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## Abstract

This thesis is concerned with a syntactic analysis of the nominal syntagm of modern standard Arabic. The theory applied is Professor J.W.F. Mulder's "axiomatic functionalism".

The thesis falls into seven chapters. Chapter I deals with the theory itself, i.e., 'axiomatic functionalism'. Chapter II deals with syntax in 'axiomatic functionalism'. Chapter III deals with 'axiomatic functionalist' criteria for identifying and distinguishing morphological complexes from syntactic complexes. Chapter IV deals with the "positions" within the nominal syntagm of Modern Standard Arabic. Chapter V deals with the different realizations of the nominal syntagm of Modern Standard Arabic. Chapter VI deals with the relationship of the nominal syntagm with other syntagms in Modern Standard Arabic. Chapter VII deals with ellipsis in the nominal syntagm of Modern Standard Arabic.

## Errata

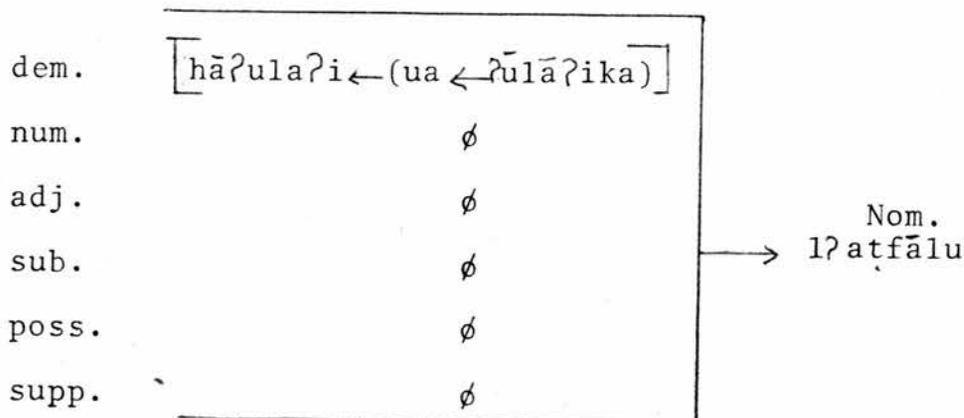
P.16 line (1) I say that a syntactic analysis is an analysis of sentence - bases. In fact this is not the case. Syntactic analysis cannot be an analysis of sentence-bases. In a syntactic analysis we only consider sentence-bases of sentences to which there correspond well formed syntagms.

P.42 lines (9) & (10) The complex sign "kitābun" has been analyzed into the sign "kitāb" and the allomorph "/un/" of the nominative. In fact we cannot analyze a complex sign into a sign plus an allomorph of a sign. The analysis should be into signs. Therefore the complex sign "kitābun" should be analyzed into the sign "kitāb" and the sign "nominative" represented by the allomorph "/un/".

P.43 lines (9) & (10) The complex sign "ʔalkitābu" has been analyzed into the signs "al", "kitāb" and the allomorph "/u/" of the nominative. The correct analysis is an analysis into the sign "ʔal", the sign "kitāb" and the sign "nominative" represented by the allomorph "/u/".

P.50 lines (3) & (4) It is not the positions, but the items in positions that stand in a relation of sub-ordination to the nucleus.

P.74 lines (5) & (6) It has been mentioned that there is an elliptical element in the syntagm "hāʔulāʔi ua ʔulāʔika lʔatfālu". In fact there is no ellipsis in the syntagm in question. Consequently, the above syntagm can be fitted into the model as follows:



Throughout the thesis slant lines have been used indiscriminately to indicate signs, allomorphs and phonological forms of allomorphs. In fact slant lines should be used to indicate phonological forms. Signs should have been indicated by inverted commas, and allomorphs by slant lines between inverted commas.

A Syntactic Analysis of  
the Nominal Syntagm  
in  
Modern Standard Arabic  
by  
Mohammad S.A. AL-Nobani

A thesis submitted for an  
M.Litt. Degree in the  
University of St. Andrews  
May, 1978

Declaration

I HEREBY DECLARE that the present work which is a record of research performed by myself, was conducted under the supervision of Professor J.W.F. Mulder, Department of Linguistics, University of St. Andrews to which I was admitted as a research student under the M.Litt. Resolution, and as a candidate for the degree of Master of Letters in October, 1976.

I also declare that this thesis embodies work which is being made public for the first time, and which has not been accepted previously for any degree.

Mohammad S.A. AL-Nobani

CERTIFICATE

I HEREBY CERTIFY that the conditions of the Ordinance and Regulations concerning the submission of an M.Litt. thesis have been fulfilled by Mr. Mohammad S.A. Al-Nobani.

Supervisor

ACKNOWLEDGEMENTS

I would like to express my gratitude to my supervisor Professor J.W.F. Mulder, of the Department of Linguistics, University of St. Andrews, for the help, advice, and guidance he offered me in the course of writing this thesis.

I have benefited a great deal from discussions with Mr. M.Y. Suleiman, of the Department of Linguistics, University of St. Andrews. I would like to thank him for his generous help, encouragement and advice throughout.

My thanks go to Dr. S.G.J. Hervey, of the Department of Linguistics, University of St. Andrews, with whom I discussed parts of this thesis. I would like to thank my colleague Mr. Suliman Hadj Mohamed with whom I had lengthy discussions.

My thanks go to the World University Service whose small grant helped me cover the typing expenses of this thesis.

Last, but not least, I would like to offer my sincere thanks to my brother Mr. Ma'ath Nobani without whose financial support the present thesis would never have come to light.

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INTRODUCTION

This thesis contains an 'axiomatic functionalist' syntactic analysis of the nominal syntagm of Modern Standard Arabic. The thesis is divided into seven chapters. Chapter I is a theoretical background of 'axiomatic functionalism'. Chapter II deals with the place of syntax in the theory in question and with the steps to be followed while attempting a syntactic analysis of any chosen field of speech-phenomena. Chapter III deals with 'axiomatic functionalist' criteria for identifying and distinguishing morphological complexes from syntactic ones.

Chapter IV deals with the "positions" within the nominal syntagm of Modern Standard Arabic. For this purpose a seven-position model has been set up. This model adequately accounts for any instance of the nominal syntagm of Modern Standard Arabic. Chapter V deals with the different realizations of the nominal syntagm. Chapter VI deals with the relationship of the nominal syntagm with other syntagms in Modern Standard Arabic. It deals with the relationship of the nominal syntagm with the non-verbal predicative syntagm, with the verbal predicative syntagm and with the functional syntagm. The last chapter deals with ellipsis in the nominal syntagm.

As understood in this thesis, the term 'Modern Standard Arabic' means that variety of Arabic to be found in contemporary books, magazines, newspapers and Arabic news broadcasts. For the sake of brevity, the terms "Arabic" and 'nominal syntagm' sometimes replace the terms 'Modern Standard Arabic' and 'nominal syntagm in Modern Standard Arabic', respectively.

(1)

Below is a list of the phonemes of Modern Standard

Arabic:

Consonants

/b/	ب
/t/	ت
/θ/	ث
/z/	ذ
/h/	هـ
/x/	خ
/d/	د
/ḍ/	ض
/d̥/	ظ
/ṭ/	ط
/r/	ر
/z/	ز
/s/	س
/ṣ/	ص
/s̥/	ش
/ʕ/	ع
/g/	غ
/q/	ق
/k/	ك
/f/	ف
/m/	م
/n/	ن
/ʔ/	الهمزة
/h/	ح
/l/	ل
/l̥/	

الإمام الفاضل

(1) See a forthcoming Ph.D. thesis by M.Y. Suleiman, Department of Linguistics, University of St. Andrews.

Vowels

/a/	/ʒalasa/ "he sat down"
/i/	/suriqa/ "it was stolen"
/u/	/kutiba/ "it was written"
/ā/	/nāma/ "slept"
/ī/	/qalīl/ "small"
/ū/	/sūqun/ "market"

Chapter I

The "Axiomatic Functionalist" Approach

"Axiomatic Functionalism", the theory applied in this work, is called "axiomatic" as it adheres to the axiomatic method in theory building, and it is called "functionalism" as functionality is one of the major tenets in this theory. "Functionality" is so important with respect to the theory in question that it has become the first axiom in the theory, i.e., "All features in semiotic sets are functional" (Mulder, Postulates, Axiom A.) and functional for "separately relevant to the purport of the whole of which it is a part". (Mulder, "Postulates", Def. la.) In the case of language, "axiomatic functionalism" considers all features which are separately relevant to communication, i.e., all functional features.

As regards the underlying philosophy of science which "axiomatic functionalism" follows, it is a hypothetico-<sup>(1)</sup> deductive method. In general in a hypothetico-deductive approach one needs a theory to make use of when describing any phenomenon. That is to say, one has to work in the light of a theory when attempting to describe any phenomenon.

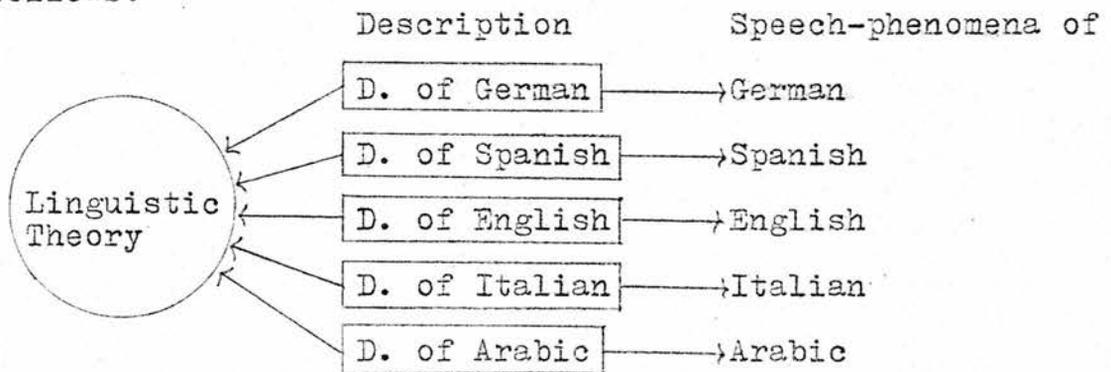
As far as "axiomatic functionalism" is concerned, the theory is axiomatic therefore deductive, whereas the description is hypothetical. The statements in the description are mere hypotheses that can be confronted with the data. That is to say, they are subject to refutation. On the other hand no statement in the theory is said to be hypothetico-<sup>(2)</sup> as "the theory includes no existence postulate".

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(1) This is Mulder's version of the hypothetico-deductive approach.

(2) Hjelmslev, Prolegomena to a Theory of Language, 1969 pl4.

(1)  
According to Mulder the aim of linguistics is "to make possible the scientific description of any chosen field of speech-phenomena". In order to achieve this aim "linguists have to provide a theory as a device"<sup>(2)</sup>. Thus, in order to arrive at a linguistic description we need a linguistic theory and a chosen field of speech-phenomena. The relationship between these three can be diagrammatically shown as follows:



(The arrows read 'implies' or 'presupposes'.)

The diagram shows that there is a one-to-one relation between a particular description and a particular field of speech-phenomena. Yet, the relation between the theory and the descriptions based on it is a one-to-many relation. We notice that a particular linguistic description is dependent on both a particular linguistic theory and a chosen field of speech-phenomena. We also notice that the linguistic theory and the speech-phenomena are independent of one another. They are independent in the sense that the theory may not have been applied or the fields of speech-phenomena may not have been described by the same theory. The fields of speech-phenomena, however, may be said to be determined by the linguistic theory. This is true to the extent that

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(1) Mulder, "Linguistic Theory, Linguistic Descriptions And The Speech-Phenomena", (1975).

(2) Ibid.

the theory considers those features which are relevant in the phenomena. For example, "axiomatic functionalism" considers only those features which are "functional", i.e., those features which are separately relevant to the purport - the purport in the case of language is communication.

As regards the types of statement in an axiomatic theory we may distinguish between three major types. These include the axioms, the theorems and the definitions. Of these three the axioms are statements that are accepted in advance. The second type of statement in an axiomatic theory is theorems. Theorems can be derived from other statements of the theory, i.e., they can be derived from the axioms or from the definitions or from both. As an axiomatic-deductively organized theory is rich in theorems it is difficult to <sup>in</sup>corporate these in the presentation of the theory. Even if they can be <sup>in</sup>corporated in the presentation, there is no need to do so as they are implied in the theory.

The third type of statement we find in an axiomatic theory is definitions. The role of definitions in the theory is to define terms used in the statements of the theory. In the theory we may have two types of terms: non-primitive and primitive terms. The task of definitions is to attach meaning to the former type of terms. We do this until we are left with nothing but primitive terms. However, care must be taken while defining terms produced by statements of the theory so that we may not be led to infinite regression. This process, i.e., definition of terms in the theory, goes on until we arrive at a stage where any further definition of the terms used in the

theory will add nothing to our understanding of the terms in question.

Another task of definitions is to introduce notions in the theory. Examples of notions in "axiomatic functionalism" are "opposition", "Commutation", "distinctive function", "distinctive feature", "simultaneity", "neutralization" and "archiphoneme", etc.. Of these notions "archiphoneme" and "distinctive feature" apply to entities in descriptions. In other words, we can say, for example, that the element X in the description is an archiphoneme whereas the element Y is a distinctive feature. On the other hand, there is nothing to be called, for example, "opposition" or "commutation" in the description. That is to say, there are no "entities" or "elements" in the description that might be called "opposition" or "commutation". Entities in the description <sup>(1)</sup> are not entities in the real world, i.e., in the realm of speech-phenomena, but they are regarded as standing in a certain relation of isomorphism with certain classes of phenomena". These may be called "models" or "descriptive models". The notions that correspond to the "descriptive models" in the theory are called "meta-models" or "theoretical models".

Having seen the types of statement and other things, i.e., other than statements, an axiomatic theory contains, it remains for us to see what type or types of statement one finds in a description. As statements the description contains hypotheses. These are the only type of statement we find in a linguistic description. Hypotheses are

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(1) Mulder, "Linguistic Theory, Linguistic Description And The Speech-phenomena", (1975).

(2) Ibid.

descriptive statements that can be tested with reference to the data. In other words, they are liable to refutation. That is to say, they can be refuted if they are in conflict with the data. If, on the other hand, they are in conflict with other statements in the data under the same theory they are invalidated.

Besides hypotheses, the description also contains models. As I said earlier, "models" are entities that stand in a relation of isomorphism with certain classes of the phenomena. The "descriptive models" are linked with the "theoretical models" by a many-to-one relation of isomorphism. An example of "descriptive models" is "the phoneme /b/ in English". The "theoretical model", i.e., the meta-model, which corresponds to the descriptive model in question is the notion "phoneme".

The description may also contain "labels". These are language specific, i.e., they have to be established for each language separately. As Mulder puts it "the device of labelling is mainly of a simplificatory and administrative nature, and it is internal to the description". Examples of labels are "subject", "object", "vowel", "consonant"... etc.

Let us now examine the conditions for calling a description a good description. A good description must satisfy three major requirements. These include consistency, adequacy and simplicity.

A consistent description is a description which is free of contradictions. In other words, the statements in

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(1) Mulder, "The Strategy of Linguistics", (1976).

a description must be consistent with one another. If a statement in a description is in conflict with another statement, and both statements are justified by the same theory, then both statements become meaningless. If, on the other hand, one of the statements is not justified by the theory, then it is invalidated out of hand.

As a description is dependent on a particular theory, and a chosen field of phenomena, it follows that every statement in the description must be justified by the theory, i.e., by the theory used in describing the phenomena, as well as by the data. If the former of these two conditions is not met then the description is arbitrary, therefore, void of meaning. In addition, as I have said, the statements in the description must be consistent with our observations of the data. This is due to the fact that statements in the description are hypotheses, and statements as such can be tested by direct confrontation with the data.

As regards adequacy of the description, the description must account for all the relevant features of the phenomenon to be described, and it must do so in sufficient detail. This boils down to saying that the description must ensure a full and detailed coverage of the data under investigation. If it is discovered that certain areas of the data under investigation are not satisfactorily accounted for by the description, then the description is inadequate. Saying that the description must account for all the relevant phenomena within its chosen field does not only mean accounting for all relevant phenomena but also accounting for all relevant potential phenomena, because, to quote Mulder,

(1)  
"linguistic description is, by its very nature, both descriptive and generative".

The description must be relatively simple. By saying that the description must be relatively simple we mean, to quote Mulder <sup>(2)</sup> "that there should be no redundant elements in a description, and the number and complexity of statements it contains should be reduced as much as satisfying the conditions of consistency and adequacy allows".

Having examined the requirements for a description to be a good description, it is imperative to examine the requirements for a theory to be a good theory. A good linguistic theory as well as any other theory must be consistent, adequate and simple. By consistency we mean that statements in the theory must be free of contradictions, i.e., they must not be in conflict with one another. Unlike statements in the description, statements in the theory need no external justification. Yet, they must be appropriate.

As regards adequacy of the linguistic theory, the linguistic theory is said to be adequate as long as it is capable of rendering an unlimited number of good linguistic descriptions. Good linguistic descriptions are consistent, adequate and simple descriptions. If it is discovered that a certain field or certain fields of speech-phenomena cannot be described under one and the same theory - provided that we have access to the phenomena, then that theory is inadequate.

Besides consistency and adequacy, a good linguistic theory must be simple. The reasons for saying that a

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(1) Mulder, "Linguistic Theory, Linguistic Descriptions And The Speech-Phenomena", (1975).

(2) Ibid.

linguistic theory must be simple are the same as those given for a linguistic description. However, because of the one-to-many relation between a particular linguistic theory and the descriptions based on it, one may "sacrifice (1) some simplicity in the theory if this can lead to a greater simplicity in the descriptions based on it".

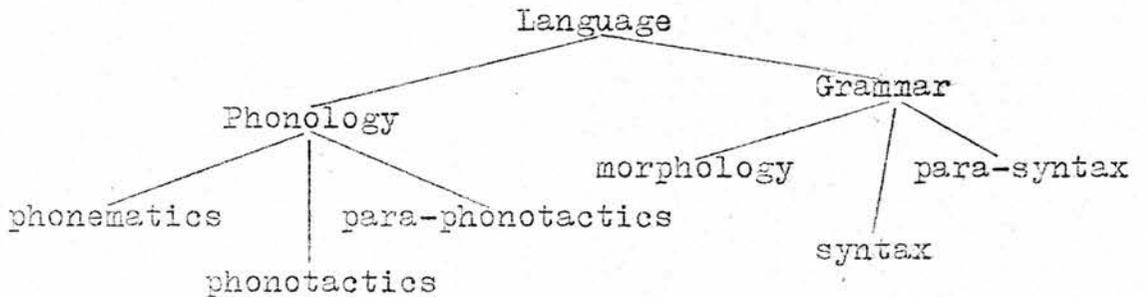
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(1) Mulder, "Linguistic Theory, Linguistic Descriptions And The Speech-Phenomena", (1975).

Chapter II

Syntax in "Axiomatic Functionalism"

Followers of "axiomatic functionalism" divide human language into two main systems, namely "phonology" and "grammar". Each of these is further divided into three sub-systems. "Phonology" is divided into "phonematics", "phonotactics" and "para-phonotactics" whereas "grammar" is divided into "morphology", "syntax" and "para-syntax". These divisions can be diagrammatically shown as follows:



As the present work is of a grammatical nature, i.e., syntactic one, I shall try to give a somewhat detailed explanation of what is meant by "syntax" in the theory<sup>in</sup> question, i.e., "axiomatic functionalism". "Phonology", on the other hand, will not be dealt with here and those readers who are interested in phonology in "axiomatic functionalism" may refer to "Language as a system of systems" by Mulder and Hervey.

"Axiomatic functionalism" draws a clear-cut distinction between morphology and syntax in terms of the relations that hold between the entities that belong to each of them. The type of relations we find in morphology is "relations of simultaneity". "Relations of simultaneity" is defined as "symmetrical relations between entities in combination".

(Mulder, "Postulates", Def.6b.)

On the other hand, the type of relations we find in syntax is "syntactic relations". "Syntactic relations" is defined as "tactic relations in grammar". (Mulder, "Postulates", Def.7d<sup>1</sup>.) "Tactic relations" is defined as "constructional relations (whether ordering or not) between syntagmatic entities, as immediate constituents in combinations". (Mulder, "Postulates", Def.7c<sup>3</sup>.) "Constructional relations;" on the other hand, is defined as "relations between immediate constituents". (Mulder, "Postulates", Def.7f.) This means that syntactic relations can be either ordering relations or non-ordering relations, i.e., simultaneity relations. "Ordering relations" is defined as "asymmetrical relations between entities in combinations". (Mulder, "Postulates", Def.6a.)

The difference between simultaneity relations in syntax and simultaneity relations in morphology is that while the former are between syntagmatic entities the latter are not. "Syntagmatic entity" is defined as "entity capable of standing in ordering relations with other entities or having an internal structure such that it is capable of containing - as constituents - entities capable of standing in ordering relations with other entities". (Mulder, "Postulates", Def.7b<sup>2</sup>.)

Now, if a in relation (R1) to b equals b in relation (R2) to a then R1 and R2 are equal. That is the converse of the relation is the same as the relation itself. This is what is meant by symmetrical relations, i.e., relations of simultaneity. If on the other hand, a in relation (R1) to b is not the same as b in relation (R2) to a then R1

and R2 are not the same, therefore, asymmetrical relations, i.e., ordering relations.

Now if we replace the symbols by concrete examples from English we will understand what is meant by ordering relations and relations of simultaneity. Given the construction "bus station" we can show that the relation that holds between its constituents is <sup>(1)</sup>an asymmetrical relation, i.e., ordering relation. This can be shown as follows: "bus" in relation (R1) to "station" is not the same as "station" in relation (R2) to "bus". That is the converse of the relation is not the same. In other words "station bus" is a different construction from "bus station", i.e., they convey different messages. Hence we encounter asymmetrical relation, thereby, ordering relation, between the constituents of "bus station".

Having demonstrated what is meant by ordering relation I shall demonstrate what is meant by relations of simultaneity. Before I give an example I would like to point out that relations of simultaneity cannot be positively and directly proved in a given construction. Therefore, in order to find out whether the relations in a given construction are ordering relations or simultaneity relations, one may start off by assuming that the relations that hold between the constituents of the given construction are ordering relations, i.e., asymmetrical relations. If there is evidence for ordering relations in a given construction then the construction in question is syntactic. If, on the other hand, no evidence for any potential of

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(1) The technique applied to this construction to see if it has ordering relations is not the only technique. For more techniques see Chapter III.

ordering relations can be shown in a given construction, then the construction in question is not syntactic but morphological. That is to say, the relations that hold between its constituents are relations of simultaneity, i.e., symmetrical relations. This boils down to saying that absence of any potential for ordering relations in a given construction is sufficient to say that the construction in question is morphological, thereby, the relations that hold between its constituents are relations of simultaneity.

Now, given the construction "cats" we want to know whether the relations that hold between its constituents are ordering relations or relations of simultaneity. The construction in question can be analyzed into "cat" & "plural". In order to see whether the relation between "cat" and "plural" is ordering relation or simultaneity relation we apply the permutation test to the construction in question. As the constituents of the given construction do not permute with one another and as no other tests can show any potential for ordering relation in the construction in question we conclude that "cats" is not a syntactic complex but a morphological complex. That is the relation between "cat" and "plural" is a relation of simultaneity.

From what has been said we conclude that what is characteristic of morphology is that any constructional relations which occur in it have to be, by definition, symmetrical simultaneity relations. On the other hand, the characteristic feature of syntax is that the constructional relations in it are, by definition, relations between

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(1) See Chapter III.

elements that can stand in asymmetrical relations with one another, or relations of simultaneity between syntagmatic entities.

We may go a step further and say that morphology is that part of grammar that deals with the analysis of simultaneous bundles of signs. In other words, it deals with the analysis of pleremes into monemes. "Plereme" is defined as "word or grammateme" (Mulder, "Postulates", Def.8b.) and "word" or "grammateme" is defined "self-contained (by definition: simultaneous) bundle of one or more monemes as its immediate (and at the same time ultimate) constituents" (Mulder, "Postulates", Def.8b<sup>1</sup>.). "Moneme", on the other hand, is defined as "minimum morphological entity" and, indeed "minimum grammatical entity". (Mulder, "Postulates", Def.8b<sup>3</sup>.)

In syntax we are concerned with the analysis of syntagms (see below) into lower level syntagms. This process, i.e., analysis of syntagms into lower level syntagms, goes on until we arrive at their ultimate constituents, i.e., pleremes. Therefore, we can say that there are two types of syntagmatic entities in syntax: syntagms and pleremes.

Since this work is of a syntactic nature in what follows I shall talk about the following:

1. Position.
2. Syntagm and sentence.
3. Immediate Constituent Analysis.
4. Syntactic relations.
5. Disjunctive or diverse determination versus parallel determination.
6. Occurrence dependency.

7. Logical order of procedures in syntactic analysis.

1. Position

"Positions" is defined "divisions within a chain, such that in every such division an entity, as an immediate constituent of that chain, can stand and alternate (i.e., commute) with other entities, or with zero", (Mulder, "Postulates", Def.7g.). "Chain" is defined "self-contained bundle of positions". (Mulder, "Postulates", Def.9.).

The notion "position" is an important notion in syntax as syntactic relations hold between elements that stand in different positions within the same group of interdependent positions. In other words, an element that stands in a position has function in syntax.

In a syntactic analysis one is concerned with identifying the different types of chain, hereafter referred to as syntagms. "Syntagm" which is equivalent to "chain" is defined as "self-contained bundle of positions in grammar", or "instance of a self-contained bundle of positions in grammar". (Mulder, "Postulates", Def.9b.). It is a distributional unit or field of relations in grammar. Every element which occurs in a particular syntagm is assigned to a position of that syntagm. The functions of the elements of any syntagm may be described in terms of the positions in which they stand. Therefore, in a syntactic analysis it is important to establish the correct number of positions in a syntagm. If the positions of a particular syntagm cannot account for the functions of all the elements of that syntagm, then the syntagm in question is inadequate.

## 2. Syntagm and Sentence

"Syntagm" is defined as "self-contained bundle of positions in grammar", or "instance of a self-contained bundle of positions in grammar". (Mulder, "Postulates", Def.9b.). Thus, "syntagm" does not only refer to the descriptive model, it also refers to instances of the model which we encounter in the data. In syntax the "syntagm" is the model with which we work for a syntactic analysis. In such analysis we only consider that syntagm which may or may not correspond to a sentence-base (see below). Example of a sentence-base from English: the sentence-base of "I drank milk" is the corresponding syntagm (i.e., without the intonation).

In syntax we analyze higher level syntagms into lower level syntagms then ultimately into pleremes. Therefore, a syntagm, depending on the syntactic level on which it occurs, may be an immediate constituent of a larger syntagm, or an element of a syntagm may be a syntagm in its own right on a lower level.

The maximum sign in any semiotic system is the sentence. "Sentence" is defined as "signum with such features that it cannot be a feature (constituent, or other feature) of another signum", or "signum such that it is a self-contained vehicle for conveying messages". (Mulder, "Postulates", Def.20.) The "sentence" is not just an ordered combination of syntactic elements. It has also other features such as intonation and pauses. These are called para-syntactic features. In a syntactic analysis we only consider sentence-bases of sentences to which there correspond well-formed syntagms. Therefore, we can say

that a syntactic analysis is an analysis of sentence-bases.

### 3. Immediate Constituent Analysis

The basic principle of immediate constituent analysis is that syntagms are not just linear sequences of elements, but they are composed of different levels of I.C.s (the abbreviated form of immediate constituents). In a syntactic analysis, higher level I.C.s are analyzed into lower level ones. This process goes on until we arrive at the ultimate constituents, i.e., pleremes. This shows us that language is hierarchically structured on the syntactic plane. The idea of cutting a syntagm into I.C.s is determined by the direct tactic relations (see below) that hold between its constituents.

In what follows I shall give an example from English and cut it into its I.C.s. The example is: "The farmer cut the tall tree.". I shall first establish the direct tactic relations that hold between the constituents of the syntagm in question. They, i.e., direct tactic relations, can be established as follows:

between "the farmer" and "cut",

between "the tall tree" and "cut".

On this basis, on the first level of analysis, the syntagm in question can be cut into the following three I.C.s:

- i. "the farmer",
- ii. "cut",
- iii. "the tall tree".

On another level of analysis, the I.C. "the farmer" can be cut into the I.C.s "the" and "farmer" as there is direct tactic relation between the two. Similarly, the I.C. "the tall tree" can be cut into the I.C.s "the", "tall" and

"tree" as there are direct tactic relations between "the" and "tree" as well as between "tall" and "tree". The ultimate constituents, i.e., pleremes, of the syntagm in question are "the", "farmer", "cut", "the", "tall" and "tree".

#### 4. Syntactic Relations

"Syntactic relations" are defined as "tactic relations in grammar" (Mulder, "Postulates", Def.7d<sup>1</sup>.) and "tactic relations" are defined as "constructional relations (whether ordering or not) between syntagmatic entities, as immediate constituents in combinations". (Mulder, "Postulates", Def.7c<sup>3</sup>.)

Therefore, there may be tactic and non-tactic relations between syntactic entities. There can also be direct and indirect relations. "Direct relation" is defined as "relation between constituents (not necessarily immediate constituents) that is not a relation via other constituents". (Mulder, "Postulates", Def.15.).

This gives us the following types of syntactic relations:

1. Direct tactic relation.
2. Indirect tactic relation.
3. Direct non-tactic relation.
4. Indirect non-tactic relation.

In what follows I shall give an example from English and show the four types of syntactic relations. The example is: "the man bought three cars".

1. Direct tactic relations can be established between the following:
  - "the man" and "bought",
  - "three cars" and "bought",
  - "the" and "man",
  - "three" and "cars".

2. Indirect tactic relations can be established, for instance, between the following:

"the man" and "three cars".

That is the relation between "the man" and "three cars" is via "bought".

3. Indirect non-tactic relations can be established between the following:

"the" and "bought",

"the" and "three",

"the" and "cars",

"man" and "three",

"man" and " cars",

"bought" and "three".

4. Direct non-tactic relations can be established between the following:

"man" and "bought",

"bought" and "cars".

The most important type of the aforementioned types of syntactic relation is direct tactic relation. There are three logical possibilities for the types of direct tactic relation:

i. Relation of sub-ordination.

ii. Relation of co-ordination.

iii. Relation of inter-ordination.

(1)

Relation of sub-ordination or "determination"

"Relation of sub-ordination" is defined as "direct tactic asymmetrical relation of functional dependency" (Mulder, "Postulates", Def.11a.). The converse of this

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(1) Mulder, "Postulates", (Def.11a.).

relation is super-ordination. In terms of symbols, if a and b stand in a direct tactic relation where a depends on b for its syntactic function but not vice versa we say that a is sub-ordinated to b whereas b is super-ordinated to a. In other words a determines b and b governs a. This type of relation can be symbolized as follows:



An example from English is: "the man". In this construction "the" depends on "man" for its syntactic function but not vice versa. Thus we can say that "the" is sub-ordinated to "man" and "man" is super-ordinated to "the". That is "the" determines "man" whereas "man" governs "the". The relation between the two, i.e., relation of sub-ordination, can be shown as follows:



(1)

Relation of co-ordination

"Relation of co-ordination" is defined as "direct tactic (by implication symmetrical) relation of mutual functional independency". (Mulder, "Postulates", Def.11b.). In terms of symbols, if a and b are in a direct tactic relation and each of them is independent for its syntactic function of the other, they are said to be standing in a relation of co-ordination one to the other. This type of relation may be symbolized as follows:

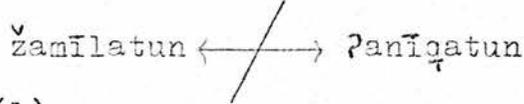


An example from Arabic is: /fatātun žamīlatun Panīqatun/ "a smart beautiful girl". In this syntagm

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(1) Mulder, "Postulates", (Def.11b.).

/žamīlatun/ "beautiful" and /ʔanīqatun/ "smart" stand in a direct tactic relation to one another, but none of them is dependent for its syntactic function on the other. In such a case, we can say that /žamīlatun/ and /ʔanīqatun/ stand in a relation of co-ordination to one another. The relation between the two can be shown as follows:



(1)

Relation of inter-ordination

"Relation of inter-ordination" is defined as "direct tactic (by implication : symmetrical) relation of mutual functional dependency". (Mulder, "Postulates", Def.11c.). If a and b stand in a direct tactic relation with one another and each of them is dependent on the other for its syntactic function, then we can say that a and b stand in a relation of inter-ordination to one another. This relation can be symbolized as follows:



An example from English is: "the sooner, the better". In this syntagm, "the sooner" and "the better" stand in a direct tactic relation to one another. In addition, each of them depends on the other for its syntactic function. Therefore, there is a relation of inter-ordination between the two. This relation can be shown as follows:



Of these three types of direct tactic relation, relation of sub-ordination is the most common type to be found in the description. In this type of relation, we may find one or more elements depending on another element

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(1) Mulder, "Postulates", (Def.11c.).

for their syntactic function. The element or the immediate constituent which governs the syntactic functions of the other elements, or the other immediate constituents of the syntagm, is called the "nucleus". "Nucleus" is defined "entity in nuclear position", (Mulder, "Postulates" Def.13a.), or "immediate constituent which governs the (1) function of other immediate constituents in the syntagm".

As soon as we talk about a nuclear element in a syntagm we imply that there are peripheral elements or a potential for peripheral elements in that syntagm.

"Peripheral element" is defined as "entity in peripheral position", (Mulder, "Postulates", Def.13b.). A peripheral element is sub-ordinated to the nuclear element and determines it, i.e.,  $\underline{a} \longrightarrow \underline{b}$  where  $\underline{a}$  is peripheral and  $\underline{b}$  is nuclear. That is,  $\underline{a}$  determines  $\underline{b}$  whereas  $\underline{b}$  governs  $\underline{a}$ .

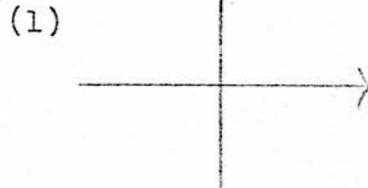
In syntax we may have two types of nuclear element. The first of these is "free nucleus". "Free nucleus" is defined as "nuclear immediate constituent that does not require the presence of a non-zero peripheral constituent", (Mulder, "Postulates", Def.13c.). In terms of symbols  $[\underline{a}] \longrightarrow \underline{b}$  where  $\underline{b}$  is a "free nucleus" and  $[\underline{a}]$  is a peripheral entity that is an expansion. "Expansion" is defined as "immediate constituent that commutes with zero". (Mulder, "Postulates", Def.13c.). We can say that all the elements peripheral to a "free nucleus" are expansions. The second type of nucleus is "non-free nucleus". A "non-free nucleus" is a nucleus that requires the presence of a non-zero peripheral constituent. In terms of symbols  $\underline{a} \longrightarrow \underline{b}$  where  $\underline{b}$  is a "non-free nucleus" and  $\underline{a}$  is called a bound peripheral entity. A "bound peripheral entity" is defined as "peripheral immediate constituent that does not commute with zero". (Mulder, "Postulates", Def.13d.).

5. Disjunctive or diverse determination versus parallel determination:

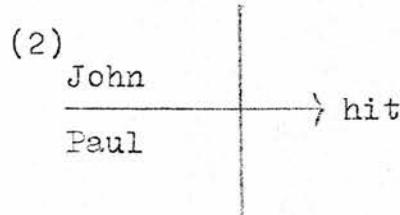
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(1) University of St. Andrews, Linguistics Department handout, (1977).

"Diverse determination" is defined as "complex tactic relation such that two or more peripheral immediate constituents are sub-ordinated to the same nucleus, but in different ways". (Mulder, "Postulates", Def.14a.). For this type of determination we may use the following notation:



An example from English is: "John hit Paul". In this syntagm "John" and "Paul" are two immediate constituents sub-ordinated to the same nucleus, e.g., "hit". However, the relation of "John" to "hit" is different from the relation of "Paul" to "hit". That is, if we have "Paul hit John" the message conveyed will be different from the message conveyed by "John hit Paul". Hence we encounter diverse determination. This type of determination can be shown as follows:



Conjunctive or parallel determination:

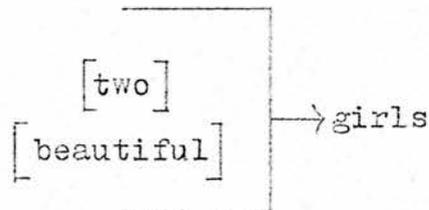
"Parallel determination" is defined as "complex tactic relation such that two or more peripheral immediate constituents are sub-ordinated to the same nucleus, but it cannot be ascertained that they are so in different ways". This type of relation can be presented as follows:



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(1) Mulder, "Postulates", Def.14a.  
(2) Ibid.  
(3) Mulder, "Postulates", Def.14b.

An example from English is: "two beautiful girls". This syntagm can be analyzed into the following I.C.s: two / beautiful / girls. Of these three I.C.s "girls" is the nucleus whereas "two" and "beautiful" are peripheral. That is to say, that "two" and "beautiful" are sub-ordinated to "girls". Since it cannot be ascertained that they do so in a different way we encounter parallel determination. That is, we can have "two girls" as well as "beautiful girls". This type of relation can be shown as follows:



"two" and "beautiful" have been put between square brackets to show that they are expansions, i.e., they can be replaced by "zero".

#### 6. Occurrence dependency:

In syntax we may distinguish between three types of occurrence dependency:

- i. Occurrence interdependency.
- ii. Unilateral occurrence independency.
- iii. Bilateral occurrence independency.

i. "Occurrence interdependency" is defined as "relation such that neither of two entities in direct relation which are immediate constituents of a chain can occur in the chain in question whilst the other is zero". (Mulder, "Postulates", Def.12a.). That is, both elements are dependent on one another for their occurrence.

An example from Arabic is: /qat̤aṣa rraḏulu lḥabla/  
"the man cut the robe". In this syntagm, the transitive

verb /qataṣa/ "cut" cannot occur without having an object. Similarly the object /lḥabla/ "the robe" cannot occur without the occurrence of a transitive verb. Thus, both the transitive verb and the object are mutually dependent for their occurrence. This situation rules out co-ordination, i.e., it may be a case of inter-ordination or of sub-ordination.

ii. "Unilateral occurrence independency" is defined as "relation such that one of two entities in direct relation which are immediate constituents of a chain can occur in the chain in question whilst the other is zero, but the other one cannot". (Mulder, "Postulates", Def. 12b.).

The relation of peripheral element to a "free nucleus" offers an example of this type of occurrence dependency. "Free nucleus" can occur without the occurrence of any peripheral entity. However, the occurrence of a peripheral entity depends upon the occurrence of a nuclear entity.

An example from English is: "the boys" where "the" for its occurrence depends on "boys" but not vice versa. This situation implies sub-ordination but not vice versa.

iii. "Bilateral occurrence independency" is defined as "relation such that each of two entities in direct relation which are immediate constituents of a chain can occur in the chain in question whilst the other is zero". (Mulder, "Postulates", Def. 12c.).

An example from Arabic is: /ʔibrīqun mina nnuḥāsi kabīrin zanīlin/ "a large beautiful jug of copper". In this syntagm /kabīrin/ "large" does not depend on

/zamīlin/ "beautiful" for its occurrence and vice versa. This situation implies co-ordination and vice versa.

7. Logical order of procedures in syntactic analysis  
(1)

"a. Analysis into immediate constituents.

b. Establishing whether the relation between these immediate constituents is sub-ordinative, co-ordinative or inter-ordinative.

c. If sub-ordinative, establishing which of the constituents is nuclear, and which is peripheral.

d. In case there are more than one peripheral constituents, establishing whether and, if so, how they stand in a different relation to the nuclear constituent.

e. Establishing whether a peripheral element is 'bound', or whether it is an 'expansion'. This operation is simultaneous with the other operations, as the outcome of a. and b., may partly depend on it, but itself depends on a. and c. As a classificatory device, however, it comes after e. We may say that until all five operations have been applied, each of the results remains hyper-hypothetical and cannot even be launched as a hypothesis concerning the phenomena. That is, until stage e. has been passed, each hypothesis has to be considered as a mere working-hypothesis.

f. Making an inventory of all types of syntagm that can be distinguished on this basis, and further classifying them according to the hierarchical levels on which they can occur. It is, for instance, clear that a syntagm such as "very old" is generally speaking of a lower hierarchical type than "the old man" is, because it commutes with one of the constituents of the latter, but not vice versa. The same is true for "the old man", versus "John hit Paul", as the former commutes with elements in the latter, but not vice versa. In a similar way we can classify words as to their syntactic potentials e.g., "very" is of a different (i.e., lower) order than "old", etc."

Chapter III

Morphological And Syntactic Complexes

The purpose of this chapter is to provide criteria by which we can identify morphological complexes and syntactic complexes as such. Such criteria will enable us to distinguish morphological complexes from syntactic ones. In addition, they will enable us to distinguish between true complexes and signs that look as though they may be complex, but actually turn out to be unanalyzable.

This has to be done as a prerequisite for attempting a syntactic analysis, because while attempting such an analysis of, say, the nominal syntagm of modern standard Arabic, we find some complex grammatical constituents that can be either morphological or syntactic. Therefore, the need for such criteria, i.e., criteria by which we distinguish morphological complexes from syntactic ones, is acute.

In order to show the need for such criteria, I shall give an example from Arabic. The example is: /ʔalkitābu/ "the book".

The above instance is a combination of /ʔal/"the", /kitāb/ "book", and the "nominative." At first sight, it seems to be that the above instance is a complex sign as we are intuitively inclined to think so. However, there is no formal reason to make us think that the instance in question is a complex sign. Nevertheless, let us suppose that the above instance is actually a complex sign. In such a case we are not able to tell whether it is a morphological complex or a syntactic one. Were it the case that the complex in question is a syntactic complex

consisting of /ʔal/ "the", /kitāb/ "book" and the nominative, we would assign its constituents to different syntactic positions. In other words, we would encounter a certain type of syntactic relations between its constituents. On the other hand, had it been the case that the above tentative complex turned out to be a morphological complex, it would have been assigned to one syntactic position. That is to say, no syntactic relations would have been encountered between the constituents of the given instance.

Since we cannot tell from sight or observation whether the above instance is a morphological complex or a syntactic one, if it is a complex sign at all, we need rigorous criteria by which we can decide whether a given sign is a complex one or not, and if it is a complex sign, whether it is a morphological complex or a syntactic one. Before I give the criteria which "axiomatic functionalism" provides for this purpose, I would like to point out what has been implied above, that signs can be either simple or complex. A simple sign is a sign that cannot be analyzed into two or more constituent signs, e.g., "book". On the other hand, a complex sign is a sign that can be analyzed into at least two constituent signs, e.g., "the table".

In what follows, I shall give the criteria by which "axiomatic functionalism" identifies and distinguishes morphological complexes from syntactic ones, and I shall apply these criteria to examples from Arabic as well as to examples from English. The criteria are the following:

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(1) See Hervey and Mulder, (1973) p.41.

" (1)

a) The complex sign P is a potential constituent.

b) The set X consists of at least two signs. If this were not the case - and a condition is that each constituent must be identifiable as a sign with a sign in at least one other context - then the sign P could not consistently be said to be complex.

c) The set X contains only simple signs. Monemes are all simple signs (though not vice versa), and therefore any complex containing at least one constituent which is itself a complex sign, cannot be a 'simultaneous bundle of monemes', by definition. This requirement, as we have said above, could be restated as a requirement that the immediate constituents of a 'morphological complex' should at the same time be its ultimate constituents.

d) The members of the set X (of simple signs) all stand in a relation of simultaneity to one another in the complex sign P. The other alternative, which is that at least two members of the set X are not simultaneous in P, implies that they must stand in syntactic relations in that complex which, in turn, implies that the complex P is a 'syntactic complex', and thereby directly refutes the hypothesis that P is a 'morphological complex'."

The first two of these criteria deal with identifying a potential morphological complex as being, in fact, a complex sign. The last two deal only with entities that are already identified as complex signs; they deal with the complexes in terms of discriminating between syntactic and morphological complexes.

Needless to say that in application one should follow the above four steps in succession. When the given entity goes through one stage we pass it to the next one. We could not tell whether a given entity is a morphological complex or a syntactic complex unless we identify it as a potential grammatical constituent.

In what follows, I shall discuss each of the above criteria and apply it to as many examples as possible.

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(1) Hervey and Mulder, (1973) pp.43-44. To criterion (a) Mulder has recently made the reservation that this holds except when it by structural necessity corresponds to a complex sentence. To this criterion Hervey and Mulder added that the complex must be self-contained.

(1)

Criterion (a) states that, with certain natural exceptions, a morphological complex must be a potential constituent in grammar, and it must be self-contained. If it is discovered that the given tentative complex is not a potential grammatical constituent, which, in fact, means that it is not self-contained, then it does not qualify as a morphological complex.

By commutation we can decide whether a given entity is a potential grammatical constituent or not. Therefore, if the given entity is a potential constituent in a least one larger complex, then it is a potential grammatical constituent. Now, given the entity "shopkeeper", we can say that it is a potential grammatical constituent since it is a potential constituent in, say, "the shopkeeper" where it commutes with "bank manager", "girl" and "door". Similarly, given the following entity from Arabic: /ʔalkitābu/ "the book", we can say that it is a potential grammatical constituent as it is a potential constituent in, say, /ʔalkitābu lʔadīdu/ "the new book" where it commutes with /ʔalqalamu/ "the pen", /ʔalmabnā/ "the building", etc. On the other hand, "the black" in "the black box" is not a potential grammatical constituent as it is not self-contained.

Criterion (b) states that in order to call a given grammatical constituent a complex sign, it must consist of at least two signs. The criterion by which we determine whether a given potential entity is a complex sign or a simple sign is commutation. If commutation permits

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(1) Mulder's remark.

(2) Hervey and Mulder, (1973) p.44.

that potential entity to be analyzed into two or more constituents and each of these constituents can be identified as a fully-fledged linguistic sign, then, of course, it is valid to call that entity a complex of signs.

Before applying the commutation test for any given potential entity, two points have to be made clear. The first of these is to avoid pseudo-analysis on intuitive grounds. The second is to avoid analysis on the grounds of form alone. Therefore, in order to conduct a valid commutation we must keep it between signs and nothing else. Furthermore, there must be no residue while attempting an analysis of a given potential entity. In other words, you cannot analyze X, for example, into two signs plus something else. This kind of analysis is rejected.

This leads us to a further consideration while applying the commutation test. This has something to do with the denotational role of the linguistic sign. A constituent sign is not a mere form but an element with a certain form and a certain denotation. This denotation is a kind of constant function of the given sign. In fact, it is part of the definition of that sign. This means that each constituent in the tentative complex sign can only be identified as a constituent sign only if it plays a denotational function in the complex of which it is said to be a constituent. So, if we have a grammatical complex such as, for example, aRbRc (R stands for in relation to), then the denotation of the complex as a whole is a function of the denotation of each constituent plus the relations that hold between the constituent signs of the complex in question. That is to say, each of the

constituent signs of any complex sign must play a regular and identifiable role in the overall denotation of the whole complex.

For example, if we have the complex sign "the tall girl" we notice that each constituent sign in this complex is expected to contribute its own denotation to the overall denotation of the whole complex. The constituent sign "the" contributes the denotation of "definiteness" to the whole complex, whereas "tall" contributes the denotation of a "physical property" to the construction. On the other hand, the constituent sign "girl" contributes the denotation of "a type of a female human being" to the complex in question. The constructional relations, i.e., the relations that hold between the constituent signs of the complex in question, on the other hand, play their semantic role in the above construction. They relate the denotation of "definiteness", the denotation of a "physical property" and the denotation of "a type of a female human being" to one another. We conclude that the denotation of a given complex sign bears some relation to the denotation of each of its constituent signs plus the relations that hold between these constituents.

Now suppose that X is a complex sign whose immediate constituent signs are Y and Z and the constituent signs, in turn, stand in some grammatical relation (R) to one another, then this complex can be broken down with regard to its denotational role as follows:

(1)

"X"		
Y	R	Z
denotation of Y	which bears some relation to	denotation of Z
denotation of Z	which bears some relation to	denotation of Y

The whole thing depends on both Y and Z being identifiable as signs in X. According to the aforementioned criterion each of Y and Z can be identified as signs, if for each of them we find an equivalent complex in which we have an element formally non-distinct from each of Y and Z, taken one at a time, playing the same semantic role. In other words, the context and the constructional relations must be kept constant while commuting one element with another.

Now, I shall give examples to illustrate what has been said above. Given the sign "bank manager" from English, we want to know whether it is a complex sign or a simple one. Of course, we already know that the sign in question is self-contained and therefore a potential grammatical constituent. In addition, it occurs in larger complexes such as "the old bank manager" where it commutes with "man", "woman", etc. In order to see whether the sign "bank manager" is a complex sign or not we commute each of its tentative constituents, taken one

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(1) See Hervey and Mulder, (1973) p.49.

at a time, with elements that may occur in the same context. That is to say, while applying the commutation test to either of its tentative constituents, we must make sure that the context together with the denotation of the constituent we are commuting, are kept constant. In addition, the constructional relations in the tentative complex must be kept constant during the commutation process. Other-wise, we will be no longer commuting signs but mere forms. Let us first apply the commutation test to the tentative constituent "bank" while keeping "manager" together with the constructional relations that hold between the tentative constituents constant. By commutation we will get:

company	manager
∅	manager

On the other hand, by applying the same test to "manager" we will get:

bank employee

We conclude that the requirements of identifying "bank manager" as a complex sign consisting of the two constituent signs "bank" and "manager" have been fulfilled.

Having given an example from English to illustrate how the procedure of identifying a complex sign from an unanalyzable one works, I shall proceed by giving an example from Arabic. Now, given the entity /ʔalkitābu/ "the book" we want to know whether it is a complex sign or not. We know that the entity in question is self-contained, therefore a potential grammatical constituent. It occurs in larger complexes such as /ʔalkitābu lʔadīdu/ "the new book" where it commutes with /ʔalqalamu/ "the

pen", /ʔaθθaubu/ "the dress", etc. We start off by assuming that the sign in question consists of the tentative signs /ʔal/ "the", /kitāb/ "book" and the allomorph /u/ of the nominative. Now I shall commute each of them with other elements while keeping the others constant. By applying the commutation test to /ʔal/ "the" we will get the following:

(1)  
 ∅ kitābun

Similarly, by applying the commutation test to /kitāb/ "book" while keeping the others constant we will get:

ʔalmadrasatu	"the school"
ʔalfatātu	"the girl"
ʔalqamaru	"the moon"

In the same way, by commuting the allomorph /u/ of the nominative while keeping /ʔal/ and /kitāb/ constant we will get:

(2) ʔalkitāba  
 ʔalkitāb ∅

From this we conclude that the sign /ʔalkitābu/ "the book" is a complex sign consisting of the constituent signs /ʔal/ "the", /kitāb/ "book" and the allomorph /u/ of the nominative.

Having dealt with the first two criteria, I shall now deal with the third and fourth criteria which aim at distinguishing morphological complexes from syntactic ones. Criterion (c) states that none of the immediate constituents of a morphological complex are by requirement allowed to be a complex sign. This boils down to saying that all the immediate constituents of a morphological

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(1) /un/ and /u/ are allomorphs of one and the same sign, i.e., the nominative.

(2) /a/ is the allomorph of the accusative

complex are at the same time its ultimate constituents, i.e., not further analyzable into other, smaller grammatical constituents.

By commutation we can tell whether the immediate constituents of a given grammatical complex are at the same time its ultimate constituents or not. A complex sign has as many constituent signs as it can be proved by applying the commutation test. Now suppose by commutation "foolishly" has been analyzed into "fool, "-ish" and "-ly" then it is possible that "fool" and "-ish" belong more closely to one another than either of them does to "-ly". In other words, on the first level of analysis, "foolishly" can be analyzed into two immediate constituents: "foolish" and "-ly". On another level of analysis "foolish" can be analyzed into two immediate constituents: "fool" and "-ish". This means that the immediate constituents of the complex in question are not at the same time its ultimate constituents. Therefore, the possibility of the given complex being a morphological complex may be ruled out. Yet, we cannot decide that it is a syntactic complex unless we apply the fourth and final criterion.

Criterion (d) has to do with the type of relation that holds between the constituents of a given complex. By definition, all the constituents of any morphological complex stand in a relation of simultaneity to one another. In other words the relations that hold between the constituents of a morphological complex are symmetrical ones. On the other hand, the relations that hold between the constituents of a syntactic complex are syntactic relations. Therefore, when given a grammatical complex whose type is unknown to us, i.e., we do not know whether it is morphological or syntactic, we try to find

out whether the relations that hold between its constituents are morphological simultaneity relations or syntactic relations.

We start off with the assumption that the given complex is a simultaneous bundle of monemes, i.e., a morphological complex. In other words, the relations that hold between its constituents are relations of simultaneity, i.e., symmetrical relations. As relations of simultaneity cannot be positively and directly proved in a given grammatical complex, we try to bring evidence to refute the assumption that the given complex is a simultaneous bundle of monemes, i.e., morphological complex. We do that by attempting to find or failing to find evidence of syntactic relations within the given complex. If we find syntactic relations or potential for syntactic relations in the given grammatical complex, then it is a syntactic complex. If, on the other hand, we do not find any potential for syntactic relations within a given complex, then that is a sufficient evidence that the given grammatical complex is a morphological complex.

As regards the evidence for trying to find or failing to find syntactic relations within a given complex, (1) "axiomatic functionalism" distinguishes between internal evidence and external evidence. By external evidence we mean the way the given sign would behave in larger complexes. By internal evidence we mean looking at the complex sign from the inside, considering its internal structure and the possibility of performing certain operations within the given complex. Therefore, external evidence

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(1) See Hervey and Mulder, (1973) p.55.

is used to demonstrate that a given complex is in fact a potential grammatical constituent. However, external evidence should not be used to infer the internal structure of a given grammatical complex. That is to say, it should not be used to decide whether a particular complex sign is internally morphological or syntactic. Whether a particular complex sign is morphological or syntactic is a matter of its internal structure only. So the only evidence we use to determine whether a given complex sign is morphological or syntactic is evidence that comes from within the complex sign itself, i.e., internal evidence.

Now if there is internal evidence of syntactic relations within a given complex sign, then the complex in question is a syntactic complex. If, on the other hand, internal evidence has failed to prove syntactic relations or the potential for syntactic relations within a given complex sign, then the sign in question is a simultaneous bundle of monemes, i.e., a morphological complex. Therefore, when given a particular given sign, we start off with the assumption that it is a morphological complex. Since we cannot positively prove that the relations within the complex in question are morphologically simultaneous relations, we try to refute or to confirm the assumption that the complex in question is morphological by finding or failing to find syntactic relations within the given complex.

(1)

Reversibility or permutation is one of the techniques for attempting to refute the assumption that a

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(1) See Hervey and Mulder, (1973) p.55.

given complex sign is morphological. Now given a complex sign like "office guard", we want to know the type of relations that hold between its constituents. First of all, we already know that the sign in question is self-contained, therefore, a potential grammatical constituent. In addition, it is a complex sign consisting of the constituent signs "office" and "guard". The immediate constituents of the complex sign in question are at the same time its ultimate constituents. Now, the question is: are its constituent signs standing in morphological simultaneous relations to one another or is there any evidence of syntactic relations or potential for syntactic relations between its constituents? In order to answer this question we apply the reversibility test or permutation. We ask ourselves whether the same constituents, i.e., denotationally and formally, of the complex sign in question can be permuted with one another and whether that would give us a different construction.

Now, by permuting "office" with "guard" in "office guard" we get "guard office". We notice, here, that "office" and "guard" have kept their identity constant in both "office guard" and "guard office". The difference between the two, i.e., between "office guard" and "guard office", is a matter of the relations that hold between the constituents of each of them. That is to say, the relations between "office" and "guard" in "office guard" on the one hand, and the relations between "guard" and "office" in "guard office" on the other, are different. In other words they are asymmetrical type of relations. This means that the relation within the complex sign

"office guard" is not a morphological simultaneous relation, because by definition a simultaneous relation is a symmetrical relation. We conclude that the complex sign in question, e.g., "office guard" is a syntactic complex and not a morphological one.

Although permutation is the easiest way of demonstrating that a given complex sign has a syntactic internal structure and, therefore, not a morphological one, absence of permutation does not necessarily mean that a given complex sign is morphological. The possibility is still open for a given complex sign to be syntactic although we cannot carry out the permutation test on its constituent signs. An example from English is "black box". This complex sign is a syntactic complex although its constituent signs do not permute with one another in a functional way. Thus, a grammatical complex may not be reversible and ~~may~~ still turn out to be syntactic.

If further tests yield negative results regarding the evidence of syntactic relations within a given complex sign then the given complex sign is morphological. Otherwise it is syntactic. The point is that if we find any potential for relational hierarchy or syntactic positions within a given grammatical complex, then the complex in question is syntactic and, therefore, not morphological. By definition morphological simultaneity relations do not tolerate any form of relational hierarchy or any kind of potential for internal positions within it, because simultaneous bundles of monemes are constituted by the simple togetherness of mutually

symmetrical monemes.

(1)

If, for example, we have the complex sign X consisting of the constituent signs a and b, and we commute b with the sign Z, while keeping a constant, in such a way that Z stands in a syntactic relation with respect to a, then b, which stands in an equivalent relation to a, must stand in a syntactic relation with respect to a.

Now given the following example from English:

"radio station" we want to know whether this complex sign has any potential for syntactic relational hierarchy or any potential for syntactic positions within it. If it has any such potentials then it is a syntactic and not a morphological complex. The immediate constituents of the complex sign in question are at the same time its ultimate ones: "radio" and "station". By commuting "radio and television" with "radio" we will get the complex sign "radio and television station". In this complex sign the immediate constituents are "radio and television" and "station". On another lower level of analysis "radio and television" is analyzed into the I.C.s "radio" and "and television". On the lowest level of analysis "and television" can be analyzed into the I.C.s "and" and "television". What is relevant for our purpose is that on the lowest level of analysis "and" and "television" stand in separate syntactic positions. Consequently, on the following higher level of analysis, "and television" must stand in a syntactic position with regard to "radio". On the highest level of analysis "radio and television" must stand in a syntactic position

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(1) See Hervey and Mulder, (1973) pp.57-58.

with respect to "station". As the relation between "radio" and "station", on the one hand, is equivalent to the relation between "radio and television" and "station", on the other, and the latter being syntactic, then the relation in "radio station" is syntactic. Therefore, the complex sign "radio station" is not a simultaneous bundle of monemes, i.e., is not a morphological complex, but is a syntactic complex.

So far the criteria for identifying and distinguishing morphological complexes from syntactic complexes have been discussed and demonstrated in such a way that it will enable us to identify grammatical complexes whenever we find them. Following is a list of items from

Arabic:	/kitābun/	"a book"
	/ʔalkitābu/	"the book"
	/ṣundūqulxaṣabi/	"the wooden box"
	/zauḏuhā/	"her husband"

Now, we want to know which of these items are complex signs and what kind of complexes they are, i.e., morphological or syntactic complexes. This can be done by applying the aforementioned criteria to each of the given items, taken one at a time. For the time being, let us assume that the items in question are morphological complexes. Then we shall try to confirm or refute this assumption.

First of all the above items are self-contained, therefore potential grammatical constituents. Now if we take the item /kitābun/ we can identify two constituent signs in it. By commuting /kitāb/ "book" with other entities that may appear in the same context while keep-

ing /un/ constant we will get:

/ualadun/ "a boy"

/raʒulun/ "a man"

Similarly by commuting /un/ with other entities or with its absence, i.e., "zero", while keeping /kitāb/ constant we will get:

/kitāb/  $\emptyset$

This gives us evidence that the sign /kitābun/ is a complex sign consisting of the constituent signs /kitāb/ and the allomorph /un/ of the nominative.

Now having identified two constituent signs in the sign /kitābun/ we want to see whether the complex sign in question has any potential for any syntactic relations within it. If it has such a potential, then it is not a morphological complex, but is a syntactic complex.

The first technique, i.e., permutation, for discovering syntactic relations within this complex, does not apply as the constituent signs of the complex in question cannot<sup>be</sup> permuted. On the other hand, if we apply the other techniques for discovering syntactic relations or potential for syntactic relations within the given complex we will find that no evidence for any potential of syntactic relations can be shown in the given complex sign. We conclude that the complex sign /kitābun/ is not a syntactic complex but a morphological one.

As regards the element /ʔalkitābu/ "the book", by commutation we can identify three constituent signs within it. By commuting /kitāb/ with other elements that may occur in the same context we will get:

/ʔalualadu/	"the boy"
/ʔalmarʔatu/	"the woman"
/ʔalmadrasatu/	"the school"

Similarly by commuting  $\overset{(1)}{/ʔal/}$  "the" with its absence we will get: /kitābun/  $\emptyset$

Now, by commuting the allomorph /u/ of the nominative by its absence we will get: /ʔalkitāb/  $\emptyset$

Thus, we have demonstrated that /ʔalkitābu/ is a complex sign consisting of the constituent signs /ʔal/ "the", /kitāb/ "book" and the allomorph /u/ of the nominative. The immediate constituents of this complex are at the same time its ultimate one. In this case we have satisfied criterion (c).

It remains for us to see whether the complex in question is a simultaneous bundle of monemes or not.

As simultaneity relations cannot be proved positively, we try to see whether the complex sign in question has any potential for syntactic relations or syntactic positions within it. We do that by applying one of the techniques I mentioned earlier. These include permutation and commutation. As the constituents of /ʔalkitābu/ cannot <sup>be</sup> permuted in a functional way we apply the commutation test. If we find a constituent with potential for syntactic relations within it, and this constituent commutes with any constituent sign of the complex sign in question, provided that the commutation process is valid, then we will end up by saying that /ʔalkitābu/ is a syntactic complex. That is to say,

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(1) /un/ and /u/ are allomorphs of one and the same sign, i.e., the nominative.

the complex will not be a simultaneous bundle of monemes. As far as I know there is no sign that can be said to be syntactic which can commute with any constituent sign of the complex sign /ʔalkitābu/. We conclude that the complex sign in question is a morphological complex.

As regards the complex sign /ʂundūqu lxašabi/ "the box of wood" it cannot be a morphological complex because its immediate constituents are not at the same time its ultimate constituents. The complex sign in question forms, on the first level of analysis, the I.C.s /ʂundūqu/ "box" and /lxašabi/ "the wood". On a further level of analysis /lxašabi/ forms two I.C.s: /l/ "the" and /xašabi/ "wood". Now if we commute /ʂundūqu ua kursiiu/ "box and chair" with /ʂundūqu/ "box" in /ʂundūqu lxašabi/ we will get the complex sign /ʂundūqu ua kursiiu lxašabi/ "the box and chair of wood". This complex sign forms two I.C.s, on the first level of analysis. These are /ʂundūqu ua kursiiu/ "box and chair" and /lxašabi/ "wood". On another level of analysis /ʂundūqu ua kursiiu/ forms the I.C.s /ʂundūqu/ and /ua kursiiu/. On a further level of analysis /ua kursiiu/ forms the I.C.s /ua/ "and" and /kursiiu/ "chair". On the lowest level of analysis /ua/ and /kursiiu/ stand in two separate syntactic positions. On the following higher level of analysis /ua kursiiu/ must stand in a syntactic relation with respect to /ʂundūqu/ "box". On the highest level of analysis /ʂundūqu ua kursiiu/ "box and chair" must stand in a syntactic relation with respect to /lxašabi/ "wood". As the relation between /ʂundūqu/ "box" and /lxašabi/ "the wood", on the

one hand, is equivalent to the relation between /ṣundūqu ua kursiū/ "box and chair" and /lxašabi/, on the other, and the latter being syntactic, then /ṣundūqu/ in /ṣundūqu lxašabi/ must stand in syntactic relations with respect to /lxašabi/. That is to say the complex sign /ṣundūqu lxašabi/ "the box of wood" is a syntactic complex.

Now, it remains for us to decide whether the sign /zaužuhā/ "her husband" is a simultaneous bundle of monemes or not. By commuting the tentative constituent sign /zauž/ "husband" in the sign "/zaužuhā/ with other constituents that may occur in the same context we will get:

/baituhā/	"her house"
/əaubuhā/	"her dress"
/ʔibnuhā	"her son"

Similarly by commuting /hā/ "her" in /zaužuhā/ with other elements that may occur in the same context we will get:

/zaužu bnatihā/	"her daughter's husband"
/zaužu lmarʔati/	"the woman's husband"

In the same way if we commute the allomorph /u/ of the nominative with the allomorph /a/ of the accusative we will get:

/zaužahā/

We conclude that the sign /zaužuhā/ "her husband" is a complex sign consisting of the constituent signs /zauž/ "husband", /hā/ "her" and the allomorph /u/ of the nominative. In addition, the immediate constituents of the complex sign in question are <sup>not</sup> at the same time its ultimate constituents.

In order to see whether the complex sign in question is morphological or syntactic, we will start off with the assumption that the given complex is a simultaneous bundle

of monemes, i.e., a morphological complex. If the complex in question shows any potential for syntactic relations or syntactic positions within it then it is not morphological. In order to see whether this complex sign has any potential for syntactic relations or syntactic positions or not we will apply the commutation test and not the permutation test as the constituents of the given complex ~~cannot~~<sup>be</sup> permuted ~~in any~~ in any functional sense.

By commuting /hā/ "her" with /bnati šaqīqatihā/<sup>a</sup> "her sister's daughter" we will get the complex sign /zaužu bnati šaqīqatihā/ "the husband of her sister's daughter". The new complex sign forms, on the first level of analysis, the I.C.s /zaužu/ "husband" and /bnati šaqīqatihā/ "her sister's daughter". On the next lower level of analysis, /bnati šaqīqatihā/ forms the I.C.s /bnati/ "daughter" and /šaqīqatihā/. On the following lower level of analysis, /šaqīqatihā/ "her sister" forms the I.C.s /šaqīqati/ "sister" and /hā/ "her". We notice that /bnati šaqīqatihā/ stands in syntactic relations with respect to one another. Therefore, it, i.e., /bnati šaqīqatihā/ must stand in syntactic relations with respect to /zaužu/ "husband" in /zaužu bnati šaqīqatihā/. Since the relation between /zaužu/ and /hā/ in /zaužhā/, on the one hand, is equivalent to the relation between /zaužu/ and /bnati šaqīqatihā/ in /zaužu bnati šaqīqatihā/, on the other, then /hā/ must stand in syntactic relations with respect to /zaužu/ in /zaužuhā/. That is to say, /zaužuhā/ is not a morphological complex, but is a syntactic complex.

Chapter IV

Positions within the Nominal Syntagm

In Arabic, just as in many other languages, in normal non-elliptical speech, the nominal syntagm can occur on its own as well as with other syntagms in the language. Normally, it is subordinated to some other syntagm, e.g., a predicative or a functional syntagm. In addition, the nominal syntagm in modern standard Arabic can be realized in different ways. One of these ways is when the syntagm is realized by a single constituent. An example is:

al-lu'adu/ "the boy"

As the nominal syntagm can be realized by one constituent, it follows that the other elements of the syntagm are expansions, i.e., they can be left out or replaced by "zero".

Since our study is of a syntactic nature, i.e., we are mainly interested in the field of relations that hold between the elements of the nominal syntagm, the above instance of the nominal syntagm does not help us in setting up an exhaustive descriptive model for the syntagm.

As the name suggests, the nominal syntagm has as its nucleus a noun or any element regarded as such. In order to account for the relations that hold between the elements of the nominal syntagm I am going to set up a model for this syntagm. In such a model it is necessary to show the relations between the nucleus and the peripheral elements. Moreover, the model will account for any element that might occur in any instance of the nominal syntagm. If, in any case, it is

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(1) For ellipsis see Chapter VII.

(2) For "predicative" and "functional" syntagms see Chapter VI.

discovered that a constituent of the nominal syntagm cannot be fitted into the model, it means that the model is inadequate and has to be discarded or altered.

The model must allow for the maximum realization of the positions of that syntagm. That is, the syntagm as a descriptive model must be of a sufficient extent to account for all the elements assigned to positions in it. By definition, the nuclear position is always filled in the nominal syntagm. The peripheral positions may or may not be filled in every instance of the nominal syntagm, but there must always be sufficient positions in the model for all these peripheral elements.

In the following paragraphs I shall give examples of instances of the nominal syntagm and try to set up a descriptive model for this syntagm. The following examples may be helpful for this purpose:

1. /ʔalmadrasatu/ "the school"
2. /ʔalbintu lʒamīlatu/ "the beautiful girl"
3. /muḥammadun hādā/ "this Mohammad"
4. /xamsūna raʒlan/ "fifty men"
5. /ʒiʃrūna raʒulan qawīan/ "twenty strong men"
6. /hāʔulāʔi ʕalāʕatu ʔullābin/ "these three students"
7. /hāʔulāʔi ʕalāʕūna ʔāliban nnaʃīʔīna/ "these thirty active students"
8. /hāʔulāʔi lʒiʃrūna ʔāliban nnaʃīʔīna fi lmasbaḥi/ "these twenty active students in the swimming pool"

Example 1. is an instance of the nominal syntagm with one position, i.e., nuclear position. This one-position syntagm cannot be regarded as an adequate model for the nominal syntagm in Arabic as it does not account for the whole field of

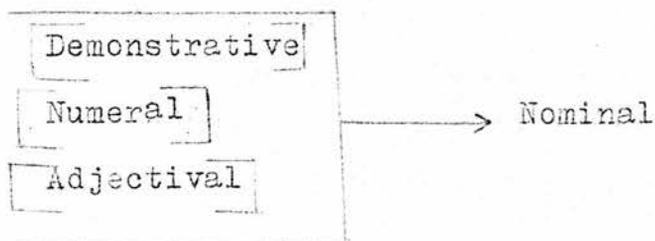
relations within the nominal syntagm. As soon as we find instances of the nominal syntagm with more than one position, as it is the case in the rest of the examples given above, we discover that a one-position model cannot be an adequate model for the nominal syntagm in Arabic, thereby, it must be discarded. Similarly, a two-position syntagm, as it is the case in examples 2., 3. and 4. cannot be regarded as the model that adequately accounts for the whole field of relations within the nominal syntagm in its maximum extent. This can be easily shown if we examine examples 5. and 6. If we try to fit the elements of these two instances of the nominal syntagm in a two-position model, we will find that only two elements of each instance can be fitted into the two-position model whereas the third element in each instance cannot be fitted at all. Therefore, the two-position model must be discarded as it does not adequately account for the relations that hold between the elements of the nominal syntagm.

In the same way, a three-position model, as it is the case in examples 5. and 6., must be discarded as it cannot represent the nominal syntagm in its maximum extent.

Now if we take example 7. :

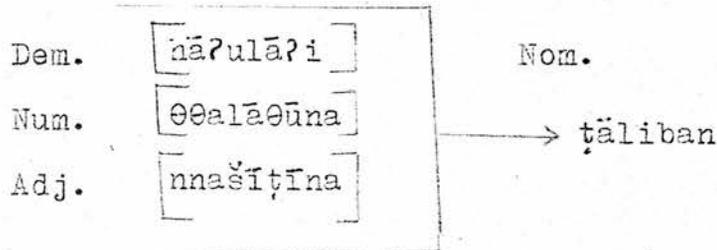
/hāʔulāʔi ʕalāʕūna ʔaliban nnašīʔina/ "these thirty active students"

as an instance of the nominal syntagm in its maximum extent, we would set up a four-position model and label the positions: "demonstrative", "numeral", "adjectival" and "nominal" positions. The four-position model can be schematized as follows:



The model shows three peripheral positions namely the "demonstrative", the "adjectival" and the "numeral" positions. These three peripheral positions stand in a relation of subordination to the nuclear position, i.e., nominal. As the three peripheral positions can be expansions, i.e., they can be replaced by "zero" they have been put between square brackets.

Now the elements or I.C.s of the aforementioned syntagm would be assigned to their positions in the model as follows:



(Dem., Num., Adj. and Nom. are abbreviated forms of demonstrative, numeral, adjectival and nominal respectively.)

The nominal element is the nuclear element of the syntagm and is determined by the peripheral elements: /hā?ulā?i/ "these", /θəalāθūna/ "thirty" and /nnašīṭīna/ "active"

in the "demonstrative", "numeral" and "adjectival" positions respectively. Each of these stands in a relation of subordination to the nucleus and each is an expansion to the nucleus.

Needless to say that in a relation of subordination, we find one or more elements depend for their syntactic function on another element. In the syntagm in question the elements or I.C.s /hā?ulā?i/ "these", /θəalāθūna/ "thirty" and /nnašīṭīna/ "active" depend for their syntactic function on /ṭāliban/ "student". That is, in this syntagm, none of the I.C.s /hā?ulā?i/, /θəalāθūna/ and /nnašīṭīna/ or all can occur without the occurrence of /ṭāliban/ but not vice versa.

Since we cannot determine that one of the peripheral I.C.s is subordinated to the nucleus in a different way from the other, we have parallel determination. That is we can have:

/hāʔulāʔi ʔtullābu/	"these students"
/ʕalāʕūna ʔāliban/	"thirty students"
/ʔulābun našīʔūna/	"active students"

In order to find out whether this four-position model is adequate or not we have to apply it to the other examples given above to see if it adequately accounts for all the relations between the elements of each instance of the nominal syntagm. If it does in a convincing way then it is an adequate model, if it does not then it must be discarded and a new model must be set up and tested. The table below shows how the elements of the instances given above would be assigned to the four positions of the model.

The Instances Assigned to the Four-position Model

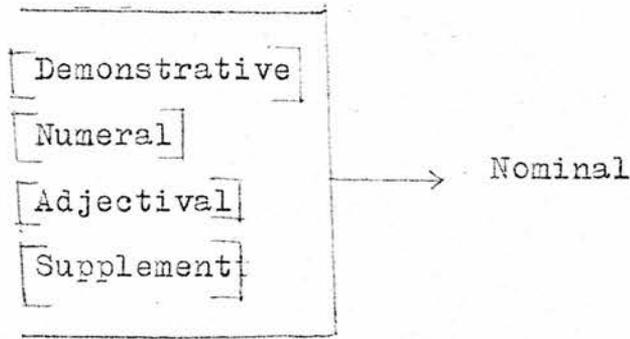
	Demonstrative	Numeral	Adjectival	Nominal
1	∅	∅	∅	ʔalmadrasatu
2	∅	∅	lʔamlatu	ʔalbintu
3	hādā	∅	∅	muḥammadun
4	∅	xamsūna	∅	raʔulan
5	∅	ʔiṣrūna	qauḍan	raʔulan
6	hāʔulāʔi	ʕʕalāʕatu	∅	ʔullābin
7	hāʔulāʔi	ʕʕalāʕūna	nnašīʔīna	ʔāliban
8	hāʔulāʔi	lʔiṣrūna	(nnašīʔīna fi lmasbaḥi)	ʔāliban

One of the consequences of the four-position model, is that the elements occurring in the "adjectival" position in instance 8. form a single I.C. of the nominal syntagm in

question. That is, on the first level of analysis of the syntagm type, /nnašīṭīna/ "active" and /fi lmasbaḥi/ "in the swimming pool" together, and not separately stand in a direct relation with the nucleus. On a lower level of analysis it must be shown whether they stand in any syntactic relation with each other. As no direct syntactic relation can be shown between /nnašīṭīna/ and /fi lmasbaḥi/, the assumption that both elements are of the same position class, and as such form one I.C. on the first level of analysis, must be discarded.

Similarly, if we assign the elements /fi lmasbaḥi/ to the "numeral" or the "demonstrative" positions, we cannot show a direct relation between /fi lmasbaḥi/ and /hāʔulāʔi/ or between /fi lmasbaḥi/ and /lṣiṣrūna/ "twenty" on the one hand and the nucleus /ṭāliban/ on the other. That is to say, in the syntagm in question /fi lmasbaḥi/ can never form, on the first level of analysis, one immediate constituent with either /hāʔulāʔi/ or /lṣiṣrūna/. The only relation which holds between /fi lmasbaḥi/, /hāʔulāʔi/ and /lṣiṣrūna/ is an indirect one via the nuclear element /ṭāliban/.

This shows that our model, i.e., four-position model, for the nominal syntagm is inadequate since it has not adequately accounted for all the elements which occur in instances of the nominal syntagm and the relations which hold between them. In order to avoid the discrepancy in our model a further position is required to account for the occurrence of elements such as /fi lmasbaḥi/. To this position we may give the label "supplement". Thus the model for the nominal syntagm has to be set up as follows:



Thus, a five-position model for instances of the nominal syntagm, i.e., possible realizations of the syntagm, has been set up. In the following table I shall show how the elements or I.C.s of the previous instances of the nominal syntagm can be assigned to their positions in the model:

The Instances Assigned to the Five-position Model

	Demonstrative	Numeral	Adjectival	Supplement	Nominal
1	∅	∅	∅	∅	ʔalmadrasatu
2	∅	∅	lʒamīlatu	∅	ʔalbintu
3	nāḏā	∅	∅	∅	muḥammadun
4	∅	xamsūna	∅	∅	raʒulan
5	∅	ʒiṣrūna	ḡauḡan	∅	raʒulan
6	hāʔulāʔi	ḡḡalāḡatu	∅	∅	ṭullābin
7	hāʔulāʔi	ḡḡalāḡūna	nnašīṭīna	∅	ṭāliban
8	hāʔulāʔi	lʒiṣrūna	nnašīṭīna	fi-lmasbaḡi	ṭāliban

Having set up a five-position model I shall apply it to the following instances of the nominal syntagm to see whether it adequately accounts for all the elements that have occurred in these instances or not. If it accounts for all the elements in the following instances of the nominal syntagm in a convincing way then it is adequate. Otherwise it is inadequate and it has to be discarded or altered. The instances that are to be accounted for in the model are the following:

1. /kitābu ṭṭālibi/ "the student's book"

2. /maktabatu lmadrasati/ "the school library"

Two points have to be made clear before assigning the elements of the above syntagms to their positions in the model. The first one is that entities in positions in the model of the nominal syntagm are mutually exclusive. That is to say, we will not find two immediate constituents of the full syntagm in any single position except in case of "apposition". On this basis we can group the elements which occur in the same positions into classes and label them as position classes. In the "demonstrative" position, for example, we can either have /hādā/ "this", /tilka/ "that" or "these", /dāka/ "that" or /hā?ulā?i/ "these" etc. We can group these items into one position class and call it "the demonstrative position class".

The second point is that the idea of belonging to the same position class rather than to another can be easily shown by applying the commutation test. That is we commute the given entity with the other entities that might appear in the same context. If it commutes with them in the same context then it belongs to the same position class.

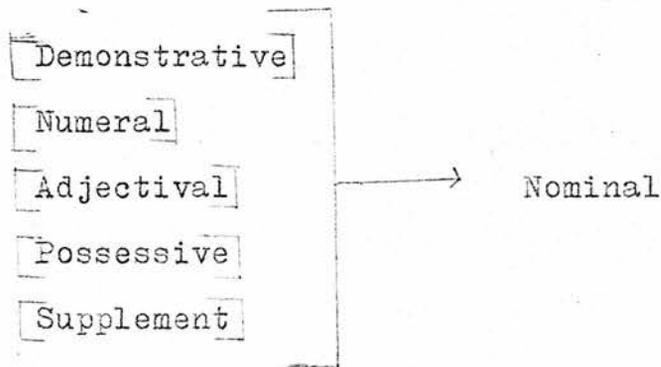
Now, while keeping these considerations in mind, we will try to fit the following instances of the nominal syntagm into the model:

1. /kitābu ṭṭālibi/ "the student's book"
2. /maktabatu lmadrasati/ "the school library"

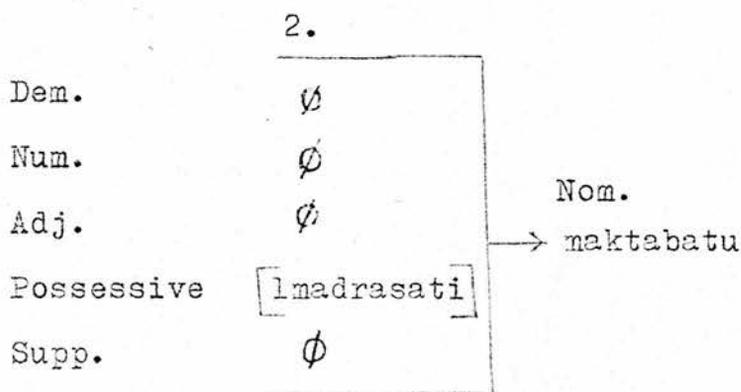
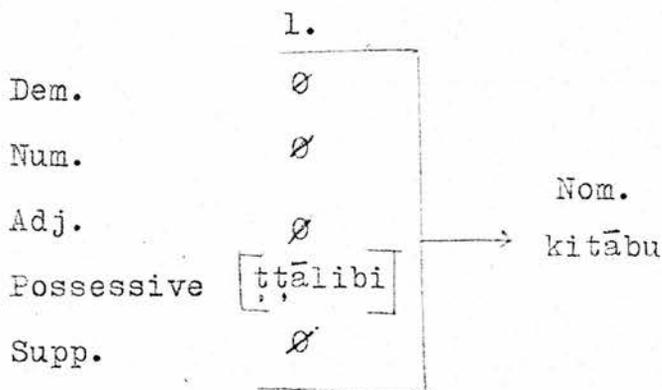
In these instances /ṭṭālibi/ "the student" and /lmadrasati/ "the school" are traditionally called "genitive" elements. It may seem that none of the "genitive" elements in question can be assigned to any of the aforementioned peripheral positions as they do not commute with any element that may occur in these positions. In addition there is no evidence to show that any

of the "genitive" elements in question stands in any direct syntactic relation with any element occurring in any peripheral position. That is to say, none of the above "genitive" elements would form, on the first level of analysis, one immediate constituent with any element that may stand in any of the hitherto established peripheral positions. Furthermore, none of the elements in question can be assigned to the nuclear position as they are expansions, and by definition the nucleus cannot be an expansion.

This shows us that the five-position model is not adequate as it does not adequately account for some elements, i.e., "genitive" elements, that may occur in some instances of the nominal syntagm. Now, in order to account for the occurrence of the "genitive" in some instances of the nominal syntagm, a new peripheral position is to be added. To this position I shall give the label "possessive". In such a case, a six-position model would be set up. This model can be schematized as follows:



Consequently, the above instances of the nominal syntagm namely: 1. /kitābu ṭṭālibi/  
2. /maktabatu lmadrasati/  
can be accounted for in the model as follows:



As we shall see below this model, i.e., six-position model is still inadequate as it does not represent the nominal syntagm in its maximum extent. Let us consider the following example: /hādhi qanādīlu zaiti lmarʔati ʕalāʕatu lqadīmatu llati štarathā/

This example could either mean:

(1)

"these woman's oil's three old lamps which she bought" or,

"these woman's three old oil lamps which she bought".

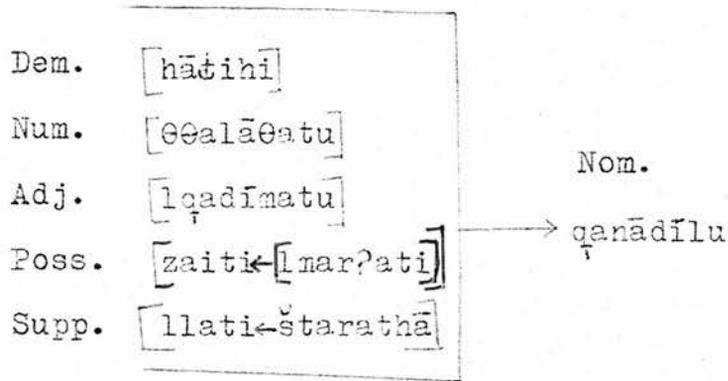
Consequently, we recognize in this example two different syntagms with two different structures. The question is how can we account for these two syntagms in the hitherto established six-position model?

Let us first take /hādhi qanādīlu zaiti lmarʔati ʕalāʕatu lqadīmatu llati štarathā/ with the denotation of "these woman's oil's three old lamps which she bought".

This syntagm can be fitted into the model as follows:

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(1) In fairy tales "oil" can possess lamps to live in.



The model clearly shows that, on the first level of analysis, we have six immediate constituents. Of these six I.C.s we have five I.C.s standing in peripheral positions and one I.C. standing in the nuclear position. Each of the peripheral I.C.s stands in a relation of subordination to the nucleus /qanādīlu/ "lamps". They do so, as far as we can tell, in the same way. Hence we have the same type of determination, i.e., parallel determination. That is to say, we can have:

1. /hāṭihī lqanādīlu/ "these lamps"
2. /ḡalqanādīlu ēalāḡatu/ "the three lamps"
3. /alqanādīlu lqadīmatu/ "the old lamps"
4. /qanādīlu zaiti lmarḡati/ "the lamps of the woman's oil"
5. /ḡalqanādīlu llati ṡtarathā/ "the lamps which she bought"

The model also shows that /zaiti lmarḡati/ "the woman's oil" forms one I.C. on the first level of analysis. On another lower level of analysis it forms two I.C.s namely /zaiti/ "oil" and /lmarḡati/ "the woman". Of these <sup>(1)</sup>/zaiti/ "oil" is the nucleus. Similarly, the I.C. /llati ṡtarathā/ "which she bought" forms on another lower level of analysis the I.C.s /llati/ "which" and /ṡtarathā/ "she bought". Of these two /llati/ "which" is the nucleus.

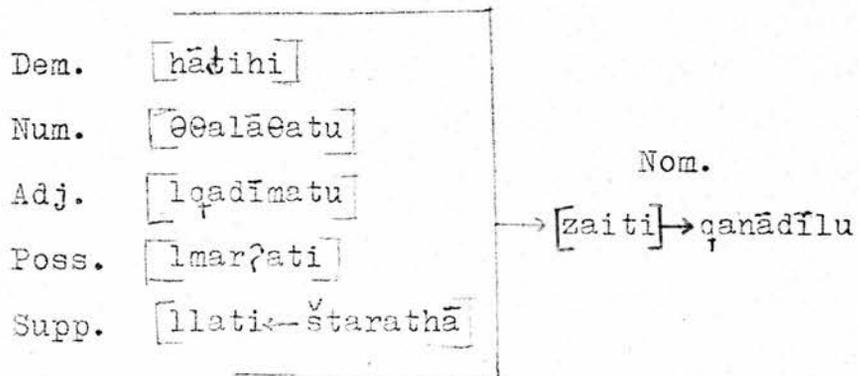
Having fitted the above syntagm into the model, I shall try to fit the syntagm:

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(1) /llati ṡtarathā/ "which she bought" is called a functional syntagm. The functional syntagm will be discussed in Chapter VI.

/hāḍiḥi qanādīlu zaiti lmarʔati ʕealāʕatu lqadīmatu llati ṽstarathā/ which has the denotation of "these woman's three old oil lamps which she bought" into the model.

First of all, it would be absurd to fit this syntagm into the model in the same way we did with the first syntagm, because if we do so, we will no longer have two different syntagms. For this reason, one is inclined to group /qanādīlu/ "lamps" and /zaiti/ "oil" together as forming one immediate constituent on the first level of analysis. On this basis the syntagm in question can be fitted into the model as follows:



The model shows that the elements /qanādīlu/ "lamps" and /zaiti/ "oil" have been taken as forming one I.C. on the first level of analysis. Furthermore, the I.C. in question has been assigned to the nuclear position. In fact, the elements /zaiti/ and /qanādīlu/ have been grouped together to form one I.C., on the first level of analysis, as one is intuitively inclined to think that they are more <sup>closely</sup> related to one another than any other two elements in the syntagm. Although, from a semantic point of view, it may seem to be so, from the point of view of syntax it does not seem possible as we have no formal reason to justify this type of analysis. Therefore the hypothesis that /zaiti/ "oil" can be assigned to the nuclear position is refuted.

Similarly, the hypothesis that /zaiti/ "oil" can be

assigned to one of the hitherto established peripheral positions is refuted as there is no evidence for any direct syntactic relation between /zaiti/ on the one hand, and any element standing in any of the aforementioned peripheral positions, on the other.

This shows us that the model, i.e., six-position model, has not adequately accounted for the elements of the syntagm in question. Therefore, the model has to be discarded and a new model has to be tried.

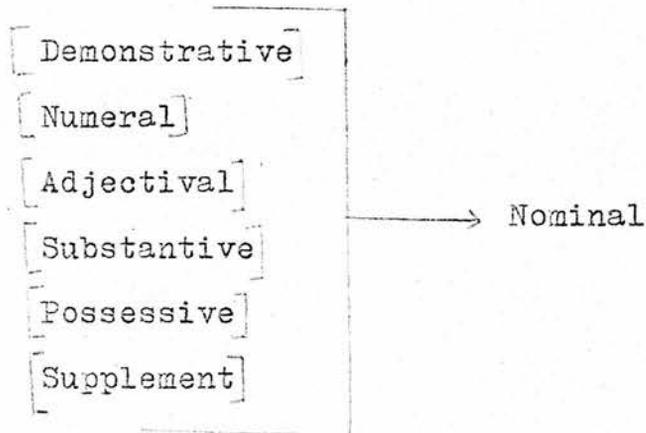
Before I set up a new model I would like to establish the direct tactic relations that hold between the constituents of the above syntagm, e.g., /hāṭihi qanādīlu zaiti lmarṭati ʕalāʕatu lqadīmatu llati štarathā/ which has the denotation of: "these woman's three old oil lamps which she bought". The direct tactic relations within this syntagm can be established as follows:

- between /qanādīlu/ and /zaiti/
- between /qanādīlu/ and /lmarṭati/
- between /qanādīlu/ and /ʕalāʕatu/
- between /qanādīlu/ and /lqadīmatu/
- between /qanādīlu/ and /hāṭihi/
- between /qanādīlu/ and /llati štarathā/

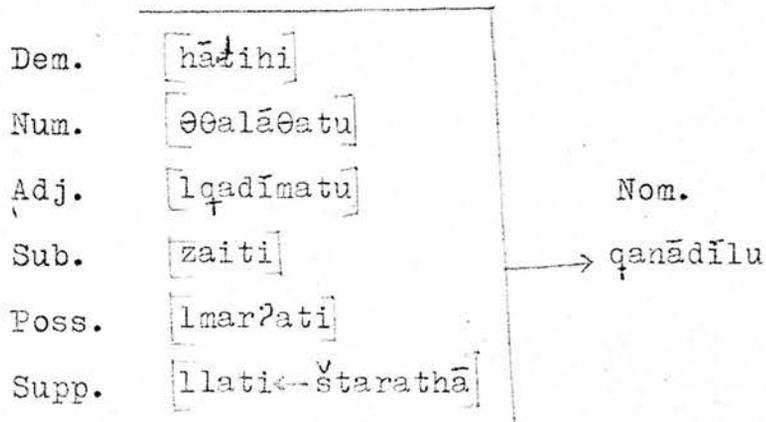
This shows us that the syntagm in question is a combination of seven immediate constituents of which /qanādīlu/ "lamps" is the nucleus as it is the element on which all the other elements in the syntagm depend for their syntactic function. It is only via /qanādīlu/ the other I.C.s stand in a significant relation to the rest of the syntagm or to one another. Each of the other immediate constituents is regarded as a peripheral constituent standing in a relation

of subordination to the nucleus.

Now if we take this instance of the nominal syntagm to represent the nominal syntagm in its maximum extent, we would set up a seven-position model and label the positions: "demonstrative", "numeral", "adjectival", "substantive", "possessive", "supplement" and "nominal". This model can be diagrammatically shown as follows:



Now, if we try to fit the above mentioned syntagm into the model, the positions will be filled in as follows:



(Dem., Num., Adj., Sub., Poss., Supp. and Nom. are the abbreviated forms of the "demonstrative", the "numeral", the "adjectival", the "substantive", the "possessive", the "supplement" and the "nominal" positions respectively.)

The model shows six peripheral I.C.s standing in a relation of subordination to the nucleus. As far as we can tell, they do so in the same way, therefore, we have the same type of determination, i.e., parallel determination.

Having set up a seven-position model, I would like to test the adequacy of this model by applying it to as many instances of the nominal syntagm as possible. Now given the example: /kutubu tārīxi lmaliki/ how can we account for it in the model? Before I account for the given example in the model I would like to point out that the "example" in question has two different denotations. The first of these is "the king's history books" and the second is "the books of the king's history". As two different messages are conveyed by the above example, we must have two different structures, thereby, two different syntagms.

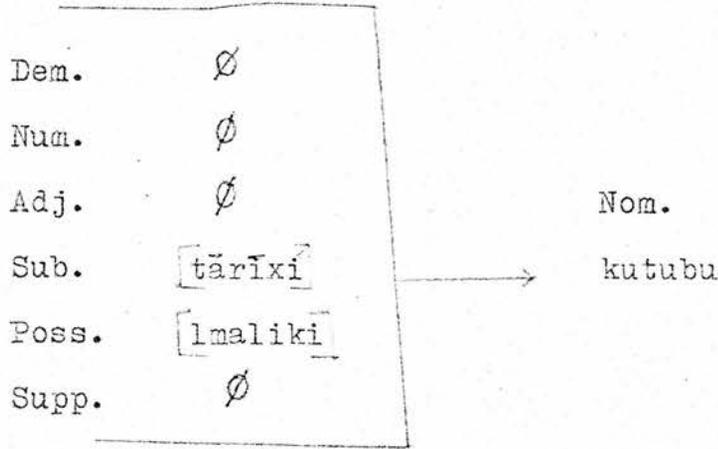
Let us first take the syntagm /kutubu tārīxi lmaliki/ which has the denotation of "the king's history books". The direct tactic relations within this syntagm can be established as follows:

between /kutubu/ and /tārīxi/

between /kutubu/ and /lmaliki/

On this basis the syntagm has to be cut into three I.C.s, namely, /kutubu/ "books", /tārīxi/ "history" and /lmaliki/ "the king". Of these three I.C.s /kutubu/ is the nucleus as it is the element on which the other elements depend for their syntactic function. The only relation that holds between /tārīxi/ and /lmaliki/ is an indirect one via /kutubu/. Each of /tārīxi/ and /lmaliki/ stands in a relation of subordination to the nuclear element /kutubu/. As the nuclear element can occur on its own, it follows that the other elements are expansions.

The syntagm in question can be fitted into the model as follows:

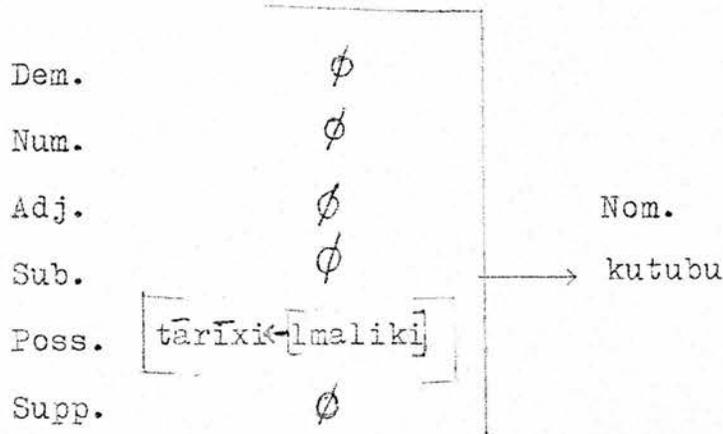


Now let us try to fit the syntagm /kutubu tārīxi lmaliki/ which has the denotation of "the books of the King's history" into the model.

The direct tactic relations can be established within this syntagm as follows:

between /kutubu/ and /tārīxi lmaliki/

One may claim that there is also a direct tactic relation between /tārīxi/ and /lmaliki/. In fact, there is a direct tactic relation between them. But, this is only true on a lower level of analysis. The only direct tactic relation we may encounter in this syntagm, on the first level of analysis, is between /kutubu/ "books" on the one hand, and /tārīxi lmaliki/ "the king's history" on the other. In this case the syntagm in question has to be cut into two I.C.s namely /kutubu/ and /tārīxi lmaliki/. Of these two /kutubu/ is the nucleus as it is the element on which /tārīxi lmaliki/ depends for its syntactic function. Now we can fit the above syntagm into the model as follows:



One may ask why has /tārīxi lmaliki/ been assigned to the "possessive" position rather than to the "substantive" position? In order to answer this question I have to point out first that /tārīxi lmaliki/ can never be assigned to the "demonstrative", the "numeral", the "adjectival" or the "supplement" positions as they are mutually exclusive. It remains for us to see why /tārīxi lmaliki/ has been assigned to the "possessive" position and not to the "substantive" position. In the data under investigation it has been noticed that whenever two I.C.s, apart from the I.C.s occurring in the "demonstrative", the "numeral", the "adjectival" and the "supplement" positions, are subordinated to the nucleus of a nominal syntagm, the two immediately follow the nucleus. In addition, the one that immediately follows the nucleus stands in the "substantive" position whereas the other stands in the "possessive" position within the model of the nominal syntagm.

Suppose we have only one I.C. following the nucleus, apart from the I.C.s that stand in the "demonstrative", the "numeral", the "adjectival" and the "supplement" positions, to which position do we assign it? Do we assign it to the "substantive" position or do we assign it to the "possessive" position?

This is the case with the syntagm we are dealing with namely: /kutubu tārīxi lmaliki/ which has the denotation of "the books of the king's history".

In order to see whether the peripheral I.C. /tārīxi lmaliki/ belongs to the "substantive" or to the "possessive" position the following test is applied: taking /kutubu

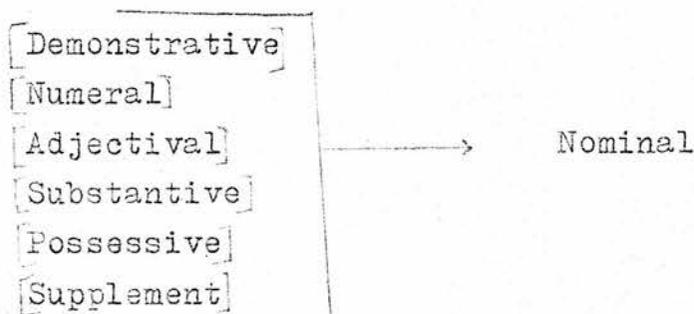
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(1) Though this is purely a matter of realization we may take it only as a rule of thumb.

tārīxi lmaliki/ we try to find whether another element, apart from the elements that may stand in the "demonstrative", the "numeral", the "adjectival" and the "supplement" positions, that can occur immediately after the nucleus /kutubu/ or after the peripheral I.C. /tārīxi lmaliki/ and see whether this new element can stand in a relation of subordination to the nucleus. As far as I know no such element can occur after the peripheral I.C.

However, one may encounter: /kutubu falsafati tārīxi lmaliki "the philosophy books of the king's history" in which case there are three I.C.s, on the first level of analysis, namely: /kutubu/, /falsafati/ and /tārīxi lmaliki/ of which /kutubu/ is the nucleus. On applying the previous statement, i.e., the I.C. which immediately follows the nucleus stands in the "substantive" position, whereas the other I.C. stands in the "possessive" position, we conclude that the I.C. /falsafati/ goes to the "substantive" position whereas /tārīxi lmaliki/ goes to the "possessive" position.

So far, it has been shown that when we have two peripheral I.C.s in the nominal syntagm that are assumed to be standing in the "substantive" and the "possessive" positions, then the two are not equivalent as to the positions in which they occur, i.e., they belong to two different position classes. Accordingly, the model of the nominal syntagm will be schematized as follows:



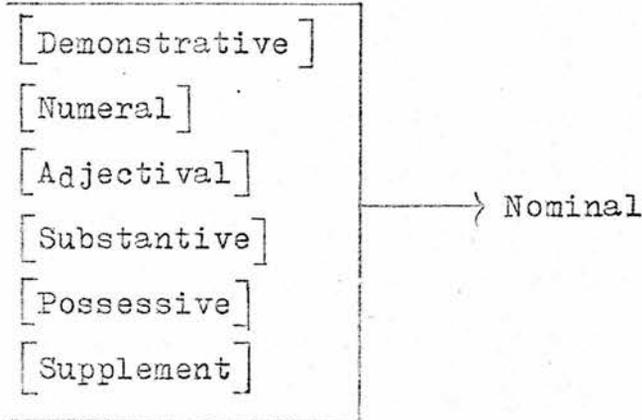
The model shows six peripheral positions standing in a relation of subordination to the nucleus. As far as we can tell, they do so in the same way, therefore, we have parallel determination. Since the nuclear position can occur on its own, it follows that all the peripheral positions are expansions.

From what has been said we conclude that the nominal syntagm in modern standard Arabic is a self-contained bundle of seven positions: a nuclear and six peripheral positions standing in a relation of subordination to it.

Chapter V

Different realizations of the nominal syntagm

In the previous chapter I have established the model of the nominal syntagm as follows:



This model adequately accounts for any element that might occur in any instance of the nominal syntagm. In addition, it adequately accounts for the maximum extension of that syntagm. However, it is not necessary for all the positions of the model to be filled at any instance of the nominal syntagm. In some cases all the positions are filled whereas in others some of them are filled and some of them are not.

It is necessary to point out that we must not expect the constituents that fill the above positions to be realized successively. That is we must not expect the constituents that fill the positions of the model of the nominal syntagm to be realized in this order: "demonstrative" - "numeral" - "adjectival" - "substantive" - "possessive" - "supplement". On the contrary, in some instances of a nominal syntagm the constituent (a), for example, follows the constituent (b) while in other instances of a nominal syntagm the same constituent (a) precedes the same constituent (b). In order to clarify what has been said above I shall

give an example from English:

1. the police brought the criminal in;
2. the police brought in the criminal.

In 1. we notice that "in" has followed "the criminal" whereas in 2. it has preceded "the criminal". Despite the occurrence of "in" in different places in the above examples, we still talk about one and the same syntagm. The difference between the two is a matter of realization. Therefore, we can say that here we have got two different realizations of one and the same syntagm.

This phenomenon, i.e., different realizations of one and the same syntagm is no less prominent in Arabic than in English. In fact, we can encounter several cases of different realizations of a nominal syntagm in modern standard Arabic. If we examine the following examples we will understand what is meant by different realizations of a nominal syntagm. The examples are the following:

a) /baitun ʃala lbaḥri ʒamīlun/

"literally : a house on the sea beautiful"

b) /baitun ʒamīlun ʃala lbaḥri/

"literally : a house beautiful on the sea"

In example a) we notice that the prepositional phrase /ʃala lbaḥri/ "by the sea" has immediately followed its governing noun, e.g., /baitun/ "house", whereas in example b) the same prepositional phrase has been separated from its governing noun, e.g., /baitun/ "house" by the adjective /ʒamīlun/ "beautiful". However, both examples represent one and the same syntagm realized in two different ways.

In order to account for the different realizations of the nominal syntagm I shall start with the constituents

that fill in the "demonstrative" position and talk about their occurrence with regard to the occurrence of the other constituents that occupy the different positions in the syntagm whether these positions are peripheral or nuclear ones.

In modern standard Arabic the "demonstrative" position is usually filled in by a demonstrative pronoun. Since the demonstrative pronouns in modern standard Arabic are finite in number, I am going to put the most frequently used demonstrative pronouns in today's standard Arabic in two tables. In the following table the demonstrative pronouns are equivalent to "this" and "these" in English:

Table (1)

Number and Case	Masculine	Feminine
Singular: all cases	hādā	hādihī
Dual: Nominative	hādānī	hātānī
Dual: Accusative and Genitive	hādīanī	hātīanī
Plural: all cases	hāʔulāʔī	hāʔulāʔī

The demonstrative pronouns in the following table are equivalent to "that" and "those" in English:

Table (2)

Number and Case	Masculine	Feminine
Singular: all cases	ʔāka or ʔālika	tilka
Dual: Nominative	tānika	tānika
Dual: Accusative and Genitive	tainika	tainika
Plural: all cases	ʔūlāʔika	ʔūlāʔika

However, when used with broken plurals of inanimate objects /hādihī/ "this" and /tilka/ "that" will have

the meaning of "these" and "those" respectively. Thus we may have:

/hāḍihi lʔaurāqu/ "literally : this papers", "these papers"  
and,

/tilka lʔaiānu/ "literally : that days", "those days"

The "demonstrative" position in the model of the nominal syntagm is usually filled in by one of the above mentioned demonstrative pronouns. However, in some constructions two demonstrative pronouns usually occur in the "demonstrative" position. In such constructions the two demonstrative pronouns are often combined by a conjunction. An example of such a realization will be given later.

In instances of the nominal syntagm where the noun is determined by the definite article, the demonstrative usually precedes the noun.

An example is: /hāḍa lkitābu/ "literally : this the book", "this book". This does not necessarily mean that the demonstrative pronoun can never occur after a noun determined by the definite article. In fact we can find instances where the demonstrative pronoun follows a noun determined by the definite article. An example of this type of realization is:

/ʔaššazaratu hāḍihi/ "literally : the tree this", "this tree".

In instances where we have proper names such as "Mohammad" and "Fatimah", the demonstrative pronoun follows the proper name. Thus we will have:

/muḥammadun hāḍā/ "literally : Mohammad this", "this Mohammad"  
and  
/fāṭimatur hāḍihi/ "literally : Fatimah this", "this Fatimah"

Similarly, if a noun is determined by a pronominal suffix, the demonstrative pronoun will be placed at the

end of the construction. An example is:

/kalbī hātā/ "literally : dog my this", "this dog of mine".

When the noun is determined by a proper name, the demonstrative pronoun will be placed at the end of the construction no matter which noun the demonstrative determines. An example of such constructions is: /ʔibnu ʕamrin hātā/ "literally : Son Amr this". In such a case we cannot tell which noun the demonstrative determines. That is, the above construction may either mean "this son of Amr" - in which case the demonstrative pronoun determines the governing noun "son" - or "son of this Amr" where the demonstrative pronoun determines the governed noun "Amr". Nevertheless, the message conveyed by the above example can be known if we are given the context in which the example has occurred.

Let us suppose that the context in which the above example has occurred is an answer to the following question: /man min ʔabnāʔi ʕamrin tufaḏīlu/ "which son of Amr do you prefer?" In this case, we understand that we have one "Amr" who has more than one son. Consequently, the demonstrative pronoun in /ʔibnu ʕamrin hātā/ definitely determines /ʔibnu/ "son".

On the other hand, if the above example has been an answer to the following question: /ʔibnu ʔaii ʕamrin tufaḏīlu/ "which son of the Amrs do you prefer?" then /ʔibnu ʕamrin hātā/ would only mean "the son of this Amr". In this case the demonstrative pronoun /hātā/ "this" determines the governed noun /ʕamrin/ "Amr".

These are not the only constructions in which the demonstrative pronouns occur. In correlative constructions

two or more demonstrative pronouns appear. An example of such constructions is: /hāđihi lžumlatu ʔau tilka lžumlatu/ (1) "this sentence or that sentence". Now, one may ask, how can this instance of the nominal syntagm be accounted for in the model?

At first sight, it may seem that the syntagm in question can be fitted into the model as follows:

dem.	[hāđihi]	
num.	∅	
adj.	∅	
sub.	∅	→ ʔalžumlatu ʔau tilka lžumlatu
poss.	∅	
supp.	∅	

Let us for the time being ignore the relations that hold between the constituents within the "nuclear" position. The model shows that on the first level of analysis we have two I.C.s: /hāđihi/ on the one hand, and /lžumlatu ʔau tilka lžumlatu/ on the other. Of these two the latter is the nucleus of the syntagm in question. In addition, the model shows that there is a direct relation between "hāđihi" and the rest of the syntagm. In fact, this is not the case; the only constituent to which /hāđihi/ stands in a direct relation is /lžumlatu/ - the first one in the construction. As a result the above analysis of the syntagm in question is inadequate as it violates the principle of *adequacy*. Therefore, another analysis has to be attempted and tested.

One is inclined to cut the syntagm, on the first level of analysis, into the following three I.C.s:

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(1) For more about the analysis of such constructions see Mulder, "Some Difficult Cases in Syntactic Description", (1978).

1. /hāṭīhi lžumlatu/ "this sentence"
2. /ʔau/ "or"
3. /tilka lžumlatu/ "that sentence"

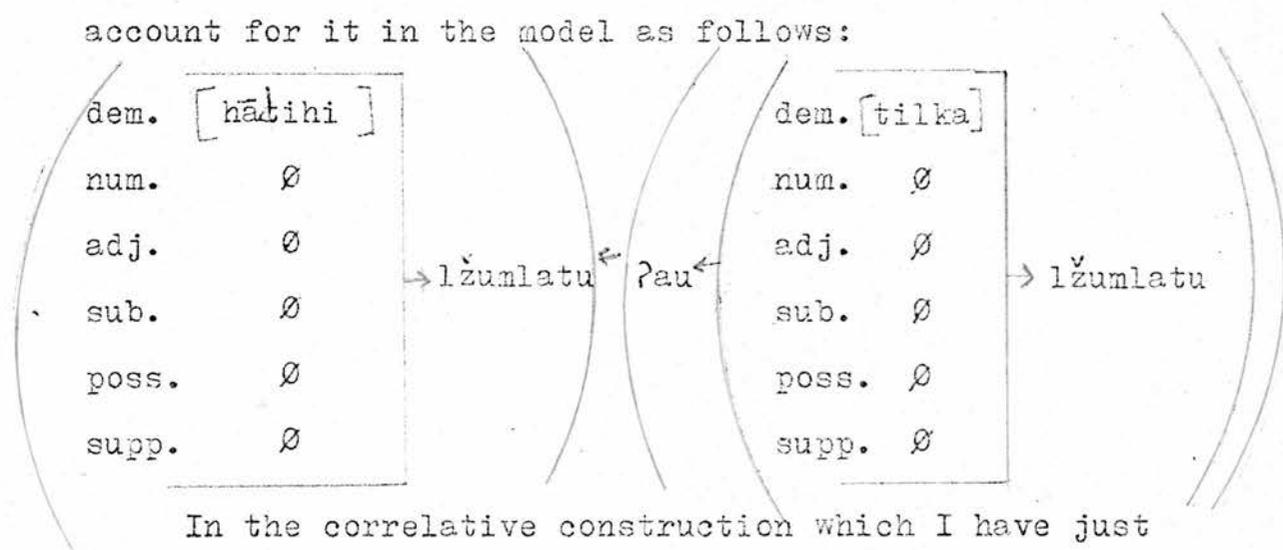
In this syntagm /hāṭīhi lžumlatu/ "this sentence" stands in a direct relation to /ʔau/ "or". Similarly, /tilka lžumlatu/ "that sentence" stands in a direct relation to /ʔau/ "or". However, the relation between /hāṭīhi lžumlatu/ and /tilka lžumlatu/ is an indirect one via /au/. Therefore, it may seem that /ʔau/ is the nucleus of the syntagm.

As we shall see below /ʔau/ cannot be the nucleus of this syntagm. We know that the nucleus of any syntagm is the identity element of that syntagm and it determines its distribution in higher level syntagms, therefore, it cannot be an expansion. However, this is not the case with /ʔau/ in the above syntagm. That is to say /ʔau/ cannot be the nucleus of the syntagm in question as it is <sup>part of</sup> an expansion. In order to show that /ʔau/ in the above syntagm is <sup>part of</sup> an expansion I shall give an instance of a higher level syntagm where the syntagm in question occurs. The syntagm is: /hāṭīhi lžumlatu qaṣīratun/ "this sentence is short". In this higher level syntagm the constituent /ʔau tilka lžumlatu/ "or that sentence" is left out, i.e., it is an expansion. Similarly, in /tilka lžumlatu ṣahīnatun/ "that sentence is correct" the constituent /hāṭīhi lžumlatu ʔau/ "this sentence or" is left out, i.e., it is an expansion. We notice that in both cases /ʔau/ "or" is left out, i.e., it is <sup>part of</sup> an expansion. We conclude that /ʔau/ in the syntagm: /hāṭīhi lžumlatu ʔau tilka lžumlatu/ cannot be the nucleus of the syntagm as it is <sup>part of</sup> an expansion.

This shows us that the above analysis of the syntagm

in question is inconsistent. Therefore, another analysis has to be attempted. This time the syntagm is to be cut into either:  $\text{hāṭihi l'žumlatu /ʔau tilka l'žumlatu/}$  , or  $\text{/hāṭihi l'žumlatu ʔau / tilka l'žumlatu}$ . With regard to the message conveyed both analyses are consistent and adequate. However, we have to choose one of them. Our choice is determined by the way the syntagm is realized. We notice that in ordinary speech we tend to stop or pause after  $\text{/hāṭihi l'žumlatu/}$  when we say  $\text{/hāṭihi l'žumlatau ʔau tilka l'žumlatu/}$  . This is the normal way of saying the syntagm in question. For this reason we are inclined to choose:  $\text{/hāṭihi l'žumlatu/ʔau tilka l'žumlatu/}$  rather than  $\text{hāṭihi l'žumlatu ʔau/ tilka l'žumlatu}$ .

Having cut the syntagm into two I.C.s, of which  $\text{/hāṭihi l'žumlatu/}$  is the nucleus, we are in a position to account for it in the model as follows:

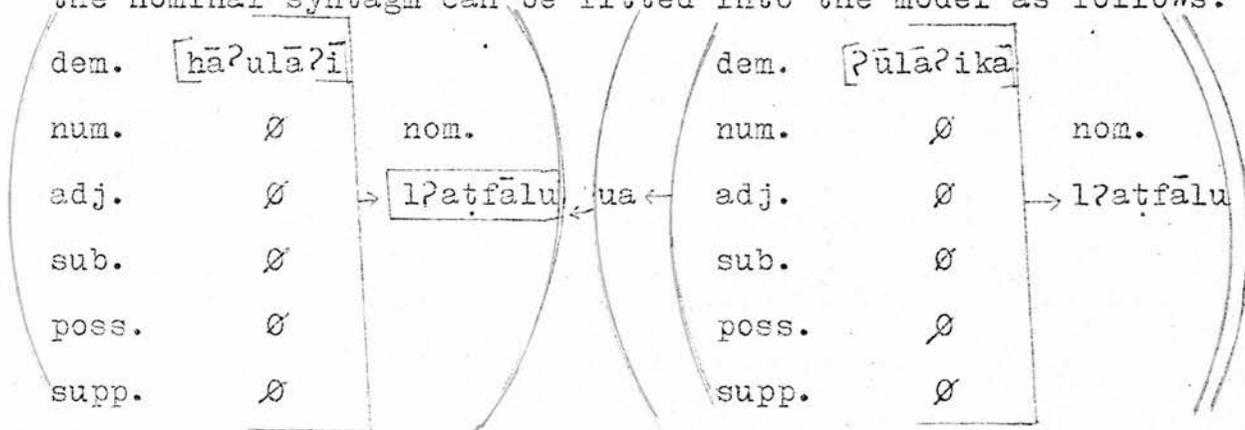


In the correlative construction which I have just accounted for in the model, we notice that two different demonstrative pronouns have been used namely  $\text{/hāṭihi/}$  "this" and  $\text{/tilka/}$  "that". The former has occurred in the first part of the construction whereas the latter has occurred in the second part of the construction. However, one and the same demonstrative pronoun may occur in both

parts of such constructions. An example is: /hāḁa ṭṭflu  
 ʔau hāḁa rraḁulu/ "this child or this man". Furthermore, the  
 occurrence of both demonstrative pronouns in one part of the  
 construction rather than the other is quite common. An  
 example of this type of realization is: /hāʔulāʔi ua ʔūlāʔika  
 lʔaṭfālu/ "these and those children".

Before I fit this instance of the nominal syntagm into  
 the model I would like to point out that there is an ellip-  
 tical element immediately after /hāʔulāʔi/ "these". The  
 (1)  
 elliptical element is /lʔaṭfālu/ "the children". Consequently,  
 the corresponding syntagm can be established as follows:

/hāʔulāʔi lʔaṭfālu ua ʔūlāʔika lʔaṭfālu/. This instance of  
 the nominal syntagm can be fitted into the model as follows:



/lʔaṭfālu/ has been put in a box to show that it is the ele-  
 ment that has been suppressed in realization, i.e., elliptical.

As regards the adjectives and their occurrence in the  
 nominal syntagm, we have to distinguish between restrictive  
 (2)  
 and non-restrictive adjectives. Restrictive adjectives  
 usually delimit the noun they modify whereas non-restrictive  
 adjectives add new aspects or description to it. In some  
 instances of the nominal syntagm both types of adjective  
 appear. In such a case the restrictive adjective usually

(1) For "ellipsis" see Chapter VII.

(2) See Cantarino, Vol. II, (1975), p.48.

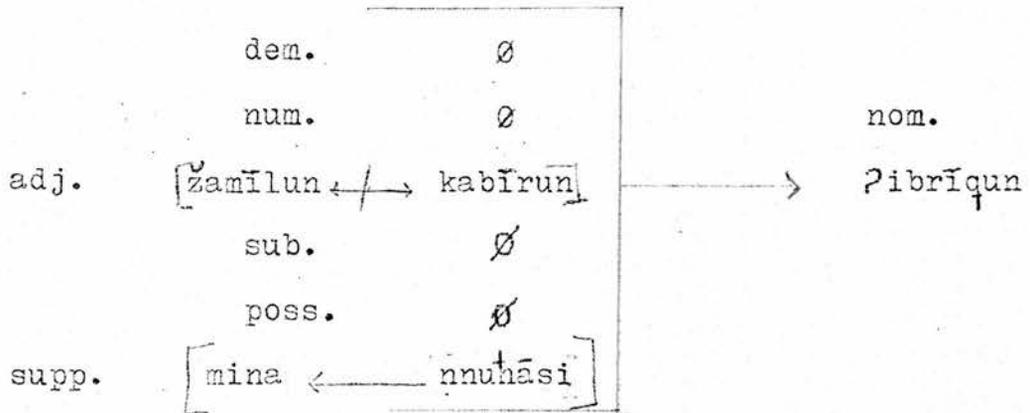
follows the non-restrictive one. An example is: /ʔarraʔiu lʕāmu lʕarabīu/ "literally: the opinion the public the Arabic", "the Arabic public opinion".

However, in some instances of the nominal syntagm, the non-restrictive adjective follows the restrictive one. An example is: /ʔalḥaiātu lʕarabīatu lʕāmmatu/ "literally: the life the Arabic the public", "the Arabic public life".

In modern standard Arabic, the adjective always follows its governing noun, and it is usually immediately after it. However, in some cases the adjective is separated from its governing noun by some other constituents. This is the case when the noun is determined by a prepositional phrase. In such a case the prepositional phrase may precede the adjective: /baitun ʕala lbaḥri ẓamīlun/ "literally: a house on the sea beautiful", "a beautiful house by the sea", or it may follow it as in: /xamsuʔḥfālin ʕigārin fi lḥadīqati/ "literally: five children young in the garden", "five young children in the garden". Thus, a prepositional phrase in the nominal syntagm may precede or follow the adjective, but in most cases it follows the adjective.

When two or more adjectives are subordinated to one and the same noun they will follow it. In such a construction the adjectives will stand in a relation of co-ordination one to the other except when they are combined by a conjunction. In the following example: /ʔbrīqun mina nnuḥāsi kabīrun ẓamīlun/ "literally: a jug of copper large beautiful", "a large beautiful jug of copper", we have two adjectives, namely: /kabīrun/ "large" and /ẓamīlun/ "beautiful". Both are subordinated to one

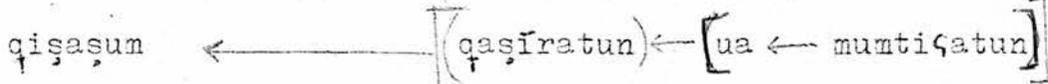
and the same noun, e.g., /ʔibrīqun/ "jug". In addition, the two adjectives stand in a relation of co-ordination to one another. The relations within the syntagm can be shown in the model as follows:



However, a relation of co-ordination is not the only type of syntactic relation we find in the "adjectival" position. In some instances of the nominal syntagm, we may encounter a relation of subordination holding between the constituents of the "adjectival" position. An example is: /qīṣaṣun qāṣīratun ua muntīṣatun/ "literally: stories short and interesting", "short and interesting stories". This instance of the nominal syntagm forms, on the first level of analysis, two I.C.s, namely: /qīṣaṣun/ "stories" and /qāṣīratun ua muntīṣatun/ "short and interesting". The former I.C. stands in the "nuclear" position within the model of the nominal syntagm whereas the latter stands in the "adjectival" position. On another level of analysis, the I.C. that stands in the "adjectival" position forms two I.C.s: /qāṣīratun/ "short" and /ua muntīṣatun/ "and interesting", of which the latter stands in a relation of subordination to /qāṣīratun/ "short". At a further level of analysis /ua muntīṣatun/ "and interesting" forms two I.C.s of which /ua/ "and" is the nucleus. Thus, the whole relations in the above syntagm can be shown as follows:

"nuclear" position

"adjectival" position



This shows us that a relation of subordination may be encountered within the "adjectival" position.

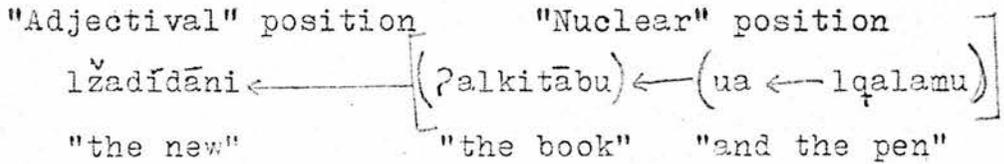
When the noun is determined by another following noun together with an adjective, the adjective will occur at the end of such a construction. An example is: /kutubu ttārīxi lqadīmatu/ "literally: books the history the old", "the old books of history". Similarly, when the noun is determined by a pronominal suffix together with an adjective, the adjective will be placed at the end of the construction. An example is: /kitābi lʿadīdu/ "literally: book my the new", "my new book".

When the noun is determined by a numeral together with an adjective, the numeral always precedes the adjective. An example is: /xamsu banātin kibārin/ "literally: five girls old", "five old girls".

Up to now we have seen instances of the nominal syntagm where one or more adjectives modify one and the same noun. In both cases, i.e., whether the noun is determined by one adjective or by more than one, the adjectives always follow the noun they modify. Furthermore, if two or more adjectives modify one and the same noun, they will stand in a relation of co-ordination with one another unless they are combined by a conjunction.

However, in some instances of the nominal syntagm we may have one adjective determining two or more preceding nouns. In this case the adjective will follow the last noun but it will agree with all the preceding nouns. An example is: /ʔalkitābu ua lqalamu lʿadīdāni/ "literally: the

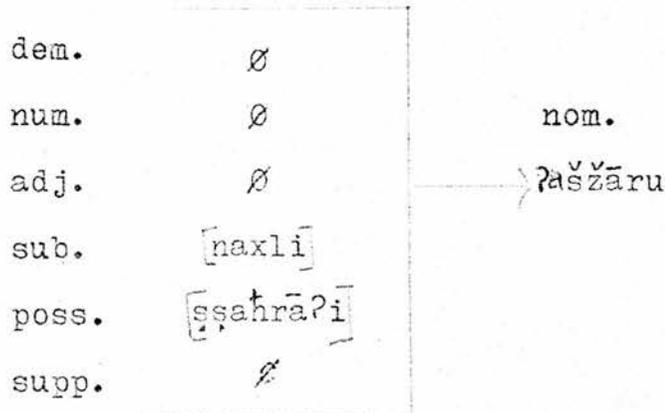
book and the pen the new", "the new book and the new pen". In this instance of the nominal syntagm, the adjective /lʒadīdāni/ is in the dual, therefore, we can say that it determines the two preceding nouns rather than one of them. The relations between the constituents of the syntagm can be shown as follows:



As regards the way in which the constituents that fill the "substantive" and "possessive" positions are realized, the constituents that fill the former immediately precede those which fill the latter. These, in turn, i.e., the constituents that fill the "substantive" and "possessive" positions, immediately follow their governing noun. The governing noun can never be separated from its governed noun whether the latter stands in the "substantive" or "possessive" positions. This is still a strict rule in Arabic. An example of this type of realization is:

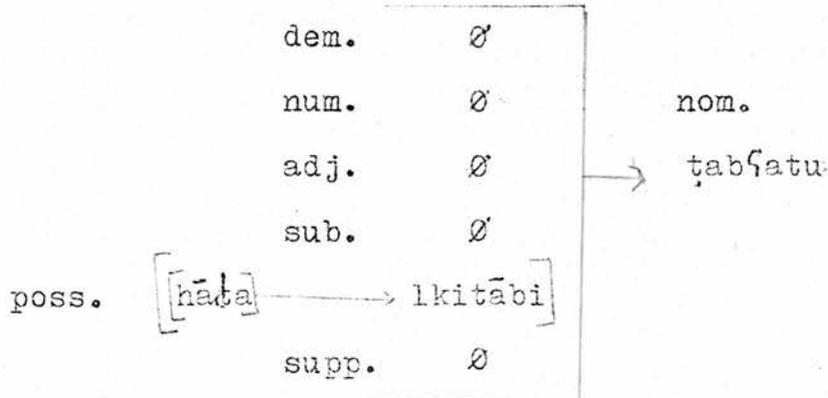
/ʔaššāru naxli šṣaḥrāʔi/    "literally: trees palm the desert", "the desert's palm trees, or the palm trees of the desert".

This instance of the nominal syntagm can be fitted into the model as follows:



As regards the grammatical categories that fill in the "substantive" and "possessive" positions, they can be either  
(1)  
substantives or elements regarded as such.

In the data under investigation it has been noticed that the constituent that stands in the "possessive" position may be determined by other constituents. That is to say, we may encounter a certain type of syntactic relations within the "possessive" position. An example is: /ṭabʕatu hāʕa lkitābi/ "the edition of this book". This syntagm can be fitted into the model as follows:



The model shows that, on the first level of analysis, we have two I.C.s: /ṭabʕatu/ and /hāʕa lkitābi/ of which /ṭabʕatu/ is the nucleus. At another level of analysis /hāʕa lkitābi/ forms two I.C.s: /hāʕa/ and /lkitābi/. Of these two /lkitābi/ is the nucleus. The model also shows that there is a relation of subordination between the constituents that have occurred in the "possessive" position. We conclude that a relation of subordination may be encountered between the constituents that stand in the "possessive" position of the model of the nominal syntagm.

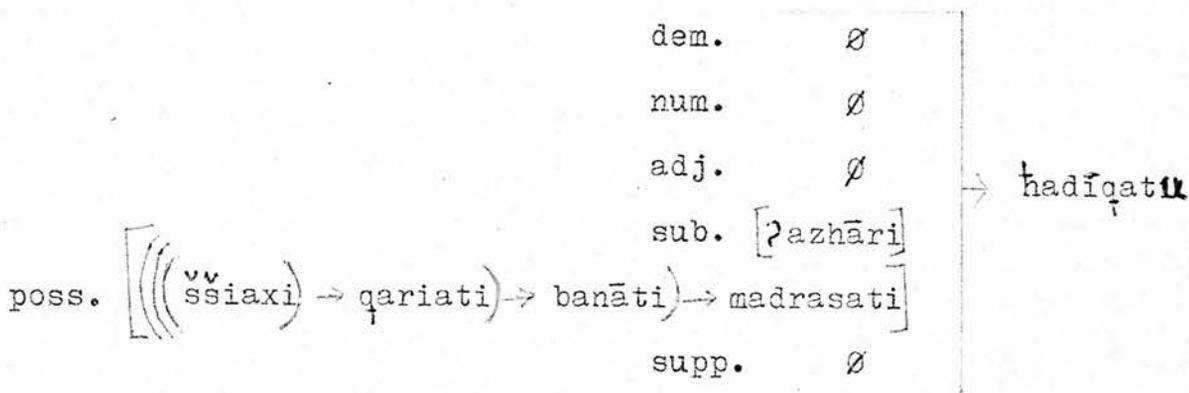
In some instances of the nominal syntagm we may have several nouns standing in the "possessive" position.

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(1) "Substantives" is used here in the traditional sense.

Between these nouns we may encounter a relation of subordination. An example is: /<sup>†</sup>hadīqatu ʔazhāri madrasati banāti qariati ššīaxi/ "the flowers garden of the school of the girls of the sheik's village".

This syntagm can be fitted into the model as follows:



It is clear in the model that, on the first level of analysis, /madrasati banāti qariati ššīaxi/ "the school of the girls of the sheik's village" forms one I.C. standing in a relation of subordination to /<sup>†</sup>hadīqatu/ "garden". On the second level of analysis /banāti qariati ššīaxi/ forms one I.C. standing in a relation of subordination to /madrasati/ "school". On the third level of analysis /qariati ššīaxi/ forms one I.C. standing in a relation of subordination to /banāti/ "girls". Finally on the fourth level of analysis /ššīaxi/ "the sheik" forms one I.C. that stands in a relation of subordination to /qariati/ "village".

From this instance of the nominal syntagm we conclude that in some instances of the nominal syntagm we may have a long chain of nouns in the "possessive" position standing in a relation of subordination one to the other.

However, there is a tendency in Arabic to avoid long chains of successive nouns by using a prepositional phrase. Thus, instead of saying: /gurfatu muḥāmī maḥkamati

/ʔistiʔnāfi/ "the advocates' chamber of the Appellate Court" we can say: /gurfatu lmuḥāminā bi maḥkamati ʔistiʔnāfi/ "the advocates' chamber in the Appellate Court".

In some instances of the nominal syntagm the adjective may determine the governed noun - whether this noun stands in the "substantive" or "possessive" positions - rather than the governing noun. In such a case, it is easy to distinguish the adjective that determines the governed noun from that which determines the governing one because the adjective follows the noun it determines in case, number and gender. And as we know that the governing noun in the nominal syntagm is always in the nominative case whereas the governed one is in the dative (حالة الجر) it follows that we can tell which noun the adjective determines from the agreement, i.e., concord, between the adjective and its noun. Thus, in: /kitābu tāriḫin qadīmin/ "a book of old history" we know that /qadīmin/ "old" determines /tāriḫin/ "history" and not /kitābu/ "book" as it agrees with the former in case, number and gender. On the other hand, in: /kitābu tāriḫin qadīmun/ "an old book of history" /qadīmun/ determines /kitābu/ and not /tāriḫin/ as it agrees with it, i.e., with /kitābu/, in case, number and gender.

However, in some cases this distinction, i.e., the distinction between the adjective that determines the governing noun and the one that determines the governed noun, becomes difficult especially if the nominal syntagm is subordinated to a functional, i.e., a preposition. In

this case, the governing noun, the governed noun and the adjective will be in the dative. Consequently, it is difficult to decide whether the adjective determines the governing noun or the governed one. Thus, in: /fī baiti bniha lkabīri/ "literally: in the house her son the old", it is difficult to decide whether /lkabīri/ "the old" determines /baiti/ "house" or /bni/ "son". In such a case, there is no grammatical rule, but only the context, to distinguish the adjective which determines the governing noun from that which determines the governed one.

In some instances of the nominal syntagm we may have two adjectives; one determining the governing noun while the other determines the governed one. In such a case, the adjective which determines the governed noun will immediately follow it, and it will precede the adjective that determines the governing noun. An example is:

/tārīxulluḡati lqarabiati lqadīmu/ "literally: history language Arabic the old", "the old history of the Arabic language".

Chapter VI

The relationship of the nominal syntagm  
with other syntagms in Arabic

In this chapter I shall deal with the relationship of the nominal syntagm with other syntagms in modern standard Arabic. That is to say, the study will include the occurrence of the nominal syntagm with respect to the occurrence of other syntagms in Arabic. The relationship of the nominal syntagm will be studied with regard to the following syntagms:

1. The predicative or non-verbal syntagm.
2. The verbal predicative syntagm.
3. The functional syntagm, i.e., the syntagm that has a "functional" as its nuclear element (see below).

1. The relationship of the nominal syntagm with the predicative syntagm:

The nominal syntagm may accompany the predicative syntagm in modern standard Arabic. It occupies the "subject" position of this syntagm. The relation between the two is that of subordination in which the nominal syntagm is subordinated to the predicative one. That is to say the predicative syntagm governs the nominal one. This relation can be shown as follows:

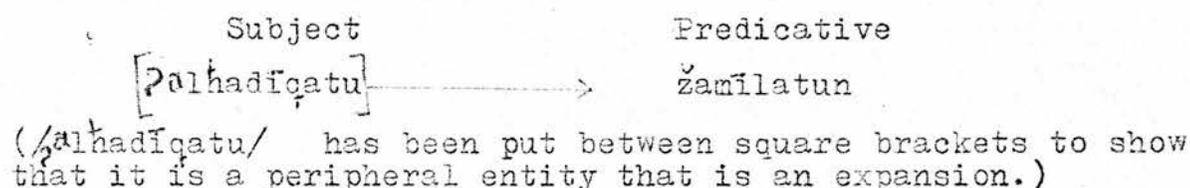
[ Nominal ] —————> Predicative

Since the nominal syntagm occupies the "subject" position of the predicative syntagm I shall refer to them as:

[ Subject ] —————> Predicative

An example from Arabic is: /Palḥadīqatu ḡamīlatun/  
"literally : the garden beautiful", "the garden is beautiful".

In this syntagm, i.e., predicative syntagm, /ʔalḥadīqatu/ "the garden" stands in a relation of subordination to /ẓamīlatun/ "beautiful". That is to say, we cannot have /ʔalḥadīqatu/ without having /ẓamīlatun/ but not vice versa. As /ẓamīlatun/ can occur on its own as an instance of the predicative syntagm, it follows that /ʔalḥadīqatu/ is an expansion, i.e., it can be replaced by "zero". Since /ẓamīlatun/ is the identity-element of the syntagm in question, it is the nucleus of the syntagm. The relationship between the immediate constituents of the syntagm in question can be shown as follows:

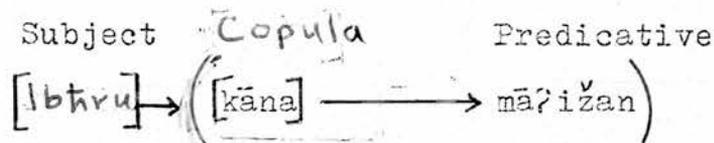


The "nuclear" position of the predicative syntagm can be filled by an adjective as it is the case in the above example or by a prepositional phrase: /ʔalkitābu ʕala tṭāuilati/ "literally : the book on the table", "the book is on the table". or by a noun: /muḥammadun raḏulun/ "Mohammad is a man".

In some instance of the predicative syntagm the verb /kāna/ "was" may be deployed as a copulative verb joining the subject to its predicate. In such a case the copula always determines the predicative. An example is: /kāna lbaḥru māʔiḏan/ "literally : was the sea stormy", "the sea was stormy". The relations between the immediate constituents of the syntagm in question can be shown as follows:

(1) The terms "adjective", "prepositional phrase" and "noun" are taken in the traditional sense.

(2) Other verbs may be used as copulative verbs such as /ʔaṣbaḥa/ "became", /ṣāra/ "became to be", /laisa/ "not to be", etc.



It often happens that the subject is separated from its predicate by the pronoun of the third person which has been called "the pronoun of separation" by Arab grammarians. This pronoun is normally used to lay more emphasis or to clarify the subject. From a syntactic point of view, this pronoun, i.e., the pronoun of separation, stands in a relation of apposition to the subject. An example is: /landan hia lqāsimatu/ "literally : London, it, the capital", "London, it, is the capital". The relation between the immediate constituents of this syntagm can be shown as follows:



The normal word order in the predicative syntagm is subject - predicative. However, sometimes for stylistic reasons the word order may change to become predicative - subject as in: /marīdatun hia/ "literally : ill she", "she is ill".

This has been done to lay more emphasis on the predicative /marīdatun/ "ill". This word order, i.e., predicative - subject is common when the subject is not definite and the predicative is a prepositional phrase. An example is: /fi lhadīqati raʒulun/ "literally : in the garden a man", "there is a man in the garden".

The relation between the immediate constituents of this syntagm can be shown as follows:

(1) The dash between /landan/ and /hia/ indicates a relation of apposition between the two.



The I.C. which has occurred in the "predicative" position forms two I.C.s, on a lower level of analysis, namely /fi/ "in" and /lḥadīqati/ "the garden". Of these two I.C.s /fi/ is the nucleus.

2. The relationship of the nominal syntagm with the verbal predicative syntagm:

Arab grammarians draw a distinction between nominal sentences and verbal sentences. To them a nominal sentence is a sentence that begins with a noun whereas a verbal sentence is a sentence that begins with a verb. Thus, they would call /zaidun iaktubu/ "literally : Zeid writing", "Zeid is writing" a nominal sentence as it begins with a noun. However, if the word order of the above example is reversed, it becomes: /iaktubu zaidun/ "literally : writing Zeid", "Zeid is writing". In such a case the Arab grammarians would no longer call the resultant sentence a nominal sentence, but they would call it a verbal sentence as it begins with a verb.

In the first place I would call the above example a syntagm rather than a sentence since I am dealing with the former and not with the latter. Sentences are dealt with on the sentential level. In the second place, I do not accept the distinction made by the Arab grammarians between: /zaidun iaktubu/ "literally : Zeid writing", "Zeid is writing" and /iaktubu zaidun/ "literally : writing Zeid", "Zeid is writing".

In my opinion, the above examples are not two different syntagms. In fact, they constitute one syntagm realized in two different ways. Whether the subject precedes its predicate

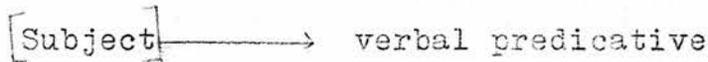
or follows it is not structurally relevant to the syntagm in question. The word order of the syntagm in question is a matter of realization rather than of structure. I would call this type of syntagm a "verbal predicative syntagm" owing to the fact that its nuclear position is always filled by a verb.  
(1)

With regard to transitivity of the verb in the verbal predicative syntagm we may encounter the following types of such a syntagm:

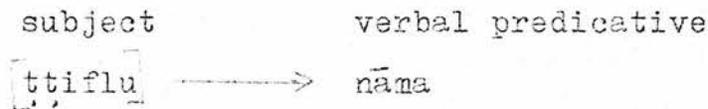
a) Intransitive verbal predicative syntagm:

In this type of syntagm the verb cannot have an object. An example is: /nāma ṭṭiflu/ "the child slept".

We may establish a model for such a type of syntagm as follows:



The above instance of the verbal predicative syntagm can be fitted into the model as follows:



As the nuclear element can occur on its own it follows that the peripheral element is an expansion, i.e., it can be replaced by "zero". That is in the syntagm in question the I.C. /nāma/ "slept" can occur on its own as an instance of the verbal predicative syntagm.

b) Non-transitive verbal predicative syntagm:

The verb here may have an object, but the object is an expansion. An example is: /ṭakala ḍḍaifu ṭṭaṣāma/ "the guest ate the food".

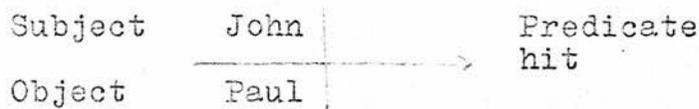
The relations between the immediate constituents of this syntagm can be shown as follows:

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(1) For more about transitivity see Mulder's Sets and Relations in Phonology (1968) p.77.



The model shows two peripheral I.C.s standing in a relation of subordination to the nucleus /ṭakala/ "ate". Since it cannot be ascertained that they do so in different ways we encounter parallel determination. Unlike the predicative syntagm in English where we encounter diverse determination. In the English predicative syntagm: "John hit Paul" there are three I.C.s namely: "John", "hit" and "Paul". Of these three "hit" is the nucleus. In this construction "John" and "Paul" separately stand in a relation of subordination to "hit". They do so in different ways, hence, we have diverse determination. That is "John hit Paul" is different from "Paul hit John". This type of determination, i.e., diverse determination can be shown in the model as follows:



This is not the case in the verbal predicative syntagm in Arabic. That is to say the only type of determination we encounter in the verbal predicative syntagm in Arabic is parallel determination. In Arabic, semantically speaking, it makes no difference whether we say: /ṭakala ddaifu tṭaṣāma/ or /ṭakala tṭaṣāma ddaifu/ or /ṭaṭṭṣāma ṭakala ddaifu/.

c) Transitive verbal predicative syntagm:

The verb in this type of syntagm has an object. An example is: /ḡaṭaṣa lmuṣārīṣu ṣṣāḡarata/ "the farmer cut the tree". The object here is obligatory, i.e., it cannot be an expansion. Hence it is a peripheral bound entity. The relations

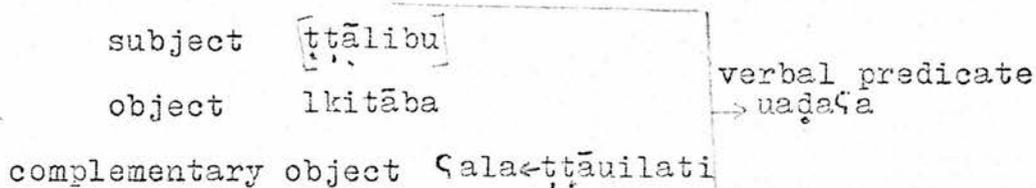
(1) The I.C.s that have occurred in the "subject" and "object" positions have been put between square brackets to show that they are expansions.

between the immediate constituent of the syntagm can be shown as follows:



d) Complementary transitive verbal predicative syntagm:  
 (1)  
 The verb here must have an object and a complementary object.  
 An example is: /uadaṣa ṭṭālibu lkitāba ṣalāṭṭāuilati/ "the student put the book on the table".

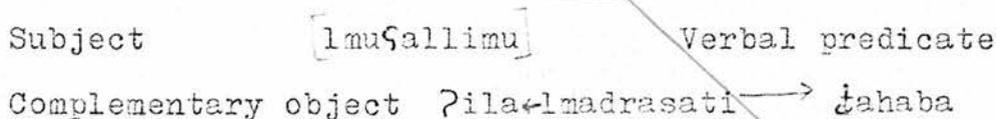
We may establish a model for such a type of syntagm as follows:



The complementary object, i.e., /ṣalā ṭṭāuilati/ "on the table" is a syntagm on its own. It is called functional syntagm (see below).

e) Complementary intransitive verbal predicative syntagm:  
 In this type of syntagm the verb cannot have a direct object but it must have a complementary object. An example is: /ḥahaba lmuṣallimu ḥila lmadrasati/ "the teacher went to school".

A model for this type of syntagm may be set up as follows:

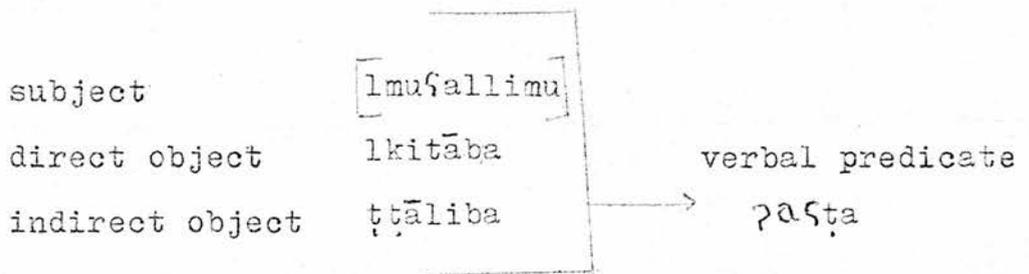


f) Indirect transitive verbal predicative syntagm:  
 The verb here must have a direct object and an indirect one.  
 An example is: /paṣṭa lmuṣallimu ṭṭāliba lkitāba/ "the teacher gave the student the book".

We may set up a model for this type of syntagm as follows:

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(1) A complementary object is usually introduced by what is traditionally called a prepositional phrase.



Having discussed the types of the verbal predicative syntagm in modern standard Arabic, it remains for us to talk about the relation of the nominal syntagm with this type of syntagm, i.e., verbal predicative syntagm. In the instances of the verbal predicative syntagm which I have cited above, we notice that the "subject" position is always filled by a nominal syntagm. That is to say the nominal syntagm occupies the "subject" position in the verbal predicative syntagm. As it has been shown above, it stands in a relation of subordination to the nucleus, therefore, it is peripheral to the nucleus. As the nominal syntagm which occupies the "subject" position of the verbal predicative syntagm can be replaced by "zero", it is an expansion. That is why it has been put between square brackets.

This is not the only position which the nominal syntagm occupies in the verbal predicative syntagm. It may also occupy the "object" position in such a syntagm. In this case it can be either an expansion, i.e., it can be replaced by "zero" as in: /ḡakala rraḡūlu rraḡīfa/ "the man ate the loaf".



or a peripheral bound entity, i.e., a peripheral entity that cannot be replaced by "zero" as in: /tasallaḡalḡirdu ṣṣaḡarata/ "the monkey climbed the tree"



In both cases, i.e., whether the nominal syntagm in the "object" position is an expansion or a peripheral bound entity, it stands in a relation of subordination to the nucleus.

The normal word order in the verbal predicative syntagm is verbal predicate - subject - object. An example is: /kataba zaidun rrisālata/ "literally : wrote Zeid the letter", "Zeid wrote the letter".

Another common word order of the verbal predicative syntagm is: subject - verbal predicate - object. An example is: /ʔalqittatu ʔakalat lfaʔra/ "literally : the cat ate the mouse", "the cat ate the mouse".

Sometimes, for stylistic reasons the object precedes both the verbal predicate and the subject. An example is: /ʔaṣṣahīfatu qaraʔa muhammadun/ "literally : "the newspaper read Mohammad", "Mohammad read the newspaper".

We may also encounter verbal predicate - object - subject as another different realization of the verbal predicative syntagm in Arabic. An example is: /bana lmadrasata lmuhandisūna/ "literally : built the school the architects", "the architects built the school".

However, this type of realization is rare in modern standard Arabic.

3. The relationship of the nominal syntagm with the functional syntagm:

I shall start off by giving examples of the functional syntagm:

i. /fi lbiati lkabīri/ "in the big house"

- ii. /ʔala ššātʔi/ "on the beach"
- iii. /mina lgarbi/ "from the west"

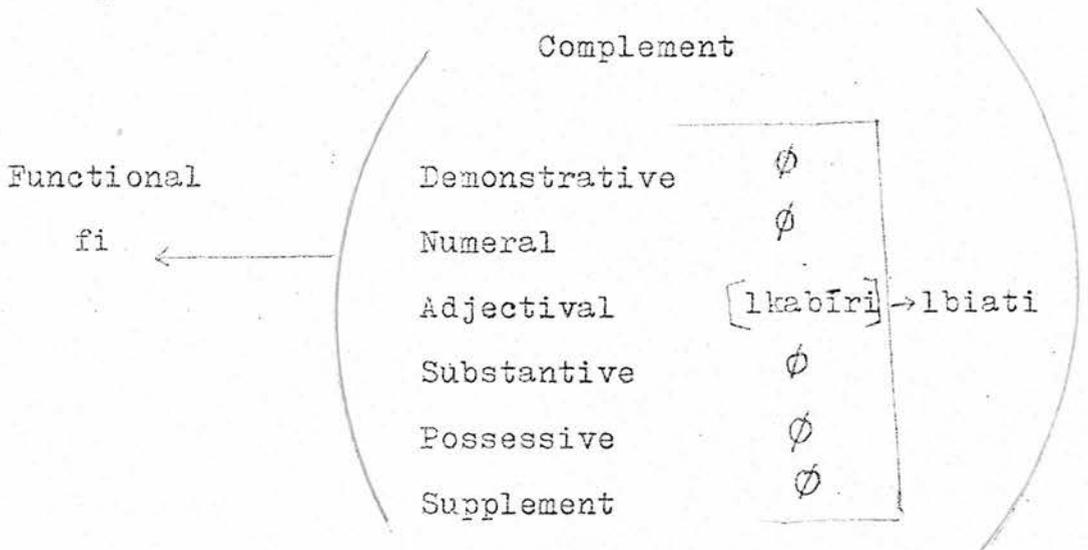
These examples are called functional syntagms as the nuclear position of each of them is filled by a functional. (1)  
 We can set up a model for this type of syntagm as follows:

functional ←———— complement

The model shows two positions: a nuclear and a peripheral. The nuclear position is always filled by a functional, e.g., a preposition or a relative pronoun, whereas the complement is filled by a nominal syntagm or by a verbal predicative syntagm.

Consequently the syntagm: /fi lbaiti lkabīri/

"in the big house" can be fitted into the model as follows:



This shows that the nominal syntagm occupies the "complement" position in the functional syntagm. In order to show that the functional is the nuclear element in the functional syntagm I shall give an example of a higher level syntagm and try to establish the direct and indirect relations between the constituents of the syntagm. The example is:

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(1) "Functionals" are entities like prepositions, relative pronouns or some other particles such as /ʔiṣā/ "if" and /lau/ "if" in Arabic. For more about "functionals" see Martinet, Elements of General Linguistics, p.124.

/taskun fi lbaiti lkabīri/ "she lives in the big house".

The relation between /fi/ "in" and /lbaiti/ "the house" is a direct relation whereas the relation between /fi/ "in" and /lkabīri/ "the big" is an indirect one via /lbaiti/ "the house". On the other hand the relation between /lbaiti lkabīri/ "the big house" and /taskunu/ "lives" is an indirect one via /fi/ "in". This gives us evidence that in /fi lbaiti lkabīri/ /fi/ is the nucleus as it determines the distribution of /lbaiti lkabīri/ "the big house" in higher level syntagms. In other words the functional in the functional syntagm is the nucleus whereas the complement is the peripheral. In terms of occurrence dependency both the functional and the complement in the functional syntagm are interdependent on one another.

Chapter VII

Ellipsis in the Nominal Syntagm

(1)

"Ellipsis" is defined as "defective realization of a syntagm, such that one or more of its constituents are not realized at the utterance level". The utterance level, i.e., the level at which the syntagm is realized, represents the superficial manifestation of the underlying structure. That is, on the utterance level we may have utterances such as "John cooked and Peter ate it". This utterance is regarded as a well-formed sentence. However, such an utterance does not form a well-formed syntagm on the syntactic level. Therefore, in a syntactic analysis, the sentence-base must be well-formed as it corresponds to a syntagm. Thus, while ellipsis is not an issue on the syntactic level, i.e., it does not occur on this level but on the utterance level, it is necessary to recognize ellipsis when it occurs, i.e., to recognize that a sentence-base as it corresponds to a syntagm is defective. Otherwise, our syntactic analysis will be inadequate since the proper identification of the syntactic entities will be affected.

Nevertheless, one must not confuse ellipsis with something else namely "zero" realization. In the case of "zero", i.e., when a peripheral element that is an expansion is left out, the message conveyed will be affected by its inclusion or omission. However, this is not the case in ellipsis, i.e., leaving out the element has no repercussions for the message conveyed. That is, in "Peter plays" and "Peter plays tennis"

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(1) Mulder, Postulates for Axiomatic Functionalism, Def. 21.

we recognize two different messages, therefore, the former is not elliptical, whereas, "Jane cooked and Peter ate it" is elliptical since the message conveyed will not be affected if the element left out, i.e., "it", is included.

It is necessary to point out that in ellipsis, the elliptical element or elements are recoverable. That is we must make sure that we can know exactly what and where ellipsis is. In other words the corresponding syntagm can be precisely established and analyzed.

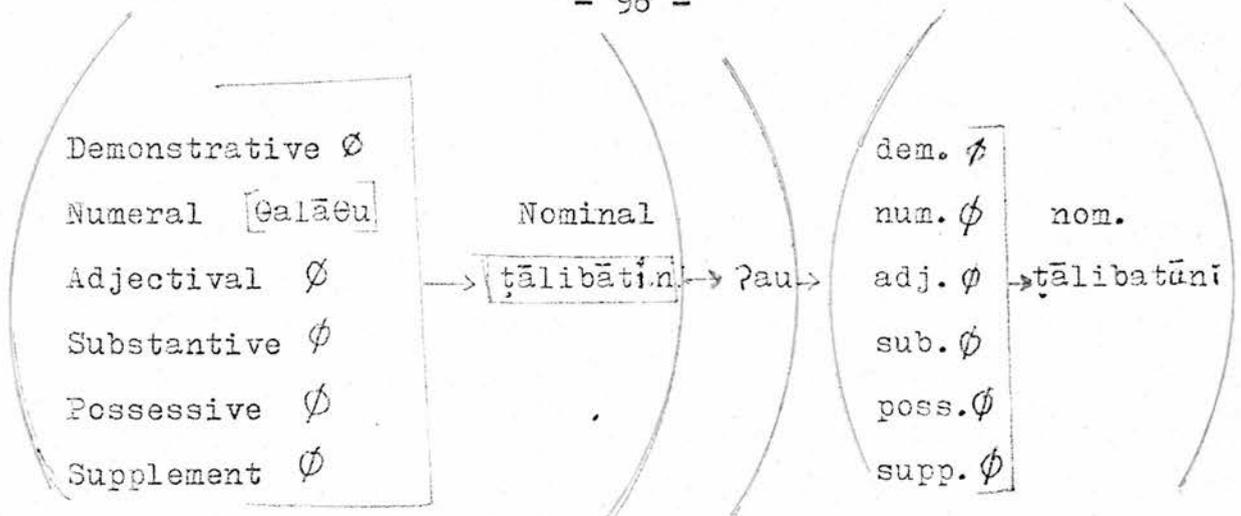
In the "nominal syntagm" of modern standard Arabic, there are some conventions for the usage of ellipsis. However, these conventions are not strict rules. In the following paragraphs I shall refer to the cases in which ellipsis occurs in the nominal syntagm of modern standard Arabic.

It is typical for the numbered noun in some instances of the nominal syntagm to be left out in realization, i.e., the numbered noun may<sup>be</sup>/elliptical. An example is:

/ṭalibatāni ʔau ʕalāʕan/ "two students or three ( )"

In the utterance in question we may recognize an elliptical element after /ʕalāʕan/ "three". As regards the syntagm which may correspond to this utterance, it can be precisely established, i.e., we can say exactly what and where the ellipsis is. Therefore, the corresponding syntagm may be established as follows: /ṭalibatāni ʔau ʕalāʕu tālibātin/ "two students or three students".

(The line indicates the element that has been left out in realization.) This syntagm can be fitted into the model as follows:



The box indicates the element that has been left out in realization, i.e., the elliptical element.

We may also have ellipsis in constructions such as:

/hāʔulāʔi ua ʔūlāʔika lʔaulādu/ "these and those boys".

In this utterance we may recognize an elliptical element after

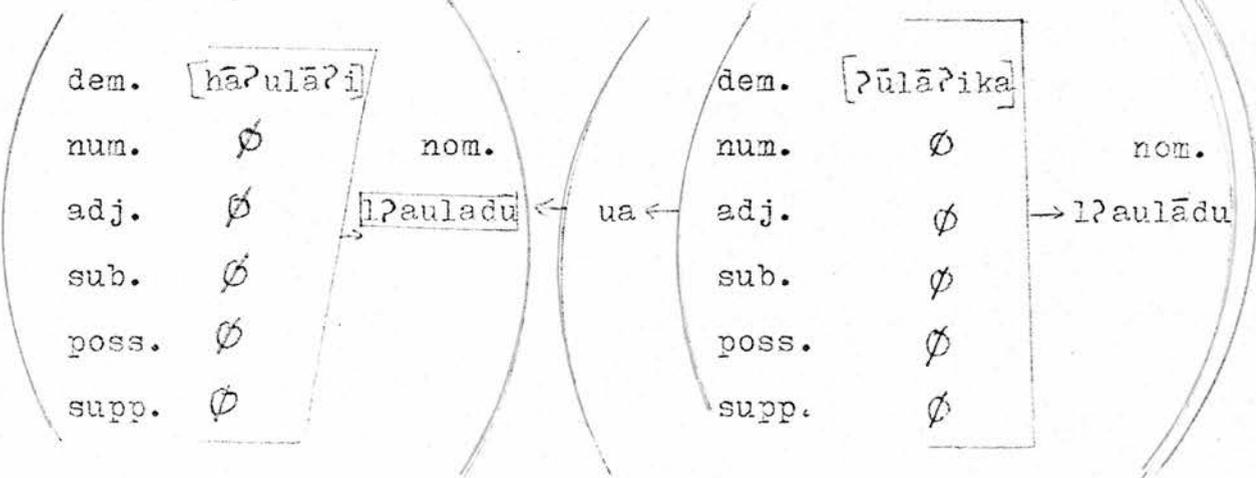
/hāʔulāʔi/ "these". The elliptical element is /lʔaulādu/

"boys". Thus, the corresponding syntagm can be recon-

structed as follows: /hāʔulāʔi lʔauladu ua ʔūlāʔika

lʔaulādu/ "these boys and those boys".

This syntagm can be fitted into the model as follows:



(The box indicates the suppressed part in the realization.)

We notice that the nuclear element of the syntagm has been left out in realization. Therefore, we may say that in some cases of ellipsis the nuclear element of the syntagm may be left out in realization.

In addition to the above cases of ellipsis in the nominal syntagm we may also have other ones. Thus, given

the following utterance: /kutubu ttārīxi ua lʔadabi/  
 "books of history and of literature".

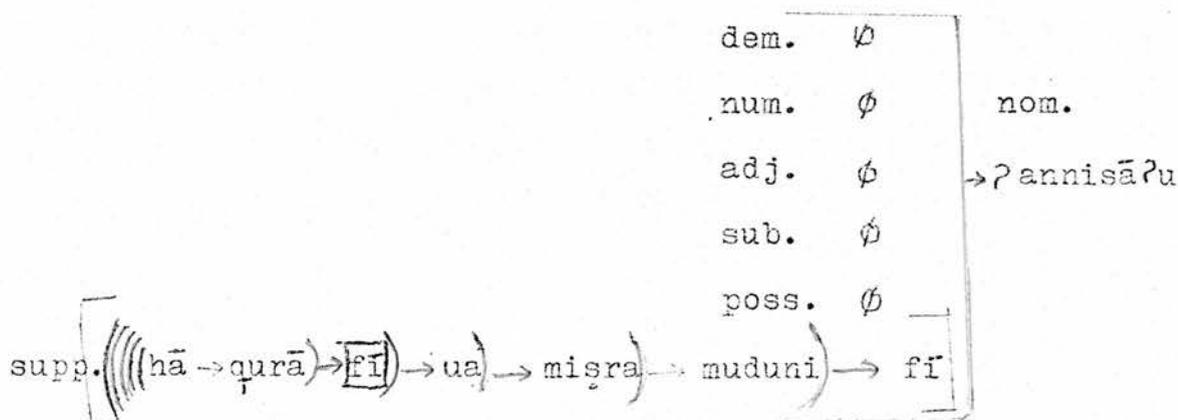
we may recognize an elliptical element immediately preceding /lʔadabi/ "literature". This element is /kutubu/ "books". In this case the corresponding syntagm can be established as follows: /kutubu ttārīxi ua kutubu lʔadabi/ (The underlined element has been left out on the utterance level)

Another instance where we may have ellipsis is:  
 /ʔannisāʔu fī muduni miṣra ua qurāhā/ "women in Egyptian cities and Egyptian villages".

In the above utterance we may recognize an elliptical element immediately after /uā/ "and". The elliptical element is the preposition /fī/ "in". Consequently the corresponding syntagm can be established as follows:

/ʔannisāʔu fī muduni miṣra ua fī qurāhā/ "women in Egyptian cities and in Egyptian villages".

This syntagm can be fitted into the model as follows:



The box indicates the element that has been left out in realization, i.e., the elliptical element.

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