduced, I explained in English to the testees of both groups that their performance on this work was not intended for any sort of assessment. To distance the very idea of exams from their minds, I told them that their performance sheets would not be stamped like their exam scripts. Moreover, to make them even more at ease and relaxed, I asked them not to write their names on the test sheet, if so they wished.

I also explained to the testees that once they were supplied with the elicitation sheets, their performance would be on the sheets themselves. Finally, I invited them to ask questions if they did not understand the instructions given on the elicitation sheets.

The atmosphere was so friendly to the extent that I was

warmly welcomed to run the experiment myself. This, of course, was to my advantage, i.e. to answer any questions raised.

I started with group A with translation task (VI). In the course of doing this task, some questions were asked. They were on vocabulary (meaning of certain L1 words in L2). I answered these questions, since this would not affect the ultimate goal of my research, which is syntax, not vocabulary. This task was followed by task (III). This was a simple task. No questions were asked. The following day they did tasks (I) and (IV). Here also no questions were raised. On the third day, tasks (V) and (II) were done. There were some queries on task (II) i.e. Y/NQs. Using oral examples, I explained to them how these are done. Notably, I avoided written examples for fear of copying.

I followed the same order with learners of group B. There were no questions from this group. Everything was smooth except for the late turn out of one of the learners.

6.7. Method of Scoring:

There are many ways of being wrong in verbal output. I am only concerned here with errors or successes of a certain type: those resulting from the positiveness or respectively negativeness of the NL transfer which the learner made to L2. Speakers of different L1s can be wrong in different ways, as James (1980:22-25) argues in his

discussion of the *Ignorance Hypothesis*. In my work I am only concerned with L1 group-specific (not idiosyncratic, or non-transfer based) ways in which SA learners of English can predictably be wrong.

Thus, the scoring method used here is based upon whether subjects' responses are in accordance with the predictions-i.e. confirmation of prediction- and not upon whether the response is correct or incorrect. Thus, every interrogative response which confirmed my prediction was given the score of 1 point; and every interrogative response which did not confirm my prediction was given the score of 0 (zero) (see appendix A). That is, for negative transfer predicted items, the score of 1 point means my prediction was endorsed in the sense that there was transfer error; while the score of 0 (zero) means my prediction was not endorsed in the sense that there was no transfer error. This could mean either that there was no error at all, or that the error was demonstrably not due to L1 transfer. Conversely, for every item predicted to attract positive transfer that in fact was correctly performed for demonstrably (+T) reason, a score of 1 was given, and a score of 0 for items not confirming the (+T). At times, the asterisk * was given as a neutral score indicating that a subject did not respond to a particular structure or item (see appendix A). I assumed that the missed out items were left out through inadvertence, so were left out of % calculation, and were not due to

'avoidance' because subjects were afraid of 'being wrong'. It is worth mentioning that the identification of L1 transfer is done by executing a back-translation of the IL form into the NL and measuring their congruence.

The points on each item were added up and divided by the number of subjects who took the test. The result then was converted into a % group mean score for this item. A score of 100% means that all subjects who attempted that particular item answered it correctly (i.e. in a way confirming the prediction). A score of 0% means that none of the subjects confirmed the prediction.

The percentages for one prediction on one task were added up and divided by the number of items of the relevant structure that occurred in that task. This gave the percentages of confirming and disconfirming responses for every prediction in each task. Additionally, the mean percentages of confirming and disconfirming responses was measured for every prediction in the whole experiment. Finally, the mean percentage of confirming and disconfirming responses was calculated on every item, every task, every prediction for every group.

The statistical test of chi squared (X^2) was used to measure the statistically significant difference between the two groups of students in their performance, since the advanced group B students had been predicted to show less negative (and more positive) transfer than the less advanced group A students.

6.8. Elicitation Instrument

1- Turn the following into questions, beginning with the word in brackets

1- He met them in Damascus. prediction 8
(Who)

.....

2- He plays football every week. prediction 12
(Why)

.....

3- Kamal is in the kitchen. prediction 11
(Why)

.....

4- John took my book. prediction 8
(Who)

.....

5- The tourists stayed in Aleppo last year. prediction 12
(Where)

.....

6- We will water the flowers tomorrow. prediction 10
(When)

.....

7- Nabeel is in Rome. prediction 11
(Why)

.....

8- My uncle should have helped the poor. prediction 10

(How)

.....

11- Turn the following into Y/N questions:

Prediction No 10 (I. movement) tested in 1 and 3.

Prediction No 12 (do support) tested in 2 and 4.

1- You should have written her a letter.

.....

2- She works hard.

.....

3- They will come home very soon.

.....

4- They visited the zoo yesterday.

.....

111- Fill in the spaces using either **if**, **which**, **what** or **whether**

Prediction No 4 and 5, the equation of **if** with **whether**.

1- She doubted.....they arrived.

2- I wonder..... to go there now.

3-they can come, I very much doubt.

4- They asked..... to work now.

5- I wouldn't mind.....she sent me a present.

6- He isn't sure.....to help her now.

7- John asked.....Mary had been seeing Bill.

8- They wondered.....to drive the car.

9- It is not clear to us.....they like our food.

10- He didn't tell me.....to return the paper immediately.

1V- Are the following sentences CORRECT or INCORRECT? If INCORRECT, please write down the CORRECT form in the space given below

Prediction No 1 tested in 4,13.

Prediction No 2 tested in 8,18.

Prediction No 3 tested in 19,21.

prediction No 4 tested in 9,27.

Prediction no 5 tested in 1,17.

Prediction No 6 tested in 10,29.

Prediction No 7 tested in 6,25.

Prediction No 8 tested in 11,26.

Prediction No 9 tested in 24,28.

Prediction No 10 tested in 2,22.

Prediction No 11 tested in 20,23.

Prediction No 12 tested in 7,15.

Prediction No 13 tested in 3,12.

Prediction No 14 tested in 14,16.

Prediction No 15 tested in 5,30.

Prediction No 5. The nonfinite use of Y/N comp. whether with a lexical subject in embedded clauses:

1- I don't know whether to go home now.

.....

Prediction No 10. Difficulty with I. movement:

2- When you will get the money back?

.....

Prediction No 13. Double tense marking:

3- Would he come late?

.....

Prediction No 1. The finite use of Y/N comp. whether in embedded clauses:

4- She wonders whether she will succeed.

.....

Prediction No 15. The use of WHQs with a lexical subject in nonfinite embedded clauses:

5- John does not know what to do in summer.

.....

Prediction No 7. The wrongly filled head c position in embedded WHQs clauses:

6- We did not know where we would go.

.....

Prediction No 12. Difficulty with 'do' support:

7- What you put on the table?

.....

Prediction No 2. The use of subject-initial sentences with question function but without interrogative syntax :

8- Ahmad wants to use it?

.....

Prediction No 4. The infinitival use of the finite comp. if (overgeneralisation):

9- He asks if to sleep early.

.....
Prediction No 6. The finite use of Y/N comp. whether
introducing VSO sentences:

10- Nadia wondered whether went Nawal to the university.

.....
Prediction No 8. The use of a WH-word functioning as a
subject in direct clauses:

11- Who told you this story?

.....
Prediction No 13. Double tense marking:

12- Which book did you liked best?

.....
Prediction No 1. The use of Y/NQs in embedded clauses:

13- She doubts if the claim is true.

.....
Prediction No 14. The use of VSO sentences in indirect
WHQs:

14- We knew what bought the girl.

.....
Prediction No 12. Difficulty with 'do' support:

15- Where did you go last night?

.....
Prediction No 14. The use of VSO sentences in indirect
WHQs:

16- He asks where the driver went.

.....
Prediction No 5. The nonfinite use of Y/N comp. whether

with a lexical subject:

17- Omar asks whether Muneer to eat now.

.....

Prediction No 2. The use of subject-initial sentences with question function but without interrogative syntax:

18- Muna speaks English?

.....

Prediction No 3. The use of verb-initial sentences as interrogatives:

19- Go Hassan to school everyday?

.....

Prediction No 11. The (in)direct use of a WH-word with no 'be' form involved:

20- Where is your book?

.....

Prediction No 3. The use of verb-initial sentences as interrogatives:

21- Wrote my brother a letter yesterday?

.....

Prediction No 10. Difficulty with I. movement:

22- When can I see you?

.....

Prediction No 11. The (in)direct use of a WH-word with no 'be' form involved:

23- They do not know why Sameer sick.

.....

Prediction No 9. The use of WHQs in embedded clauses:

24- They did not know which car she bought.

.....

Prediction No 7. The wrongly filled head c position in embedded WHQs:

25- She does not know when will she arrive.

.....

Prediction No 8. The use of a WH-word functioning as a subject in direct clauses:

26- Who took my book?

.....

Prediction No 4. The infinitival use of Y/N comp. if:

27- We do not know if we will meet him there.

.....

Prediction No 9. The use of WHQs in embedded clauses:

28- We knew when they arrived last night.

.....

Prediction No 6. The finite use of Y/N comp. whether introducing VSO sentences:

29- Omar wondered whether Ahmad bought the shirt.

.....

Prediction No 15. the use of WHQs with a lexical subject in nonfinite embedded clauses:

30- Muna asked Omar what Nawal to do next.

.....

V- Tick [] to show which of a, b, c is the correct completion to each sentence. Cross [x] any completion you consider wrong.

Prediction No.

Multiple Choice

- 4- Little Salwa asked.. (a) if to have a sweet [].
(b) if he could have a sweet [].
(c) if had a sweet [].
- 5- He asks..... (a) whether read a book [].
(b) whether he to read a book [].
(c) whether to read a book [].
- 6- She wondered..... (a) whether opened the door [].
(b) whether opened she the door [].
(c) whether she had opened the door [].
- 7- They didn't say..... (a) when could we see them [].
(b) when saw them [].
(c) when we could see them [].
- 11- I don't know..... (a) why is Salwa in hospital [].
(b) why Salwa in hospital [].
(c) why Salwa is in hospital [].
- 14- I couldn't hear.... (a) what said the girl [].
(b) what the girl had said [].
(c) what said [].
- 15- We didn't know..... (a) what were to do next [].
(b) what we to do next [].
(c) what to do next [].

VI- Translate the following into English:

..... (حوار بين المدرس والطلاب)
..... سأل المدرس الطلاب:
..... من كسر الطاولة؟
..... أكافئه إذا اعترف بذلك
..... قال أحد الطلاب:
..... أحمد كسر الطاولة
..... المدرس: أحمد كسر الطاولة؟
..... أين أحمد؟
..... لماذا كسر أحمد الطاولة؟
..... و متى كسرها؟
..... لا أدري لماذا يكسر الطلاب الطاولة؟
..... و لا أدري من المسؤول عن الصف؟
..... و لا أعرف لماذا يتصرف الطلاب هكذا؟
..... أين النظام؟
..... متى سنتعلم النظام؟
..... كيف يمكننا أن نتعلمه؟
..... استغرب جداً إذا تكرر هذا التصرف ثانية؟
..... فجأة يقرع الباب
..... المدرس للطلاب: إنني ذاهب لأرى من القارع؟
..... من القارع؟ أحمد أنا
..... المدرس يفتح الباب: جئت يا أحمد؟
..... أحمد: نعم
..... لكنني تأخرت لأنني نُهبت لأزور والدي في المشفى
..... المدرس: نهبت لتزور والدك في المشفى؟
..... والدك دخل المشفى؟
..... انصدم المدرس والطلاب لسماع هذا الخبر
..... ونهبوا جميعاً لزيارة والد أحمد في المشفى

CHAPTER SEVEN

The Discussion of Confirmed +/- Transfer Predictions

7.0. Overview

In chapter five, we carried out a contrastive analysis (CA) of English and Syrian Arabic (SA) interrogative structures. With this CA, we predicted those target structures likely to be influenced by positive and by negative L1 transfer respectively.

This chapter reports the success of those predictions. This involves comparing the subjects' attested performance as elicited by the instrument described in chapter six with the CA predictions. The findings of this comparison is then taken as a measure of the validity of my predictions and of the hypotheses on which they were founded.

This chapter is constructed as follows: section 7.1. deals with Positive transfer predictions - i.e. predictions for which subjects are expected to produce maximally L1-like structures - i.e. nonerrors. Section 7.2. deals with negative transfer predictions - i.e. predictions for which subjects are anticipated to produce more errors.

7.1. Hypothesis 1

7.1.1. Positive Transfer Predictions

As mentioned earlier, the term 'positive transfer prediction' refers to a structure for which subjects are expected to respond correctly due to L1 transfer when

prompted to produce a certain structure. In this sense, 3 of the 15 predictions formulated in chapter five are positive. These are 1, 8 and 9. Their distribution in the tasks is as presented below:

| <u>Task</u> | <u>Number of Items</u> |
|-------------|------------------------|
| I | 2 |
| IV | 6 |
| V | 2 |
| VI | 6 |

These predictions permit only one correct response for every item which reflects L1 positive transfer. The degree of confirmation for each prediction and each task is calculated by the percentage mean on the subjects performance on the prediction or the task.

7.1.2. Degree of Prediction Confirmation

Prediction 1

The correct use was predicted of indirect Y/NQs with the head C position filled by a base-generated complementiser as in (1):

(1) I wonder [_{CP} [_C whether] she will attend the party]]

It occurred five times in the whole elicitation instrument: twice in task IV, items 4, 13; once in task V, item 3; and twice in task VI, items 2, 13. Subjects' performance for this prediction was as follows:

Group A

In task IV, item 4, 22 (out of 22) students confirmed the prediction. On item 13, 21 students confirmed the prediction, and one student did not respond. The mean

percentage of transfer in task IV, prediction 1, group A is 100%

In task V, prediction 1 occurred only in item 3, in which 8 students confirmed the prediction, and 12 disconfirmed it, and 2 students did not respond. The percentage mean of transfer in task V, prediction 1, group A is 40%.

In task VI, item 2, there were 21 confirming responses, and one disconfirming response. On item 13, 18 students responded positively, and 4 did not respond at all. Hence, the percentage mean of transfer in task VI, prediction 1, group A is 98%.

The overall percentage mean for prediction 1, group A is 87%. The table below summarises the findings:

Table VII. 1: Prediction 1A:

| Pred | Task | Item Num | Positive Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|-----------------|-------------|-----|---------|
| | | | No Resps | % Resps | % Task | overall % pred. | No | % | |
| 1 | IV | 4 | 22 | 100 | | | - | | - |
| | | 13 | 21 | 100 | 100 | | - | | 1 |
| | VI | 3 | 8 | 40 | 40 | 87 | 12 | 60 | 2 |
| | | 2 | 21 | 95 | | | 1 | 4.5 | - |
| | | 13 | 18 | 100 | 97.5 | | - | | 4 |

Group B

The performance of group B students on prediction 1 yielded the following results. In task IV, items 4 and

13, there were 20 confirming responses, and 2 missing responses. The percentage mean for task IV is 100%.

In task V, item 3, 16 students confirmed the prediction, 3 did not confirm it, and 3 did not respond. The percentage mean is 84% right and 16% wrong.

In task VI, item 2, all 22 students got it right. On item 13, 18 students got it right, and 4 students did not respond. The percentage mean for task VI is 100%.

The overall percentage mean for prediction 1, group B yielded a degree of confirmation of 97%. The table below sums up the findings:

Table VII. 2: Prediction 1B:

| Pred | Task | Item Num | Positive Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 2 | IV | 4 | 20 | 100 | 100 | - | - | - | 2 |
| | | 13 | 20 | 100 | | 2 | - | 2 | |
| | V | 3 | 16 | 84 | 84 | 97 | 3 | 16 | 3 |
| | | VI | 2 | 22 | 100 | 100 | - | - | - |
| | 13 | | 18 | 100 | | - | - | 4 | |

Prediction 8

This prediction involves the formation of a question using a WH word (who) functioning as a subject in direct questions. Observe (2) Below:

- (2) (a) who won the race?
- (b) who owns that new car?

It was tested 6 times. Twice in task I, items 1 and 4. Twice in task IV, items 11 and 26, and twice in task VI, items 1 and 5. The results of group A performance were as follows:

Group A:

The findings of task I, item 1 were 21 confirming answers, and 1 disconfirming answer. On item 4, there were 22 confirming answers. The percentage mean for task I is 97.5%

The results of task IV, item 11, 21 students confirmed the prediction, and 1 student did not do so. In item 26, 21 subjects got right answer, and only 1 student did not respond. Thus, task IV showed a percentage mean of 97.5% transfer.

The figures of task VI, item 1 showed 21 students doing the test correctly and 1 incorrectly. Item 15 showed 19 students doing it correctly, and 3 not doing the test. The percentage mean for task IV is 97.5%.

The total percentage mean for prediction 8, group A is 98% of positive transfer. For the summary of the findings, see the table below:

Table VII. 3: Prediction 8A:

| pred | Task | Item Num | Positive Transfer | | | overall % pred | Discon.resp | | no resp |
|------|------|-------------|-------------------|------------|-----------|-------------------|-------------|---|------------|
| | | | No Resps | % Resps | % Task | | No | % | |
| | I | 1 | 21 | 95 | 97.5 | | 1 | 5 | - |
| | | 4 | 22 | 100 | | | - | | - |
| 8 | IV | 11 | 21 | 95 | 97.5 | 98 | 1 | 5 | - |
| | | 26 | 21 | 100 | | | - | | 1 |
| | VI | 1 | 21 | 95 | 97.5 | | 1 | 5 | |
| | | 15 | 19 | 100 | | | - | | 3 |

Group B:

Group B findings showed that in task I, item 1, 19 students responded correctly, and 3 incorrectly. In item 4, also 19 students responded correctly, 2 incorrectly, and 1 did not do the exercise. These figures gave the percentage mean of 88% confirming responses in task I.

The tests on task IV, item 11 showed 22 students performing the exercise correctly; and on item 26, 18 students performing it correctly, 1 incorrectly, and 3 not responding at all. The percentage mean for task IV is 97.5%.

The experiment carried on task VI, item 1, presented 21 subjects scoring right answers, and 1 subject scoring a wrong answer. On item 15, 19 subjects scoring right answers, and 3 not responding. The percentage mean for task VI is 97.5%.

The overall percentage mean of degree of confirmation for prediction 8, group B is 94%. Here is the summary:

Table VII. 4: Prediction 8B:

| pred | Task | Item Num | Positive Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % pred | No | % | |
| 8 | I | 1 | 19 | 86 | 88 | 94 | 3 | 14 | - |
| | | 4 | 19 | 90 | | | 2 | 10 | 1 |
| | IV | 11 | 22 | 100 | 97.5 | | - | | - |
| | | 26 | 18 | 95 | | | 1 | 5 | 3 |
| | VI | 1 | 21 | 95 | 97.5 | | 1 | 5 | - |
| | | 15 | 19 | 100 | | | - | | 3 |

Prediction 9

This prediction relates to the use of WHQs in embedded clauses, e.g.

(3) I don not know where they went last night

This prediction was put to the test 5 times: twice in tasks IV and VI, items 24, 28, and 8, 14 respectively, and once in task V, item 6. Group A performance on prediction 9 was as follows:

Group A:

In task IV, item 24, all 22 subjects answered the prediction correctly. The results of item 28 told of 20 subjects answering it correctly, and 2 subjects did not attempt it. These figures gave a percentage mean of 100% for task IV.

In task V, item 6 only 5 subjects supported the prediction; while 16 did not support it, and 1 skipped it. The percentage mean for task V was only 24%.

In task VI, item 8, 20 people gave right judgment, and

2 did not try it. Item 14 stated 21 people getting prediction 9 correctly , and 1 not responding.

Group A degree of confirmation for prediction 9 totalled a percentage mean of 85%. The summary of group A findings is as follows:

Table VII. 5: Prediction 9A:

| pred | Task | Item Num | Positive Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % pred | No | % | |
| | IV | 24 | 22 | 100 | 100 | | - | - | |
| | | 28 | 20 | 100 | | | - | 2 | |
| 9 | V | 6 | 5 | 24 | 24 | 85 | 16 | 76 | 1 |
| | VI | 8 | 20 | 100 | 100 | | - | | 2 |
| | | 14 | 21 | 100 | | | - | | 1 |

Group B:

The findings of group B on prediction 9 rendered 20 students responding predictably in item 24, task IV, and 2 not responding. In item 28, 18 students responding predictably, and 4 not responding. The percentage mean for task IV was 100%.

On task V, item 6, 18 students performed as predicted, 3 contrary to prediction, and 1 not performing the exercise. The percentage mean for task V was 86%.

The results of task VI, item 8, were 21 students got correct answers, and 1 avoided the exercise. On item 14, the results were 19 students got correct answers, and 3

avoided the exercise. The percentage mean for task VI was 100%.

The overall percentage mean for prediction 9, group B showed a degree of confirmation of 97%, as the table below sums up:

Table VII. 6: Prediction 9B:

| Pred | Task | Item Num | Positive Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % pred | No | % | |
| 9 | IV | 24 | 20 | 100 | 100 | 97 | - | | 2 |
| | | 28 | 18 | 100 | | | - | | 4 |
| | V | 6 | 18 | 86 | 86 | | 3 | 14 | 1 |
| | VI | 8 | 21 | 100 | 100 | | - | | 1 |
| | | 14 | 19 | 100 | | | - | | 3 |

The following table illustrates the degree of confirmation for each group on each task as follows:

Table VII.7: degree of confirmation on every task in the two groups.

| task | degree of confirmation | |
|------|------------------------|---------|
| | group A | group B |
| I | 97.5% | 88% |
| IV | 99% | 99% |
| V | 32% | 85 |
| VI | 98% | 99% |

7.1.3. Discussion of Positive Transfer Predictions

The discussion so far has focused on measuring the performance of the two groups so as to attest the degree of dis/confirmation for each positive transfer prediction made in chapter five. It was evident from the final analysis of the results that the degree of confirmation by both groups on all three predictions was indeed very high, ranging between 85% to 98% for group A, and between 94% to 97% for group B. This exceptionally high degree of prediction-accuracy might be, in general, indicative of two or more factors. First, it might indicate to the fact that the Arabic speakers had learnt some aspects of English interrogatives earlier than others because of the high learnability of these interrogative structures. This high learnability, in turn, could be linked to the fact that both languages have similar interrogative structures. Second, it might be a reflection on the nature of the tasks involved in the experiment. That is, some tasks (e.g. I, IV, VI) have had facilitating effects for the students; while others (e.g. V) had inhibiting ones. For instance, talking about the degree of confirmation for each task in each prediction, wherever tasks IV and VI were performed, the degree of confirmation is ranging from 97.5% to a 100% in both groups on predictions 1 and 9. While in task I, it has varying range in both groups on prediction 8: 88% for group B, and 97.5% for group A. However, task V rendered the lowest degree of confirmation

for group A on predictions 1 and 9 showing 40% and 24% respectively; and 84%, 86% for group B. This variance between the two groups relates to the hypothesis two, which predicts the better performance of group B.

The general conclusion to be drawn from this is that some tasks were easier than others. For example, the performance on task IV, i.e. judgment was high, signalling the easiness of this task. This easiness might have stemmed from the fact that this was a judgment task involving a mere distinction between pairs of correct and incorrect utterances; i.e. it was not a performance task. In comparison with IV, task V was proven to be a difficult one (note the results given at the end of the immediately preceding paragraph). This task was a multiple choice m/c. Its difficulty may have to do either with the fact that being m/c is itself a difficult exercise. Or with the fact that it was testing more than one prediction at a time. For example, item 3 was testing predictions 1 and 6. In task I (transformation), the degree of confirmation on prediction 8, for group B was 88% and 97.5% for group A, which is exceptionally higher than group B.

The strongest confirmation of prediction was 98% on prediction 8, group A. 97% on predictions 1 and 9 for group B. The reason for the success of this high degree of positive prediction performance can be associated with both English and Arabic having similar interrogative structures.

Closer scrutiny of the exceptionally high degree of confirmation in judgment (IV) and translation (VI) tasks shows one important fact - i.e. the abundance of transfer. The account for this abundance, apart from the easiness of the tasks, is that "similarities in syntactic structures can facilitate the acquisition of grammar" (Odlin, 1989:36). In other words, the high degree of confirmation of positive transfer could be the result of the fact that subjects transferred their isomorphic L1/L2 knowledge in the formation of Y/N and WH interrogatives undertaken in this study, lending support to part one of Hypothesis 1, which suggests that "having similar interrogative structures in both languages will prompt positive transfer-meaning correct formation of interrogatives." Thus, the high profile of transfer may have generated from the sameness of some structures and the nature of the tasks.

7.2. Negative Transfer Predictions

As was noted in chapter five, as far as negative predictions are concerned, we have 10 negative ones; and 2 overgeneralisation. These predictions respectively bear the following numbers: 2. 3. 5. 6. 10. 11. 12. 13. 14. 15. and 4 and 7. The negative predictions were tested in 5 of the 6 tasks of the whole experiment. Their distribution over the tasks was as follows:

| | |
|---------|----------|
| Task I | 6 items |
| Task II | 4 items |
| Task IV | 24 items |
| Task V | 6 items |
| Task VI | 14 items |
| | ----- |
| | 54 items |

The overgeneralisation predictions (No 4 & 7) were tested in 3 of the 6 tasks of the elicitation instrument and their distribution was as follows:

| | | |
|--------|----------|---------|
| No (4) | Task III | 5 items |
| | Task IV | 2 items |
| | Task V | 1 item |
| | | ----- |
| | | 8 items |
| No (7) | Task IV | 2 items |
| | Task V | 1 item |
| | | ----- |
| | | 3 items |

Now we shall elaborate on the frequencies, in percentages, and the degrees of confirmation of these predictions.

7.2.1. Degree of Prediction Confirmation

Prediction 2:

This predicts the use of subject-initial sentences as interrogatives, e.g.

(4)* John went home?

It has occurred in task IV, items 8, 18; and task VI, items 3, 18. The following is the students' performance on this prediction.

Group A:

In task IV, item 8, 21 students endorsed the negative transfer prediction, and 1 student did not. Item 18,

showed 20 students confirming the predicted negative transfer, and 2 students disconfirming it. The percentage mean for prediction 2, task IV is 93% confirmed transfer error, and 7% disconfirmed transfer error.

In task VI, item 3 advanced 19 predicted errors, and 3 unpredicted errors. Item 18 illustrated 16 responses occurring predictably, 4 unpredictably, and 2 not responding. The percentage mean of prediction 2, task VI is 83% confirmed negative error and 17% disconfirmed negative error.

The overall degree of confirmation for prediction 2, group, A is 88% confirmed negative transfer, and 12% disconfirmed negative transfer. Here is the table of the findings:

Table VII. 8: Prediction 2A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 2 | IV | 8 | 21 | 95 | 93 | 88 | 1 | 5 | - |
| | | 18 | 20 | 91 | 2 | | 9 | - | |
| | VI | 3 | 19 | 86 | 83 | | 3 | 14 | - |
| | | 18 | 16 | 80 | 4 | | 20 | 2 | |

Group B:

The students' performance of prediction 2, task IV, item 8 showed 16 answers confirming the prediction, 5 answers disconfirming the prediction, and 1 no answer.

item 18 showed 17 answers confirming the prediction, and 5 answers disconfirming it. The percentage mean for task IV is 76.5%.

Task VI, item 3 reported 17 confirming responses, and disconfirming ones. Item 18 reported 15 responses supporting the prediction, 4 not supporting it, and 3 avoiding the test. The percentage mean for task VI is 78%.

The overall degree of confirmation for prediction 2, group B is 77% negative transfer error. Here is the summary:

Table VII.9: Prediction 2B:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 2 | IV | 8 | 16 | 76 | 76.5 | 77 | 5 | 24 | 1 |
| | | 18 | 17 | 77 | | | 5 | 23 | - |
| | VI | 3 | 17 | 77 | 78 | | 5 | 23 | - |
| | | 18 | 15 | | | | 4 | 21 | 3 |

Prediction 3: that verb-initial sentences will be used as interrogatives, e.g.

(5)* went John home?

This prediction was tested four times in the experiment. In task IV, items 19, 21; and task VI, items 16, 17. Group performance was thus:

Group A:

In task IV, item 19, 17 responses matched up with the

prediction, and 5 did not. In item 21, 16 responses did so, and 6 did not. These figures gave a percentage mean of 75%.

In task VI, item 16, showed 14 prediction correlates, 6 did not, and 2 abstentions. Item 17, showed 13 confirmed correlates, 8 disconfirmed ones, and 1 abstention. The percentage mean is 66%.

The overall degree of confirmation for prediction 3, group A is 70.5% negative transfer. Here is the summary.

Table VII. 10: Prediction 3A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 3 | IV | 19 | 17 | 77 | 75 | 70.5 | 5 | 23 | - |
| | | 21 | 16 | 73 | | | 6 | 27 | - |
| | VI | 16 | 14 | 70 | 66 | | 6 | 30 | 2 |
| | | 17 | 13 | 62 | | | 8 | 38 | 1 |

Group B:

The performance on prediction 3, task IV, items 19 and 21 was 9 correct answers and 13 wrong answers, with a task percentage totalled 41%.

The performance in Task VI, item 16 there were 11 errors supporting the prediction, 7 were not supporting it, and 4 abstentions. In item 17, there were 10 errors of prediction correlates, 9 errors of non-prediction correlates, and 3 abstentions. The percentage mean is 57%.

The overall degree of confirmation for prediction 3, group B is 48%. For the results, note the table below:

Table VII.11: Prediction 3B:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 3 | IV | 19 | 9 | 41 | 41 | 48 | 13 | 59 | - |
| | | 21 | 9 | 41 | | | 13 | 59 | - |
| | VI | 16 | 11 | 61 | 57 | | 7 | 39 | 4 |
| | | 17 | 10 | 53 | | | 9 | 47 | 3 |

Prediction 4: that the finite complementiser IF will be used infinitively as a result of overgeneralising the finite comp. **WHETHER**, e.g.

(6) I do not know *if to\ whether to go there now

This kind of structure testing prediction 4 was put to the test eight times: Task III, items 2, 4, 6, 8, and 10; Task IV, items 9, and 27; and Task V, item 1. The group performance was as follows.

Group A:

In Task III, items 2 and 4 the students performed according to my prediction, and 7 students performed otherwise. On item 6, 14 students acted accordingly, and 8 otherwise. On item 8, 9 students replied accordingly and 13 otherwise. On item 10, 13 students performed according to my prediction, 8 otherwise, with 1 abstention. The percentage mean for Task III is 61%.

In Task IV, item 9, 19 students got my prediction right, and 3 students got it wrong. On item 27, only 3 students answered predictably, 16 unpredictably, and 3 escaped the test. The percentage mean is 51%

In Task V, item 1, 18 students responded predictably, 3 unpredictably, and 1 escaped the test. The percentage mean is 86%.

The overall degree of confirmation for prediction 4, group A is 71%. Here is the summary of the results.

Table VII.12: prediction 4A:

| Pred | Task | Item | Negative Transfer | | | | Discon.resp | | no resp | |
|------|------|------|-------------------|---------|--------|----------------|-------------|----|---------|---|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | | |
| 4 | III | 2 | 15 | 68 | | | 7 | 32 | - | |
| | | 4 | 15 | 68 | | | 7 | 32 | - | |
| | | 6 | 14 | 64 | 61 | | 8 | 36 | - | |
| | | 8 | 9 | 41 | | | 13 | 59 | - | |
| | | 10 | 13 | 62 | | | 8 | 38 | 1 | |
| | IV | 9 | 19 | 86 | 51 | 71 | 3 | 14 | - | |
| | | 27 | 3 | 16 | | | 16 | 84 | 3 | |
| | | V | 1 | 18 | 86 | 86 | | 3 | 14 | 1 |
| | | | | | | | | | | |

Group B:

In Task III, item 2, there were 13 confirming errors, and 9 disconfirming ones. In item 4, there were 11 confirming errors, and 11 disconfirming ones. In item 6, there were 9 confirming answers, and 13 disconfirming ones. In item 8, there were 2 confirming errors, 18

disconfirming ones, and 2 escape answers. In item, there were 9 predicted errors, 12 unpredicted errors, and 1 escape answer. The percentage mean is 41%

In Task IV, item 9 contained 15 prediction-matching errors, and 7 nonprediction-matching errors. Item 27 contained 3 prediction-matching errors, 14 nonprediction-matching errors, and 5 escape responses. The percentage mean is 43%

In Task V, item 1 showed 7 prediction errors, and 15 nonprediction errors. The percentage mean is 32%

The overall degree of confirmation for prediction 4, group B is 41% . Here is the conclusion.

Table VII. 13: Prediction 4B:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp | |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|---|
| | | | No Resps | % Resps | % Task | overall % pred | No | % | | |
| 4 | III | 2 | 13 | 59 | | | 9 | 41 | - | |
| | | 4 | 11 | 50 | | | 11 | 50 | - | |
| | | 6 | 9 | 41 | 41 | | 13 | 59 | - | |
| | | 8 | 2 | 10 | | | 18 | 90 | 2 | |
| | | 10 | 9 | 43 | | | 12 | 57 | 1 | |
| | IV | 9 | 15 | 68 | 43 | 41 | 7 | 32 | - | |
| | | 27 | 3 | 18 | | | 14 | 82 | 5 | |
| | | V | 1 | 7 | 32 | 32 | | 15 | 68 | - |
| | | | | | | | | | | |

Prediction 5: that the nonfinite complementiser **WHETHER** will be used to introduce a lexical subject, e.g.

(7)* I wonder whether [John] to do it now

It was tested in Task IV, items 1, 17; and Task V, item 2.

The outcomes were as follows:

Group A:

In Task IV, item 1, 17 students made the predicted errors, and 5 did not. In item 17, 20 students made the predicted errors, 1 did not, and 1 avoided the exercise. The percentage mean is 86%

In Task V, item 2, 11 students responded according to the prediction, 4 did not, and 7 avoided the exercise. The percentage mean is 73%

The overall degree of confirmation of prediction 5, group A is 83%. Here is the summary.

Table VII. 14: Prediction 5A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|-------------|-------------------|------------|-----------|-------------------|-------------|----|------------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 5 | IV | 1 | 17 | 77 | 86 | 83 | 5 | 23 | - |
| | | 17 | 20 | 95 | 1 | | 5 | 1 | |
| | V | 2 | 11 | 73 | 73 | | 4 | 27 | 7 |

Group B:

In Task IV, item 1 showed 9 subjects getting the prediction right, and 13 subjects getting it wrong. Item 17 showed 15 subjects acting anticipatively, 6 otherwise, and 1 abstention. The percentage mean is 56%

In Task V, item 2 rendered 9 expected answers, and 13 otherwise. The percentage mean is 41%

The overall degree of confirmation for prediction 5, group B is 51%. Here is the summary.

Table VII. 15: Prediction 5B:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|--------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resp | % Task | overall % Pred | No | % | |
| 5 | IV | 1 | 9 | 41 | 56 | 51 | 13 | 59 | - |
| | | 17 | 15 | 71 | 6 | | 29 | 1 | |
| | V | 2 | 9 | 41 | 41 | | 13 | 59 | - |

Prediction 6: that Y/N complementiser **WHETHER** will be erroneously used to introduce a VSO clause, e.g.

(8)* They wondered whether [_v received _s Mary _o the books]

A structure of this sort standing for prediction 6 was put to the test three times: Task IV, items 10, 29; and Task V, item 3. The subjects performed as follows.

Group A:

In Task, item 10 elicited 17 predicted errors, and 5 unpredicted errors. Item 29 elicited 11 predicted errors, 7 unpredicted ones, and 4 abstentions. The percentage mean is 69%.

In Task V, item 3 demonstrated 12 expected errors, 8 unexpected ones, and 2 abstentions. The percentage mean is 60%.

The overall degree of confirmation on prediction 6, group A is 67% confirmed negative transfer, and 33% disconfirmed negative transfer. Here is the finding for

group A.

Table VII. 16: Prediction 6A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|-------------|-------------------|------------|-----------|-------------------|-------------|----|------------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 6 | IV | 10 | 17 | 77 | 69 | 67 | 5 | 23 | - |
| | | 29 | 11 | 61 | 7 | | 39 | 4 | |
| | V | 3 | 12 | 60 | 60 | | 8 | 40 | 2 |

Group B:

In Task IV, item 10 gave 11 anticipated errors, and 11 otherwise. Item 29 gave only 1 anticipated error, 18 unanticipated ones, and 3 abstentions. The percentage mean is 27.5%.

In Task V, item 3 contained only 3 expected errors, 16 unexpected ones, and 3 abstentions. The percentage mean is 16%.

The overall degree of confirmation of prediction 6, group B is 37.5% negative transfer. Here is the summary.

Table VII. 17: Prediction 6B:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|-------------|-------------------|------------|-----------|-------------------|-------------|----|------------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 6 | IV | 10 | 11 | 50 | 27.5 | 37.5 | 11 | 50 | - |
| | | 29 | 1 | 5 | 18 | | 95 | 3 | |
| | V | 3 | 3 | 16 | 16 | | 16 | 84 | 3 |

Prediction 7: that head C position will be illicitly filled in indirect interrogatives as a result of overgeneralisation, e.g.

(9)* I don't know why [_{CP}[_C do] students behave as such]]

This structure occurred three times in the elicitation instrument. Task IV, items 6, 25; and Task V, item 4. The registered performance was as follows:

Group A:

In Task IV, item 6 registered 11 confirming negative errors, and 11 disconfirming ones. Item 25 registered 18 confirming negative errors, and 4 disconfirming ones. The percentage mean is 66% for Task IV.

In Task V, item 4 recorded 16 predictions coming out correctly, and 6 incorrectly. The percentage mean for Task V is 73%.

The overall degree of confirmation for prediction 7, group A is 68% confirmed negative transfer, and 32% otherwise. Here is the summary of findings for Group A.

Table VII. 18: Prediction 7A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 7 | IV | 6 | 11 | 50 | 66 | 68 | 11 | 50 | - |
| | | 25 | 18 | 82 | 4 | | 18 | - | |
| | V | 4 | 16 | 73 | 73 | | 6 | 27 | - |

Group B:

In Task IV, item 6 recorded 4 students complying with the prediction, 17 not complying, and 1 avoiding the exercise. Item 25 recorded 15 students complying with the prediction, and 7 not complying. The percentage mean for Task IV is 43.5%.

In Task V, item 4 recorded 13 students responding expectedly, and 9 unexpectedly. The percentage mean for Task V is 59%.

The overall degree of confirmation of negative transfer on prediction 7, group B is 49%. Here is the conclusion:

Table VII. 19: Prediction 7B:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 7 | IV | 6 | 4 | 19 | 43.5 | 49 | 17 | 81 | 1 |
| | | 25 | 15 | 68 | | | 7 | 32 | - |
| | V | 4 | 13 | 59 | 59 | | 9 | 41 | - |

Prediction 10: that I movement will be overlooked in the formation of WHQs, e.g.

(10)* What the students [will] read tomorrow?

This prediction was tested eight times. In Task I, items 6, 8; Task II, items 2, 4; Task IV, items 2, 22; and Task VI, items 11, and 12. The recorded performance was as follows.

Group A:

In Task I, item 6, 20 students responded positively to my prediction, and 2 negatively. In item 8, 12 students responded positively, 5 negatively, and 5 did not respond. The percentage mean of this Task is 81%.

In Task II, items 2 and 4, 12 students responded expectedly, 8 unexpectedly, and 2 did not respond. The percentage mean of Task II is 60%.

In Task IV, item 2, 17 students answered my prediction, and 5 students did not. On item 22, 18 students answered my prediction and 4 did not. The percentage mean is 79.5%.

In Task VI, item 11, 19 students reflected the expected errors, 2 did not reflect, and 1 skipped the test. On item 12, 17 students' responses were in accordance with the prediction, 3 were not, and 2 avoided the exercise. The percentage mean for Task VI is 87.5%

The overall degree of confirmation of negative transfer on prediction 10, group A is 77%. Here is the table of findings.

Table VII. 20: Prediction 10A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 10 | I | 6 | 20 | 91 | 81 | 77 | 2 | 9 | - |
| | | 8 | 12 | 71 | | | 5 | 29 | 5 |
| | II | 2 | 12 | 60 | 60 | | 8 | 40 | 2 |
| | | 4 | 12 | 60 | | | 8 | 40 | 2 |
| | IV | 2 | 17 | 77 | 79.5 | | 5 | 23 | - |
| | | 22 | 18 | 82 | | | 4 | 18 | - |
| | VI | 11 | 19 | 90 | 87.5 | | 2 | 10 | 1 |
| | | 12 | 17 | 85 | | | 3 | 15 | 2 |

Group B:

In Task I, item 6 presented 13 confirmed errors, and 9 disconfirmed ones. Item 8 presented 12 confirmed errors, 5 disconfirmed ones, and 5 no answers. The percentage mean is 65%.

In Task II, item 2 offered 3 anticipated errors, 15 unanticipated ones, and 4 null ones. Item 4 offered also 3 anticipated errors, 16 unanticipated ones, and 3 no answers. The percentage mean is 16.5%

In Task IV, item 2 gave 19 expected errors, 3 unexpected ones. Item 22 gave 8 expected errors, 12 unexpected ones, and 2 missing answers. The percentage mean is 63%

In Task VI, item 11 gave 15 predicted errors, 2 unpredicted ones, and 5 void errors. Item 12 gave 14

predicted errors, 5 unpredicted errors, and 3 no responses. The percentage mean is 81%

The overall degree of confirmation of negative transfer error on prediction 10, group B is 66%. Here is the summary.

Table VII. 21: Prediction 10B:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | % overall Pred | No | % | |
| 10 | I | 6 | 13 | 59 | 62 | 66 | 9 | 41 | - |
| | | 8 | 11 | 65 | | | 6 | 35 | 5 |
| | II | 2 | 3 | 17 | 16.5 | | 15 | 83 | 4 |
| | | 4 | 3 | 16 | | | 16 | 84 | 3 |
| | IV | 2 | 19 | 86 | 63 | | 3 | 14 | - |
| | | 22 | 8 | 40 | | | 12 | 60 | 2 |
| | VI | 11 | 15 | 88 | 81 | | 2 | 12 | 5 |
| | | 12 | 14 | 74 | | | 5 | 26 | 3 |

Prediction 11: that a WH-word with no verb form will be used in WHQs, e.g.

(11)a.* Why John in the kitchen?

b.* They asked why John in the kitchen

It occurred in 4 of the 6 tests of the experiment. These were Task I, items 3, 7; Task II, items 20, 23; Task V, item 5; and Task VI, items 4 and 10. The performance was as follows:

Group A:

In Task I, item 3 produced 19 students getting the

prediction right, and 3 students getting the prediction wrong. Item 7 produced also 19 students getting the prediction right, 1 getting it wrong, and 2 not answering it. The percentage mean is 90.5% for Task I.

In Task IV, item 20, 12 students responded as expected, and 10 did not. In item 23, 20 students responded as expected, and did not. The percentage mean is 73%.

In Task V, item 5, 17 students supported the prediction, 4 failed to do so, and 1 did not respond at all. The percentage mean is 81%

In Task VI, item 4, 15 students replied predictably, and 7 unpredictably. In item 10, 16 students replied predictably, 5 failed to do so, and 1 did not reply at all. The percentage mean is 72%.

The overall degree of confirmation of negative transfer on prediction 11, group A is 79%. Here is the summary:

Table VII. 22: Prediction 11A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 11 | I | 3 | 19 | 86 | 90.5 | 79 | 3 | 14 | - |
| | | 7 | 19 | 95 | 1 | | 5 | 2 | |
| | IV | 20 | 12 | 55 | 73 | | 10 | 45 | - |
| | | 23 | 20 | 91 | 2 | | 9 | - | |
| | V | 5 | 17 | 81 | 81 | | 4 | 19 | 1 |
| | VI | 4 | 15 | 68 | 72 | | 7 | 32 | - |
| 10 | | 16 | 76 | 5 | 24 | 1 | | | |

Group B:

In Task I, item 3, 13 students agreed to my prediction, 8 did not, and 1 did not respond at all. In item 7, 16 students agreed to my prediction, and 6 did not. The percentage mean for Task I is 67,5%.

In task IV, item 20, 6 students confirmed my prediction, 11 did not, and 5 skipped the test. In item 23, 16 students confirmed my prediction, and 6 did not. The percentage mean for Task IV is 54%.

In Task V, item 5, 5 students supported the prediction, and 17 did not. The percentage mean for Task V is 23%.

In Task VI, item 4, 9 students responded positively to the prediction, 12 did so negatively, and 1 avoided the exercise. In item 10, 10 students answered predictably, 9 unpredictably, and 3 abstained. The percentage mean is 48%.

The overall degree of confirmation of negative transfer on prediction 11, group B is 52%. Here is the table of findings.

Table VII. 23: Prediction 11B:

| Pred | Task | Item Num | Negative Transfer | | | overall % Pred | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | | No | % | |
| 11 | I | 3 | 13 | 62 | 65 | 52 | 8 | 38 | 1 |
| | | 7 | 15 | 68 | | | 7 | 32 | - |
| | IV | 20 | 6 | 35 | 54 | | 11 | 65 | 5 |
| | | 23 | 16 | 73 | | | 6 | 27 | - |
| | V | 5 | 5 | 23 | 23 | | 17 | 77 | - |
| | VI | 4 | 9 | 43 | 48 | | 12 | 57 | 1 |
| 10 | | 10 | 53 | 9 | | 47 | 3 | | |

Prediction 12: that the 'do-support' requirement will be violated in the formation of direct WH and Y/N interrogatives, e.g.

(12)a.* Why you go to school every day?

b.* John works hard?

miscellaneous structures of this nature testing prediction 12 occurred 8 times: in Task I, items 2, 5; in Task II, items 1, 3; in Task IV, items 7, 15; and in Task VI, items 5, 6. The students' performance on this prediction was as follows:

Group A1

In Task I, item 2, 18 students responded expectedly, and 4 unexpectedly. On item 5, 19 students responded expectedly, and 3 unexpectedly. The percentage mean is 84%.

In Task II, item 1, 12 students got the prediction correctly, 7 got it incorrectly, and 3 abstained. On item 3, 10 students got the prediction right, 9 got it wrong, and 3 abstained. The percentage mean is 58%.

In Task IV, item 7, 18 students certified the prediction, and 4 did not. In item 15, 16 students certified the prediction, and 6 did not. The percentage mean is 77.5%.

In task VI, item 5, 18 students performed predictably, and 4 unpredictably. On item 6, 19 students performed predictably, 1 unpredictably, and 2 avoided the test. The percentage mean is 88.5%

The overall degree of confirmation of negative transfer on prediction 12, group A is 77%. Here is the summary.

Table VII. 24: Prediction 12A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 12 | I | 2 | 18 | 82 | 84 | 77 | 4 | 18 | - |
| | | 5 | 19 | 86 | | | 3 | 14 | - |
| | II | 1 | 12 | 63 | 58 | | 7 | 37 | 3 |
| | | 3 | 10 | 53 | | | 9 | 47 | 3 |
| | IV | 7 | 18 | 82 | 77.5 | | 4 | 18 | - |
| | | 15 | 16 | 73 | | | 6 | 27 | - |
| | VI | 5 | 18 | 82 | 88.5 | | 4 | 18 | - |
| | | 6 | 19 | 95 | | | 1 | 5 | 2 |

Group B:

In task I, item 2 presented 14 subjects answering the prediction positively, and 8 negatively. Item 5 presented 15 subjects answering the prediction positively, and 7 negatively. The percentage mean is 66%.

In Task II, item 1 presented 6 subjects responding in accordance with the prediction, 11 otherwise, and 5 abstaining from responding. Item 3 offered 4 subjects responding in accordance with the prediction, 13 otherwise, and 5 abstaining from responding. The percentage mean is 29.5%.

In Task IV, item 7 offered 11 subjects certifying the prediction, and 11 otherwise. Item 15 offered 6 subjects certifying the prediction, 14 not certifying it, and 2 avoiding the test. The percentage mean is 40%.

In task VI, item 5, 17 subjects made the predicted transfer error, and 5 did not. In item 6, 18 subjects made the predicted transfer error, and 4 did not. The percentage mean is 79.5.

The overall degree of confirmation of negative transfer for prediction 12, group B is 55.5%. Here is the conclusion.

Table VII. 25: Prediction 12B:

| Pred | Task | Item Num | Negative Transfer | | | Discon.resp | | no resp | |
|------|------|----------|-------------------|---------|--------|----------------|----|---------|---|
| | | | No Resps | % Resps | % Task | overall % Pred | No | | % |
| 12 | I | 2 | 14 | 64 | 66 | 55.5 | 8 | 36 | - |
| | | 5 | 15 | 68 | | | 7 | 32 | - |
| | II | 1 | 6 | 35 | 20.5 | | 11 | 65 | 5 |
| | | 3 | 4 | 24 | | | 13 | 76 | 5 |
| | IV | 7 | 11 | 50 | 40 | | 11 | 50 | - |
| | | 15 | 6 | 30 | | | 14 | 70 | 2 |
| | VI | 5 | 17 | 77 | 79.5 | | 5 | 23 | - |
| | | 6 | 18 | 82 | | | 4 | 18 | - |

Prediction 13: that tense will be double marked, e.g.

(13)* Did you went home yesterday?

It was tested only in one Task of the whole elicitation instrument, e.g. Task IV, items 3, and 12. The result on this prediction was as follows:

Group A:

In Task IV, item 3 showed 15 students' response corresponding with the prediction, 6 not doing so, and 1 abstaining. Item 12 showed 20 students response corresponding with the prediction, and 2 not doing so. The percentage mean for this is 81.5%

The overall degree of confirmation of negative transfer on prediction 13, group A is 81.5%, as the table below provides the findings.

Table VII. 26: Prediction 13A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|-------------|-------------------|------------|-----------|-------------------|-------------|----|------------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 13 | IV | 3 | 15 | 72 | 81.5 | | 6 | 28 | 1 |
| | | 12 | 20 | 91 | 81.5 | | 2 | 9 | - |

Group B:

In Task IV, item 3, 10 students endorsed the prediction; while 12 did not. In item 12, 17 students endorsed the prediction; while 5 did not.

The overall degree of confirmation of negative transfer on prediction 13, group B is 61%. Here is the conclusion.

Table VII. 27: Prediction 13B:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|-------------|-------------------|------------|-----------|-------------------|-------------|----|------------|
| | | | No Resps | % Resps | % task | overall % Pred | No | % | |
| 13 | IV | 3 | 10 | 45 | 61 | | 12 | 55 | - |
| | | 12 | 17 | 77 | 61 | | 5 | 23 | - |

Prediction 14: that Wh-interrogatives introducing VSO sentences will be used in indirect clauses, e.g.

(14)* I wondered why_v left _s John _o the class]

The Tasks and the items which tested this prediction were: Task IV, items 14, 16; Task V, item 6; and Task VI, items 7, 9. The performance on prediction 14 reflected as

follows:

Group A:

In Task, item 14, 15 students' answer met with the prediction, and 7 students' answer turned to be otherwise. In item 16, 13 students' answer met with the prediction, and 9 students' answer proved to be otherwise. The percentage mean is 63.5%

In Task V, item 6 gave 16 students confirming the prediction, 5 disconfirming it, and 1 abstaining. The percentage mean is 76%.

In Task VI, item 7 rendered 13 expected errors, and 9 unexpected ones. Item 9 rendered 10 expected errors, 11 unexpected ones, and 1 missing value. The percentage mean is 53.5%

The overall degree of confirmation of negative transfer on prediction 14, group A is 62%, as the table given below sums up the findings.

Table VII. 28: Prediction 14A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| 14 | IV | 14 | 15 | 68 | 63.5 | 62 | 7 | 32 | - |
| | | 16 | 13 | 59 | | | 9 | 41 | - |
| 14 | V | 6 | 16 | 76 | 76 | 62 | 5 | 24 | 1 |
| | | VI | 7 | 13 | 59 | | 53.5 | 9 | 41 |
| | | | 9 | 10 | 48 | | 11 | 52 | 1 |

Group B:

In Task IV, item 14 had shown 13 error-oriented responses, and 9 otherwise. Item 16 had shown 10 error-oriented responses, 10 otherwise, and 2 missing values. Thus, the percentage mean for this Task is 54.5%

In task V, item 6 had offered only 3 error-oriented answers, 18 otherwise, and 1 missing value. The percentage mean, therefore, is only 14%

In Task VI, item 7 had presented 9 students endorsing the prediction, and 13 not endorsing it. Item 9 had presented 8 students complying with the prediction, 13 not complying with it, and 1 not doing the exercise. The percentage mean for Task VI is 39.5%.

The overall degree of confirmation of negative transfer on prediction 14, group B is 41%. Here is the summary.

Table VII. 29: Prediction 14B:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | % | |
| | IV | 14 | 13 | 59 | 54.5 | | 9 | 41 | - |
| | | 16 | 10 | 50 | | | 10 | 50 | 2 |
| 14 | V | 6 | 3 | 14 | 14 | 41 | 18 | 86 | 1 |
| | VI | 7 | 9 | 41 | 39.5 | | 13 | 59 | - |
| | | 9 | 8 | 38 | | | 13 | 62 | 1 |

Prediction 15: that a lexical subject will be used in the formation of WHQs in indirect nonfinite clauses, e.g.

(15)* I asked what [John] to do next

This prediction occurred three times in the whole experiment. Task IV, item 5, 30; and Task V, item 7. The performance of the students was as follows:

Group A:

In Task IV, item 5, 14 students answered as expected, and 8 otherwise. In item 30, 19 students replied predictably, 2 unpredictably, and 1 did not respond. The percentage mean is 77.5%

In Task V, item 7, 12 students confirmed the prediction, 8 did not, and 2 did not respond. The percentage mean is 60%.

The overall degree of confirmation of negative transfer on prediction 15, group A is 71%. Here is the summary.

Table VII. 30: prediction 15A:

| Pred | Task | Item Num | Negative Transfer | | | | Discon.resp | | no resp |
|------|------|----------|-------------------|---------|--------|----------------|-------------|----|---------|
| | | | No Resps | % Resps | % Task | overall % Pred | No | | |
| 15 | IV | 5 | 14 | 64 | 77.5 | | 8 | 36 | - |
| | | 30 | 19 | 91 | | | 2 | 9 | 1 |
| | V | 7 | 12 | 60 | 60 | 71 | 8 | 40 | 2 |

Group B:

In Task IV, item 5 showed 10 students doing anticipatively, and 12 unanticipatively. Item 30 showed 16 students doing anticipatively, 5 otherwise, and 1 abstaining. The percentage mean is 61%.

In Task V, item 7 showed 12 students performing as expected, and 10 otherwise. The percentage mean is 55%.

The overall degree of confirmation of negative transfer on prediction 15, group B is 58.5%. Here is the summary.

Table VII. 31: Prediction 15B:

| Pred | Task | Item Num | Negative Transfer | | | Discon.resp | | no resp | |
|------|------|----------|-------------------|---------|--------|-------------|----|---------|---|
| | | | No Resps | % Resps | % Task | No | % | | |
| 15 | IV | 5 | 10 | 46 | 61 | 58.5 | 12 | 54 | - |
| | | 30 | 16 | 76 | | | 5 | 24 | 1 |
| | V | 7 | 12 | 55 | 55 | | 10 | 45 | - |

7.2.2. Discussion of Negative Transfer Predictions

The findings in the previous section include the frequency count of the predicted negative transfer being a measure of the degree of validity of each negative transfer prediction following the performance of Group A and B students. The findings were calculated as percentages for each Task within the predictions and for each prediction as a whole. From the findings it emerged that the degree of support for negative transfer predictions was lower than that for the positive transfer predictions, which were discussed earlier on. In this connection, Group A showed a degree of support for negative transfer prediction varying from 62% to 88%, and Group B from 37.5% to 77%.

However, the degree of confirmation in Group A on all

negative transfer predictions was considerably in excess of 60%. The mean degree of confirmation of negative transfer predictions was 74%. These high percentages for Group A means that my predictions were successful. This lends credence to part two of Hypothesis One which proposes that "the degree of transfer is dependent on the phase of learning."

While in Group B, the success rate was slightly below 50% for some the predictions, and just above 50% for some others. The mean degree of confirmation of negative transfer predictions was 49%. The reason for this relatively low success rate of the negative transfer predictions is that Group B students are third year university learners of English, which means that they are in a much more advanced phase, than Group A who are in their first-year of learning English, and thus they (the former) are likely to have less negative transfer simply because they have been exposed to the language and taught for a longer period (see James (1971) and Ringbom (1987)) for the relation between level and L1 transfer. This advanced stage of learning will naturally result in the low success rate, as we have seen above, of the degree of confirmation of negative transfer predictions which substantiates Hypothesis Two which proposes that "the more advanced the learners are, the less negative transfer there will be."

Tables VII.32 and VII.33 given below present the

difference of degree of confirmation of each prediction within the Tasks.

Table VII. 32: shows the degree of confirmation of each positive prediction within the various tasks of the experiment.

Table VII. 32:

| Task | Prediction | Degree of Confirmation per prediction in the Task | | | |
|------|------------|---|-------|-----------|------|
| | | Group A | | Group B | |
| | | confirmed | mean | confirmed | mean |
| I | 8 | 97.5% | 97.5% | 88% | 88% |
| | 1 | 100% | | 100% | |
| | 8 | 97.5% | 99% | 97.5% | 99% |
| V | 9 | 100% | | 100% | |
| | 1 | 40% | 32% | 84% | 85% |
| | 9 | 24% | | 86% | |
| VI | 1 | 97.5% | | 100% | |
| | 8 | 97.5% | 98% | 97.5% | 99% |
| | 9 | 100% | | 100% | |

The reason for the low degree of confirmation of group A in task V is probably the fact that some of the structures/items that occurred in this task, being multiple choice, were testing more than one prediction at a time, which may have confused subjects of this group. For example, item 3 was testing predictions 1 and 6, and item 14 was testing predictions 9 and 14.

The degree of confirmation of each negative prediction

within the various tasks of the experiment.

Table VII. 33:

| Task | Prediction | Degree of confirmation per prediction in the task | | | |
|------|------------|---|------|-----------|------|
| | | Group A | | Group B | |
| | | confirmed | mean | confirmed | mean |
| I | 10 | 81% | 85% | 65% | 66% |
| | 11 | 90.5% | | 67.5% | |
| | 12 | 84% | | 66% | |
| II | 10 | 60% | 59% | 16.5% | 23% |
| | 12 | 58% | | 29.5% | |
| III | 4 | 61% | 61% | 41% | 41% |
| IV | 2 | 93% | 74% | 76.5% | 52% |
| | 3 | 75% | | 41% | |
| | 4 | 51% | | 43% | |
| | 5 | 86% | | 56% | |
| | 6 | 67% | | 27.5% | |
| | 7 | 66% | | 43.5% | |
| | 10 | 79.5% | | 63% | |
| | 11 | 73% | | 54% | |
| | 12 | 77.5% | | 40% | |
| | 13 | 81.5% | | 61% | |
| | 14 | 63.5% | | 54.5% | |
| 15 | 77.5% | 61% | | | |
| V | 4 | 86% | 73% | 32% | 34% |
| | 5 | 73% | | 41% | |
| | 6 | 60% | | 16% | |
| | 7 | 73% | | 59% | |
| | 11 | 81% | | 23% | |
| | 14 | 76% | | 14% | |
| 15 | 60% | 55% | | | |
| VI | 2 | 83% | 75% | 78% | 64% |
| | 3 | 66% | | 57% | |
| | 10 | 87.5% | | 81% | |
| | 11 | 72% | | 48% | |
| | 12 | 88.5% | | 79.5% | |
| 14 | 53.5% | 39.5 | | | |

The comparison of the percentages mean of the Tasks calculated in the tables (VII.32) and (VII.33) given above shows both groups' higher degree of confirmation of the positive transfer predictions than of the negative transfer predictions. This outcome is as expected simply because the identical structures of the two languages will prompt the automatic use of the relevant target-language structures.

The analysis of the positive transfer predictions reveals that both groups recorded a very high degree of prediction confirmation in Task IV. Both groups scored 99%. Task IV is a judgment Task. It subsumes pairs of correct and incorrect sentences, and the students were asked to make a distinction between the two. The lowest degree of confirmation, on the other hand, was registered in Task V, which was M/C. Group A scored 32% and group B 85%.

However, the analysis of the negative transfer predictions showed the two groups scoring the highest degree of confirmation on Task I. Group A scored 85% and group B 66%, which is expected to show low degree of transfer. Task I, a manipulation Task, involved the formation of simple WH-interrogatives from statements. The lowest degree of confirmation was scored in Task II, which also was a manipulation Task. It involved the formation of Y/N questions via the 'do-support' requirement. Group A

scored 59% and group B 23%. One might wonder why the two groups differed in these Tasks though both of them are concerned with question formation. The account for this difference can be based on the assumption that group B learners will expectedly show less negative transfer because of the fact that they were more taught and exposed to English than their group A counterparts. Task III, a slot filling, rendered a fairly low confirmation (cf table VII. 34 below). This may be attributed to use of distracters in this task. It is useful to classify the degrees of confirmation of the Tasks in rank order in accordance with their percentages which we can present in table VII (34) below:

| order | positive predictions | | | | negative predictions | | | |
|-------|----------------------|-------|---------|-----|----------------------|-----|---------|-----|
| | group A | | group B | | group A | | group B | |
| | task | % | task | % | task | % | task | % |
| 1 | IV | 99% | IV | 99% | I | 85% | I | 66% |
| 2 | VI | 98% | IV | 99% | VI | 75% | VI | 64% |
| 3 | I | 97.5% | I | 88% | IV | 74% | IV | 52% |
| 4 | V | 32% | V | 85% | V | 73% | III | 41% |
| 5 | - | - | - | - | III | 61% | V | 34% |
| 6 | - | - | - | - | II | 59% | II | 23% |

7.3. Hypothesis 2

Having measured the confirmation of both positive and negative transfer predictions, we will now turn to assess

Hypothesis Two, which hypothesises the better performance of Group B students in the sense that these students are expected to show less negative transfer (and more positive transfer) than Group A students because the former are at a more advanced stage of learning English. The hypothesis can best be tested by finding out if the difference between the two groups is significant, which is our prime concern here, and the difference in the degrees of transfer. Thus, if Group B students are to support Hypothesis Two, then there must be a significant difference in the performance of both groups and the degree of transfer in B Group must be lower than that in Group A.

7.3.1. Group Performance

The statistical test of chi square (X^2) showed that the performance of the two groups is significantly different (Robson, 1973:94-100). This means that there is a significant difference in the performance of the two groups. To show a significant difference, the X^2 value must equal or exceed 3.841 with 1 degree of freedom (1 d.f.), at the 5 per cent level. Whenever this observed X^2 is more than 3.841 for the 5 per cent level, we have evidence for an association between group A & B in the sense that group B students will predictably exhibit less negative transfer. This lends support to our second hypothesis - namely group B students will predictably show less negative transfer (and more positive transfer) than

group A. For the results of the chi square test, observe the table VII. 35 below:

Table VII. 35:

| Prediction | chi square Group A & B | significant at 5% level |
|------------|------------------------|-------------------------|
| 1 | 6.367 | yes |
| 2 | 3.360 | no |
| 3 | 8.677 | yes |
| 4 | 14.846 | yes |
| 5 | 13.948 | yes |
| 6 | 20.979 | yes |
| 7 | 4.854 | yes |
| 8 | 1.766 | no |
| 9 | 9.125 | yes |
| 10 | 15.832 | yes |
| 11 | 23.022 | yes |
| 12 | 17.133 | yes |
| 13 | 4.261 | yes |
| 14 | 9.872 | yes |
| 15 | 2.360 | no |

As is evident, there is such a large overcoming of negative transfer errors by group B learners relative to group A for predictions 11, 6, 12, 4, etc. and so little for predictions 2, 8, and 15. This may have to do with the teaching/learning process in Syria in that some structures

were being paid more attention in class than others.

7.3.2. Difference in Degrees of Transfer

7.3.2.1. Positive Predictions

Having found out that the performances of two groups are significantly different, we will first identify the difference in degrees of transfer for positive predictions which is presented in table VII (36) below:

Group A & B Difference in Degrees of Transfer
For Positive Predictions

| Prediction | Task | Item | Difference in % |
|------------|------|------|-----------------|
| 1 | IV | 4 | 0% |
| | | 13 | 0% |
| | V | 3 | + 40% |
| | VI | 2 | + 5% |
| 13 | | 0% | |
| 8 | I | 1 | 9% |
| | | 4 | 10% |
| | IV | 11 | + 5% |
| | | 26 | 5% |
| VI | 1 | 0% | |
| | 15 | 0% | |
| 9 | IV | 24 | 0% |
| | | 28 | 0% |
| | V | 6 | + 62% |
| | VI | 8 | 0% |
| 14 | | 0% | |

Note that the plus (+) means that the percentage difference of Group B transfer was higher for Group B than for Group A.

7.3.2.1.1. Rank-Order of Positive Predictions

Table VII. 37:

| Group A | | Group B | |
|--------------|-----|--------------|-----|
| No of Predic | % | No of Predic | % |
| 8 | 98% | 1 | 97% |
| 1 | 87% | 9 | 97% |
| 9 | 85% | 8 | 94% |

7.3.2.2. Negative Predictions

Table VII. 38:

Group A & B Difference in Degrees of Transfer For Negative Predictions

| Prediction | Task | Item | Difference in % |
|------------|------|-------|-----------------|
| | IV | 8 | + 19% |
| | | 18 | + 14% |
| 2 | VI | 3 | + 9% |
| | | 18 | + 1% |
| 3 | IV | 19 | + 36% |
| | | 21 | + 32% |
| | VI | 16 | + 9% |
| | | 17 | + 9% |
| 4 | III | 2 | + 9% |
| | | 4 | + 18% |
| | | 6 | + 23% |
| | | 8 | + 31% |
| | | 10 | + 19% |
| | IV | 9 | + 18% |
| | | 27 | + 2% |
| V | 1 | + 54% | |
| IV | 1 | + 36% | |
| | 17 | + 24% | |

Table VII.38 continued..

| | | | |
|----|----|----|-------|
| 5 | V | 2 | + 32% |
| | IV | 10 | + 27% |
| 6 | | 29 | + 56% |
| | V | 3 | + 44% |
| 7 | IV | 6 | + 31% |
| | | 25 | + 14% |
| 10 | V | 4 | + 14% |
| | I | 6 | + 32% |
| 10 | | 8 | 0% |
| | II | 2 | + 43% |
| 10 | | 4 | + 44% |
| | IV | 2 | 9% |
| 10 | | 22 | + 42% |
| | VI | 11 | + 2% |
| 11 | | 12 | + 11% |
| | I | 3 | + 24% |
| 11 | | 7 | + 22% |
| | IV | 20 | + 20% |
| 11 | | 23 | + 18% |
| | V | 5 | + 58% |
| 12 | VI | 4 | + 25% |
| | | 10 | + 23% |
| 12 | I | 2 | + 18% |
| | | 5 | + 18% |
| 12 | II | 1 | + 28% |
| | | 3 | + 29% |
| 12 | IV | 7 | + 32% |
| | | 15 | + 43% |
| 13 | VI | 5 | + 5% |
| | | 6 | + 13% |
| 13 | IV | 3 | + 27% |
| | | 12 | + 14% |
| 13 | IV | 14 | + 9% |
| | | 16 | + 9% |

Table VII.38 continued..

| | | | |
|----|----|----|-------|
| 14 | V | 6 | + 62% |
| | IV | 5 | + 18% |
| | | 30 | + 15% |
| 15 | V | 7 | + 5% |

Note that the plus (+) stands for the high degree of Group A transfer.

Notably, pluses (+) are bigger for some predictions than others (and some tasks than others and even items in the same task). For some explanation on this, see the discussion in the immediately following section - i.e. 7.3.2.2.1.

7.3.2.2.1. Rank-Order of Negative Predictions

Having considered Hypothesis Two, which compared the group performance on the degrees of positive and negative transfer in both groups, we can now compare the rank-orders of confirmation of predictions by group A and B, which we can present as in table VII. (39) below:

| Group A | | Group B | |
|---------------|-------|---------------|-------|
| No of Predic. | % | No of Predic. | % |
| 2 | 88% | 2 | 77% |
| 5 | 83% | 10 | 66% |
| 13 | 81% | 13 | 61% |
| 11 | 79% | 15 | 58.5% |
| 10 | 77% | 12 | 55.5% |
| 12 | 77% | 11 | 52% |
| 4 | 71% | 5 | 51% |
| 15 | 71% | 7 | 49% |
| 3 | 70.5% | 3 | 48% |
| 7 | 68% | 4 | 41% |
| 6 | 67% | 14 | 41% |
| 14 | 62% | 6 | 37.5% |

As is evident, the most successful predictions are giving high percentages; while the least successful predictions are giving low percentages. Interestingly, there was a consensus between the groups on predictions 2, 13 and 3 in the sense that both groups gave same rank-order to these predictions which were predicting respectively: subject-initial clauses as interrogatives, verb-initial clauses as interrogatives and double tense marking.

It is important to note that some negative transfer errors are more persistent than others in the performance

of both groups. For instance, prediction 2 is high generally (and group B managed to do little to combat negative transfer effect). while prediction 6 is generally lower (and group B improved much more in overcoming negative transfer). Moreover, predictions 6 and 14 are low for both groups; while 10 and 11 are fairly high. one reason for this could be the nature of the tasks. That is, the rank-order may be affected by the fact that not all predictions were tested equally in all tasks. A second could be related to the view expressed in Chapter One (p. 2, 18) that linguistic difference between L1 and L2 may result in difficulty and , hence, prolong the process of L2 learning. A third reason may have to do with the fact that some structures were more targeted than others by teachers and coursebody in Syria. A fourth reason, which is more important and convincing, could be related to the interlanguage developmental process (Dulay et. al (1982)), as explained in chapter one. That is, since learners of a L2 go through systematic stages in their acquisition of some basic second language structures, it is reasonable to suggest that structures involving I movement are still recurring in the output of both groups (but at a lower rate in group B). Whereas structures involving VSO word order are disappearing from the output of both groups, specially group B (cf predictions 6 and 14 for this group). This means that Syrian learners of English did not use much transfer in VSO sentences, although they could

have done. This gives support for the proposition that the length of exposure to L2 will help combating negative transfer, as has been pointed out in chapter one.

7.4. Summary

Following the discussion and analysis of this chapter, we can make a few observations: the comparative findings on the performance of group A and B students showed that there truly was positive and negative transfer as predicted by CA, supporting the postulate formulated in Hypothesis One. The comparison of these findings on the negative transfer predictions exhibited that the degree of transfer of group B was less than that of group A, upholding the claim made by Hypothesis 2.

As for Syrian learners using transfer in learning English, it seemed less interesting that they use it than WHERE they use it and even more important, where they DO NOT use it although they could have done.

CHAPTER Eight

The Discussion of Disconfirmed +/- Predictions and Errors Irrelevant to the Predictions

8.0. Overview

I discussed and assessed in chapter 7 the success of only confirmed +T and -T predictions and the validity of the (two) experimental hypotheses. In addition to the confirmed +T and -T predictions respectively, the students' responses also showed disconfirmed ones. Thus, my concern in the present chapter is to discuss the nature of those structures for which +T and -T predictions were not confirmed and comment on their likely possible sources.

8.1. The Discussion of Disconfirmed Positive Predictions

This section deals with interrogative responses for which +T predictions were made - viz utterances for which learners were expected to give predominantly right answers but they did not. As mentioned in chapter 7, we had three positive predictions. These are 1, 8, and 9. Here follows a discussion of each.

Prediction 1 that Y/NQs in complement clauses would be well formed, as in (1) below:

(1)a. He does not know [whether] the suspect will stand trial.

b. He does not know [if] ministers will respond soon.

Group A

Learners of group A in task IV produced the following well formed disconfirming structure: "she wonders if she will succeed". The nature of this disconfirming response resides in the fact that learners have changed 'whether', which the test item contained, into 'if' when they are asked to judge the correct and incorrect sentences which task IV contained. The cause of such an unpredicted answer could be that first year students (group A) are exposed more often to use of 'if', and it is monosyllabic and easier to learn.

In the translation task VI, the unanticipated response of group A reflected the following "I don't accept with this behaviour". The student avoided the translation of the Y/N complementiser altogether. It might be reasonable to suggest that avoidance may result from difficulty of some sort.

Group B

Learners in this group, task IV, performed the other way round on prediction 1. That is, they used 'whether' in place of 'if'. Given that this is a manipulation task, they also added expressions like 'or wrong' to the sentences which they disagreed with. This is what s/he produced: "she doubts whether the story is true or wrong". The possible source of using 'or wrong' in this elicited response could be semantic.

Prediction 8 that a WH-word functioning as a subject in

direct questions will be correctly formed, as indicated below:

- (2) a. Who told you this story?
- b. Who took my books?

Group A

In tasks I, IV, and VI respectively students of this group produced the following unexpected structures:

- (3) a.* Who did meet them in Damascus?
- b.* Who did tell you this story?
- c.* Who did break the table?

Apart from getting the Wh-word right and hence endorsing the prediction, the nature of these unpredicted responses lies in the fact that learners irrelevantly used the 'do-support' requirement. The cause of this intralingual error could be overgeneralisation in that learners are applying the 'do-support' requirement where it is inapplicable.

Group B

Group B, in tasks I, IV, and VI respectively, produced the following unexpected answers:

- (4) a.* Who did he meet them in Damascus?
- b.* Who he met in Damascus?
- c.* Who did take my book?
- d.* Who did take John's book?
- e. Who is taking my book?
- f.* Who took my book? is he John?
- g.* Who did break the table?

In addition, to the fulfilment of my prediction, the nature

of these unpredicted responses consists in that in (4a, c, d, and g), learners used the 'do-support' technique ungrammatically. The source of such erroneous use is L2 overgeneralisation. In addition, (4a) contains an addition error. The student added the pronoun 'he'. Moreover, (4d) contains 'John's book'. The learner used it instead of using 'my book'. The cause of this may be misunderstanding on the learners' part in that s/he could not distinguish which subject to use. Furthermore, the nature of the unpredicted structure in (4e) resides in the use of the present continuous tense. The possible cause of this could be traced to training. Students in Syrian schools are first and more often trained to use the continuous form of English tenses. (4f) turned up as anticipated, but it also contained the expression 'is he John', which could be explained on semantic grounds.

Prediction 9

This predicts the correct formation of the WHQs in complement clauses, as in:

(5) We do not know which party we will vote for.

Group A

In task IV, learners of group A produced the following disconfirming response "they did not know which car did she bought". The nature of this unanticipated response consists in the wrong use of the auxiliary 'did'. The source of this ungrammatical use is L2 overgeneralisation in which 'do insertion' and I to C movement can take place

only in direct questions. Thus, learners are overstretching and applying rules to cases where they do not apply.

Group B

This Group, on task IV, produced the following irrelevant, to WHQs, unpredicted response "they did not know which the car she bought" where learners used 'the' with the complement clause subject 'car'. This is an interlingual error in that learners transferred an element of their L1 structure, e.g. 'the' which goes with most nouns in subject positions.

8.2.. The Discussion of Disconfirmed Negative Predictions

We will now turn to discuss the disconfirmed negative predictions. On these predictions, learners were predicted to transfer structures of their L1, given the dissimilarities with L2. In the course of discussion, we will present the disconfirmed structures and comment on their nature and possible source. Following each unpredicted structure, we will give a figure indicating the number of the student/s who produced this sort of unpredicted structure.

Prediction 2

This prediction involves the use of subject-initial sentences as interrogatives in Y/NQs, as illustrated by the following example:

(6)* John speaks Arabic?

As explained in the introduction, this sort of structure is incorrect as a Y/NQ. But it is correct as an echo

question, which lie beyond the scope of this investigation because echo questions do not involve movements.

Group A

In task IV, a judgement task, students were asked to write the correct form of a given incorrect sentence if they disagreed with it. Most of the responses obtained were according to my prediction. But, there were also some unpredicted responses. On Prediction 2, for example, the unpredicted response was as follows:

(7)* Muna speak English? (16)

Although this interrogative response is according to my prediction of using Y/NQs with clauses of SVO word order, its unpredicted nature consists in the omission of the third person singular 's', which could be attributed to the lack of mastery elementary features of L2 such as 's', 'ed', etc.

Group B

No unpredicted responses were detected in the performance of this group.

Prediction 3

This prediction refers to the use of verb-initial sentences as interrogatives in Y/NQs, as illustrated below:

(8)* Kicked John the ball?

This kind of interrogative structure is ungrammatical simply because, unlike SA, V - fronting is confined only to Have/Be in English, as I discussed in chapter three.

Group A

Apart from the predicted negative responses, the following unpredicted answers were detected in the performance of group A students:

(9)a.* Write my brother write a letter yesterday? (13)

b.* Is Hassan go to school everyday? (6)

(9a) was predicted to occur as a result of L1 transfer. So, in part it confirms prediction 3. However, its unpredicted nature lies in the use of the verb write twice. The real cause of this error is not known. (9b) is also unpredicted in that the learner attempted to use the auxiliary is to form Y/NQs, but failed to get the structure right. That is, he/she was unsuccessful in using the present continuous tense, which is the first to be taught among English tenses of the verb in Syrian schools.

Group B

In the responses of this group, the following disconfirming structures were detected:

(10)a.* Does my brother wrote a letter yesterday? (3)

b.* Had my brother wrote a letter yesterday? (10)

c.* My brother wrote a letter yesterday? (11)

d.* Did write a letter my brother yesterday? (21)

e.* Did my brother wrote a letter yesterday? (22)

(10a) is disconfirming because it does not have main verb first. However, it is unexpected because the learner failed to get the tense right (which is irrelevant to the prediction), namely, he/she used the present tense and

instead of changing the tense of the main verb (wrote) into the present, the learner left it in the past. The nature of this error is, therefore, to do with tense. Its cause may be attributed to the incomplete application of a rule to the effect that tense in English is only realised on the available auxiliary in the absence of a main verb, and vice versa.

Turning now to (10b), this can be explained in the light of the comment given on (10a). What is more, this structure confirms prediction 13, which in turns predicts tense marking for both the auxiliary and the main verb.

The structure in (10c) is predicted to occur, but not in this particular item. It, however, confirms prediction 2, which predicts the formation of Y/NQs in subject-initial clauses. The source of (10c), then, is L1 transfer.

The structure in (10d) occurs quite unexpectedly, though the student rightly uses the 'do-insertion' technique and I-to-C movement. The nature of this error can be traced back to the fact that the learner uses the sequence Aux+main verb as an interrogative structure, which is ungrammatical in English. The source of this disconfirming ill-formed structure could be a false equation with structures used in English affirmatives, e.g. 'He has written a letter ---'.

Finally, the structure in (10e) disconfirms prediction 3. It is predicted to occur in other tests of the

experiment. Its occurrence on this prediction supports the validity of my prediction of double tense marking. The cause of this error is interlingual nature since Arabic employs the past tense to refer to present actions.

Prediction 4

This predicts an equation of the base-generated finite complementiser *if* with the nonfinite use of the base-generated complementiser *whether*, as in (11):

(11)* I wondered *if* to go home now.

Group A

Most of the responses obtained from group A students in task IV were as predicted. However, there were some unpredicted as well, viz:

(12)a.* He asks *if* to must sleep early (1)

b. We do not know *if* we are going to see him soon (1)

The response in (12a) confirms my prediction of the infinitival use of 'if'. It also disconfirmed it in that the learner added the auxiliary 'must'. As for the source of these response, it is likely that the source of the predicted response could be an internal analogy to English between 'if' and 'whether' in its nonfinite use, whereas the source of adding 'must' is hard to explain but one reason could be semantic. The nature of the unexpected response in (12b) consists in the substitution of the modal auxiliary 'will' for 'are going to' e.g. "we do not know *if* we will see him soon/ we do not know *if* we are going to see him soon". This may be a L2 induced transfer

in the sense that English uses will and going to to indicate futurity.

Group B

For the disappearance of errors involving prediction 4, see the discussion on prediction 2 of the same group.

Prediction 5

This is predicting the use of the nonfinite Y/N complementiser 'whether' with a subject, as in (13) below:

(13)* I wonder whether you to go there

Group A

The disconfirming performance of this group on task IV showed quite interesting examples of the learners interlanguage. For instance, consider the following erroneous responses in (14) below:

(14)a.* I do not know whether I to go home now or not (1)

b.* Omar asked whether Muneer to eat now or not (3)

c.* Omar asked whether Muneer is he going to eat now
(8)

Although structures (14a&b) confirm my prediction as stated in (13) above, they also appear to unexpected because of the 'or not' expression which learners added in their manipulation of the sentences of the judgement task. The reasoning behind adding 'or not' could be L2 because it often uses 'or not' with 'whether'.

In (14c) disconfirms prediction 5. The student changed the infinitival use of 'whether', which allows PRO in such use, see chapter three, into a finite one. The student

also used Aux - Subject inversion in embedded complement clauses, which English disallows. The source of using the formula Aux - Subject inversion in subordinate clauses lies in L2 direct Y/NQs, which is being overgeneralised in the case of (14c) to include indirect ones.

Group B

The response of this group to prediction 5 was as follows:

(15)a. I do not know whether to go home now or not (1,7, 13, 16, 20)

b. Omar asked whether Muneer would eat now (4)

c. Omar asked whether Muneer ate now (6)

d. Omar asked whether Muneer wants to eat now (10)

e. Omar asked whether Muneer eats now or not (17)

f. Omar asked whether Muneer is eating now (18)

g. I do not know whether to go home now or to stay here (22)

The unexpected nature of the responses in (15a & g) consists in adding the sequences 'or not' and 'or to stay here' respectively, which might be looked upon as semantic. The unpredicted nature of the responses in (15b&f) involves changing the sequence [subject plus nonfinite] clause into a finite one (they disconfirm this prediction, but they confirm prediction 1). It also involves the addition of certain elements such as 'would', 'wants', and 'or not' to (15b, d, and e) respectively. In any case, the correct manipulation of these structures suggests that the student is more of L2 oriented.

Prediction 6

This prediction concerns the use of Y/N complementiser whether introducing VSO sentences, as in (16) below:

(16)* I am not sure whether saw Bill his supervisor

Group A

The performance of this group in task IV showed the following unpredicted responses:

(17)a. Nadia wondered whether Nawal had gone to university

(13)

b.* Nadia wondered wither went with Nawal to the university (18)

The unpredicted response in (17a) was not in accordance with my prediction of 'whether' introducing VSO complement clauses. This means that the learner has the knowledge of a L2 having SVO word order in subordinate clauses. The response in (17b) endorsed my prediction in that the learner quite expectedly used VSO word order following the interrogative complementiser 'whether'. This incorrect use of VSO word order is a L1 transfer.

Group B

The performance of group B in task IV yielded the following disconfirming structures:

(18)a.* Nadia wondered whether Nawal has gone to university (21)

b. Nadia wondered whehter Nawal had gone to university (10)

c.* Omar wondered whether Ahmad buying the books (8)

d. Omar wondered whether Ahmad had bought the books
(18)

The disconfirming nature of (18a & b) lies in changing VSO word order into SVO in the complement clauses of 'whether'. Their unpredicted nature lie in the addition of 'has' and 'had' respectively. In (18c) the learner seems to have misunderstood the verb form by adding the 'ing', while in (18d) he rightly added 'had'. However, they disconfirm my prediction because they were not converted into VSO as predicted.

Prediction 7

This involves the illicitly filled head C position in indirect WHQs, as in (19) below:

(19)* They wondered why have the judge postponed the case

Group A

In task IV, the unpredicted responses of group A were as follows:

(20)a.* We did not know where should we go in summer (5)

b. She does not know when she will arrive? (7)

In (20a) prediction is confirmed. Its unpredicted nature lies in adding the PP 'in summer'. The possible source of this 'addition' could be related to the elicitation instrument itself in that task IV, which is designed to test prediction 7, among others, the immediately preceding structure i.e. item (5) contained the PP 'in summer'.

In (20b) prediction is disconfirmed. It is unexpected because the student wrongly added the question mark (?),

which could be based on incomplete learning of rules. That is, the learner had not learnt yet that the question mark is added only to direct Y/N and WHQs of L2.

Group B

In the responses of group B students, in task IV, The unpredicted structures were as follows:

(21)a. We did not know where we must go (5)

b.* We did not know where we should have to go (21)

In (21a), the student replaced 'should' by 'must', which may be based on semantic grounds rather than syntactic. In (21b), the student added the sequence 'have to'. It is, therefore, an addition error, which "result from the all-too-faithful use of certain rules." Dulay et al (1982:156).

Prediction 10

This prediction refers to the lack of I-movement in direct WHQs and Y/NQs, as in (22):

(22)a.* What you tell him?

b.* When they can do it?

c.* She has gone home?

Group A

The unanticipated responses obtained from group A learners on prediction 10, task I, were as follows:

(23)a.* How my uncle helped the poor? (6)

b. When will he water the flowers? (7)

c.* How my uncle should help the poor? (8)

d. How have my uncle helped the poor? (10)

e. How should he have helped the poor? (16)

In (23a), the learner formed the WHQ without I-movement, as predicted. But s/he also unpredictably missed the I constituent 'have' and the V constituent 'should'. One might regard the missing of these constituents as transfer from L1, which lacks such grammatical morphemes. In (23b & e), which are disconfirming, the learner respectively changed the pronominal subject 'we' and the lexical subject 'my uncle' into 'he'. I consider this as developmental error because the learner is trying the use of another pronoun from which I assume that s/he is on her/his way to L2 proficiency. In (23c & d), the learner omitted the V and I constituents respectively, and moved the V element after omitting I element in (23d). The former confirms prediction, but the latter does not.

In task II, there were some dis/confirming answers, viz:

(24)a. Did they come home very soon? (6)

b.* I should have written her a letter? yes, I should (16)

c.* They will come home very soon? yes, they will (16)

d.* Will they home soon? (22)

In (24a), the student formed the Y/NQ with 'did' instead of forming it with the I constituent 'will', which he omitted from the structure. The likely cause of this may be a L2 overgeneralisation of the 'do-support' system. In (24b & c), although the student performed predictably i.e.

no I-to-C movement took place in Y/NQ formation because L1 has no such movement operation; yet unpredictably the student added the sequences 'yes, I should' and 'yes, they will'. This addition error might be interpreted as an answer to the wrongly formed Y/NQ. In (24d), the student disconfirmed my prediction by rightly moving the I element to C, but the structure was not predicted with regard to the omission of the V element 'come' and quantifier 'very'.

Group B

In task I, prediction 10, the dis/confirming responses of group B were as follows:

- (25) a.* How my uncle have helped the poor? (1)
- b.* How should my uncle helped the poor? (3)
- c. How could my uncle help the poor? (12)
- d.* How should have my uncle helped the poor? (14)
- e.* How the poor should have helped? (16)
- f.* How your uncle should help the poor? (18)
- g.* when did you water the flowers? (19)
- h. How my uncle should help the poor? (20)
- i. How should my uncle help the poor? (21)

The nature of the confirmed structure in (25a) lies in the omission of the V element 'should'. In (25b), which is disconfirmed, the modal auxiliary 'have' was omitted, and the structure resulted in tense misunderstanding, i.e. the modal auxiliary 'should' must be followed by a bare infinitive, not a past tense, e.g. 'helped'. In (25c),

which is disconfirmed, the modal aux. 'should' as well as the V constituent 'have' were omitted and replaced by the modal 'could' which was rightly moved to the head C position. In (25d), which is also disconfirmed, both elements (e.g. I and V) were moved to occupy C. In (25e) the subject was omitted, and the object 'the poor' was moved to subject position. Prediction is confirmed. In (25f) 'have' was omitted and 'my uncle' was changed into 'your uncle'. Prediction is confirmed. In (25g) 'did' was overgeneralised, the modal 'will' was omitted and the subject pronoun 'we' was changed into 'you'. Prediction is disconfirmed. In (25h & i) the head V constituent 'have' was omitted. Prediction is confirmed in (25h) but not in (25i). In surveying the unpredicted responses in (25) we come to conclude that they all deal with omission and addition errors. In this context, it is important to note that learners resort to simplification strategy, and omission is a way of simplification, to make the tasks easier. Additions, on the other hand, may indicate that learners are constructing hypotheses about L2.

In task II, the following unpredicted responses were detected:

- (26)a. Should you have written her a letter? (1)
- b. Should they come home very soon? (12)
- c. Should I have written her a letter? (13)
- d.* They will they come home very soon? (21)

In (26a) the subject pronoun 'I' was changed into 'you'.

In (26b) the modal 'will' was changed into 'should' and rightly positioned in C to form Y/NQ. In (26c) the sequence 'yes, I should have' was added. In (26d) the subject pronoun 'they' was repeated twice. However, (26a, b & c) do not endorse my prediction; whereas (26d) does.

In task IV, the unpredicted responses of group B performance on prediction 10 were as follows:

(27)* When do you will get the money back? (18)

Instead of moving the I constituent 'will' (hence prediction is confirmed), the learner overgeneralised 'do', which is a reflection of L2 in (27).

Prediction 11

This prediction concerns the incorrect formation of direct and indirect interrogative structure with no BE form involved, e.g.

(28)a.* Why John in London?

b.* I am not sure why Fred in France

Group A

In task I and IV, the unanticipated contribution of group A was respectively as follows:

(29)a. Why is he in London? (16)

b.* They did not say why Sameer ill (1)

Apart from dis/confirmed responses in (29a & b) respectively, in both of these structures, the learner replaced an element for another. In the former the lexical subject NP was changed into the pronominal NP 'he'. In the latter the adjective 'sick' was changed into 'ill'. The

possible cause of this replacement could be semantic.

Group B

The unanticipated performance of group B in task I is given in (30) below:

(30)* Why does Nabeel is in London (21)

The nature of this disconfirmed erroneous interrogative structure lies in the incorrect use of the 'do-support' system. The source of this error is more likely to be related to L2 simply because the student was trying to overgeneralise 'do', which L1 lacks.

Prediction 12

This refers to difficulty with 'do' support in the formation of WH and Y/NQs, as in (31) below:

(31)a.* What you do in summer?

b.* Where you go last night?

c.* Visited John Mary?

Group A

The following unpredicted responses were detected in the performance of group A in task I.

(32)a.* Why he is playing football every week? (4)

b.* Where the tourists have stayed in Aleppo last year? (4)

c.* Where did the tourists stayed? (7)

As predicted, in (32a), the student failed to form the WH-interrogative structure with 'do'. Unpredictably the student used the present continuous tense, but failed to get the I-to-C movement right, as prediction 10 stated.

The reason for the use of the continuous tense could be based on using this tense more often than others in Syrian schools. In (32b), the student failed to form the question with 'do'. Instead the student tried to form it with the auxiliary 'have'. And here also the student endorsed prediction 10 for being unable to get the I-to-C movement right. However, although in (32c) the learner disconfirmingly succeeded in forming the interrogative structure with 'do', but marked both C and V constituents for tense. This gives credence to prediction 13 of double tense marking.

In task II, the disconfirming responses of group A were as follows:

- (33) a.* Does she works hard? (2, 6)
- b.* Did they visited the zoo? (2, 7)
- c.* Do they visit the zoo yesterday? (6)
- d. Does she work hard? yes, she does (16)
- e. Did they visit the zoo yesterday? yes, they did (16)

The responses in (33a & b) were in evidence of prediction 13 - i.e. double tense marking - not 12. In (33c), the student disconfirmed prediction 12 by rightly forming the question with 'do', but s/he made a tense error - i.e. he used the present form of 'do', not 'did', as required. In (33d & e), the student disconfirmed prediction 12 because he correctly formed the Y/N interrogative structure with 'do'. But unpredictably, the student added the sequences

'yes, she does, and yes, they did'. The common way of conducting lessons in class might be an indicative of this addition. In other words, the student is taught how to ask the question and then either negate it or affirm it.

In task IV, the disconfirming performance of group A was as follows:

(34)* What are you put on the table? (15)

Task IV was a judgement task. It contained pairs of correct and incorrect sentences. In (34), the student disagreed with the incorrect form of 'do' testing structure by forming the question with 'are'. The reason for this could be the effect of phrases learnt 'prefabricated' in which the pronoun 'you' takes 'are' of the BE form, e.g. what are you....?

Group B

The unpredicted performance of group B in task I was as in (35) below:

(35)a.* Where does the tourists stayed? (5)

b.* Where they stayed last year? (18)

In (35a) prediction 12 is not confirmed because the student used 'do' correctly, though he got the tense wrong. But the student unpredictably marked the V element for tense. However, though different tenses are being realised on C and V, we can consider this in support of prediction 13. In (35b), apart from confirmation of prediction, the student changed the lexical subject NP 'the tourists' into 'they'. This suggests that is well

aware of the fact that 'they' must also be plural.

In task II, the following disconfirming interrogative responses were noticed in the performance of group B:

(36) a.* Did they visited the zoo yesterday? (3)

b.* Did they the zoo yesterday? (8)

c.* Did they visited the zoo yesterday? (10)

d. Does she work hard? yes, she does (13)

e. Did they the zoo yesterday? (17)

In (36a, b & c), the learner disconfirmed prediction 12 by using the 'do-support' requirement correctly. On the other hand, the learner confirmed prediction 13, which predicts that the learner will mark for tense C as well as V elements. In (36b & e), the learner used 'do' correctly, but omitted the verb 'visit'. In (36d), the learner succeeded in getting the 'do' requirement right, yet here again he added the sequence 'yes, she does'.

In task IV, the performance of group B was as follows:

(37) a.* Where did you were last night? (10)

b.* What you are putting on the table? (16, 20)

Although the student succeeded in forming the WHQ by rightly getting 'did' in place in (37), but he was not expected to replace 'go' with 'were', for which no reasonable explanation can be found. In (37b), the student confirmed prediction 12 by not using the 'do-support' system. He unpredictably used the present continuous tense, but failed to move I to the head C position to form the question correctly. However, the lack of I-to - C

movement gives support to prediction 10.

Prediction 13

This prediction refers to double tense marking, e.g.

(38)* When did they went home?

for more on this prediction, see the examples in previous sections already covered.

Group B

The unexpected responses which occurred in the performance of group B, task IV, were shown in (39) below:

(39)a.* Would he to came late? (4)

b.* Which book you liked more? (4)

In (39a), the student disagreed with the incorrect form of this structure which was 'would he came late?'. In attempting to correct it, the student added the infinitival particle 'to', for which no concrete explanation can be found other than semantic, leaving the constituents of C and V marked for tense. In (39b), the student disapproved the incorrect form of this interrogative structure by omitting the auxiliary 'did'. Moreover, the student changed 'best' into 'more'.

Prediction 14

This involves the use of VSO word order in indirect Wh-interrogative structures, e.g.

(40)* They are not sure why sold John his new car

Group A

The unpredicted responses of this group on prediction 14, task IV, are given, in (41) below:

(41)a.* We knew what the girl buy (2)

b.* We did knew what bought the girl (18)

In reproducing the structures above, the learner disapproved the illicit VSO word order in the complement clause of (41a). Though the learner got the word order right, he made a tense error by putting the verb of the subordinate clause in the present tense when it must have been put in the past, as required. In (41b), the learner reproduced the structure by transferring his L1 VSO word order, hence supporting my prediction, and adding the auxiliary 'did' unpredictably. The addition of the past tense of the auxiliary 'do' together with the past tense of the verb in the subordinate clause gives support to prediction 13 of double tense marking. The possible source of using 'did' in structures like (41b) may be overgeneralisation from L2.

In task VI, which involves translation from L1 into L2, the unpredicted responses of group A were as follows:

(42)a.* I don't know why do/did students break the table
(3, 7, 11, 12, 13)

b.* I don't know why do students behave like this (3, 13)

Obviously, prediction 14 was not answered in these structures. However, the same structures uphold prediction 7, which states that, as a result of L2 overgeneralisation, the head C position can be illicitly filled in embedded WhQs. |

Group B

The unanticipated answers of this group on the same prediction and same task are given in (43) below:

(43)a.* We knew who bought the girl (5)

b.* We knew who bought the girl (13)

c.* He asked where did the driver go (16)

In (43a & b), the student agreed to the occurrence of VSO word order in the complement clause of L1 by transferring it to L2. However, the nature of the unpredictableness of these structures resides in changing the wh-word 'what' into 'who'. This change is more likely to be regarded as semantic than syntactic. In (43c), the student disconfirmed the occurrence of VSO in wh-complement clauses as I predicted in prediction 14, instead he confirmed prediction 7 about the illicitly filled head C position. The cause of which may be L2 overgeneralisation of 'do-support' system.

In task VI, the disconfirming structures (sic) of group B were as follows:

(44)a.* I don't know why does the students brok the table (5)

b.* I don't know why do the students do such work? (10)

c.* And I don't know why do students break tables (18)

d.* And i don't know why do they do that (18)

Here again prediction 14 which predicts the occurrence of VSO order in Wh - complement clauses was not endorsed .

But interestingly, these structures give support to prediction 7 of overgeneralisation 'do' from root into embedded clauses of L2.

Prediction 15

This prediction concerns the use of Wh-words followed by a subject in infinitival complement clauses, e.g.

(45)a.* We wondered when John to leave the stage

b.* She is not certain why he to boycott the meeting

Group A

In task IV, this group made the following unpredicted performance:

(46)a.* Muna asked Omar what Nawal to will do next (2)

b. Muna asked Omar what Nawal is going to do next (8)

c. John does not know what I am to do in summer (9)

Structure (46a) ties in with prediction 15 insofar as the subject of the nonfinite clause is concerned. Yet the unpredicted nature of the structure lies in the use of the modal auxiliary 'will' following the particle 'to', which is hard to explain. Structure (46b) does not tie in with prediction 15 because the student reproduced the incorrect form correctly. Structure (46c), in one sense, is in keeping with the prediction concerned - viz the student used 'I' as the subject of the infinitival complement clause. In another it is unpredicted because the student added 'am', which indicates that the student is moving towards the TL system.

Group B

The unpredicted responses of group B on the same prediction and task were as follows:

- (47) a. Muna asked Omar what Nawal did (6)
- b.* Muna asked Omar what did Nawal do next (18)
- c. Muna asked Omar what Nawal did next (22)

In all these structures, the student rejected the incorrect forms which contain nonfinite subordinate clauses with a subject. The rejection resulted in changing the nonfinite into a finite, which was unpredicted. However, although the structure in (49b) did not confirm prediction 15, but it did so with prediction 7, which predicts the illicit filling of C position. The possible source of such wrong use of 'do' is L2 overgeneralisation where the student is overstretching the use of 'do' from direct into indirect questions.

In terms of the number of the items which had been left 'unanswered' or 'missed out' by the learners of both groups, it had totalled 130. Group A students had scored 54 items unanswered, and group B 76. The difference between both groups was 22 items.

Unexpectedly, the more proficient group omitted more. No feasible reason can be thought of other than the cautious attitude exercised by this group in dealing with the data elicited.

8.3. Summary

In general, quite a lot of unpredicted errors of various sources other than negative transfer errors (i.e.

overgeneralisation, simplification, teaching induced, meaning based substitutions, fossilisation etc..) came to the fore in this chapter. Moreover, some responses, unexpectedly, gave evidence to predictions other than the ones they were predicted to occur. For example, the performance of both groups on prediction 12 beat prediction 13.

CHAPTER NINE

Conclusions and Implications

9.0. Overview

In this study we tested two hypotheses central to CA i) that degree of transfer will depend on degree of contrast, and ii) that levels of L1 transfer will be determined by stage level. These two hypotheses were tested in relation to the acquisition of Y/N and WHQs by two groups of Syrian university learners of English.

9.1. Conclusion

The conclusions that emerged from this investigation upheld the two hypotheses. For the results of the two hypotheses, see chapter 7.

9.2. Implications for X-bar Theory

The descriptive dimension of this investigation was carried out within the framework of X-bar syntax. Some implications for X' can be summarised as follows:

a) X' is a subtheory comprising a subcomponent of the theory of GB. This entails that X' and GB both complement each other. This amounts to saying that the use of one in a given field is a reflection on the other. If GB is relevant to issues in SLA, then X' must also be relevant. Thus, given the fact that the role of L1 influence 'permeates even the most recent developments in second language acquisition, as can be seen in current work within the Government and Binding framework..' Sharwood Smith & Kellerman (1986:7) suggests the involvement of X'

in language acquisition.

b) The interaction of the Projection Principle (among other principles and rules) with X' syntax, which acts as an artifact of UG (Cook, 1988), is an indication of pertinency of X' to language acquisition domains.

c) The well-suitedness of X' to this work stems from its application to the descriptive as well as contrastive study of interrogative and declarative sentences of the languages under contrast.

d) The concept of 'head', deep and surface structure is yet a further implication of X' in this study. The head-to-head movement rule enabled us to characterise the interrogatives of both languages.

9.3. Implications for CA and EA

This study is a rigorous CA of English and SA, in that it describes, compares/contrasts, predicts errors and designs an elicitation instrument with which to test these predictions. It follows, in other words, the usual procedural steps for conducting a CA and exploits the implications of such steps in practical use.

To gain further insight into the analysis of errors (predicted and mispredicted), EA diagnosis the findings of CA in explaining the sources of those mispredicted errors and comparing their sources with those of predicted ones. EA, in other words, complements the results of CA and serves as a validation instrument for it.

A satisfactory examination of F.L. learners' errors,

therefore, requires the corroboration of both CA and EA.

9.4. EFL Pedagogical Conclusions

The purpose of this study has been to empirically validate the power of CA in predicting learner difficulty. It does not seek direct CA application to classroom language teaching. It rather carries valuable implications and guidelines for the planning of curricula and the design of teaching materials.

However, although (it is beyond the scope of this study) to assist classroom practitioners with possible teaching techniques and with notions and information upon which they can directly act, our results may prove useful in an indirect way i.e. they could, in the spirit of Wilkins (1972), constitute 'implications' and 'insights' rather than 'applications' of this linguistic study. For the teachers who aspired to adjust their teaching techniques to their students' state of knowledge, the combined results of CA and EA can offer notions to ways and means of grading their teaching according to the Y/N and WHQs investigated experimentally here. For example, the teaching of I-to-C movement of Y/N and WHQs as it is represented in my investigation needs more time and targeting than other rules in classroom. For curriculum planners, the outcome of this work may be useful in preparing textbooks covering the types of questions that proved problematic.

9.5. The Shortcomings of this Study

Although we are content with the results achieved here, this work is by no means complete. Its shortcomings concern mainly the elicitation techniques used.

The data elicited here were in written form only. Thus one limitation of this study is that it did not include oral data. The combination of written and oral data would have achieved more satisfactory results, for oral data is more spontaneous than written data because the latter requires (and indeed allows) thinking and reflection on possible revisions on the part of the learner. Also some concern with oral data would have been more pertinent to applied purposes because the aim of language teaching is first to enable learners to speak it: the 'primacy of speech' is still valid.

A further limitation of the data elicitation is that the pilot test was not carried out on the subjects themselves (see 6.6.).

The lack of native controls is yet a further limitation of this study.

9.6. Recommendation for Further Research

This study focused on only a small area of the structure of English i.e. the syntax of the English interrogative C-system. An immediate follow-up study should focus on other areas of English C-system. This research would address the following types of question:

i) Do learners use non Wh-complementisers correctly, e.g.

that and for?

ii) Do learners 'know' as manifest in their language processing that these complementisers are noninterrogative?

iii) Do learners 'know' that movement processes affect only auxiliaries and not that and for?

iv) Do learners 'know' the conditions under which auxiliary preposing is allowed, e.g. direct and semi-direct speech, but not indirect speech?

v) Given that research tends to favour the 'indirect access model' (Cook, 1988) - i.e. in UG terms, L2 learning can only be through L1, and given that Arabic is a pro-drop language, the prime and pressing task of research is to show how English learners of Arabic will learn Arabic and vice versa.

vi) The rethinking of CA we have attempted here is becoming a necessity. To carry out a CA on behalf of learners and provide them with the results is insufficient. The real linguistic gain to learners resides in a type of CA carried out by the learners themselves along the lines proposed by James et al. (1992:6).

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APPENDIX A

Results For Task I, Group A (Positive Predictions)
8 Predictions
1 4 Items

| | | |
|----|---|---|
| 1 | 1 | 1 |
| 2 | 1 | 1 |
| 3 | 1 | 1 |
| 4 | 1 | 1 |
| 5 | 1 | 1 |
| 6 | 1 | 1 |
| 7 | 1 | 1 |
| 8 | 1 | 1 |
| 9 | 1 | 1 |
| 10 | 1 | 1 |
| 11 | 1 | 1 |
| 12 | 1 | 1 |
| 13 | 1 | 1 |
| 14 | 1 | 1 |
| 15 | 1 | 1 |
| 16 | 1 | 1 |
| 17 | 0 | 1 |
| 18 | 1 | 1 |
| 19 | 1 | 1 |
| 20 | 1 | 1 |
| 21 | 1 | 1 |
| 22 | 1 | 1 |

Results For Task I, Group A (Negative Predictions)

| | 10 6 8 | 11 3 7 | 12 2 5 | Predictions Items |
|----|-----------|-----------|-----------|----------------------|
| 1 | 1 1 | 1 1 | 1 1 | |
| 2 | 1 1 | 1 1 | 1 1 | |
| 3 | 1 1 | 1 1 | 1 1 | |
| 4 | 1 1 | 1 1 | 0 0 | |
| 5 | 1 * | 1 1 | 1 1 | |
| 6 | 1 1 | 1 1 | 0 1 | |
| 7 | 0 1 | 1 1 | 1 1 | |
| 8 | 0 0 | 1 0 | 0 0 | |
| 9 | 1 1 | 1 1 | 1 1 | |
| 10 | 1 0 | 1 1 | 1 1 | |
| 11 | 1 1 | 1 1 | 1 1 | |
| 12 | 1 * | 1 1 | 1 1 | |
| 13 | 1 0 | 1 1 | 1 1 | |
| 14 | 1 * | 1 1 | 1 1 | |
| 15 | 1 1 | 1 1 | 1 1 | |
| 16 | 1 0 | 0 0 | 1 1 | |
| 17 | 0 0 | 1 1 | 0 0 | |
| 18 | 1 * | 0 * | 1 1 | |
| 19 | 1 1 | 1 1 | 1 1 | |
| 20 | 1 * | 1 1 | 1 1 | |
| 21 | 1 1 | 1 * | 1 1 | |
| 22 | 1 1 | 1 1 | 1 1 | |

Results For Task II, Group A (Negative Predictions)

| | 12 2 4 | 10 1 3 | Predictions Items |
|----|-----------|-----------|----------------------|
| 1 | 1 1 | 1 1 | |
| 2 | 0 0 | 0 0 | |
| 3 | 1 1 | 1 1 | |
| 4 | * * | * * | |
| 5 | 1 1 | 1 1 | |
| 6 | 0 0 | 0 0 | |
| 7 | 0 0 | 0 0 | |
| 8 | 0 0 | 1 0 | |
| 9 | 1 1 | 1 1 | |
| 10 | 1 1 | * 0 | |
| 11 | 1 1 | 1 1 | |
| 12 | 1 1 | 1 1 | |
| 13 | 0 0 | 1 1 | |
| 14 | 1 1 | 1 1 | |
| 15 | * * | * * | |
| 16 | 0 0 | 1 1 | |
| 17 | 0 0 | 0 0 | |
| 18 | 0 0 | 0 0 | |
| 19 | 1 1 | 1 * | |
| 20 | 1 1 | 0 0 | |
| 21 | 1 1 | 1 1 | |
| 22 | 1 1 | 0 0 | |

Results For Task III, Group A (Overgeneralisation: if/whether)

| | 4 | | | | | Prediction Items |
|----|---|---|---|---|----|---------------------|
| | 2 | 4 | 6 | 8 | 10 | |
| 1 | 1 | 1 | 1 | 1 | 1 | |
| 2 | 0 | 1 | 1 | 0 | 1 | |
| 3 | 1 | 1 | 0 | 1 | 1 | |
| 4 | 1 | 1 | 1 | 1 | 1 | |
| 5 | 1 | 1 | 1 | 0 | * | |
| 6 | 0 | 0 | 1 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | 0 | |
| 9 | 1 | 1 | 0 | 1 | 1 | |
| 10 | 1 | 1 | 0 | 1 | 0 | |
| 11 | 1 | 1 | 1 | 0 | 1 | |
| 12 | 1 | 1 | 1 | 0 | 0 | |
| 13 | 0 | 0 | 0 | 0 | 0 | |
| 14 | 1 | 1 | 1 | 0 | 1 | |
| 15 | 1 | 0 | 1 | 0 | 1 | |
| 16 | 0 | 1 | 0 | 0 | 1 | |
| 17 | 0 | 1 | 1 | 0 | 1 | |
| 18 | 1 | 0 | 1 | 1 | 0 | |
| 19 | 1 | 1 | 1 | 1 | 1 | |
| 20 | 1 | 1 | 1 | 0 | 1 | |
| 21 | 1 | 1 | 0 | 1 | 1 | |
| 22 | 1 | 0 | 1 | 1 | 0 | |

Results For Task IV, Group A (Positive Predictions)

| | 1 | | 8 | | 9 | | Predictions Items |
|----|---|----|----|----|----|----|----------------------|
| | 4 | 13 | 11 | 26 | 24 | 28 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 2 | 1 | 1 | 1 | 1 | 1 | * | |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 6 | 1 | 1 | 1 | 1 | 1 | * | |
| 7 | 1 | 1 | 1 | * | 1 | 1 | |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 18 | 1 | * | 0 | 1 | 1 | 1 | |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | |

| | Results For Task IV, Group A (Negative Predictions) | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|---|----|----|----|---|----|----|----|----|----|----|----|----|----|-------------|----|---|----|---|----|----|----|---|----|-------|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 11 | 12 | 13 | 14 | 14 | 15 | 15 | Predictions | | | | | | | | | | | |
| | 8 | 18 | 19 | 21 | 9 | 27 | 1 | 17 | 10 | 29 | 6 | 25 | 2 | 22 | 20 | 23 | 7 | 15 | 3 | 12 | 14 | 16 | 5 | 30 | Items | |
| 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | 1 | * | 1 | 1 | 1 | * | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | * | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 7 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 13 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 14 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 17 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 18 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 19 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

| | Results For Task V, Group A (Positive & Negative Predictions) | | | | | | | | | |
|----|---|---|---|---|---|----|----|----|----|-------------|
| | +1 | 4 | 5 | 6 | 7 | +9 | 11 | 14 | 15 | Predictions |
| | 3 | 1 | 2 | 3 | 4 | 6 | 5 | 6 | 7 | Items |
| 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| 3 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 4 | 1 | 1 | * | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 5 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | * |
| 6 | 0 | * | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 9 | 0 | 1 | * | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 0 | 1 | * | 1 | * | 1 | 1 |
| 11 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 12 | 0 | 1 | * | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 13 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 14 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 15 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 0 | 0 | 0 | 1 | * | 0 | 0 | 0 |
| 17 | 1 | 1 | * | 0 | 1 | 0 | 1 | 1 | 1 | 1 |
| 18 | 1 | 0 | * | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 19 | * | 1 | * | * | 1 | 0 | 1 | 1 | 1 | 1 |
| 20 | 0 | 1 | * | 1 | 1 | 0 | 1 | 1 | 1 | * |
| 21 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| 22 | * | 1 | 1 | * | 1 | 0 | 1 | 1 | 1 | 1 |

| | Results For Task VI, Group A (Positive Predictions) | | | | | | |
|----|---|----|---|----|---|----|----------------------|
| | 1 | | 8 | | 9 | | Predictions Items |
| | 2 | 13 | 1 | 15 | 8 | 14 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | * | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 0 | * | * | 1 | 1 |
| 6 | 1 | * | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | * | * | 1 | 1 |
| 17 | 1 | * | 1 | * | 1 | * | 1 |
| 18 | 0 | * | 1 | 1 | 1 | 1 | 1 |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Results for Task VI, Group A (Negative Predictions)

| | 2 | | 3 | | 10 | | 11 | | 12 | | 14 | | Predictions Items |
|----|---|----|----|----|----|----|----|----|----|---|----|---|----------------------|
| | 3 | 18 | 16 | 17 | 11 | 12 | 4 | 10 | 5 | 6 | 7 | 9 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 1 | * | * | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 4 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1 | 1 | * | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 6 | 1 | 1 | 1 | 1 | 1 | * | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 7 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | * | 1 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 9 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | * | 1 |
| 12 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 0 | * | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 17 | 0 | * | * | * | 1 | 1 | 0 | * | 0 | 1 | 0 | 0 | 0 |
| 18 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 19 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | * | 1 | 1 | 1 |
| 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Results For Task I, Group B (Positive Prediction)

8 Prediction
1 4 Items

| | | |
|----|---|---|
| 1 | 1 | 1 |
| 2 | 1 | 1 |
| 3 | 1 | 1 |
| 4 | 1 | 1 |
| 5 | 1 | 1 |
| 6 | 1 | 1 |
| 7 | 1 | 1 |
| 8 | 1 | 1 |
| 9 | 1 | 1 |
| 10 | 1 | 1 |
| 11 | 1 | 1 |
| 12 | 1 | 1 |
| 13 | 0 | 1 |
| 14 | 0 | 0 |
| 15 | 1 | 1 |
| 16 | 1 | 1 |
| 17 | 0 | 0 |
| 18 | 1 | 1 |
| 19 | 1 | 1 |
| 20 | 1 | 1 |
| 21 | 1 | 1 |
| 22 | 1 | * |

Results For Task I, Group B (Negative Predictions)

| | 10 | | 11 | | 12 | | Predictions Items |
|----|----|---|----|---|----|---|----------------------|
| | 6 | 8 | 3 | 7 | 2 | 5 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 3 | 1 | 0 | 1 | 1 | 0 | 1 | |
| 4 | 0 | 1 | 1 | 1 | 1 | 1 | |
| 5 | 0 | * | 0 | 0 | 0 | 0 | |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 9 | 0 | * | 0 | 0 | 1 | 1 | |
| 10 | 1 | * | * | 1 | 0 | 1 | |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 14 | 0 | 0 | 1 | 1 | 0 | 0 | |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 17 | 0 | * | 0 | 0 | 0 | 0 | |
| 18 | 1 | 1 | 0 | 0 | 1 | 1 | |
| 19 | 0 | * | 0 | 1 | 1 | 0 | |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 21 | 1 | 0 | 1 | 0 | 0 | 1 | |
| 22 | 0 | 0 | 0 | 0 | 1 | 0 | |

Results For Task II, Group B (Negative Predictions)

| | 12 | | 10 | | Predictions Items |
|----|----|---|----|---|----------------------|
| | 2 | 4 | 1 | 3 | |
| 1 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | |
| 4 | * | 0 | * | * | |
| 5 | * | * | * | * | |
| 6 | 0 | 0 | 0 | 0 | |
| 7 | 1 | 1 | 1 | 1 | |
| 8 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 1 | 1 | |
| 10 | 0 | 0 | 0 | 0 | |
| 11 | 0 | 0 | 0 | 0 | |
| 12 | 0 | 0 | 1 | 0 | |
| 13 | 0 | 0 | 0 | 0 | |
| 14 | * | * | * | * | |
| 15 | 0 | 0 | 0 | 0 | |
| 16 | 1 | 1 | * | * | |
| 17 | 0 | 0 | 0 | 0 | |
| 18 | 0 | 0 | 0 | 0 | |
| 19 | * | * | * | * | |
| 20 | 1 | 1 | 1 | 1 | |
| 21 | 0 | 0 | 1 | 1 | |
| 22 | 0 | 0 | 1 | 0 | |

Results For Task III, Group B (overgeneralisation: whether/if)

| | 4 | | | | | Predictions |
|----|---|---|---|---|----|-------------|
| | 2 | 4 | 6 | 8 | 10 | Items |
| 1 | 1 | 1 | 1 | 1 | 0 | |
| 2 | 1 | 0 | 1 | 0 | 0 | |
| 3 | 1 | 0 | 1 | 0 | 1 | |
| 4 | 0 | 1 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | * | 0 | |
| 6 | 1 | 1 | 0 | 0 | 0 | |
| 7 | 1 | 1 | 1 | 0 | 1 | |
| 8 | 1 | 1 | 0 | 0 | 1 | |
| 9 | 1 | 0 | 1 | 0 | 1 | |
| 10 | 1 | 1 | 0 | 0 | 1 | |
| 11 | 0 | 0 | 0 | 0 | 0 | |
| 12 | 1 | 1 | 0 | 0 | 1 | |
| 13 | 0 | 0 | 0 | 0 | * | |
| 14 | 1 | 1 | 1 | 0 | 0 | |
| 15 | 1 | 1 | 1 | 0 | 1 | |
| 16 | 0 | 0 | 0 | 0 | 0 | |
| 17 | 0 | 0 | 0 | * | 0 | |
| 18 | 0 | 0 | 0 | 0 | 0 | |
| 19 | 0 | 1 | 0 | 1 | 1 | |
| 20 | 1 | 0 | 1 | 0 | 1 | |
| 21 | 1 | 1 | 1 | 0 | 0 | |
| 22 | 0 | 0 | 0 | 0 | 0 | |

Results for Task IV, Group B (Positive Predictions)

| | 1 | | | | | | 8 | | 9 | | Predictions |
|----|---|----|----|----|----|----|---|--|---|--|-------------|
| | 4 | 13 | 11 | 26 | 24 | 28 | | | | | Items |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 9 | 1 | 1 | 1 | * | 1 | * | | | | | |
| 10 | 1 | * | 1 | * | 1 | * | | | | | |
| 11 | * | 1 | 1 | 1 | * | 1 | | | | | |
| 12 | * | * | 1 | * | 1 | * | | | | | |
| 13 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 14 | 1 | 1 | 1 | 0 | 1 | 1 | | | | | |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 17 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 18 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 21 | 1 | 1 | 1 | 1 | * | * | | | | | |

| | Results For Task IV, Group B (Negative Predictions) | | | | | | | | | | | | | | |
|----|---|---|---|---|---|---|----|----|----|----|----|----|----|-------------------|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 10 | 11 | 12 | 13 | 14 | 15 | 30 | Predictions Items | |
| 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 2 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 3 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| 4 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
| 5 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | * | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Results For Task V, Group B (Positive & Negative) | | | | | | | | | | |
|---|----|---|---|---|---|----|----|----|----|-------------|
| | +1 | 4 | 5 | 6 | 7 | +9 | 11 | 14 | 15 | Predictions |
| | 3 | 1 | 2 | 3 | 4 | 6 | 5 | 6 | 7 | Items |
| 1 | * | 1 | 1 | * | 1 | 1 | 1 | 0 | 1 | |
| 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| 4 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| 5 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | |
| 6 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| 7 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | |
| 8 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | |
| 9 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | |
| 10 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | |
| 11 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | |
| 12 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | |
| 13 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | |
| 14 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | |
| 15 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | |
| 16 | * | 0 | 0 | * | 0 | 1 | 0 | 0 | 1 | |
| 17 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| 18 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | |
| 19 | * | 1 | 1 | * | 1 | 0 | 0 | 1 | 1 | |
| 20 | 0 | 1 | 1 | 1 | 1 | * | 0 | * | 1 | |
| 21 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| 22 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |

| Results For Task VI, Group B (Positive) | | | | | | | |
|---|---|----|---|----|---|----|-------------|
| | 1 | | 8 | | 9 | | Predictions |
| | 2 | 13 | 1 | 15 | 8 | 14 | Items |
| 1 | 1 | 1 | 1 | 1 | 1 | * | |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 3 | 1 | * | 1 | 1 | 1 | 1 | |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 10 | 1 | 1 | 1 | 1 | 1 | * | |
| 11 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 13 | 1 | * | 0 | * | 1 | * | |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 16 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 17 | 1 | 1 | 1 | * | 1 | 1 | |
| 18 | 1 | 1 | 1 | * | 1 | 1 | |
| 19 | 1 | * | 1 | 1 | 1 | 1 | |
| 20 | 1 | 1 | 1 | 1 | * | 1 | |
| 21 | 1 | * | 1 | 1 | 1 | 1 | |
| 22 | 1 | 1 | 1 | 1 | 1 | 1 | |

Results For Task VI, Group B (Negative)

| | 2 | | 3 | | 10 | | 11 | | 12 | | 14 | | Predictions Items |
|----|---|----|----|----|----|----|----|----|----|---|----|---|----------------------|
| | 3 | 18 | 16 | 17 | 11 | 12 | 4 | 10 | 5 | 6 | 7 | 9 | |
| 1 | 1 | 1 | * | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | * | 0 | 0 | * | 1 | 1 | 0 | 0 | |
| 3 | 1 | 1 | 1 | 0 | 1 | * | 0 | 0 | 1 | 1 | 0 | 0 | |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 5 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | * | 0 | 0 | 0 | 0 | |
| 6 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | |
| 7 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | |
| 8 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 9 | 1 | 1 | 0 | 1 | * | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 10 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | |
| 11 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | |
| 12 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | |
| 13 | 1 | * | * | * | * | * | 1 | * | 1 | 1 | 1 | * | |
| 14 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 16 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | |
| 17 | 0 | * | * | * | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | |
| 18 | 1 | * | * | * | * | 1 | 0 | 0 | 0 | 1 | 0 | 0 | |
| 19 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 20 | 0 | 1 | 0 | 0 | * | * | * | 0 | 1 | 1 | 0 | 0 | |
| 21 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | |
| 22 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |