pro in Arabic Syntax:
A Theoretical Study of its Syntactic and Semantic Features with the Help of X-Bar Syntax within Chomsky's (1981-1986) Framework of Government and Binding Theory

الفاعل المستتر في النحو العربي:
دراسة نظرية لخصائصه النحوية والدلالية استنادا إلى نظرية تشومسكي النحوية (1981-1986) الإكس بار ضمن إطار نظرية العامل والربط .

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This thesis 'pro in Arabic Syntax: A Theoretical Study of its Syntactic and Semantic Features with the Help of X-Bar Syntax within Chomsky's *(1981-1986)* Framework of Government and Binding Theory' was discussed and accepted on May 24th, 2010.

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Dedication

This work is dedicated to my late parents on whom Allah's mercy may fall. It is also dedicated to my brothers, sisters and my beloved wife.

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pro in Arabic Syntax: A Theoretical Study of Its Syntactic and Semantic Features with the help of X-Bar Syntax within Chomsky's (1981- 1986) Framework of Government and Binding Theory.

Abstract

The objective of this study was to investigate the syntactic and semantic properties of the empty category pro in Modern Standard Arabic (MSA) syntax with reference to Chomsky's (1981, 1982 and 1986) universal views on Government and Binding Theory and Jalabneh's (1992 and 2007) Verb -movement which was applied to Arabic syntax to account for such properties. This study aimed at answering the following questions:

1. What syntactic features might pro have?

i) Is pro governed by a governor?

ii) Does it have a case? If yes what is it?

iii) Does it fulfill the requirement of Extended Projection Principle at all levels of syntax?

iv) Are there special markers attached to the verb that syntactically indicate the number, person and gender of pro?

v. Can pro be replaced by expletives in Arabic syntax?

vi. Is the deletion of pro optional or compulsory in Arabic syntax?

2. What semantic features does it have in Arabic syntax?

i) Does it have theta roles? If yes, what are they?

ii) At what level is a theta role assigned to pro?

The researcher used (68) sentences as the sample of the study. Nine of them were taken from modern syntactic Arabic books which were written by Wright (1984), Alghalayini (2006), Maghalsih (2007) and Alfakhuri (N. D.). The rest of the sentences were formed by the researcher, and they were checked by an Arab linguist. To analyze both properties of pro, the researcher adopted the theory of Verb-movement and dealt with Arabic as subject- verb- object (SVO) at the deep structure (D-structure) but VSO at the logical form (LF) for better government of pro because the meaning does not change. Thus, the sentences were analyzed in forms of tree diagrams using the sub-theory of X-bar syntax. The results revealed that (i) pro is properly governed by inflection (INFL) under inflectional phrase (I") since it is the subject of a finite clause; (ii) pro is assigned the nominative case from its governor INFL at the surface structure in all finite clauses, namely, present, past, imperative and in subordinate clauses; (iii) pro fulfills the requirement of the extended projection principle at all levels of syntax in Arabic syntax as a pro- drop language; (iv) there are certain Agrs markers attached to the verb in Arabic syntax that indicate the type of pro; the markers are restricted to the tense of the verb used and they do not overlap; (v) the subject position of the weather- type verbs can not be replaced by the expletives 'it' and 'there' as is the situation in non pro drop languages; However, in Arabic syntax, it is filled with pro as it has various referents. This category pro is assigned not only the nominative case but also a theta role in such structures. Such process made pro different from the expletives in the sense that they assign the nominative case only but not a theta role and (vi) pro must be dropped at the logical form because it is the property of Arabic as a pro drop language in such structures. The results also answered the second question as follows: (i) pro is assigned a theta role under the

government of the verb phrase (V”) as a requirement of theta theory. It carries the theta role of agent, theme and experiencer in various situations, and it is clear that (ii) pro is assigned its theta roles at D-structure.

The researcher recommended other scholars to follow this kind of approach and apply it to other pro-drop languages to find out similarities and differences with Arabic.

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الملخص

هدفت هذه الدراسة إلى تفحص السمات النحوية والدلالية للفاعل المستتر في النحو العربي الحديث في العام الأكاديمي 2010/2009 وذلك بالرجوع إلى أفكار العالم الأمريكي تشومسكي (1982،1981 ،1986) ضمن إطار نظرية الرابط والتحكم وكذلك بالرجوع إلى أفكار جلابنة (1992- 2007) المتعلقة بحركة الفعل في الجملة والمطبق على العربية لتفسير تلك السمات.

هدفت الدراسة إلى الإجابة عن الأسئلة التالية:

أ) ما السمات النحوية التي يتمتع بها الفاعل المستتر؟

1. هل يخضع الفاعل لسيطرة أي عنصر مسيطر في الجملة؟
2. هل يتمتع الفاعل المستتر بحركة الفاعلية وما هي؟
3. هل ينسجم الفاعل المستتر بما يتناسب مع مبدأ كل جملة يجب أن تحتوي على فاعل؟
4. هل هناك علامات خاصة بالعدد والضمير والجنس تلتصق بالفعل للدلالة على الفاعل المستتر؟
5. هل يمكن أن يستبدل الفاعل المستتر بكلمات حشوية في النحو العربي؟

ب) ما السمات الدلالية التي يتصف بها الفاعل المستتر في النحو العربي؟

1. هل يحمل الفاعل المستتر سمات دلالية خاصة ؟ وإذا كانت الإجابة نعم ما هي هذه السمات؟
2. ما المستوى الذي تعين به السمة الدلالية للفاعل المستتر؟

للإجابة على تلك الأسئلة استخدم الباحث(68) جملة كعينة للدراسة منها تسع جمل نقلت من كتب النحو العربي الحديث التي ألفها كل من رايت (1984)، مغالسة (2007) و الفاخوري (لا ت) بينما شكل الباحث بقية الجمل وقامت بتدقيقها مختص بالنحو العربي الحديث.

لتحليل السمات النحوية والدلالية المذكورة آنفاً تبنى الباحث حركة الفعل في النحو العربي وتعامل مع اللغة العربية بالترتيب فاعل- فعل- مفعول به في المستوى العميق للجملة و فعل- فاعل- مفعول به في المستوى المنطقي للجملة وذلك للتعامل مع الفاعل بطرية أفضل من حيث السيطرة. لذا حلل الباحث الجمل باستخدام الطريقة الشجرية مستخدماً نظرية الإكس بار سنتاكس الحديثة ضمن نظرية الرابط والتحكم.

أظهرت النتائج مايلي:

1. لا بد للفاعل المستتر أن يكون مسيطراً عليه من قبل عامل الزمن تحت مظلة عبارة الزمن وذلك لأن الفاعل يقع في جملة يستخدم فيها فعل زمني.

2. لا بد للفاعل المستتر أن يتسم بحالة الرفع من قبل المسيطر عامل الرفع الزمني في المستوى السطحي في كل الجمل الزمنية.
3. ينسجم وجود الفاعل المستتر في المستوى العميق والسطحي والدلالي مع مبدأ كل جملة يجب أن تحتوي على فاعل.
4. أوضحت الدراسة أن هناك علامات خاصة ملتصقة بالفعل للدلالة على الفاعل المستتر و أن تلك العلامات محددة حسب زمن الفعل ولا يجوز استبدال تلك العلامات بعضها ببعض.
5. أوضحت الدراسة أن فاعل الجمل التي تحتوي على أفعال تختص بالطقس لا يمكن أن يستبدل بفاعل حشوي كما هو الحال في اللغات التي لا تقبل إسقاط الفاعل في المستوى المنطقي وبدلاً من ذلك يعبأ موقع الفاعل بفاعل مستتر له مرجعيات معينة كما و تبين أن هذا الفاعل بالإضافة إلى أنه يرفع بعامل الزمن الموجود تعين له سمة دلالية خاصة مما يجعله مختلفاً عن الفاعل الحشوي الذي يتسم بحركة الرفع فقط.
6. يجب أن يحذف الفاعل في المستوى المنطقي في الجمل التي نوقشت لأنها سمة من السمات النحوية للغة العربية التي تسمح بإسقاط فاعلها في مثل تلك الحالات.

كما بينت الدراسة إجابات السؤال الثاني كما يلي:

1. يعين للفاعل المستتر سمة دلالية واحدة بمساعدة عامل السيطرة وهو العبارة الفعلية وهذه السمات قد تكون سمة القائم بالفعل أو سمة من يقع عليه الفعل أو سمة الذي يتمتع بالحس والإدراك.
2. أوضحت الدراسة أن عامل الدلالة يعين في المستوى العميق فقط و يحافظ عليه في كل المستويات النحوية اللاحقة لتجنب الخلط الدلالي.

أوصي الباحث غيره من الباحثين بإتباع هذه الدراسة وتطبيقها على لغات أخرى تتسم بخاصية حذف الفاعل.

Chapter One

Introduction

1.0 Background of the Study

Arabic belongs to the Semitic languages type family. It is a mother tongue to more than 250 million. As a second language, it is spoken by almost the same number all over the world. It is regarded as one of the six official languages listed in the ledger of the United Nations. There is some written evidence in which Arabic language is proved to be spoken thousands of years ago. Arabic was first spoken by Arabs who lived in Yemen, Arabia, and the Fertile Crescent Area (i.e. Iraq, Syria, Jordan and Palestine). Ever since, Arabic was called the classical language, which was used in the pre Islamic era. It survived up to later eras due to the revelation of Islam because the glorious Quran was written in the same form of the language. The classical Arabic is not widely used among Arabs these days and in stead a new variety called Modern Standard Arabic (MSA) is in use. In addition to it, Arabs tend to speak the colloquial form of Arabic depending on the area or the place. Modern Standard Arabic has basically a number of main dialects. The major dialects are the Egyptian dialect, Belad Al- Sham dialect (Syria, Jordan, Palestine, and Lebanon), and North African dialect.

Arab grammarians used the prescriptive approach to study Arabic syntax issues in an attempt to maintain the classical form of the language. This was due to the fact that the glorious Quran and the pre Islamic poetry were written in this form of classical Arabic. The study of syntax attracted the grammarians' attention after *Seibawaih* wrote his famous book on Arabic Syntax, namely, *Al Kitaab* 800 A.C. A lot of modern books are written in a new and clear style explaining syntax of Arabic. There are a number of

linguists who are interested in modern syntax. They used the traditional approach to write certain books in syntax; such writers are represented by Wright (1984), Alfakhoori (N D), Alghalayini (2006) and Maghalsih (2007). However, Jalabneh (1992 and 2007) is a modern linguist who used modern linguistic views, namely, the Theory of Government and Binding to explain syntactic and semantic issues in Modern standard Arabic in which this thesis is written.

Arabic has two types of word order, namely, (i) verb, subject object (VSO) and (ii) subject and predicate (S Predicate) i.e., the nominal sentence. Verbal sentences start with the verb then followed by the subject which can be a noun phrase or a clause. However, nominal sentences start with subject and followed by a predicate which can be a noun phrase, adjective phrase, a verb phrase, a prepositional phrase and a clause. In both types, the subject is either a reference expression or a pronoun. Arabic has various types of pronouns that have the structure of a noun phrase. They are classified into three types, namely, (1) the attached (annexed) personal pronouns, (2) non-attached personal pronouns and (3) the covert personal pronouns.

The attached personal pronouns are divided into (I) perfective tense; they are exemplified as follows: (a) *tu* 'I' '1st person, sg, masculine or feminine' as in [*la^{c}ib-tu* 'I played'] , (b) *naa* 'we' '1st,pl' as in [*la^{c}ib-naa* 'we played'], (c) *ta* '2nd, sg, masc. ' as in [*la^{c}ib-ta* ' you played'], (d) *tumaa* '2nd, dual masculine or feminine' as in [*la^{c}ib-tumaa* 'you both played'], (e) *tum* '2nd, plural, masc.' as in [*la^{c}ib-tum* ' you played'], (f) *ti* '2nd,sg, fem' as in [*la^{c}ib-ti*' you played'], (g) *tunna* '2nd, pl, feminine' as in [*la^{c}ib-tunna*' you played'], (h) *aa* '3rd, dual, masc.' as in [*la^{c}ib-aa* ' they both played'], (i) *uu* '3rd, plural, masculine ' [*la^{c}ib-uu* 'they played'], (j) *taa* '3rd,fem,dual' as in[*la^{c}iba-taa* 'they both play']

and (k) *na* '3rd, plural, feminine ' [*la^{c}ib-na' they played'*]. (II) Imperfective tense; they are exemplified as follows: (a) *....aa* '2nd , masc/fem and dual' [*tal^{c}ab-aa* 'you both play'], (b) *....uu* ' 2nd , pl and masc.' [*tal^{c}ab-uu* 'you play'], (c) *....ii* '2nd , sg and fem ' [*tal^{c}ab-ii* 'you play'] and (d) *....na* '2nd, pl, fem' [*tal^{c}ab-na* 'you play].

The attached personal pronouns as objects are exemplified as follows; (a) *ii* 'me''1st, masc/fem and sg' as in [*qaabalan-ii* 'he met me] (b) *naa* 'us''1st, masc/fem and pl' [*qaabala-naa* 'he met us] (c) *ka* 'you''2nd, masc and sg' [*qaabala-ka* 'he met you] (d) *kumaa* 'you''2nd, masc/fem and dual' [*qaabala-kumaa* 'he met both of you] (e) *kum* 'you''2nd, masc and pl' [*qaabala-kum* 'he met you] (f) *ki* 'you''2nd, fem and sg' [*qaabala-ki* 'he met you'] (g) *kunna* 'you''2nd, fem and pl' [*qaabala- kunna* 'he met you'] (h) *hu* 'him''3rd, masc and sg' [*qaabala-hu* 'he met him'] (i) *humaa* 'them''3rd, masc/fem and dual' [*qaabala-humaa* 'he met both (them)] (j) *hum* 'them''3rd,masc and pl' [*qaabala-hum* 'he met them] (k) *haa* 'her' '3rd,fem and sg' [*qaabala-haa* 'he met her] and(l) *hunna* 'them' '3rd,fem and pl' [*qaabala-hunna* 'he met them'].

The non attached personal pronouns are divided into two groups: (I) nominative (II) accusative. (I) The non-attached nominative personal pronouns are exemplified as follows: (a) *?anaa* 'I' '1st, masc/fem and sg' (b) *na<u>h</u>nu* 'we' '1st, masc/fem and pl' (c) *?anta* 'you' '2nd, masc and sg' (d) *?antumaa* 'you' '2nd, masc/fem and dual' (e) *?antum* 'you' '2nd, masc and pl' (f) *?anti* 'you' '2nd,fem and sg' (g) *?antunna* 'you' '2nd,fem and pl' (h) *huwa* 'he' '3rd,masc and sg' (i) *humaa* 'they' '3rd, masc/fem and dual' (j) *hum* 'they' '3rd,masc and pl' (k) *hiya* 'she' '3rd,fem and sg' and (l) *hunna* 'they' '3rd,fem and pl'. (II) The non attached personal accusative pronouns are exemplified as follows; (a) *?iyyaaya* 'me' '1st,masc/fem and sg' (b) *?iyyaanaa* 'us' '1st,masc/fem and pl' (c)

?iyyaaka ‘you’ ‘2nd, masc and sg’ (d) *?iyyaakumaa* ‘you’ ‘2nd,masc/fem and dual’ (e) *?iyyaakum* ‘you’ ‘2nd,masc and pl’ (f) *?iyyaaki* ‘you’ ‘2nd,fem and sg’ (g) *?iyyaakunna* ‘you’ ‘2nd, fem and pl’ (h) *?iyyaahu* ‘him’ ‘3rd,masc and sg’ (i) *?iyyaahumaa* ‘them’ ‘3rd, masc/fem and dual (g) *?iyyaahum* ‘them’ ‘3rd, masc and pl’ (k) *?iyyaahaa* ‘her’ ‘3rd,fem and sg’ and (l) *?iyyaahunna* ‘them’ ‘3rd,fem and pl’.

Arabic is rich in the pronominal system because there are personal pronouns that are attached to the verb to illustrate both the subject as well as the object in the sentence. Likewise, there are non- attached personal pronouns for both the nominative and the accusative cases respectively. Thus, they are syntactically marked personal pronouns.

The third category of Arabic pronouns is the covert pronouns; they are pre-attached to the verb in the sentence. Such a type is the focus of this study; thus, they were left to be discussed in chapter three of this work.

1.1 Statement of the Problem

There are certain syntactic as well as the semantic properties of the empty category pro in Arabic finite clauses that need to be checked. Such properties include the question of government, case, theta role assignment, deletion, substitution with expletives, overt N” and filling the gap of Extended Projection Principle (EPP).

1.2 Objectives and Questions of the Study

The study aims to check the syntactic and semantic features of pro in Modern Standard Arabic with reference to Chomsky’s (1981 and 1986) views of the Theory of Government and Binding. For such reasons, the researcher proposed the following questions:

1. What syntactic features might pro have?

i) Is pro governed by a governor?

ii) Does it have a case? If yes what is it?

iii) Does it fulfill the requirement of Extended Projection Principle at all levels of syntax?

iv) Are there special markers attached to the verb that syntactically indicate the number, person and gender of pro?

v. Can pro be replaced by expletives arguments in Arabic syntax?

vi. Is the deletion of pro optional or compulsory in Arabic syntax?

2. What semantic features does it have in Arabic syntax?

i) Does it have theta roles? If yes, what are they?

ii) At what level is a theta role assigned to pro?

1.3 Significance of the Study

This study is important because it helps learners of Arabic to understand and interpret finite sentences of an empty subject in a better manner. It also helps translators who are native speakers to go deep into the language structure to give better version of Arabic translation while translating it into another language. The researcher thinks also that this study will encourage other scholars to follow the framework of Government and Binding theory to explain pro in other similar languages and compare it to Arabic.

1.4 Definitions of Basic Terms

pro: It is the covert subject of a finite clause that appears at D-structure and S-structure but not the logical form as in [*dhahabat* ‘she went’].

X-bar: The hierarchy structure of categorical as well as functional phrases in a sentence.

Thematic relations: The semantic roles associated to CP, IP, PP, and NP in a sentence.

Case: The inflection that is visible at the end of NP occupying a grammatical function due to a governor as in [*dhahaba zaid-un* nominative (nom) ‘Zaid went’].

Governor: an inflectional element (INFL) that is able to assign the nominative case to the subject including pro.

Governing category: It is a minimal domain that contains a governed element and its governor.

Expletive: An entity such as ‘it’ and ‘there’ that are used to fill the subject positions in weather –type verbs to fulfill the requirement of EPP which says every sentence must have a subject as in [it is raining’ and ‘there seems to a man in the garden’].

N”: A noun phrase is the phrase that has lexical noun as its head, determiner as a specifier and a pre-modifier adjective if available. It occupies the grammatical functions of subject, object and a complement.

Nominative Case: It is the inflection that must be assigned to the subject position whether it is overt or covert in a finite clause as in [*ra?a zaid- un (nom)* ^{c}*amaran* ‘zaid saw Amr’].

Pro-drop language: A language that allows its subject to be dropped at the logical form in a finite clause as Arabic and Italian.

Null Subject Language: A language that does not allow pro to appear at the logical form and it is labeled as a pro- drop language as in [*la*^{c}*iba* ‘he played].

C- command: A process in which the governor has a direct command over a governed in a sister- head relation.

M-command: A process in which two constituents that do not dominate each other are related and that have no maximal projections as a barrier in between. Maximal projections are Noun phrase N", V", P", A", Adv", I" and C"

1.5. Data Corpus

This study is considered to be theoretical and instrumental at the same time. It is theoretical in the sense that the researcher referred to Chomsky's (1981 and 1986) views on Government and Binding theory related to the empty category pro in Modern Standard Arabic. The researcher referred also to the theory of V-movement which was propagated by Jalabneh (1992) to account for the government relation at D-structure in Arabic syntax. With regard to the practical instrument, the researcher used the sub- theory of X-bar syntax in which a number of tree diagrams were used to analyze the sentences of the study. Using such approach allowed the researcher to study the relation between pro and its governors in a sentence. A bunch of Arabic sentences were referred to from Modern Arabic Syntactic Books written in the course of the analysis. Many sentences were formed by the researcher. Such sentences were checked by a professor of Arabic syntax.

1.6 Validity of the Study

The sentences used in the analysis mostly were formed by the researcher and checked by the Arab syntactician Odah Abu- Odah, a professor of syntax at Middle East University for Graduate Studies. The sentences are listed in Appendix (C) on page (127). Other sentences were taken from Modern Arabic books in syntax.

Chapter Two
Review of Literature

2.0 Introduction

This chapter presents the theoretical as well as the empirical literature. Section (2.1), discusses the theoretical literature while (2.2) section, introduces the empirical literature.

2.1 Theoretical Literature

Chomsky's (1981) theoretical views are important to the extent that they are regarded as universal properties applied to all human languages. He focused on the native speaker's internal power rather his/her performance. He argued that there are many principles and parameters among all languages that they cannot be taught because they are already fixed in the human brain. Whatever the language is, the principles are the same as they are universal. He called these principles Universal Grammar (UG).

Still some languages have their own features that may differ between a language and another; they are called Parameters. The researcher focuses on the principles and parameters of Arabic language within the framework of Government and Binding Theory. Arabic Language is a pro-drop language. It shares this parameter with some other languages of the same properties that is the sentence can be made grammatical with covert subjects. As we know, a correct sentence basically consists of a subject and predicate whether the subject N" is visible or not. There is no correct sentence without a subject. However, its occurrence is based on a parametric variation between one language and another. This principle is called in syntax "extended projection principle" (EPP) (c.f. Chomsky, 1982, p. 17).

Chomsky (1981 and 1986) categorized noun phrases (N"s) in a language into (i) overt (N"s) and (ii) covert (N"s). Each (N") occupies the grammatical functions subject, the complement positions, namely, object of a verb, object of a preposition, a subject complement, and object complement. However, a language has a number of covert N"s, namely, pro, PRO, and trace. The covert pro is always the subject of a finite clause whereas PRO is always the subject of non-finite clauses. A trace is the result of either NP-movement or wh-movement and is always governed. The focus of study is merely on pro in Arabic syntax.

Chomsky (1981, p. 24-29) argued that not all languages have the pro element; however, Spanish, Japanese, Italian … etc have the structure of pro because it is dropped at the LF. He also argued that the choices in universal grammar (UG) are restricted to the question of whether the subject is or is not obligatory overt. For this reason, he assumed that the rule S→NP INFL VP for those languages in which the subject is obligatory as is the case in English and French; he assumed the rule S→ (NP) INFL VP in which case the subject is optional though INFL remains overt as in pro-drop languages, namely Italian and so on. Thus, the pro-drop parameter entails that with 'weather verbs', in English, the subject has to be filled with the expletives 'it' or 'there' to fulfill the word order of English; however, this case is not available in Arabic, in such case, the sentence remains grammatical though the subject is covert and cannot be replaced by any equivalent element.

Chomsky (1986, p. 164) illustrated that the element pro is a pure nominal element with the sense of *he* and *they* and so forth, or an expletive ‘it’ and ‘there’. It is an element that cannot visible in English but only in the null subject languages. He also argued that

the category pro is regarded in universal grammar as a kind of language variation of parameters between languages. There are certain languages that have the ability to drop the subject of the finite sentence without being affected.

2.1.1. Empty Category Principle

The empty category principle (ECP) is a mechanism in syntax proposed by Chomsky (1981) to account for properties of empty categories, namely, PRO, trace and pro those are visible in syntax. PRO is visible at deep structure (D- structure) but not at surface structure (S- structure); however, trace is visible at S- structure because it is a result of either NP- movement or Wh-movement. The category pro is licensed at both D-structure as well as S-structure for a number of syntactic reasons which are to be explained at this section. Such N"s are classified according to the features they enjoy. For instance, the category PRO has the features [+ anaphoric, + pronominal], the NP-trace has the features [+ anaphoric, - pronominal], the Wh- trace has the features [- anaphoric, - pronominal] and the category pro has the features [- anaphoric, + pronominal]. Such features are to be exemplified clearly in this analysis as follows.

Chomsky (1981) argued that PRO is always ungoverned as it occurs in a tenseless clause and with zero agreement features. For instance, in (1) PRO is not under the government of the main verb ‘want’ of the primary sentence.

1. I want Ahmad_i [PRO_i to go there].

In (1), the subject of the infinitival clause is a covert entity but theoretically it is represented by the empty category PRO. This N" has an identical anaphoric relation with the object N" 'Ahmad' of the matrix sentence. Thus, they are co-indexed with the help of co-indexation theory.

2. $John_i$ remembers [PRO_i abandoning the party]

In (2), the category PRO has an anaphoric relation with the subject NP 'John' with which it is co-indexed. It is evident that this PRO occurs in the non finite clause of ' abandoning the party' which is a gerundival clause after the verb 'remember'. However, the same category occurs in a gerundival clause after a preposition as in (3):

3. $Mary_i$ left [without [PRO_i saying goodbye]]

In (3), the category PRO is co-indexed with the NP 'Mary' with whom it has an anaphoric relation. The category PRO occurs as the subject of the non finite gerundival clause 'saying goodbye' of the preposition 'without'. However in (4) given below PRO occurs as a subject of a small clause.

4. $John_i$ arrived [PRO_i happy]

In (4), the category PRO occupies the subject position of the embedded small clause 'happy'. It is co-indexed with the subject 'John' of the matrix sentence due to the co referential anaphoric relation.

In short, the sentences (1-4) illustrate that no other category can be filled in the subject position of the infinitival, gerundival and small clauses except PRO. This is due to the fact that this particular position is ungoverned because tense is absent, and there is no governor at all.

As far as the case of the category is concerned, it cannot be assigned any case because it does not only occur in a tenseless clause but also it has no Ø –agreement features, namely, number, person and gender. On the contrary, it is assigned the theta role of agent by the predicate 'to go there' because it is theta position and is assigned the

theta role of agent in (1, 2 and 3) but the theta role of experiencer in (4). Theta marking takes palace at the level of D-Structure.

However, if this issue of PRO is compared to the second empty category pro, the latter has three different properties; they are listed as follows:

i) A subject of a tense clause.

ii) It is assigned a case though it is covert because it is rich in Ø –agreement features, namely, number, person and gender as well the verb inflection as case assignors.

iii) It does not have [+ anaphoric] reference with another N'' in the structure.

To illustrate the above features clearly, one may look at the examples (5) and (6) from Italian language.

5. mangia

is eating

'He is eating'

(c.f. Chomsky, 1981, p.256)

In (5), though the subject is not visible in the verb *mangia* ' is eating', it is still grammatical in the Italian language. This due to the fact that Italian is a pro –drop language and accepts the subject to be covert in the sentence. It can be figured out as third person singular and masculine 'he' from the inflection and the agreement features which are inflected in the primary verb *mangia*. To clarify the point in a simpler manner, (6) is given.

6. e parla

is speaking

'He is speaking'

(c.f. Chomsky, 1982, p. 79)

In (6), the symbol [e] stands for the place of the dropped category pro in Italian. The verb *prala* 'is speaking' has the ability to reflect the kind of subject as third, person , singular and masculine as it is highly inflected. In both sentences the subject is the agent as the subject position in Italian is a theta position. It is evident that the subject pro 'he' in both sentences is assigned the nominative case which will be discussed in details while tackling the issue of case assignment in the next sections. This kind of subject i.e. pro does not have any [+ anaphoric] relation with another NP as that of PRO because it is free in syntax as that of reference expressions. This element is different from PRO in the sense that pro checks the nominative case by either inflection (INFL) or agreements (AGRs). It is similar to PRO as they both are missing subjects and are assigned a theta role.

Chomsky (1981, p.58) mentioned that the empty category [t] i.e. trace is a result of either a moved NP or wh-element. Let us look at the following examples to illustrate the points.

D- Structure

7a. e pres. seem [John to like ice cream].

S-Structure

7b. $John_i$ pres. seem [t_i to like ice cream].

Phonetic Form

7c.John seems to like ice cream].

D- Structure

8a. *e* past be hit John by a car.

S-structure

8b. John past be hit t_i by a car.

Phonetic Form

8c. John was hit by the car.

(Chomsky 1986, p. 96)

In (7), the N'' moves from the subject of the embedded clause 'to like ice cream' to the subject position of the matrix sentence leaving a trace behind. Also, the same happens in (8), but the subject moves in a passive clause from the object position of the transitive verb 'be hit' to the subject position to be assigned the nominative case by the inflection 'past'. The result of these two movements is the overt traces at S-Structure. These traces have the property [+ anaphoric] because they have relations with their antecedent 'John'. The N''s move from theta marked positions to a non-theta marked places. The reason behind these two movements is to get the nominative case since the moved elements do not have a case at D- Structure. To differentiate between the two empty category groups, Chomsky (1981, p. 56) listed the basic properties of trace and PRO as follows:

(i) Properties of Trace

- Trace is governed
- The antecedent of trace is not in a theta – position.
- The antecedent-trace relation satisfies the subjacency condition.

(ii) Properties of PRO:

- It is ungoverned
- Its antecedent (if there is one) has an independent theta-role as that of PRO

- The antecedent- PRO relation (where PRO has an antecedent) need not satisfy the subjacency condition as it has no case.

The other type of trace is a result of wh-movement. Look at the following sentences for some explanations.

D-structure

9. a. e John past. see who?

S-structure

9. b. who_i did John see t ?

Phonetic Form

9. c. who did John see?

(c.f. Chomsky 1986, p.99)

In (9), the internal element of the predicate 'see' moves from its place to the external position leaving a trace. It is a short movement which occurs in simple sentences. However, the movement of wh-element in (10) is a long distance movement.

D-structure

10. a. do you think Bill said who saw John.

S-structure

10. Who do [you think [Bill said [t [t saw John]]]]]

Phonetic Form

10. c. who do you think Bill said saw John?

(c. f. Chomsky 1981, p.174)

In (10), the landing site of the wh- element is not locally one i.e. it is not within the domain of the embedded clause. The wh-element moves from the embedded clause to the

matrix sentence then in a cyclic movement it arrives at the end to its final destination. It is called the successive-cyclic movement. From (9) and (10), the wh-movement is the movement of wh-element from its place to another place leaving a trace. This element moves from an A-position i.e. theta position to a non-theta position i.e. A bar position. Usually, wh-element moves from an Adverb phrase, Preposition phrase and Adjective phrase. There are two types of movements depending on the landing site of the wh-movement i.e. long vs. short movements. In the short movement the element moves to the subject position of the clause. However, in the long movement the wh-element moves to a complementizer position. In some languages the wh- movement is not allowed in some cases (i) when the element moves from a subject position to any complementizer position which is already occupied by an overt 'that'. We call this aspect 'that- trace filter'. Also (ii) the wh-movement is not allowed in case there is an overt complementizer. This is what we call 'the doubly filled COMP filter'.

In short, Chomsky invented ECP to account for three empty categories, namely, trace, PRO and pro. Each one has its features. The focus in this research is on the empty category pro.

2.1.2 Extended Projection Principle, Expletive and pro

Chomsky (1986) argued that there are two universal projections in syntax, namely, (i) projection principle and (ii) the Extended Projection Principle. Both are posited in syntax to account for the existence of any N" in complement as well as subject positions. The projection principle reads as "lexical structure must be represented categorically at every syntactic level" (p. 54). Chomsky meant by this definition as that every argument whether phonetically realized or not must be represented syntactically at

D-structure. However, the Extended Projection Principle (EPP) is defined as "Each finite clause must have an external element i.e. each clause must have a subject" (p.116). It means that every sentence must contain a syntactic subject whether overt or covert in syntax. This subject succumbs to the requirements of theta theory and case theory. The subject must be assigned a theta role and the nominative case, in particular. It is evident that if a language is a non pro-drop language like English, the subject position sometimes cannot be filled with any N", in this situation, it can be filled with the pleonastic 'it' and 'there' as a requirement of the EPP. However, in pro-drop languages, the subject can be filled by pro. Basically, there are two primary pleonastic in English which are 'it' and 'there'.

The focus of this analysis is to see the relation between pro and the pleonastic elements in connection to EPP but not the projection principle. The researcher is going to check theoretically what situations that pro can be replaced by an expletive in non- drop languages as English as a specimen of the analysis. The only purpose for the existence of this kind of subject is only to satisfy the EPP. Such subjects appear basically with ‘weather’ verbs. Let us look at the following sentences in which the expletives 'it' and 'there' are used instead of pro in the subject position in a non pro drop languages as English.

11. It is raining.

(Chomsky, 1986, p. 115)

12. It seems that he had won.

(Chomsky, 1986, p. 140)

13. There is a man in the room.

(Chomsky, 1986, p. 86)

In (11-13) the expletives ‘it’ and ‘there’ are used to fulfill the requirement of EPP because the sentences can not stand without subjects. Chomsky (1986, p. 116) argued that Spanish and Italian languages allow the subject to be missing at PF but require it whether as an argument or an expletive as an empty category at the other levels. Chomsky gave the following example (14) from the Italian language to indicate that the empty category *e* is an expletive pro.

14. *e* [parla Giovanni]

e Giovanni speaks

'Giovanni speaks'

(Chomsky, 1986, p. 178)

In null subject languages the pleonastic element is permitted to be missed phonetically when the subject is postponed after the predicate as in (14). However, the null subject pro will appear in the subject position of a finite clause which has no overt subject. In (14), the empty expletive *e* is in an A-position but not in a theta position**.** Chomsky (1982, p. 81) argued that the term pro refers to the missing subject. He identifies pro as the null counterpart of the lexical pronouns and appears as the subject of a tensed clause with specific reference or as an expletive. There is a syntactic relation between pro and an expletive in English language and other languages in the sense that expletives are subjects of finite clauses. They are not normal ones because they have no identical identities at all. They have no meaning and no theta roles are assigned to them though they check the nominative case by [INFL].

Chomsky (1986) argued that the expletive elements must be in a case- marked position. They existed only to satisfy the EPP though they are phonetically unrealized at D-Structure but are posited at S-Structure to get the nominative case. These elements do not refer to anything in reality. The researcher can not question them; so, they exist only for structural purposes.

In short, every clause must have a subject either realized phonetically or not. The pleonastic (expletives) appear in the non pro-drop languages as a non-argument overt subject while pro appears in pro-drop languages. Chomsky (1982, p. 82) argued that the subject can be replaced by pro but not PRO because the clauses are finite.

2.1.3 Case Theory and the Assignment of Nominative Case under Government

There are some factors that affect the category pro. One of these factors is the assignment of case. The case theory is one of the fundamental issues that was discussed by Chomsky (1981, p. 48) in Government and Binding Theory. Case theory exposes the relations between N”s and their governors, namely, INFL, verbs and prepositions. In non pro- drop languages like English, N”s are not visible with case markers but cases are recognized by the syntactic positions they have in relation to governors of the respective N"s. However, in pro –drop languages mostly N"s are visible with certain nominal declension markers as the language is rich in its morphological realizations as that of Arabic. It is the syntactic relation between the governors and the elements they govern that decide the type of case. Each N" must get a case in a case position. The case filter principle emphasizes the importance of case for every overt lexical element N". Chomsky (1986, p.74) said "every phonetically realized NP must be assigned (abstract) Case". Case

assignment is based on the government relation between the two entities. The case and the governor must be next to each other in the same maximal projection. And said "If the category α has a case to assign, then it may assign it to an element that it governs". (Chomsky 1986, p.187)

The concepts of c-command and government play an essential role all through the case theory. However, the case is determined by the governor that governs the N". According to X- bar Syntax, the functional INFL of the maximal projection I" constituent commands (c-commands) and governs the subject position. Whether this position is an argument or non argument, it needs to be checked the nominative case by INFL. The government relation that is established between INFL and the N" is stated by Chomsky (1981, p, 15) as follows:

(15) "[β…γ…α…γ…], where

(i) $\alpha = X^0$

(ii) Where Ø is a maximal projection, if Ø dominates γ then Ø dominates α

(iii) α c-commands γ"

This definition of government is further simplified in Chomsky (1991, p. 50) as:

(16). "α governs β if α c-commands β and there is no category that "protects" β from government by α. γ protects β in this sense if it is c-commanded by α and either

i) γ is a barrier dominating β

ii) γ intervenes between α and β

The concept of government and command must be local for case assignment. The element α and β must be in a liner order to agree with value of the head parameter of a

language. The relation between INFL and its subject is local in I". Thus, as the subject is governed, it must be c-commanded by the same governor as shown in the c-command relation in (17).

17. "[γ……α…… β…],

"[γ…… β …… α …]

(c.f. Chomsky, 1981, p. 36)

The c-command relation is substituted for the same purpose by maximal command (M-command) and government as in (18).

18.

"[β …… γ …… α … γ…], where

(i) $\alpha = X^0$

(ii) Where Ø is a maximal projection, if Ø dominates γ then Ø dominates α

(iii) α c-commands γ"

Then α and γ are contained in all the same maximal projection"

(c.f. Chomsky, 1981, p. 165)

Chomsky (1986, p.193) argued that there are two main groups of cases, namely, structural cases and inherent cases. Structural cases are nominative and accusative cases. Oblique and genitive cases are examples of inherent cases. Structural cases are assigned in S-structure positions and they are not associated with theta marking, particularly, the subject position. An inherited case is liable to both theta marking and case. Chomsky (1986, p. 94) mentioned that a lexical argument must have case, or it will not receive a theta role and it will not be licensed. However, some elements can be governors according to Chomsky (1981, p. 50 and 1986, p. 162) such as verbs, prepositions and the

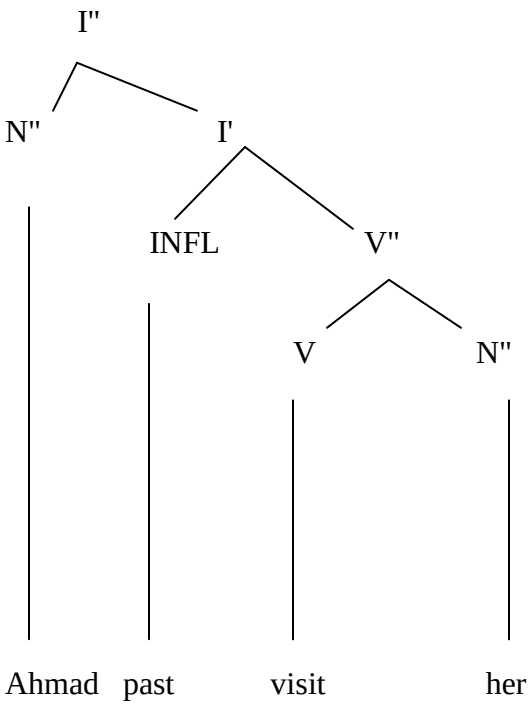
inflectional element (INFL /or I). Transitive verbs assign accusative case to the object position only while prepositions assign the oblique cases to the N"s that follow them. INFL assigns the nominative case to the subject of a finite clause (c.f. Chomsky 1981, p. 50). As the focus is merely on the subject position to the nominative case is assigned, the researcher gives the following specimens from English as a non pro –drop language, and he moves to talk about the assignment of nominative case to pro in pro-drop languages in the same section.

S-Structure

19a. Ahmad past visit her

(19b) is the tree diagram representation for (19a):

19b



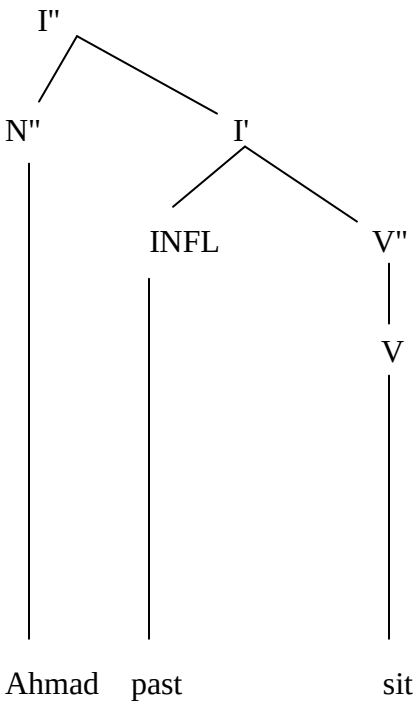
In (19b), the governor INFL 'past' and the governee N" 'Ahmad' are under the maximal projection I". Thus, the N" is assigned the nominative case whether in c-command, m-command or government relation. In other words, the relation between both

the entities is local under I". This position is governed not only if the verb is transitive as in (19) but also if the verb is intransitive because the clause is basically finite to which the nominative case is assigned as in (20).

20a. Ahmad sat

(20b) is the tree diagram representation for (20a):

20b



In (20b), the governor INFL 'past' and the governee N" 'Ahmad' are under the maximal projection I". Thus, the N" is assigned the nominative case whether in c-command, m-command or government relation. In other words, the relation between both entities is local under I" as that of (19b).

In short, this research focuses on the nominative case which is assigned by the INFL of a finite clause. It is meant by INFL the center tense node of a sentence. (c. f. Chomsky 1981, p. 19). This inflectional element is generated from the V" of a clause and

it includes the agreement elements (AGR). The agreement elements are person, number and gender. More precisely, Chomsky (1986, p. 162 and 188) claimed that the agreement element (AGR) of INFL is a governor that governs the subject and gives it the nominative case.

2.1.3. 1. Case Theory and the Assignment of Nominative Case to pro

Chomsky (1981) started his study to pro by mentioning the two properties of the category pro. The two properties are listed in (21).

21. (i) Missing subject

(ii) Free inversion in simple sentences

In pro- drop languages and because the AGR is very strong, the missing subject receives its case from its sister i.e. AGR. Here emerges the problem of the empty category pro in so far case is concerned. As mentioned ahead case filter is very much concerned with every phonetically realized N". However, pro is an empty category; then how case is assigned to it? The answer is theoretically given by Chomsky (1982, p. 82) who assumed that there is no reason why pro should not be governed at S- structure. The category pro is governed by I and AGR and has the nominative case**.** He said "In the pro-drop languages the EC subject governed by AGR is pro with case" (p. 86). He also said "In a pro-drop language, pro with case can be left in subject position governed by AGR, since its content can be determined by AGR with case" (p. 86).

Chomsky (1986) further argued that at D- structure, AGR is part of INFL, governs the subject position. In the S- structure INFL governs the subject if the INFL does not move to the main verb. If AGR is specified at D- structure for case then it is a pro. After that there will be a tendency to spell out AGR in the PF component. As a

matter of fact, the case is realized in some languages but not all languages. The realized case in some languages appears as diacritics or agreements on the syntactic elements. Some researches connect between the agreements and the pro. According to them only languages with strong agreement system has the ability to drop their subject. To exemplify the previous information one can look at (22) and (23) respectively.

D- Structure

22a. pro parlo

I spoke

S- Structure

22b. pro parlo

I spoke

PF

22 c. parlo

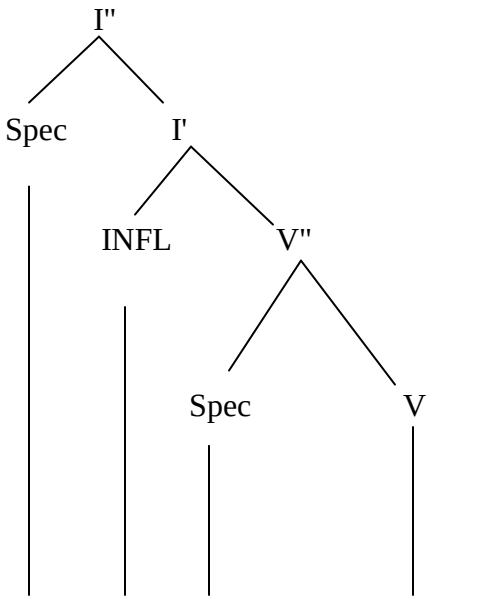
spoke

'I spoke'

(Chomsky, 1982, p. 78)

(22d) is the tree diagram representation for (22a and b)

22d.



In (22d), the functional category 'past' governs the empty pro 'I' to which the nominative case is assigned under local government under I" in Italian.

D-Structure

23a. pro vimus a juan

we see det Juan

S-Structure

23b. pro vimus a juan

we see det Juan

LF

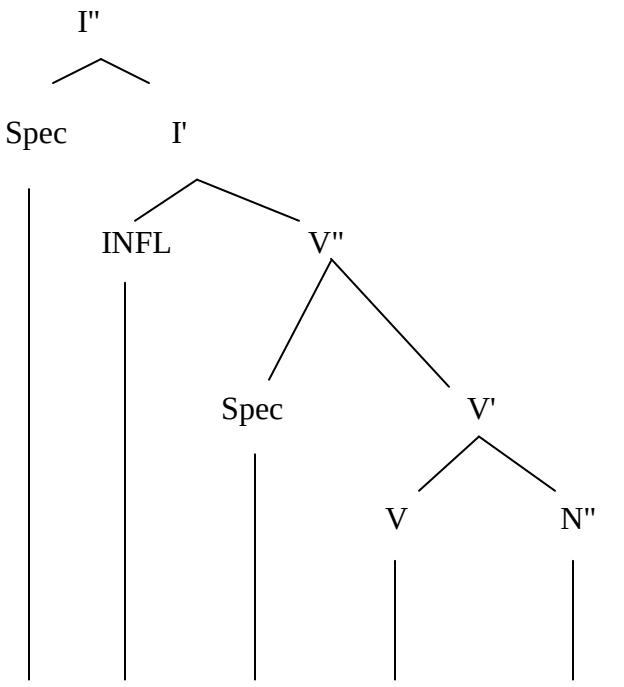
23c. vimus a juan

see det Juan

‘We see Juan’

(23d) is the tree diagram representation for (23a and b)

23d.



In (23d), the functional category 'pres' governs the empty pro 'we' to which the nominative case is assigned under local government under I" in Spanish (c.f. Haegeman, 1991, p. 416-417 for more of Italian and Spanish)

In short, Italian as well as Spanish languages are pro-drop languages but pro as the subject must get a case by INFL at S- structure because case is assigned at this particular level.

2.1.4 Thematic Relation and pro

Chomsky (1981 and 1986) discussed theta theory and put its basic principles. Theta theory is that theory which studies the semantic relations between a predicate and its external as well as internal arguments. He called the semantic properties assigned by heads thematic roles (Ɵ- roles). Chomsky referred to the conditions on proper assignment of theta roles as the 'theta criterion'. Chomsky (1986, p. 184) assumed that theta criterion expresses the idea that each argument is assigned its theta role in exactly one Ɵ-position (namely, at the D-structure) and that each assignable Ɵ- role must be assigned to an argument. So, N'', P'', I'', and C'' are theta role bearers; however, adjectives, prepositions and verbs are non arguments and the expletive elements 'it' and 'there' are added to them. Note that theta roles are assigned only to elements in A-positions; those A-positions that are assigned theta roles are 'theta positions'. However, theta roles are assigned basically by predicates. Chomsky (1986, p. 136) argued that D-structure is the position where the thematic roles are assigned. Thematic relations are of a great importance for arguments to receive their structural cases. Chomsky (1986) argued that a lexical argument must have a Ɵ- role, or it will not receive a case. Those inherent cases need a case to receive their Ɵ-roles. There are different types of theta roles, namely, agent, experiencer, theme, instruments and so on. Because thematic roles are semantic relations which depend on meanings, the meaning of a predicate determines the thematic relations of its arguments. Let us look at the listed examples below for more explanations of the theta roles assigned to the subject position. The assigned theta roles are written in italics for clarification.

24. *Ahmad* hit Ali. (Agent)

25. *Ahmad* loves cookies. (Experiencer)

26. *The ball* rolled. (Theme)

27. *Amman* is the capital of Jordan. (Location)

28. *The knife* cut the bread. (Instrument).

29. *Ahmad* got a gift from Ali. (Beneficiary).

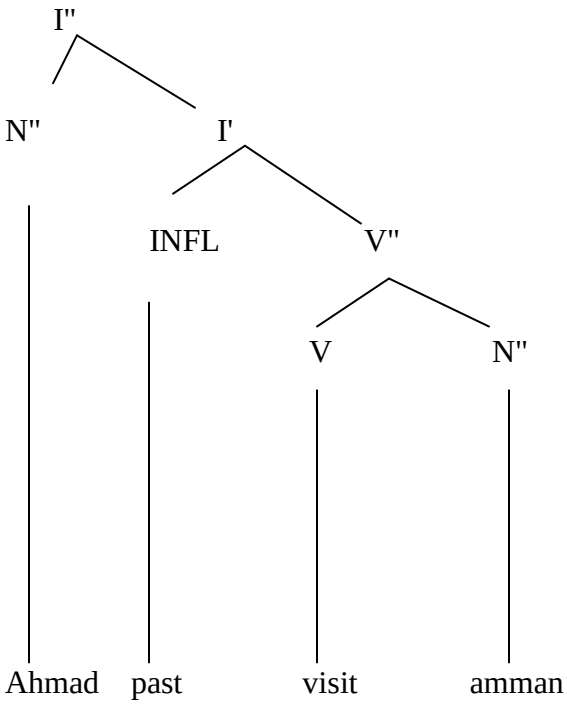
In (24- 29), the elements in italics are assigned the assigned Ɵ- roles between parentheses at the end of each clause. For example, in (24), the subject is the doer of the action 'hit'; so, it is the agent of that verb. In (25), the N'' 'Ahmad' bears the theta role of experiencer as it is the entity that experiences some sort of sense and perception i.e. love. In (26), the N'' 'the ball' has the theta role of theme as it is the entity that undergoes some action by the verb 'rolled'. In (27), the N'' 'Amman' bears the theta role of location as it is the entity that shows place. In (28), the N'' 'the knife' is assigned the role of instrument because it is the entity by which something is performed on an argument. In (29), the N'' 'Ahmad' has the theta role of benefactive as it get the benefit of having the gift. Thus, the N''s above must get Ɵ- roles depending on the meaning of the verb. It is evident the same theta roles are assigned to the category pro in pro – drop – languages.

The roles are assigned under government at D-structure as in the example (30)

30a . Ahmad visited Amman.

(30b) is the tree diagram for (30a).

30b.



In (30), the subject 'Ahmad' receives the theta role of agent as it instigates the visit to 'Amman'. It is assigned this theta role via V" ‘visited Amman'. The internal element 'Amman' receives the location theta role by the verb 'visit'; it shows the location that receives the visitor. These Ɵ- roles are assigned at the D-structures.

To sum up, pro is a universal issue by which languages are divided into pro-drop languages and non pro-drop languages. This element pro is one of the empty categories which were accounted for by Chomsky (1981) in the Theory of Government and Binding. The other elements are similar to it in terms of occurrence are PRO and Trace. The empty element pro is the covert subject of the finite clause in pro-drop languages. This element satisfies the EPP in that a clause without a subject is ungrammatical whether overt or covert. As a matter of fact, in some cases an expletive element i.e. a meaningless overt pronoun without Ɵ- role appears in the subject position in some clauses to satisfy EPP.

This expletive element is playing the same syntactic role of pro by fulfilling the need for an external element for a clause. Pro and expletive elements yield to the requirements of the case theory syntactically but pro alone yields to the requirements of theta theory. The requirement of case theory entails that pro as a subject must be governed and assigned the nominative case by INFL. The nominative case is assigned to pro under the government relation between pro and its governor the node INFL. The strong inflectional system in some pro- drop languages allows the AGR to recover the entity of the null subject by the agreements which appear on the verb. The co-indexation between AGR and the null subject is very important to satisfy the recoverability of the pro's content. With regard to the requirement of theta theory, pro must receive its theta role at the deep structure by the whole V". Because pro is a subject of a finite clause, it must receive the usual Ɵ- roles assigned to a subject. The abovementioned information will be of a great significance to be used in chapter four.

2.2 Empirical Studies

This section reviews a number of studies related to the occurrence of the empty category pro in similar finite clauses in other languages. Linguists tried to verify the syntactic as well as the semantic properties of this category as compared to other N"s. Though pro is covert, it occupies the grammatical function subject of a finite clause whether it is superordinate or embedded. It enjoys similar properties in all languages as it is a universal concept.

Rizzi (1982) performed a contrastive study between Italian and English language; he found that Italian can drop the subject but it is visible with a clitic marker as it is rich system of inflections; however, English cannot have this property. According to him the

null subject either in main clause or in an embedded clause is governed by the verbal inflection (INFL). Rizzi (1982, p.138) said "INFL counts as a proper governor in Italian for the null subject property".

The verbal inflections in null subject languages (NSLs) have (clitic-like) pronominal properties. That means INFL in NSLs is specified with the feature [+ pronominal]. When INFL has the feature pronominal, it absorbs the nominative case because of case filter and governs the empty subject. Depending on that, the pronominal INFL should be in a context of nominative case assignment. The preverbal subject in Italian receives its nominative case via one of the followings:

(i)..... tense i.e. it is adjacent to tense

(ii) Aux..... i.e. governed by an Aux in COMP

Regarding the null dummy element i.e. null expletive, Rizzi argued that the dummy element is available with weather verbs or with a post-verbal subject (c.f. p.128). Because the null subject must be in tensed (inflected) clauses while lexical subject can be found in uninflected clauses, null definite and dummy pronouns are found in tensed clauses only whereas a nominative case is assigned to the subject (c.f. p.142). Rizzi (1982, p.130) put two rules for the null definite and dummy pronouns as follows:

(I) A phonetically null subject with dummy interpretation can be found in the local context of a nominative assignor whether tensed inflection or Aux in COMP.

(II) A phonetically null subject with definite pronominal interpretation can be found in the local context of a tensed inflection.

The difference between definite and dummy pronouns is clear when we know that INFL is referential with the first type only even though INFL is pronominal with both of

them i.e. with null dummy pronouns the pronominal INFL is not referential (e.g. in gerundival and Aux- to - COMP clauses) (c.f. p. 142). There should be two features to distinguish languages, namely, INFL can be [+ - pronominal], and INFL can be [±referential]. The second feature depends on the first one. If the INFL in such a language has the pronominal feature, then this language allows the empty subject. The second feature [± referential] is applicable to those languages which allow the empty subjects to differentiate between null subjects with definite interpretation from null subject without definite interpretation. If the INFL has the feature [- referential], then the null subject is a dummy one i.e. expletive. But in case the INFL has the feature [+ referential], then the null subject is definite one since the morphological richness of INFL helps to recover the properties of the null subject.

Suner (1983, p. 189) mentioned that pro, in Spanish, has arbitrary reference like PRO. In case pro is co-indexed with the agreement, it still has its arbitrary interpretation. In (31), Suner argued that in Spanish language, pro is interpreted as 'they'.

31. e continuar- on llegando el dia entero

pro continued pl arriving det day entire

'They continued arriving during the entire day'

(c.f. Suner, 1983, p. 189)

In (31), the plural feature [on] at the end of the verb *continuaron* 'continued' is to indicate that the subject is 'they' and restricts the arbitrariness of reference in contemporary Spanish. Thus, the interpretation of pro in Spanish language is indefinite even if it refers to a number of unknown people.

Picallo (1984) conducted his study on Catalan language which is one of the Romance Languages spoken by more than nine millions in Spain and French. He adopted the idea that the INFL node is a proper governor and assigns the nominative case to the null subject of a tensed clause in case it (the INFL) has the tense features. He stated that "for the null subject languages only when INFL is 'lexically specified' i.e. contains time-frame features may it qualify as a proper governor for [NP, S]" (p.84). Following Chomsky (1981), Picallo argued that pro is an empty non-anaphoric pronominal element which receives a case and it is recoverable in feature specification by means of the element AG in INFL with which it is co-superscripted. Thus, the subject position will be properly governed when the INFL node has the two properties [+ Tense, +AG].

Huang (1984) argued that it is not only the idea of a rich inflectional morphology system that determines the pro- drop languages. Some languages that do not have any inflectional systems at all like Chinese and Japanese still permit a zero subject. However, in these languages, a zero subject pronoun is identified by an N" in a superordinate clause. Huang divided the human languages into three groups, namely, hot, cool and medium languages. Chinese, Japanese and Korean are cool languages while English language is a clear example of hot languages which are non- pro- drop languages. Italian language is a medium language i.e. a pro- drop language. The dropped subject pro of the finite clause in the cool languages is similar to that of PRO in a tenseless clause of all languages because PRO is recovered with an NP as it has [+anaphoric] feature; but with pro it refers to AGRs in medium languages (c.f. Huang, p.557). He argued that there are two types of languages with regard to the structure of a subject, namely, discourse-oriented and sentence- oriented languages. In discourse- oriented languages like Chinese,

structural subjects are not a basic requirement of the sentence so there are no pleonastic elements in these languages. The discourse- oriented languages have the rule of topic NP deletion. The following sentence taking from Huang's article exemplifies that rule.

32. [Zhongguo, defang hen da.] [e, renkou hen duo.] [e, tudi hen feiwo.]
China place very big population very many land very fertile
[e, qihou ye hen hao.] [e, women dou hen xihuan].
climate too very good we all very like
'(As for) China, (its) land area is very large. (Its) population is very big. (Its) land is very fertile. (Its) climate is also very good. We all like (it).

(c.f. Huang, 1984, p.549)

In (32), the N'' 'its' at the beginning of the clauses is deleted under the identity of the anaphoric relation in the preceding sentence. The preceding N'' 'China' in the first clause determines the subject of each clause that follows. In (33), the missing subject 'he' is determined by the matrix N'' 'Zhangsan' in the main sentence.

33. Zhangsan shuo [e bu renshi Lisi]
Zhangsan say not know Lisi
'Zhangsan said that [he] did not know Lisi.'

(c.f. Huang, 1984, p.537)

Huang explained that in pro- drop languages (here is medium), the missing subject pro is closely related to the presence of a strong antecedent which is able to recover its content but in (33), the missing subject is related to the main N'' Zhangsan 'Zhangsan' to recover its content. Huang also proved that in Chinese language, the object may be missed like the zero subject.

Byrne (1985) argued that the empty category in subordinate subject position in Saramaccan language is approximate pro (pro $_{\text{prox (imate)}}$). Saramaccan is a spoken language by approximately 20.000 descendents in Suriname a country in northern South America. Byrne called the empty subject in Saramaccan pro $_{\text{prox}}$ because it is bound and controlled by the matrix subject in the main clause (c.f. Byrne 1985, p.313). The matrix subject occurs in a tensed clause which has the nominative pronominal marker. What is strange about this language is that all its clauses are tensed either matrix or subordinate. This study showed that pro_{prox} in the subordinate clause is c-commanded by the matrix subject and coindexed with it. However, there is no empty subject in the matrix clause in Saramaccan (c.f. p 317). Byrne (1985, p.318) assumed that "the empty category in subordinate subject position is interpreted not as anaphoric but as proximate" as in the following example:

34. a_i bi-go fu pro_i luku di wosu

s/he tense-go for look-at the house

"S/he had gone to look at the house"

(c.f. Byrne 1985, p. 317)

In (34), the matrix subject *a* 'she/he' binds the empty subject in the subordinate clause and coindexed with it i.e. it reflects the matrix subject and mirrors all its properties. This empty subject is in a tensed clause since all clauses in Saramaccan are tensed marked (c.f. 314). Byrne did not consider this element as a PRO because it is in a governed position. Also it is wrong to consider it an anaphor because it is empty while anaphors should be overt.

Hyams (1986**)** posited that the main difference between the pro-drop languages and the non-pro-drop languages is that INFL in the former is pronominal. He assumed that the head of the pronominal INFL is the agreement (AGR) which governs and assigns the nominative case to the subject. The empty category pro in pro-drop languages acts as the lexical pronouns in receiving the case and the theta role. (c.f. Hyams, p.33)**.** In the embedded tensed clause in pro- drop languages the (AGR) absorbs the normal features of the subject i.e. the case and the theta role. Hyams (1982, p. 42) concluded that "the subject position of embedded sentence does not contain pro but expletive. Lexical pronoun may not appear there since the position is assigned no theta role". This expletive element lacks its phonetic forms. Hyams explained that AGR is controlled in the embedded clause by the object of the matrix clause so it needs a theta role as a requirement of control theory.

Fehri (1987) reported that there are two types of affixes in Arabic Language, namely, pronominal and non pronominal affixes. The pronominal affixes are referential with a grammatical function. They are assigned the grammatical function subject i.e. they are attached subject pronouns. The non pronominal affixes are non referential affixes but agreement markers whose sole function is to encode the subject gender on the verb (c.f. Fehri, p. 116). The difference between male and female is obvious because of the affixes as in the following sentences.

35. jaa? – at al bintu

came -female the girl

“The girl came”

36. jaa? – at al banaatu

came -female the girls

"The girls came"

(Fehri, 1986, p. 114)

In (35) and (36), the affix *at* has no grammatical function in Arabic language since it adds nothing to the meaning. The only use of this affix is to express the gender of the overt subject.

Huang (1989) assumed PRO and pro instances of the same category. According to him PRO and pro should be treated alike. They should be studied under the control theory rather than pro-drop theory. There is no need for a pro- drop theory because the distribution and the reference of both pro and PRO can be derived from the control theory i.e. PRO/pro must be controlled (c.f. p.198). Huang argued that there are three distinct empty categories, namely, NP-trace, variable and pro/PRO. These categories mirror these of lexical categories i.e. lexical anaphors, names and pronouns. The null category PRO/pro must be treated just as [+ pronominal] category. He put a generalization for PRO/pro. They are similar to each others in three factors. First, both of them need antecedences for recoverability purpose. Second, sometimes pro is free as PRO. Third, both PRO and pro occur as subjects but not objects in Chinese language.

Kenstowicz (1989) studied two dialects of Arabic, namely, Levantine (LA) and Bani Hasan (BHA). He focused on his study on the occurrence of pro in the subordinate clauses in these two dialects. Such clauses start with the complementizer innu 'that'. He found that LA does not set for the null subject parameter as in (37); however, BHA is set positively to the same parameter as in (39).

37. faadi kaal inn- ha ishtarat al- fus̱taan

Fadi said that she bought the dress.

'Fadi said that she bought the dress'

38. * faadi kaal innu ishtarat al- bint al- fustaan

Fadi said that bought det girl det dress.

39a. al- bint gaalat innu ishtar- at - e al- libaas

det girl said that bought fem pro det dress.

'The girl said that (she) bought the dress.'

39b. al- bint gaalat inn- ha ishtar- at al- libaas

det girl said that-she bought fem det dress.

'The girl said that she bought the dress.'

(c.f. Kenstowicz, 1989, p. 265)

In (37), the subject pronoun *ha* 'she' is attached to the complementizer *inn* 'that'; it is visible at all levels of syntax. If this subject is dropped to be treated as pro, the sentence becomes ungrammatical as in (38). However, in (39a), the subject pronoun in the embedded clause is not visible; the verb *ishtarat* 'bought' illustrates that the dropped subject is the 3rd, sg and feminine because of the agreement marker *at* [fem] that occurs at the end of the same verb. In (39b), the sentence still correct with the overt pronoun [ha] ‘she’ that is attached to the complementizer *innu* ‘that’.

Jaeggli and Safir (1989) refuted the old traditional idea that rich AGR allows the subject of finite clause to be dropped i.e. only languages with strong inflectional systems are pro- drop languages. As a result of their studies, they discovered that some non- NSLs have strong inflectional systems and some NSLs do not have any inflectional system.

They stated that "null subjects are permitted in all and only languages with morphologically uniform inflectional paradigms" (c.f. Jaeggli and Safir 1989, p. 29). There are two types of morphological uniformity, namely, derived and underived paradigms. Derived paradigms are those forms which contain stem and affixes. Un-derived paradigms are those forms which contain stems only. In Italian language for example, the predicate has many paradigms in different clauses to reflect the varieties of tense, person and gender. Chinese language has only one paradigm. According to Jaeggli and Safir, the null expletive subjects are always a possibility in Semitic and Italian languages, regardless of the richness of agreement.

Al- Abed Al- Haq (1992) conducted a study in Jordanian Arabic as a colloquial variety in which he proposed that null subject can occur in certain structures. For instance, in [*bič*a 'he wept'], the null subject is understood as 'he' though the stem of the verb does not show the subject agreement features. However, this feature can be visible if the subject is changed to the 3rd, singular feminine as in [*bičat* 'she wept']. In this sentence, the marker [t] is an agreement feature which is used to show that the null subject is 'she' (p. 2). He concluded that all verbs must contain a subject marker which functions as the agreement features. If a sentence does not contain an overt subject, the subject markers are merely phonological realizations of the features of the subject NP, having no predicate meaning value.

Haegeman (1994) argued that pro has the properties [+pronominal, –anaphoric]. She emphasized that the rich inflections of INFL is the only property that allows and identifies the absent subject. The most important part of INFL that recovers the features of pro is the AGR which must be coindexed with the element it recovers (c.f. Haegeman,

1994, p. 455). According to Haegeman, pro is originated at D-structure in [Spec, VP] position to be assigned its external theta role then it (pro) "moves to [Spec, IP] where it will be licensed and identified via the rich INFL". (Haegeman, p. 454). There are two types of pro in Italian language, namely, referential and non referential (expletive). The following two examples taken from Haegeman's book illustrate that.

40. ø ha parl

pro has (3rd ,sg) spoken

'He has spoken'

(Haegeman, 1994, p.451)

41. ø semra che gianni sia ammalato

pro seems that Gianni is ill

"It seems that Gianni is ill"

(Haegeman, 1994, p. 452)

In (40), pro has a definite reference like the overt pronoun 'he' while it is compared in (41) to the expletive element (it) in English language. Following Rizzi (1982), Haegeman argued that pro is licensed under head-government. The choice of the head-governor varies between languages. In Italian, the head-governor is INFL (c.f. Haegeman, 1994, p. 457). To refute Huang's (1984) proposal that pro is possible in languages with rich agreement or with no agreement at all, Haegeman argued that in these languages, which are claimed to have no agreement, INFL is richer than it is in English though poorer than in Italian. INFL in those languages still licenses pro with no reference i.e. expletive pro since the AGR features in these languages do not enable us to identify a referential pro (c.f. Haegeman, 1994, p. 458).

Alexiadou and Anagnostopoulou (1998) investigated the behavior of subjects in Germanic, Celtic, Romance and Greek languages. They divided languages into two groups, namely, languages with/without overt expletives (c.f. p. 494). According to them, languages without overt expletives are VSO languages. These kinds of languages can always drop their subject and satisfy EPP by verb -movement because they have verbal agreement morphology with the categorical status of a pronominal element. There are two results of this assumption (i) preverbal subjects are not in an A-position and (ii) VSO order never involve a covert expletive. In VSO languages (Arabic is an example of these languages), the order VSO is formed because the [Spec, IP] is licensed for covert subjects which are external elements in the same structure. They proved that the preverbal position in Null Subject Languages (NSLs) is not A- position but A'- position. They rejected Rizzi (1982) in his opinion and they proved that the inverted orders i.e. VSO order does not involve an expletive pro. They started their proposal by hypothesizing NSLs as either (i) no/ weak EPP languages or (ii) strong EPP languages where the EPP feature is not checked by the moved NP but by a different mode, namely V-movement. VSO languages are also pro-drop languages, because only pro- drop languages have the option to check the EPP features through the verbal agreement morpheme. This proposal presents the new idea that EPP can be checked not only by the movement of an NP but also by the movement of a head i.e. a predicate (c.f. p.519).

They argued that the trigger for V-movement is economical. Moving the predicate instead of NP to check the EPP is less costly according to them. Regarding the idea of morphology, they stated that there is no absolute correlate between richness of morphology and the availability of strong agreement in the sense of pro-drop. However,

Arabic shows full referential agreement in pro- drop structure and when the subject is preverbal while it is less specified in VSO orders.

The study concluded with doubting the existence of pro because of some points. First, the writers argued that the AGR affix replaces the subject in licensing the EPP. So, there is no place for pro but the AGR is the theta- bearing argument in NSLs. Second, there is no way to define the empty categories. Third, the idea of empty categories is abandoned in the framework of minimalist program (c.f. Alexiadou and Anagnostopoulou, 1998, p. 531).

Radford (2009) maintained that in null subject languages, any finite verb can have either an overt subject or a null pro subject (c.f. p. 23). Even though English has the ability to drop the subject in imperative sentences, it is not regarded a null subject language. He assumed that expletive pronouns are originated internally within VP then they move to [spec, T] because of EPP feature (c.f. p. 294).

To sum up, the category pro was discussed within the frame work of GB. The researcher presented thirteen studies which were conducted on pro in different languages. The most important two studies were conducted by Rizzi (1982) and Haegeman (1991). The two scholars agreed with Chomsky (1981, 1982 and 1986) in the sense that pro is the subject of a finite clause in pro- drop languages and it must have a case and a theta role. Picallo (1984) agreed with them that the inflectional system helps to recover the identity of pro. Rizzi (1982), Haegeman (1991) and Radford (2009) argued that pro fulfills the requirement of EPP in pro- drop languages while expletive does so in non pro- drop languages. Fehri (1987) and Al-Abed Al-Haq (1992) argued that inflections in Arabic identify the missing subject. Kenstowicz (1989) proved that BHA (an Arabic dialect)

allows pro to occur in subordinate sentences. Alexiadou and Anagnostopoulou (1998) rejected the idea of pro and they supposed AGR suffix to carry the nominative case and the theta role. According to them, there should be a verb movement inside the clause to satisfy the EPP. Huang (1984 and 1989) assumed that there are some languages which allow their subjects to be dropped while they do not have strong inflectional systems. He suggested that pro should be studied under the control theory like PRO. Other scholars concluded with some aspects of pro in certain languages. For instance, according to Suner (1983), pro in Spanish has arbitrary reference. Byrne (1985) considered pro in subordinate clauses in Saramaccan language to be an approximate element.

2.3 Summary

In short, Chomsky (1981, 1982 and 1986) argued that pro is the covert subject of a finite clause in pro- drop languages. This subject must be assigned a nominative case and a theta role. The category pro satisfies the requirement of EPP in pro- drop languages. In non pro- drop languages, the expletive satisfies the requirement of EPP. He argued that pro is governed by INFL at the S- structure to be assigned the nominative case while it is assigned the theta role at the D- structure by V". The agreement inflections help to recover pro in the LF.

Many scholars tried to investigate pro in different languages. The basic ideas of thirteen studies were presented in this chapter. There were some similarities in the results of those studies in the sense that pro is the covert subject in some languages. The difference between them was the aspects of pro in certain languages.

The theoretical literature would be applied in chapter four to pro in MSA while the empirical literature would be a place of comparison.

Chapter Three

Analysis and Findings of pro

3.0 Introduction

Section (3.1) covered the occurrence of the null subject in Arabic syntax while the second section dealt with pro from the stand point of GB and V- movement. In the first section, the researcher presented pro in different types of matrix sentences, namely, imperfective, perfective and imperative then he turned to discus pro in subordinate clauses. In (3.2), the researcher analyzed pro within the framework of GB theory. Arabic sentences were analyzed in forms of tree diagrams using the sub-theory of X-bar syntax. Such tree diagrams helped to study the relation between the elements of a sentence.

3.1 The Occurrence of the Null Subject in Arabic Syntax

There are two types of pronouns in Arabic, namely, overt and covert pronouns. The null subjects though occupy the subject position of a finite clause but they are covert. It is obvious that finite clauses are visible by the overt or covert occurrence of the tense, namely, the present and the past in which agreement is rich to illustrate the null subject as Arabic is an inflectional language and it is rich in its morphological realizations. However, non finites lack tense properties though they are rich in agreement features.

3.1.1 The Occurrence of the Null Subject in Matrix Sentences

The null subject occurs in matrix as well as subordinate clauses whenever the clause is finite. The researcher started with the former then moved to discuss the latter in the subsequent section.

3.1.1.1 The Occurrence of Null Subject in Imperfective Sentence

Al-Fakhuri argued that if the clause is in the present tense, the null subject occurs and enjoys certain agreement features as in (42).

42a. ?u - waafiq- u- ø ᶜala qaraari - ka

Ist, sg, masc./fem agree pres. Ist, sg, masc./fem with decision your

'I agree with your decision'

42b. ?u- waafiq- u ?anaa ᶜala qaraari - ka

Ist, sg, masc./fem agree pres. I with decision your

'I agree with your decision'

42c. * ?u- waafiq- u ?anta ᶜala qaraari - ka

Ist, sg, masc. agree pres. you with decision your

(c.f. Al-Fakhuri, p. 81)

In (42a), the agreement [?u] is prefixed to the present verb *waafiqu* 'agree' to which the tense marker [u] is suffixed; the subject of the clause is null and understood to be the first person singular masculine and feminine. However, in (42b), the subject is specified and it is shown by the equivalent overt pronoun *?anaa* 'I'. In case, the subject is specified to be the second person singular, the sentence is incorrect as in (42c) because the agreement marker [?u] does not fit with the overt pronoun *?anta* 'you sg'. However, if the subject is first person masculine or feminine and plural, the indication of agreement is different as in (43).

43a. na- fᶜal- u- ø al- khair- a

1st, pl, masc./fem do pres. 1st, pl, masc./fem det good acc

'We do the good'

43b. na- f^{c}al- u nah̲nu al- khair- a

Ist, pl, masc./fem do pres. we det good acc

'We do the good'

43c. * na- f^{c}al- u ?antum al- khair- a

Ist, pl, masc./fem do pres. you pl det good acc

(c.f. Maghalsih, 2007, p. 129)

In (43a), the agreement marker [na] is prefixed to the present verb *f^{c}alu* 'do' to which the same present tense marker [u] is suffixed; the subject of the clause is null and understood to be the first person plural masculine or feminine. In (43b), the subject is specified and it is shown by the overt pronoun *nah̲nu* 'we'. In case, the subject is specified to be the second person plural, the sentence becomes ungrammatical as in (43c) because the agreement marker [na] does not fit with the overt separate pronoun *?antum* 'you pl.'.

The null subject can be in the second person form if the verb is in the present tense as in (44).

44a. ta- shkur- u- ø al- laah- a

2nd, sg, masc thank pres. 2nd, sg, masc det God acc

'You thank God'

44b. ?anta ta- shkur- u- al- laah- a

You 2nd, sg, masc thank pres. det God acc

'You thank God'

44c.* ta- shkur- u ?antum al- laah- a

2nd, sg, masc thank pres. you pl det God acc

(c.f. Maghalsih, 2007, p. 129)

In (44a), the agreement marker [ta] is prefixed to the present verb *shkuru* 'thank' to which the same present tense marker [u] is suffixed; the subject of the clause is null and understood to be the second person singular masculine. In (43b), the subject is specified and it is shown by the equivalent overt pronoun *?anta* 'you sg'. In case, the subject is specified to be the second person plural, the sentence becomes ungrammatical as in (44c) because the agreement marker [ta] does not fit with the overt separate pronoun *?antum* 'you pl.'. However, if the subject is second person feminine and singular as in (45), the agreement is different and the question of null subject does not arise.

45a. ta- shkur- 0 iina al- laah- a

2nd,sg, fem thank pres you fem det God acc

'You thank God'

45b. ?anti ta- shkur- 0 iina al- laah- a

you fem 2nd,sg, fem thank pres 2nd,sg, fem det God acc

'You thank God'

45c.* ta- shkur- 0 al- laah- a

2nd,sg, fem thank pres det God acc

45d. ta- shkur- 0 iina ?anti al- laah- a

2nd,sg, fem thank pres you fem you fem det God acc

'You thank God'

(c.f. Al-Fakhuri, p. 81)

In (45a), the verb *shkur* ‘thank’ is prefixed with the present 2nd, singular and feminine marker [ta] and suffixed by the annexed pronoun [iina] which is the overt subject. It is evident that the annexed pronoun [iina] ‘you fem’ is essential to build up a grammatical sentence and any deletion to the annexed pronoun renders ungrammatical sentence as in (54c). In (54b), the subject is specified and it is shown by the equivalent overt pronoun ?anti ‘you fem’. Arabic may have a sentence as (45d) in which the subject separate pronoun *?anti* ‘you fem’ occurs after the verb.

Likewise, if the subject is second dual, it cannot be null as in (46).

46a. ta- f^{c}al- 0- aani al- khair- a

2nd, dl, masc/ fem do pres. dl det good acc

‘Both do the good’

46b. ?antumaa ta- f^{c}al- 0- aani al- khair- a

both 2nd,dl, masc/ fem do pres. both det good acc

‘Both do the good’

46c. * ta- f^{c}al- aani - 0 ?antum al- khair- a

2nd, dl, masc/ fem do both pres. you det good acc

(c.f. Al-Fakhuri, p. 81)

In (46a), the verb *f ^{c}al* ‘do’ is prefixed with the present 2nd, dual masculine and feminine marker [ta] and suffixed by the marker [aani]. It is evident that the annexed pronoun [aani] ‘you both’ is the subject in (46a) since it is essential to build up a grammatical sentence and any deletion to this pronoun renders ungrammatical sentences. The separate pronoun *?antumaa* ‘you both’ is the subject in (46b) while the suffix [aani]

is a marker to the subject. However, Arabic cannot have a sentence as (45c) in which the separate pronoun subject *?antum* does not fit with the suffixed marker[aani].

If the subject is second person plural and masculine, the null subject cannot occur as in (47).

47a. ta- f^{c}al- 0- uuna al- khair- a

2nd, pl, masc do pres. you pl det good acc

'You do the good'

47b. ?antum ta- f^{c}al- 0- uuna al- khair- a

you pl 2nd, pl, masc do pres. you det good acc

'You do the good'

47c. * ta- f^{c}al- 0 al- khair- a

2nd, dl, masc do pres. det good acc

(c.f. Al-Fakhuri, p. 81)

In (47a), the verb *f ^{c}al* 'do' is prefixed with the present 2nd, plural and masculine marker [ta] and suffixed by the annexed pronoun [uuna]. It is evident that the annexed pronoun [uuna] '2nd,pl, masc' is the overt subject and it is essential to build up a grammatical sentence and any deletion to it renders ungrammatical sentences as in (47c). Thus, (47c) cannot be an example of a null subject as that of (44a). However, Arabic may have a sentence as (47b) in which the subject is the separate pronoun *?antum* 'you pl'.

If the subject is second person feminine plural, the null subject cannot occur as in (48).

48a. ta- f^{c}al- 0- na al- khair- a

2nd, pl, fem do pres. you, fem det good acc

‘You do the good’

48b. ?antunna ta- f^{c}al- 0- na al- khair- a

you pl pres do pres. you, pl det good acc

‘You both do the good’

48c. *?anta ta- f^{c}al- 0- na al- khair- a

you sg 2nd, dl, fem do pres. you, pl det good acc

(c.f. Al-Fakhuri, p. 81)

In (47a), the verb *f^{c}al* ‘do’ is prefixed with the present 2nd, plural and feminine marker [ta] and suffixed by the annexed pronoun [na]. It is evident that the annexed pronoun [na] ‘2nd ,pl, fem’ is the overt subject and it is essential to build up a grammatical sentence. In (48b), the subject is specified and it is shown by the overt pronoun *?antunna*‘you fem’. In case, the subject is specified to be the second person singular, the sentence becomes ungrammatical as in (48c) because the agreement markers [ta]and [na] do not fit with the overt separate pronoun *?anta* ‘you sg.’.

If the subject is 3rd, singular and masculine, the null subject occurs as in (49).

49a. ya - ?kul- u - ø al- ṯa^{c}aam- a

3rd, sg, masc. eat pres. 3rd, sg, masc. det food acc

‘He eats the food’

49b. ya - ?kul- u huwa al- ṯa^{c}aam- a

3rd, sg, masc. eat pres he det food acc

‘He eats the food’

In (49a), the subject is null but understood to be *huwa* ‘he’ due to the overt occurrence of the prefix [ya]. This subject can be made overt as in (49b) in which it

occurs after the verb *?kulu* ‘eat’. However, if this sentence is compared with (50), it is evident that the null subject is 3rd, person feminine.

50a. ta - ?kul- u- ø al- t̲aᶜaam- a

3rd, sg, fem eat pres. 3rd, sg, fem det food acc

‘She eats the food’

50b. ta - ?kul- u hiya al- t̲aᶜaam - a

3rd, sg, fem eat pres she det food acc

‘She eats the food’

In (50a), the subject is null but understood to be *hiya* ‘she’ due to the overt occurrence of the prefix [ta]. This subject can be made overt as in (50b) in which it occurs after the verb *?kul* ‘eat’.

If the subject is masculine dual, the null subject does not occur as in (51).

51a. ya - ?kul- 0- aani- al- t̲aᶜaam- a

3rd,dl, masc eat pres both det food acc

‘Both (men) eat the food’

51b. ya - ?kul- 0- aani humaa al- t̲aᶜaam- a

3rd,dl, masc eat pres. dl, masc both det food acc

‘Both (men) eat the food’

In (51a), the subject of the sentence is masculine dual and showed by annexed pronoun [aani] at the end of the verb *?kul* ‘eat’. The prefix [ya] is a marker used when the verb is in the present tense to agree with the overt subject. The separate pronoun *humma* ‘both’ is the subject in (51b) while the suffix [aani] is the dual marker that illustrates

number. If this sentence is compared with (52), the researcher finds that the subject can be dual and feminine.

52a. ta - ?kul- 0- aani al- ta^{c}aam- a

3rd,dl, fem eat pres. dl, fem det food acc

'Both (women) eat the food'

52b. ta - ?kul- 0- aani humaa al- ta^{c}aam- a

3rd,dl, fem eat pres. dl, fem both det food acc

'Both (women) eat the food'

In (52a), the subject is overt and shows dual feminine; it is illustrated by the annexed pronoun [aani] at the end of the verb *?kul* 'eat'. The prefix [ta] is the dual marker for the subject which is prefixed at the verb to show agreement with the overt subject. In (52b), the subject is indicated by the separate pronoun *humma* 'both' while [aani] becomes the dual marker that illustrates number.

However, if the subject is third person masculine or feminine plural, the null subject cannot occur as in (53) and (54) respectively.

53a. ya- drus- 0 - uuna kulla sabaah

3rd, pl, masc. study pres. they every morning

'They study every morning'

53b. hum ya- drus- 0 - uuna kulla sabaah

they 3rd, pl, masc. study pres. 3rd, pl, masc. every morning

'They study every morning'

54a. ya- drus- 0- na kulla sabaah

3rd, pl, fem study pres. they every morning

'They study every morning'

54b. hunna ya- drus- na - 0 kulla sabaah

they 3rd,pl,fem study 3rd, pl, fem pres every morning

'They study every morning'

The null subject pronoun cannot occur in (53) and (54) because the subject in Arabic syntax must be overt. They are realized by the annexed pronouns *uuna* 'they masculine' and *na* 'they women' respectively in (53a) and (54a). It is evident that the affixes [ya] is used for both genders when the verb is in the present tense. The separate pronouns *hum* 'they, masc' and *hunna* 'they, fem' in (53b) and (54b), are the visible subjects and the suffixes are markers to them and thus the null subject cannot be used in Arabic in these situations.

In short, the null subjects in Arabic syntax occur in the sentences in (42a, 43a, 44a, 49a, and 50a). In other sentences, the subject must be overt either separate or annexed to the verb which is in the present tense.

3.1.1.2 The Occurrence of Null Subject in the Perfective Sentence

The occurrence of the null subject in Arabic is not restricted to the present tense; however, it can occur in structures in which the verb is in the perfective tense (past) but with different markers. The examples (55) and (56) illustrate the issue.

55a. raja[c] - a - ø bi khufai hunain

come past. 3rd,sg,masc with two shoes hunain

'He came back with the two shoes of Hunain'

55b. raja[c] - a - ø huwa bi khufai hunain

come past 3rd,sg,masc he with shoes hunain

'He came back with the two shoes of Hunain'

In (55a), the null subject is not realized phonetically but it is understood as the third person singular and masculine as it is visible by the zero agreement at the end of the verb *raja^{c}a* 'came'. If the researcher looks at (55b), it is noticed that the same subject can be made overt by the overt separate pronoun *huwa* 'he' which has the same agreement with same verb. The zero agreement in (55a) helps the native speaker of Arabic language realizes the identity of the null subject because it is the only situation in the past in which the marker is zero. However, if the subject is 3rd, singular and feminine, the null subject is recovered via the agreement marker [t] as in (56).

56a. raja^{c} - a- t- ø bi khufai hunain

come past 3rd,sg,fem 3rd,sg,fem with two shoes hunain

'She came back with the two shoes of Hunain'

56b. raja^{c} - a- -t hiya bi khufai hunain

come past 3rd,sg,fem she with shoes hunain

'She came back with the two shoes of Hunain'

In (56a), the null subject is realized to be third person and feminine because of the feminine marker [t] attached to the verb *raja^{c}a* 'came'. In (56b), the null subject is made overt by the separate pronoun *hiya* 'she' even in the presence of the same agreement marking.

To make the analysis clear, the researcher provides a number of sentences in which the subjects are overt in annexed forms.

57. qul- - 0 tu al- haq

said past 1st, sg, masc and fem det truth

'I said the truth'

58. qul- - 0 naa al- haq

said past 1st, pl, masc and fem det truth

'We said the truth'

In (57) and (58), the subjects are overt and visible by the annexed pronouns [tu] 'I' and [naa] 'we'.

59. qul- 0- ta al- haq

said past 2nd , sg,masc. det truth

'You said the truth'

60. qul- 0- ti al- haq

said past 2nd , sg, fem det truth

'You said the truth'

61. qul- 0- tumaa al- haq

said past 2nd ,dl, masc./fem. det truth

'You said the truth'

62. qul- 0- tum al- haq

said past 2nd , pl, masc. det truth

'You said the truth'

63. qul- 0- tunna al- haq

said past 2nd , pl, fem det truth

'You said the truth'

In (59), (60), (61), (62), and (63), the subjects are overt and visible by the attached pronouns [ta] ‘2nd, sg,masc.’ , [ti] ‘2nd ,sg,fem’, [tumaa] ‘2nd ,dl, masc./fem.’, [tum] ‘2nd , pl, masc.’, and [tunna] ‘2nd , pl, fem’.

64. qaal- 0- aa al- haq

said past 3rd , dl, masc det truth

‘They said the truth’

65. qaal- a- taa al- haq

said pas t 3rd , dl, fem det truth

‘They said the truth’

66. qaal- 0- uu al- haq

said past 3rd , pl, masc. det truth

‘They said the truth’

67. qul- 0- na al- haq

said past 3rd , pl, fem det truth

‘They said the truth’

In (64), (65), (66) and (67), the subjects are overt and visible by the attached pronouns [aa] ‘3rd , dl and masc.’, [taa] ‘3rd , dl and fem’, [uu] ‘3rd , pl and masc.’, and [na] ‘3rd , pl and fem’.

It is argued that, in the instances, (57-67), the subjects can be made the separate pronouns. The researcher gives the specimen (68) as an instance for the rest of the examples.

68a. qaal- - 0 uu hum al- haq

say past 3rd, pl, masc they. masc det truth

‘They said the truth’

68b. hum qaal- 0- uu al- haq

they. masc say past 3rd, pl, masc det truth

‘They said the truth’

In (68a and b), the separate pronoun *hum* ‘they, masc’ is not an essential element in the sentences. It is added for confirmation of the subject and the sentence can remain grammatical without it but when it appears in a sentence then, it is the subject. The researcher can use other appropriate separate pronouns as subjects for the sentences from (57) to (67) without changing the meaning. The ability to have an overt subject in Arabic is an aspect for both null as well as suffixed pronouns.

In short, the null subjects in Arabic syntax occur in the sentences in (55a, and 56a). In other sentences, the subject must be overt either separate or annexed to the verb which is in the past tense.

3.1.1.3 The Occurrence of the Null Subject in Imperative Sentences

There is only one situation in which the null subject can occur in the imperative type of sentences in Arabic syntax as in (69).

69a. ?uktub - 0 - ø risaalat- an

write imp. 2nd,sg, masc letter acc

‘Write a letter.’

69b. ?uktub - 0 ?anta risaalat- an

write imp you, sg letter acc

‘Write a letter.’

(c.f. Alghalayini,2006. p. 80)

In (69a), the null subject in the imperative clause is not realized phonetically but it is easily figured out to be *?anta* ‘you’ because of the zero marker attached to the verb *?uktub* ‘write’. The same process is also applied to in English syntax but in Arabic it is morphologically inflected in the verb for all types of second person. However, the null subject can be made overt with the separate pronoun *?anta* ‘you’ as in (69b) in which the subject is regarded as separate pronoun but not null.

In contrast, the following sentences in Arabic syntax involve only other imperative forms when the null subject is not allowed and the subject manifests as a connected pronoun at the end of the verb as in sentences from (70) to (73).

70. ?uktub- - 0- ii risaalat- an

write imp. 2nd, sg, fem letter acc

‘Write a letter!’

71. ?uktub- 0 - aa risaalat- an

write imp 2nd,dl, masc/ fem letter acc

‘Write a letter!’

72. ?uktub- 0- uu risaalat- an

write imp 2nd, pl, masc letter acc

‘Write a letter!’

73. ?uktub- 0- na risaalat- an

write imp 2nd, pl, fem letter acc

‘Write a letter!’

In previous sentences, from (70) to (73), the subjects are visible with the suffixes [ii] ‘2nd, sg, fem’, [aa] ‘2nd, dl, masc./fem’, [uu] ‘2nd , pl, masc.’ and [na] 2nd , pl fem’ at

the end of the verb *?uktu* ‘write’. These kinds of suffixes are called annexed pronouns. If the researcher looks at the following two examples, it is noticed that once the pronoun is changed to separate, the same annexed entities become markers to the new forms of the subjects as in (74) and (75).

74. ?uktub- 0- ?anta risaalat- an

write imp you letter acc

‘Write a letter!’

(c.f. Alghalaayiinii, p. 80)

75. ?uktub- 0 - ii ?anti risaalat- an

write inp 2nd, sg, fem you letter acc

‘Write a letter!’

In (74), the subject is the separate pronoun *?anta* ‘you’ and the agreement is zero. In (75), [ii] is the agreement marker because the subject is visible with the separate pronoun *?anti* ‘2nd , sg, fem’.

In short, the null subject is visible in the instance (69a).

3.1.2 The Occurrence of the Null subject in Subordinate Clauses

Arabic has a number of finite subordinate clauses in which the null subject occurs. In this section the researcher discusses three types of subordinate clauses which are (i) subjunctive, (ii) wh- nominal clause and (iii) adverbial clauses. The researcher starts with subordinate clauses that show subjunctive. This type is represented by the verb *yaqtarih̲u* ‘suggest’, *yatamannaa* ‘wish’, *yanwii* ‘intend’... etc. Such and similar verbs that express inclination, disinclination, prohibition, duty, effect, effort, fear, necessity and

permission show subjunctive in Arabic syntax in the subordination (c.f. Wright, 1984, vol. three, p. 25). The example bellow illustrates the issue.

76a. iqtarah- a muusaa ?an

suggest past Muusaa that

?a- ktub- a- ø resaalat- an

1st, sg, masc/fem write acc 1st, sg, masc/fem letter acc

'Muusaa suggested that I write a letter'

76b.* iqtarah- a muusaa ?an

suggest past Muusaa that

katab- a- ø resaalat- an

write past 3rd, sg, masc letter acc

In (76a), the null subject is illustrated by the agreement marker [?a] that involves the subject to be first person singular feminine and masculine. It can be personalized by *?ana* 'I'. If the null subject is changed to any other person, then new markers are used; for instance, it can be [na] *nahnw* 'we', [ta] *?nta* 'you sg and masc', or *hiya* 'she' and [ya] *huwa* 'he'. The verb in the embedded clause has to be in the present tense but not in the past or else the sentence is ungrammatical as (76b.)

Another type of subordinate clauses is the wh-clause. The specimen (77) illustrates the occurrence of the null subject in Arabic syntax.

77. laa ?- a ᶜrif- u matha

no 1st, sg, masc./fem know pres what

?a- drus- u- ø

1st, sg,masc.fem study pres 1st, sg, masc/fem

‘I do not know what I am studying’

In (77), the null subject is illustrated by the agreement marker [?a] that involves the subject to be first person singular feminine and masculine. It can be personalized by *?ana* ‘I’. If the null subject is changed to any other person, then new markers are used; for instance, it can be [na] *nahnw* ‘we’, [ta] *?nta* ‘you sg and masc’, or *hiya* ‘she’ and [ya] *huwa* ‘he’. If the embedded verb is in the past then the null subjects are to be seen by the markers zero and is shown by *huwa* ‘he’ to personalize it as in (78). In case the null subject is indicated by [t], it can be personalized by *hiya* ‘she’ as in the example (79).

78. laa ?- a ᶜrif- u matha

no 1st, sg, masc./fem know pres what

daras- a- ø

study past 3rd, sg, masc

‘I do not know what he studied’

79. laa ?- a ᶜrif- u matha

no 1st, sg, masc./fem know pres what

daras- a- t- -ø

study past 3rd,, sg, fem 3rd,, sg, fem

‘I do not know what she studied’

In (78), the null subject is illustrated by a zero marker that involves the subject to be third person singular and masculine. It can be personalized as *huwa* ‘he’. If the null subject is changed to any other person as in (79), the new marker [t] is used. In such case, the subject can be personalized as *hiya* ‘she’.

If the clause is an adverbial subordinate, the null subject occurs as follows.

80. yas̲il- u muusaa ᶜindamaa

arrive pres Muusaa when

?a- ajlis- u maᶜa akhii

1st, sg, masc./fem sit pres with my brother

'Muusaa arrives while I am sitting with my brother'

In (80), the null subject in the adverbial clause is illustrated by the agreement marker [?a] that involves the subject to be first person singular feminine and masculine. It can be personalized by *?ana* 'I'. If the null subject is changed to any other person, then new markers are used; for instance, it can be [na] *nah̲nw* 'we', [ta] *?nta* 'you sg and masc', or *hiya* 'she' and [ya] *huwa* 'he'. If the embedded verb is changed into the past, then, the null subjects are to be shown by zero marker but it can be represented by *huwa* 'he' and if the subject is shown by the marker[t], then, it is represented by *hiya* 'she' as in the examples (81) and (82).

81. was̲al- a muusaa ᶜindamaa

arrive past Muusaa when

?anhaa- 0 - ø al- daras- a

finish past 3rd , sg, masc. det lesson acc

'Muusaa arrived when he finished the lesson'

82. was̲al- a muusaa ᶜindamaa

arrive past Muusaa when

?anha- 0 - t- ø al- daras- a

finish past 3rd , sg, fem 3rd , sg, fem det lesson acc

'Muusaa arrived when she finished the lesson'

In short, the null subject occurs, in (76), in the subjunctive embedded clause whenever the tense is present. In this case, the subject can be represented overtly by *?anaa* 'I', *nahnu* 'we', *?anta* 'you' and *hiya* 'she' and *huwa* 'he'. The same null subjects can occur in wh-nominal and the adverbial clause if the verb has the same tense. However, if the verb of the wh-nominal and subordinate clauses but not the subjunctive is changed into the past, then, the null subject is represented overtly in Arabic syntax by *huwa* 'he' and *hiya* 'she'.

3.2. The Analysis of pro in GB Framework in Arabic Syntax

The following analysis is covering answers to question one of the study in an attempt to check the concept of government, nominative case, requirement of EPP, AGRs markers and deletion of the empty category pro in Arabic syntax.

3.2.1 Government and the Nominative Case of pro in Arabic Syntax

The aforementioned information proved that Arabic syntax allows the null subject in certain situations. In this section, the null subject is studied within the framework of GB to express its syntactic and semantic features. Depending on the previous summary in chapter two for the basic notions of the GB theory, Chomsky (1981 and 1986) argues that the null subject element i.e. pro in pro-drop languages must be governed by a governor. The governor must be the INFL, more strictly the Agr element. The result of the government is the nominative case assigned to it at the S-structure. The c-command relation is the corner stone for the government relation. He means by c- command that node A c- commands node B if every branching node dominating A also dominates B and neither A nor B dominates the other in X-bar theory. X-bar theory specifies the actual structure of all phrases and their relations in a sentence. The hierarchical structure

of a sentence expresses the pair relations i.e. the relations between a governor and a governee that is pro in this work. The subject pro is very important to be available in the sentence to satisfy the requirements of the EPP by which its grammaticality is determined. Arabic is a pro-drop language in which case the occurrence of pro is natural and the sentence remains good though it is not overt at the logical form. This category must be governed to get the nominative case by a case assignor, namely INFL. It is rich in morphological realizations that appear at the verb used. The concept of government in Arabic is discussed as in (83).

LF

83a. ?akal- a- t al- tufaahat- a

eat past 3rd,sg,fem det apple acc

'She ate an apple'

(83b) is the D-structure representations for (83a)

D-structure

83b. ?akal- a- t- ø al- tuffaahat- a

eat past 3rd,sg,fem pro det apple acc

'She ate the apple'

(83c) is the S-structure representations for (83b) in which case assignment is checked.

S- structure

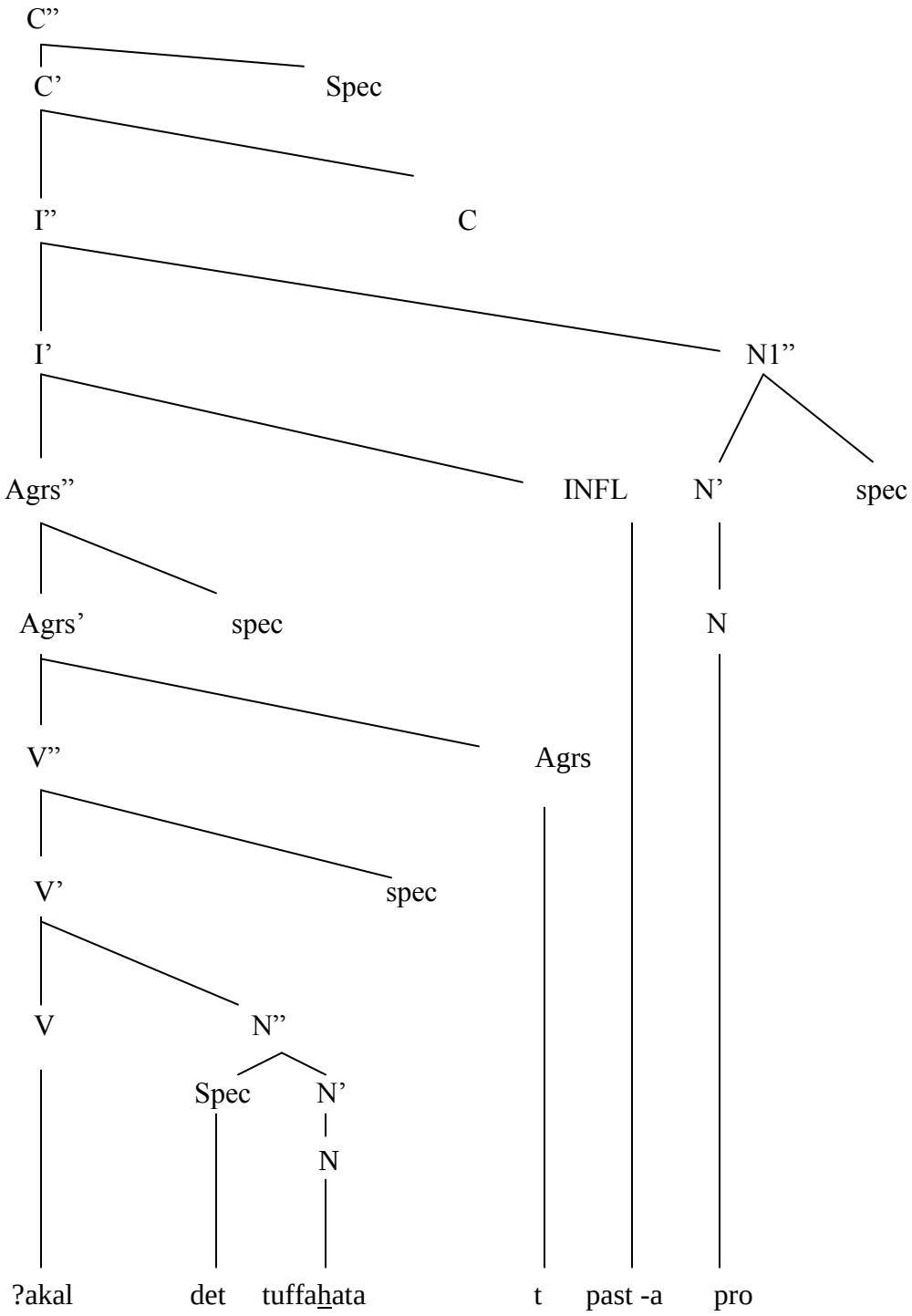
83c. ?akal- a- t- ø al tuffaahat- a

eat past 3rd,sg,fem pro det apple acc

'She ate the apple'

If the researcher applies the concept of government to (83c), then, (83d) is the tree diagram representation for it.

83d.



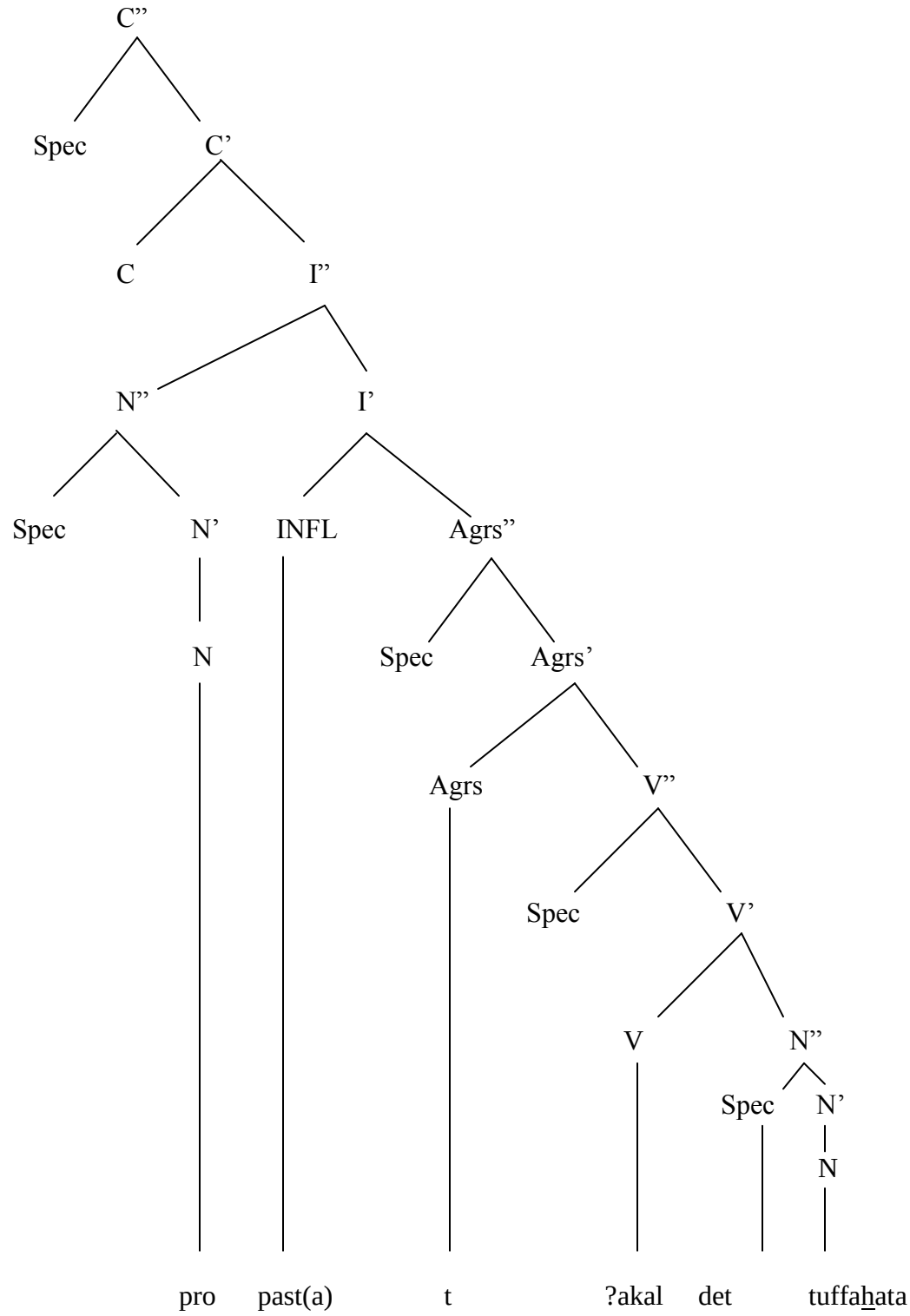
Looking carefully at (83c), it is clear that pro ‘she’ element is governed by the governor INFL. In other words, INFL c-commands N”1 and N”1 c-commands INFL and

the category that c-commands INFL also c-commands N"1 i.e. I'. The category pro is assigned the nominative case as it the closest entity next to INFL. Recall the case filter which reads that each overt N" must have a structural case; it is obvious that pro is assigned a case by being rich in AGRs and as the subject of a finite clause in accordance with the theory. For an element to have a case, it must be governed by a governor. A subject must be governed by INFL since it is c-commanded by it. In case the c- command relation is insufficient to perform the government, then the m- command must work for the government. However, every internal element i.e. object must be also governed by its governor i.e. predicate. Thus, *al tuffahata* 'the apple' which is the object here is governed by the verb *?akal* 'eat' as it is c-commanded by it in X-bar syntax; it is assigned the accusative case. In this relation the c-command is sufficient and there is no need for other relations. In case the verb has more than two objects in its internal structure, the c-command relation cannot be applied and the m-command relation is used instead.

Dealing with Arabic as VSO in the D-structure and S- structure as in (83d), creates a number of problems to get the logical form. The first problem is that the N" *al-tufaahat* 'an apple' has to move to the [C, C'] position crossing a number of nodes, namely, AGR" and I". The second problem arises in applying this style of government is the movement of the lexical verb *?akal* 'eat'. The verb has to move to AGRs to check the agreement and becomes *?akalt* 'eat fem'. Then, it moves to the position of INFL to check the past tense and becomes *?akalat* 'ate fem'. After the verb occupies the position of [INFL, I'], the subject pro must be deleted to get the logical form of (83a). As mentioned earlier, if a verb like *?a^{c}ta* 'gave' is used instead of *?akalat* 'ate fem' ;then, the movement of the internal N" must be to the positions of [C, C'] for the first N" and

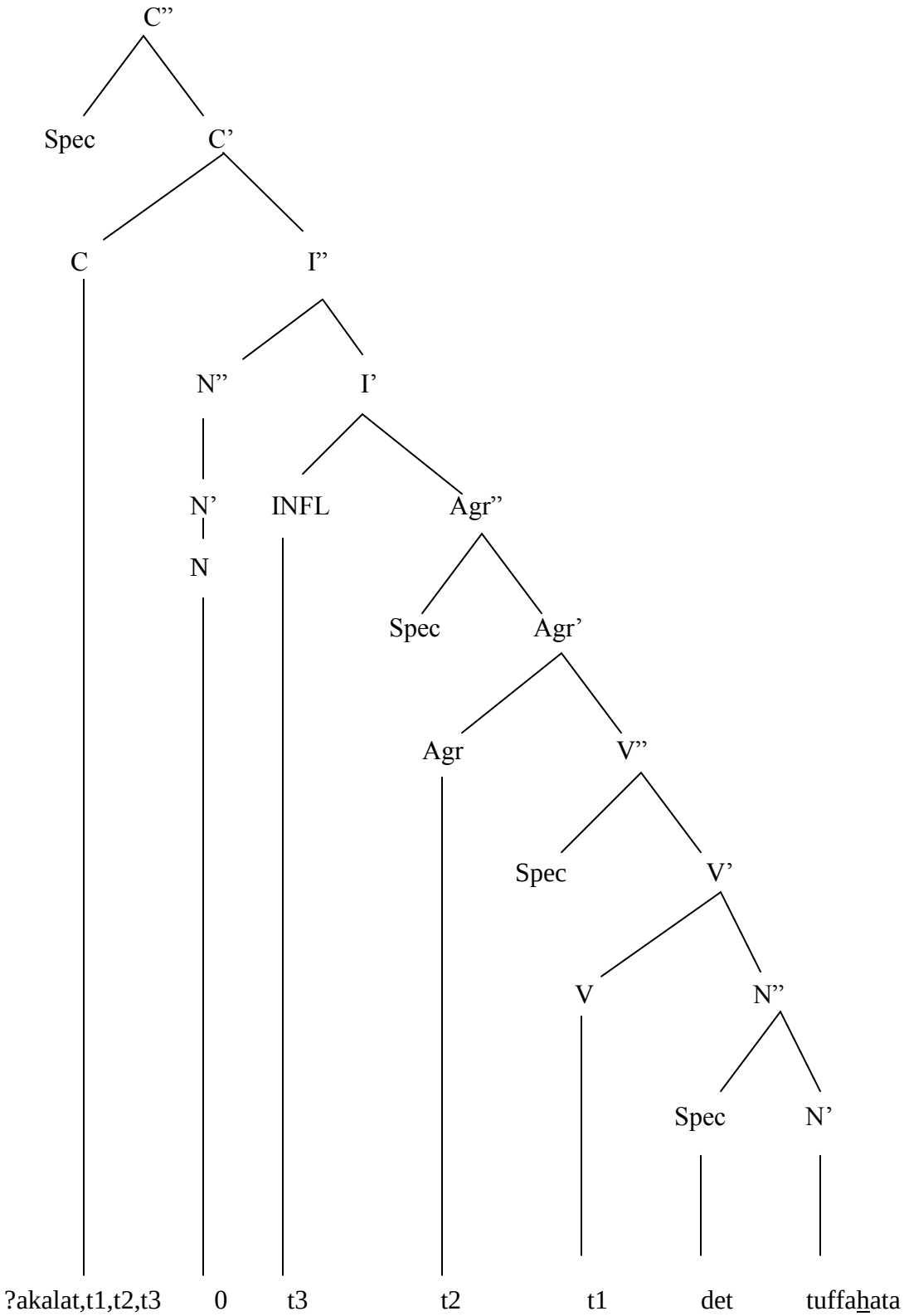
the position of [Spec, C"] is meant for the second N". After all, the verb being in the final position of [INFL, I'] is not fit because this position is already filled with another entity, namely, INFL. In other words, theory -wise, an entity has to move to an empty place to fill it syntactically or semantically. The third problem which is visible in the structure (83d) is the directionality of case-assignment. The category pro occurs to the right of the governor which violates a major concept of the theory. To make the concept of government easier and more economical, the researcher deals with Arabic as SVO in D-structure as well as S-structure and applies the concept of V-movement as it has been propagated by Jalabneh (1992 and 2007). To illustrate the issue clearly, let us look at (83e).

83e.


C”
Spec
C’
C
I”
N”
I’
Spec
N’
INFL
Agrs”
N
Spec
Agrs’
Agrs
V”
Spec
V’
V
N”
Spec
N’
N
pro
past(a)
t
?akal
det
tuffahata

In (83e), the category pro ‘she’ is governed by the case assignor INFL to which the nominative case is assigned. Both of them are under the maximal projection I” which dominates them. The case assignment is confirmed by the rich Agrs [t] that indicates the third person singular and feminine. The verb *?akal* ‘eat’ assigns the accusative case to its internal N” *al-tufaahata* ‘an apple’ under the maximal projection V”. After all the processes of case assignment are performed, the verb *?akal* ‘eat’ has to move to the position of [Agrs, Agrs’] to check the agreement features and becomes *?akalt* ‘eat fem’. Then, the verb must move to the position of [INFL, I’] to check the tense of past of [a] by adjunction and becomes *?akalat* ‘ate fem’. In a cyclic movement, the verb must move to the position of [C, C’] to initiate the structure at LF. The last process of case to be performed is the drop of the category pro ‘she’ at the interface level as it cannot be visible at the logical form as in (83a) since the sentence in Arabic in this type is able to stand correct without it but specified by the visible Agrs [t] attached to the verb used. Thus, this concept of applying V-movement is superior to the previous model because only the verb is moving and leaving other entities ,namely, N” undisturbed. Secondly, the directionality of the nominative case assignment is maintained. Thus after movement, the result is the logical form as in (83f).

83f.


C”
Spec
C’
C
I”
N”
I’
N’
INFL
Agr”
N
Spec
Agr’
Agr
V”
Spec
V’
V
N”
Spec
N’
?akalat,t1,t2,t3
0
t3
t2
t1
det
tuffahata

It is obvious that the drop of pro in Arabic is compulsory. Suppose the subject is to be overt to be specified, then, pro cannot occur and instead a separate personal pronoun or a referent expression is used as in (84).

LF

84a. ?akal- a- t- lailaa al tuffaahat- a

eat past 3rd,sg,fem Lailaa det apple acc

'Lila ate the apple'

(84b) is the D-structure representation for (84a)

D- structure

84b. lailaa ?akal- a- t- al tuffaahat- a

Lila eat past 3rd,sg,fem det apple acc

'Lila ate the apple'

(84c) is the S-structure representation for (84b)

S- structure

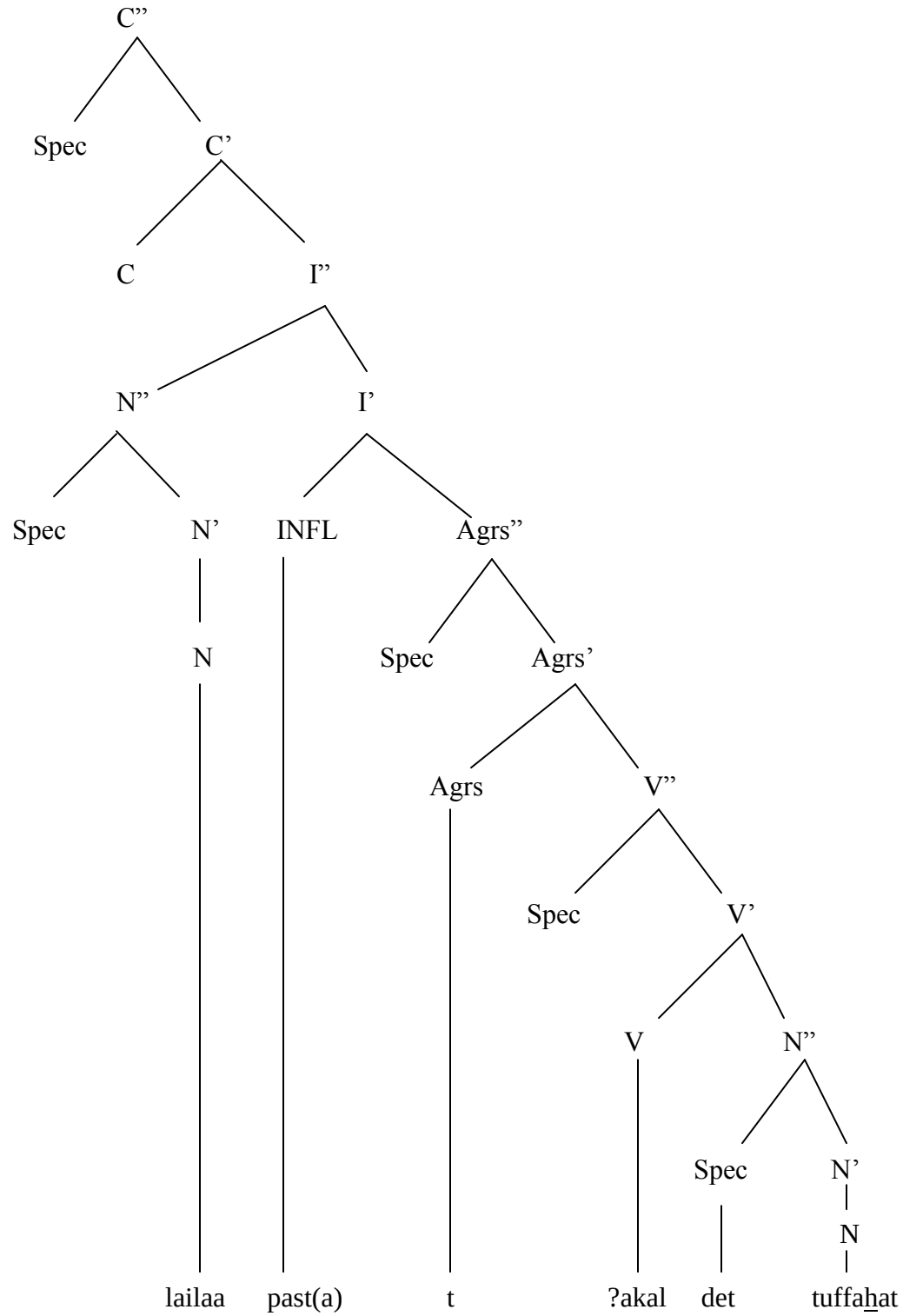
84c. lailaa ?akal- a- t- al tuffaahat- a

Lila eat past 3rd,sg,fem det apple acc

'Lila ate the apple'

The processes of government and case assignment of the nominative case are performed as in (84d) of the S-structure (84c).

84d.


C”
Spec
C’
C
I”
N”
I’
Spec
N’
INFL
Agrs”
N
Spec
Agrs’
Agrs
V”
Spec
V’
V
N”
Spec
N’
N
lailaa
past(a)
t
?akal
det
tuffahat

In (84d), the subject *lailaa* ‘Lila’ is governed by the case assignor INFL under the maximal projection I”; it is assigned the nominative case. The verb *ʔakal* ‘eat’ has to move to the positions of Agrs and INFL to check both of them before it lands in the position of [C, C’] to initiate the sentence in Arabic at LF (Jalabneh, 1992, p. 52). What makes this structure different from (83a) is that the subject cannot be dropped as it is very specific and defined as a proper name *lailaa* ‘Lila’. This reference expression can be replace by an overt separate pronoun as *hiya* ‘she’ as specimen of Arabic pronouns that can be used in this position. In such instance, the pronoun is assigned the nominative case in the same style and the verb has to do similar movements and the pronoun cannot be dropped. In short, pro occurs if there is no overt subject N”. In both instances, the extended projection principle (EPP) is maintained at all levels of syntax.

Let us now try to apply the adopted tree diagrams of V-movement when the subject pro is first person singular feminine / or masculine as in (85).

LF

85a ʔu - ḥibb- u- al- ᶜilm- a

1st, sg, masc./fem love pres. det knowledge acc

‘I love knowledge’

(85b) is the D-structure representation for (85a)

D-structure

85b . pro ʔu - ḥib- u- al - ᶜilm- a

I 1st, sg, masc./fem love pres det knowledge acc

‘I love knowledge’

(85c) is the S-structure representation for (85b).

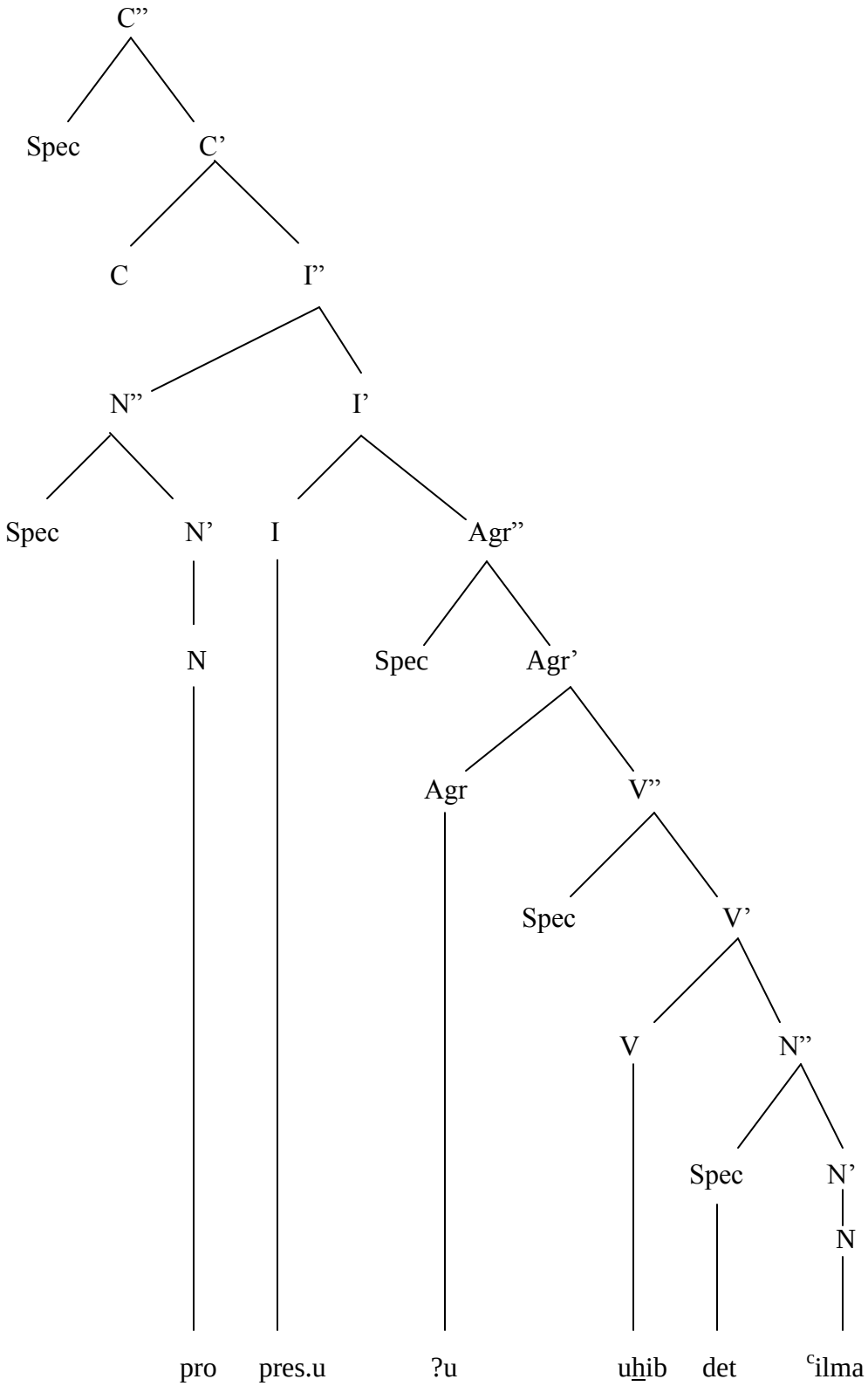
S- structure

85c .	pro	?u -	hib-	u-	al -	ᶜilm-	a	
	I	1st, sg, masc./fem	love	pres	det	knowledge	acc	

‘I love knowledge’

The processes of government and case assignment of the nominative case are performed in the tree diagram as in (85d) of (85c)

85d.


C”
Spec
C’
C
I”
N”
I’
Spec
N’
I
Agr”
N
Spec
Agr’
Agr
V”
Spec
V’
V
N”
Spec
N’
N
pro
pres.u
?u
uhib
det
cilma

In (85d), pro ‘I fem / or masc.’ is governed by INFL under the maximal projection I”. The second step is the V-movement of *ḥib* ‘love’. It moves to the node Agrs to check the agreement feature available in the structure as first person feminine and masculine and becomes *ʔuhib* ‘love’. Then it must move to the node INFL to check the present tense of [u] and becomes *ʔuḥibu* ‘love’. In a final movement, the same verb has to move to the node [C, C’] to initiate the clause at LF without disturbing other internal arguments. This subject is to be dropped at the interface level to meet the logical form. It is evident that if any other pro be used in a sentence when the verb is present, the same case assignment of the nominative is applied but pro is visible with different Agrs at the S-structure. For example, it can be [nu] ‘we’ as in (86), [tu] ‘you singular and masculine’ as in (87), [yu] ‘he’ as in (88), [ya]’he’ as in (89) and [ta] ‘she’ as in (90) respectively.

LF

86a. nu- ḥibb- u- al ᶜilm- a

1st, pl, masc./fem love pres. det knowledge acc

‘We love knowledge’

D-structure

86b. pro nu- ḥib- u- al- ᶜilm- a

we 1st, pl, masc./fem love pres. det knowledge acc

‘We love knowledge’

S-structure

86c. pro nu- ḥib- u- al- ᶜilm- a

we 1st, pl, masc./fem love pres. det knowledge acc

‘We love knowledge’

LF

87a. tu- hib- u- al ᶜilm- a

2nd, sg, masc. love pres. det knowledge acc

‘You love knowledge’

D- structure

87b. pro tu- hib- u- al ᶜilm- a

you 2nd, sg, masc. love pres. det knowledge acc

‘You love knowledge’

S- structure

87c. pro tu- hib- u- al ᶜilm- a

you 2nd, sg, masc. love pres. det knowledge acc

‘You love knowledge’

LF

88a. yu- hib- u- al ᶜilm- a

3rd,sg, masc. love pres. det knowledge acc

‘He love knowledge’

D-structure

88b. pro yu - hib- u- al ᶜilm- a

he 3rd,sg,masc. love pres. det knowledge acc

‘He loves Knowledge’

S-structure

88c. pro yu - hib- u- al ᶜilm- a

he 3rd,sg,masc. love pres. det knowledge acc

‘He loves Knowledge’

LF

89a. ya - ?kul- u- al tuffaahat- a

3rd,sg,masc. eat pres. det apple acc

‘He eats the apple’

D-structure

89b. pro ya - ?kul- u- al tuffaahat- a

He 3rd,sg,masc. eat pres. det apple acc

‘He eats the apple’

S-structure

89c. pro ya - ?kul- u- al tuffaahat- a

He 3rd,sg,masc. eat pres. det apple acc

‘He eats the apple’

LF

90a. ta - ?kul- u- al- tuffaahat- a

3rd,sg,fem eat pres. det apple acc

‘She eats the apple’

D-structure

90b. pro- ta - ?kul- u- al- tuffaahat- a

She 3rd,sg,fem eat pres. det apple acc

‘She eats the apple’

S-structure

90c. pro- ta - ?kul- u- al- tuffaahat- a

She 3rd,sg,fem eat pres. det apple acc

‘She eats the apple’

The category pro occurs not only if the verb is in the present tense, but also if it is in the past; but, of course, with different Agrs markers. This is visible in the example (91).

LF

91a. la^{c}ib- a- ø- bi al kurat- i

play past 3rd,sg,masc with det ball inst

‘He played with a ball’

(91b) is the D-structure representation for (91a)

D- structure

91b. pro la^{c}ib- a- ø- bi al kurat- i

he play past 3rd,sg,masc with det ball inst

‘He played with a ball’

(91c) is the S-structure representation for (91b).

S- structure

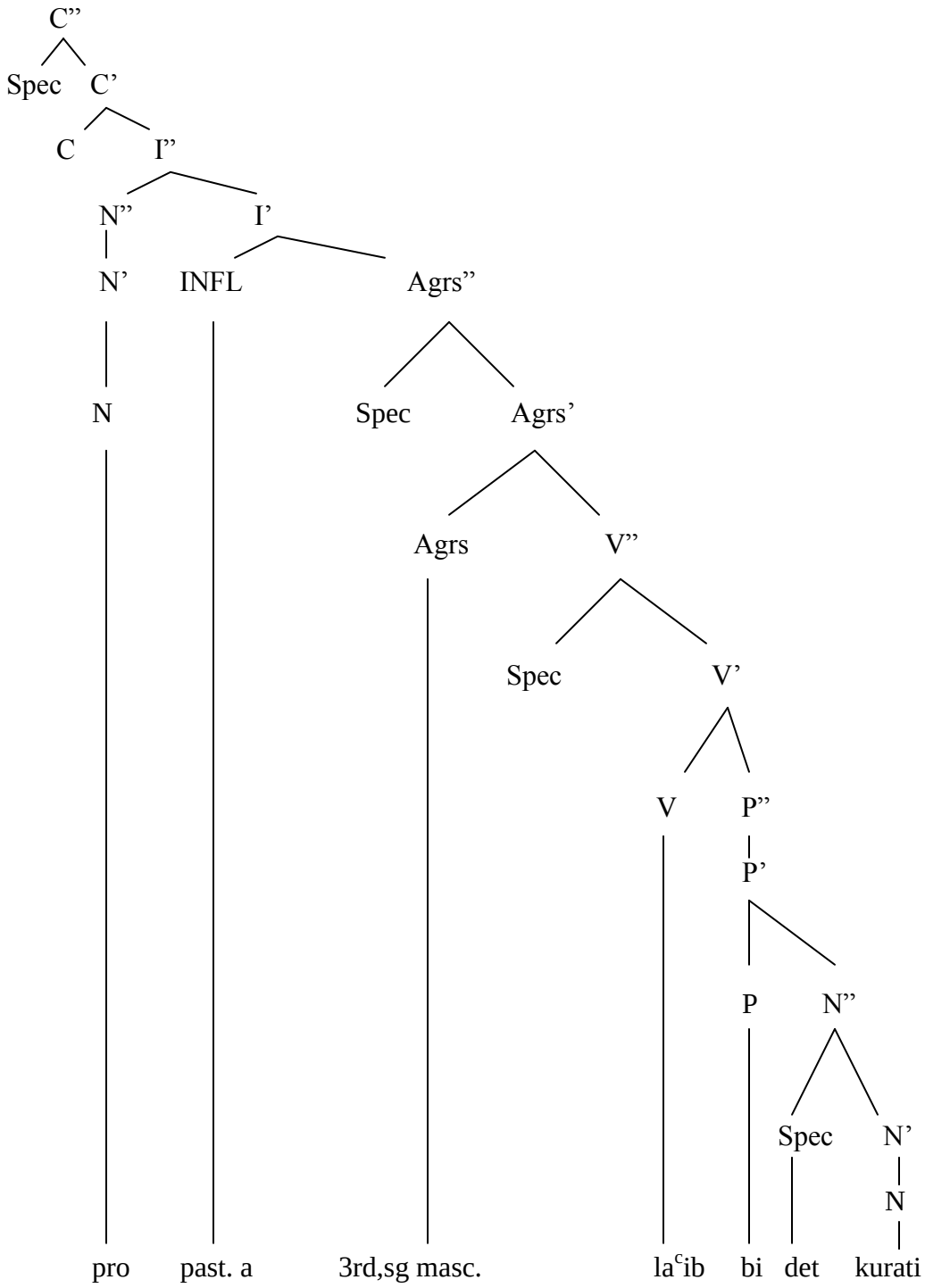
91c. pro la^{c}ib- a- ø- bi al kurat- i

he play past 3rd,sg,masc with det ball inst

‘He played with a ball’

The processes of government and case assignment of the nominative case are performed in the tree diagram as in (91d) of (91c).

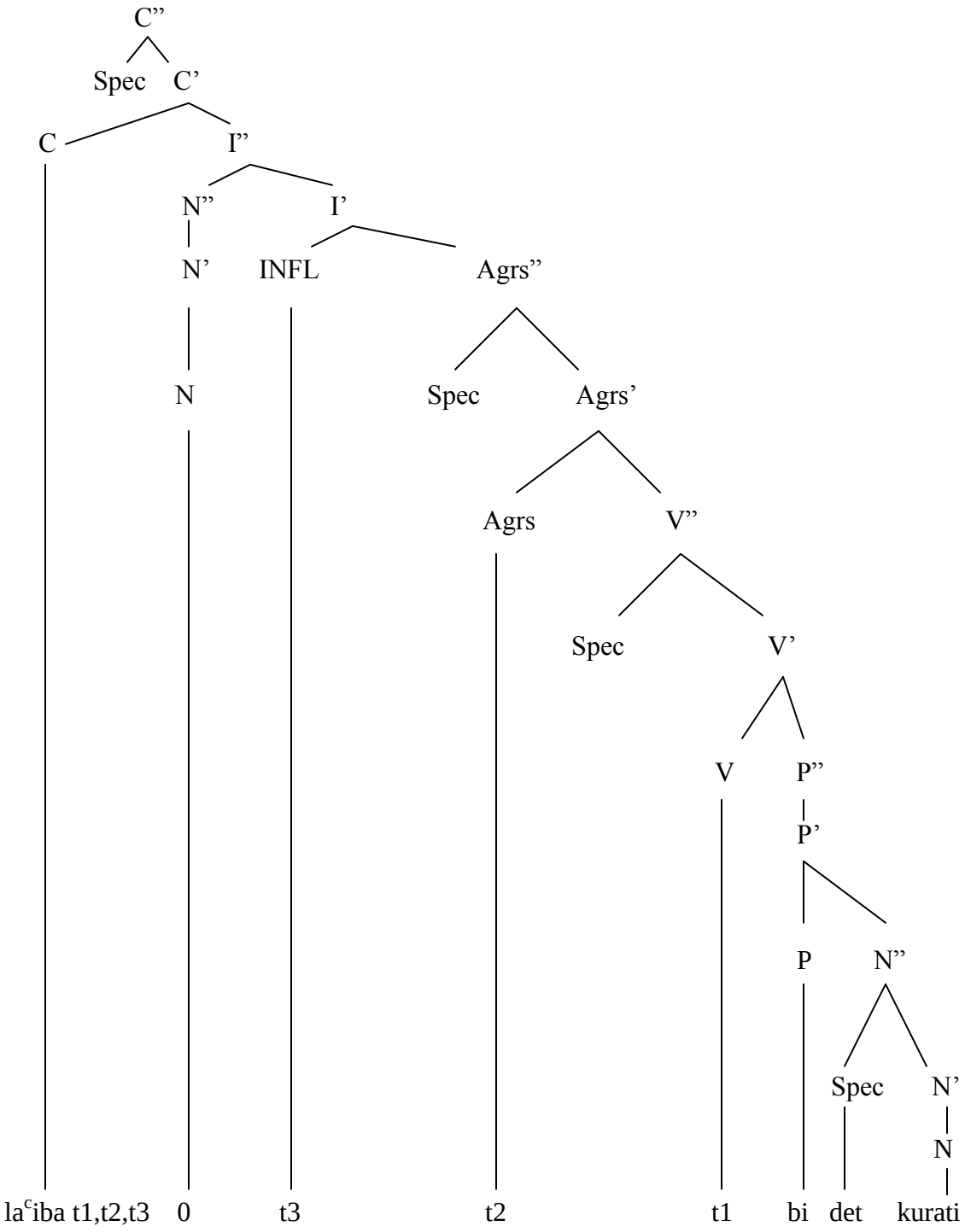
91d.



In (91d) pro ‘he’ is governed by INFL under the maximal projection I”. The second step is the V-movement of *la^{c}ib* ‘play’. It moves to the node Agrs to check the ø-

agreement feature represented as third person and becomes *la^{c}ib* ‘play’. Then it must move to the node INFL to check the past tense of [a] and becomes *la^{c}iba* ‘played’. In a final movement, the same verb has to move to the node [C, C’] to initiate the clause at LF without disturbing other internal arguments as in (91e). This subject is to be dropped at the interface level to meet the logical form of this clause.

91e.


C”
Spec
C’
C
I”
N”
I’
N’
INFL
Agrs”
N
Spec
Agrs’
Agrs
V”
Spec
V’
V
P”
P’
P
N”
Spec
N’
N
la[c]iba t1,t2,t3
0
t3
t2
t1
bi
det
kurati

It is evident that only pro ‘she’ with the Agrs [t] can be used in this context and no other pro is used. In other words, some other overt pronouns can be used as in (83) abovementioned.

As it has been discussed earlier, pro in Arabic is visible with the imperative form of the verb keeping in the second person singular and masculine as in (92).

LF

92a. ?ibtasim 0 !

smile pres.

‘Smile’

(92b) is the D- structure representation for (92a)

D- structure

92b. pro ?ibtasim 0 !

you, sg, masc smile pres.

‘Smile’

(92c) is the S- structure representation for (92b)

S- structure

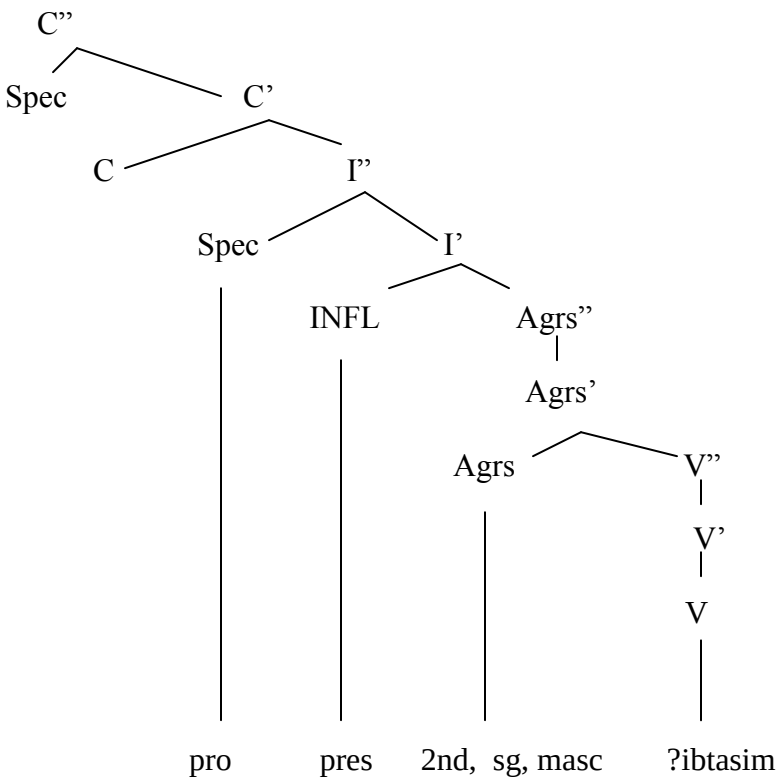
92c. pro ?ibtasim 0 !

you, sg, masc smile pres.

‘Smile’

(92d) is the tree diagram representation of case assignment for (92c).

92d.



In (92d), pro ‘you’ is governed by INFL under the maximal projection I”. It is the nominative case in this position. After this process, the verb *?ibtasim* ‘smile’ has to move to Agrs to check the ø- agreement feature represented as second person and becomes *?ibtasim* ‘smile’. Then, it must move to the node INFL to check the present tense of [0] and becomes *?ibtasim* ‘smile’. In a final movement, the same verb has to move to the node [C, C’] to initiate the clause at LF. This subject is to be dropped at the interface level to meet the logical form of the imperfective in Arabic syntax.

The subject pro in Arabic syntax can occur in a subordinate clause of the subjunctive as in (93).

LF

93a. tamanna- a zaidun ?an yanjaha

wish past Zaid that pass

‘Zaid wished that he pass’

(93b) is the D-structure form of (93a).

D-structure

93b. zaidun tamanna- a ?an pro yanjaha

Zaid wish past that he pass

‘Zaid wished that he pass’

(93c) is the S-structure form of (93b).

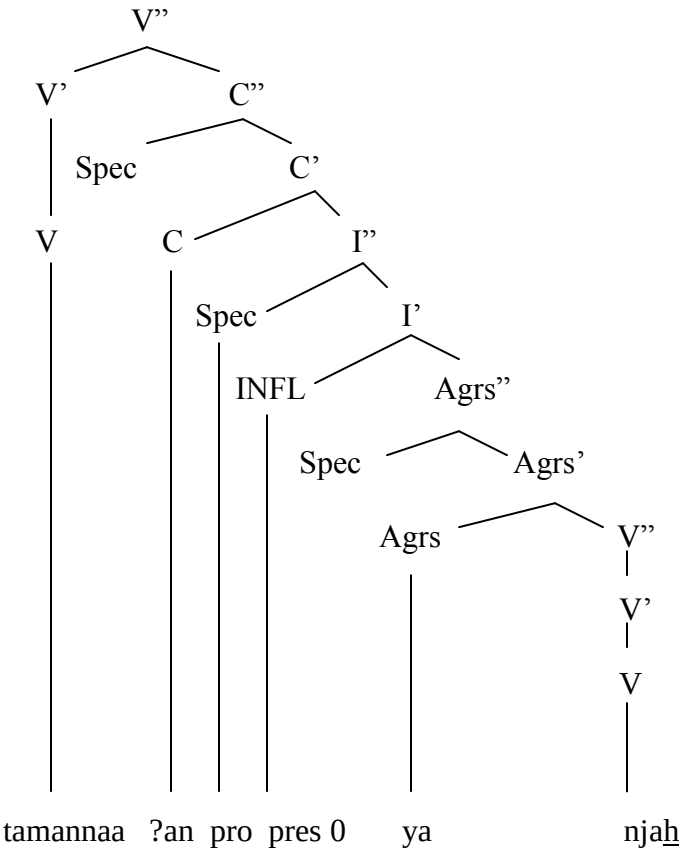
93c. zaidun [$_{V"}$ tamanna- a [$_{C"}$?an pro yanjaha]]

Zaid wish past that he pass

‘Zaid wished that he pass’

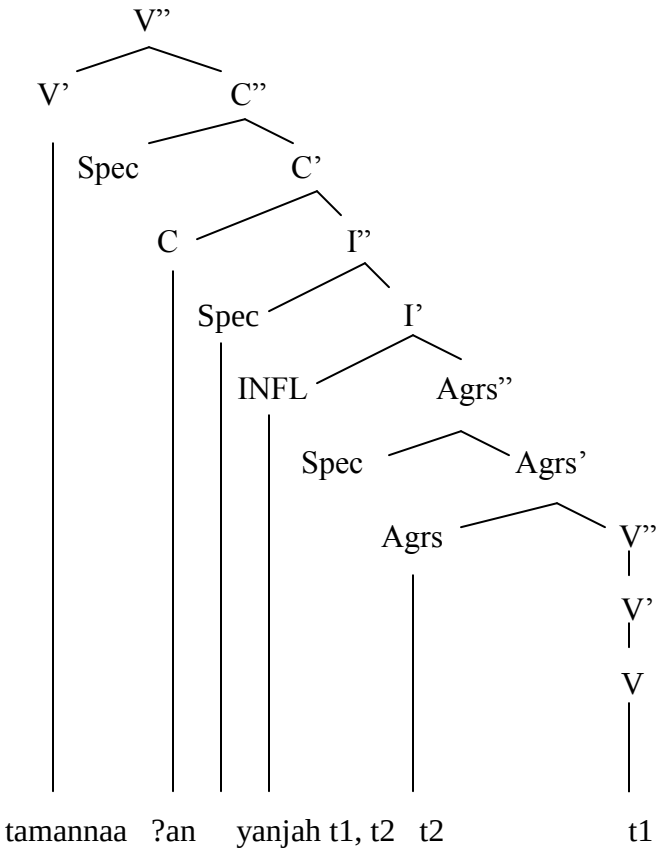
(93d) is the tree-diagram representations of government and case in V” for (93c).

93d.



In (93d), the subject pro ‘he’ is assigned the nominative case under the government of the functional node INFL in the maximal projection I”. This is confirmed by the rich Args [ya] of the embedded subjunctive verb yanjah ‘pass’ at both levels i.e D-structure, S-structure as well as LF. As this pro cannot be overt at LF, it must be dropped at the interface level to correspond word order of Arabic as in (93e) given bellow. In the embedded clause, the verb *njah* ‘pass’ has to move to the node Agrs to check the ø - agreement features of third, person singular and masculine. Then, in a final movement inside the clause, it lands in the position [INFL, I’] to check tense of the present and becomes *yanjah* ‘pass’

93e.



It is evident that if any other drop pro is used in a subordinate clause when the verb is present, the same case assignment of the nominative as well V-movement of the verb are applied but the new pro is visible with different Agrs at all levels of syntax. For example, it can be [?a] ‘I’ as in*?anjaha* ‘I pass subj’, [na] ‘we’ as in nanjaha ‘we pass subj’, [ta] ‘you singular and masculine’ as in tanja<u>h</u>a ‘you pass subj’, and [ta] ‘she’ as in *tanja<u>h</u>a* ‘she pass subj’.

The category pro can occur in a finite clause in subordinate wh- clauses as in (94).

LF

94a. laa ya- ᶜrif- u zaidun ma<u>th</u>a ?ashrabu

no 3rd,sg, masc. know pres Zaid what drink

‘Zaid does not know what I am drinking’

(94b) is the D-structure form of (94a).

D-structure

94b. zaidun laa ya- ᶜrif- u matha pro ?a- shrabu

Zaid no 3rd,sg, masc. know pres what I 1st, sg drink

‘Zaid does not know what I am drinking’

(94c) is the S-structure form of (94b).

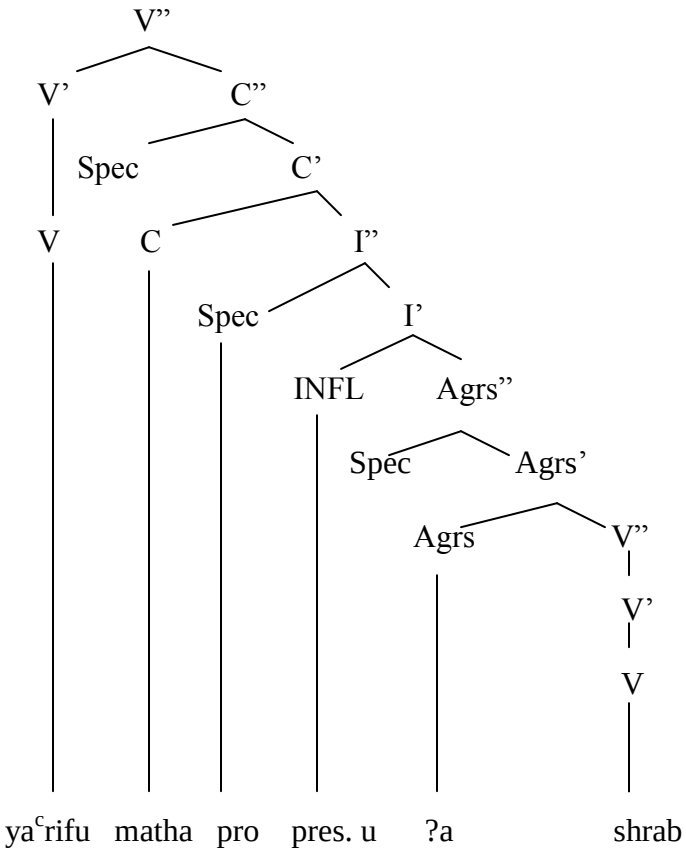
94c. zaidun laa [V” ya- ᶜrif- u [C” matha pro ?a- shrabu]]

Zaid no 3rd,sg,masc. know pres. what I 1st, sg drink

‘Zaid does no know what I am drinking’

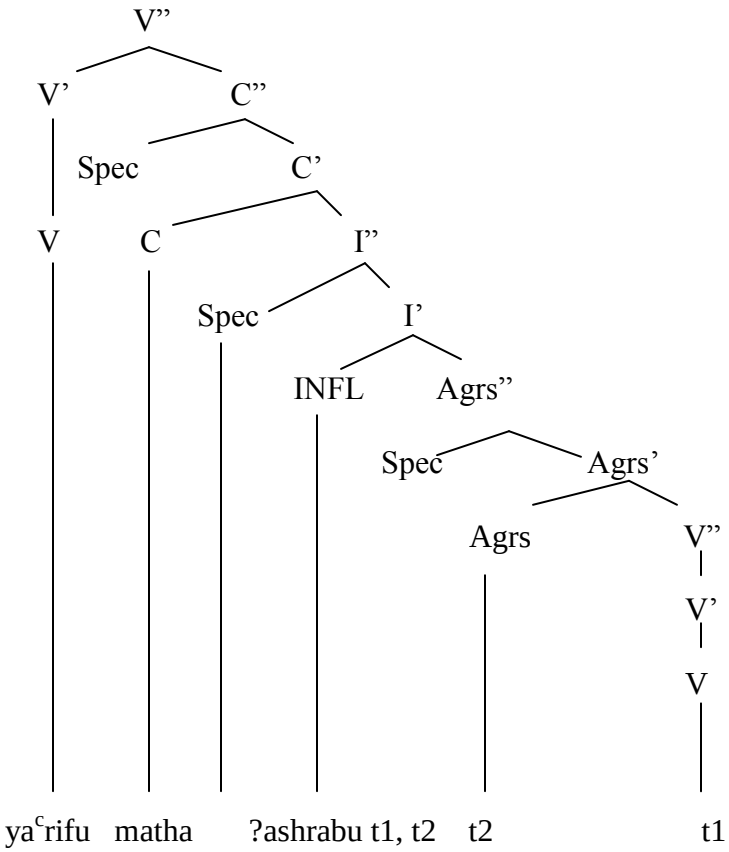
(94d) is the tree-diagram representation of government and case for V”.

94d.



In (94d), the subject pro ‘I’ is assigned the nominative case under the government of the functional node INFL in the maximal projection I”. This is confirmed by the rich Args [?a] of the embedded imperfective verb *shrabu* ‘drink’. As this pro can not be overt at LF, it must be dropped at interface. In this structure the embedded verb *shrab* ‘drinking’ must move to the position of [Agrs, Agrs’] to check the first person agreement features; then it must move to the position of [INFL, I’] to check the present inflection tense marker [u] as in (94e).

94e.



It is evident that if any other entity of the category is used in this subordinate clause when the verb is present, the same case assignment of the nominative, and V-movement are applied but pro must be visible with different Agrs features at all levels. For example, it can be [na] ‘we’ as in *nashrabu* ‘we are drinking’, [ta] ‘you singular and masculine’ as in *tashrabu* ‘you are drinking’, [ya] ‘he’ *yashrabu* ‘he is drinking’, and [ta] as in *tashrabu* ‘she is drinking’. If the tense is past the Agrs must be [0] ‘he’ as in *shriba* ‘he drank’ and [t] ‘she’ as in *sharibat* ‘she drank’.

In the subordinate adverbial clause, it is the same as matrix present and past. The pro is assigned the nominative case in the same manner abovementioned. Agrs features are to be the same with regard to tense used.

3.2.2. Expletives and pro in Arabic Syntax

There is a syntactic relation between pro and expletive in the sense that both of them are subjects of a finite clause and they satisfy the EPP. The expletive has no theta role i.e. there is no identical identities at all but it must have a case while pro has both a case and a theta role. For instance, in English the expletives are represented by the category 'it' as in [it is raining] and the category 'there' as in [there seems to be a thief outside]. It is proved theoretically that both expletives are posited at S-structure to meet the requirement of the extended projection principle. Thus, both the categories can assign the nominative case by the case-assignor INFL but without assigning a theta role because theta marking takes place at the level of D-structure. The pleonastic (expletives) appear in the non pro-drop languages as a non-argument overt subject while pro appears in pro-drop languages. Chomsky (1982, p. 82) argued that the subject can be replaced by pro but not PRO because the clauses are finite. The concept of expletives in Arabic has not been explained clearly in the literature; however, this work takes the lead in discussing this concept from the GB point of view. It is obvious that Arabic is like other languages insofar as dealing with structures that contain the expletive subjects but with certain variations with regard to quality of the N" that occurs in the subject position. For instance, if the verb used refers to the weather-types, Arabic opts for pro at D-structure as it assigns a theta role and it assigns the nominative case at S-structure because it meets the requirement of EPP. The specimens that are given bellow illustrate the issue of replacing the expletives by pro in Arabic very clearly.

LF

95a. ?amṯar- a - t al- baariḥata

rain past 3rd, sg, fem det yesterday

‘It rained yesterday’

(95b) is the D-structure representation for (95a).

D-structure

95b. pro ?amṯar- a - t al- baariḥata

she rain past 3rd, sg, fem det yesterday

‘It rained yesterday’

(95c) is the S-structure representation for (95b).

S-structure

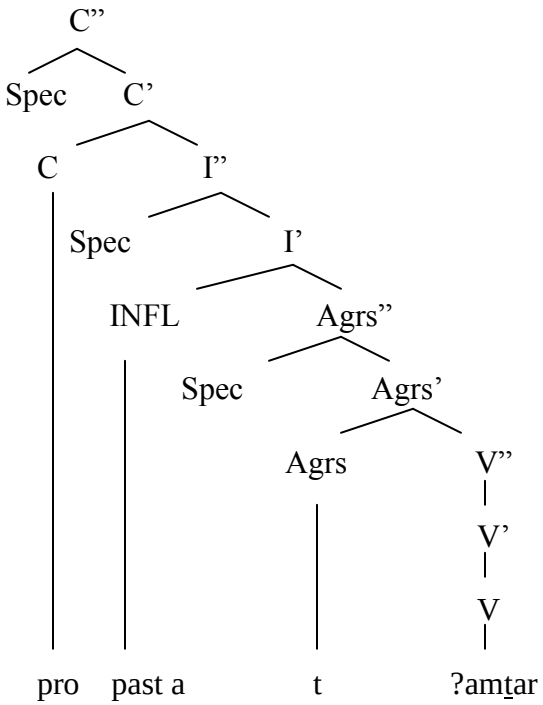
95c. pro ?amṯar- a - t al- baariḥata

she rain past 3rd, sg, fem det yesterday

‘It rained yesterday’

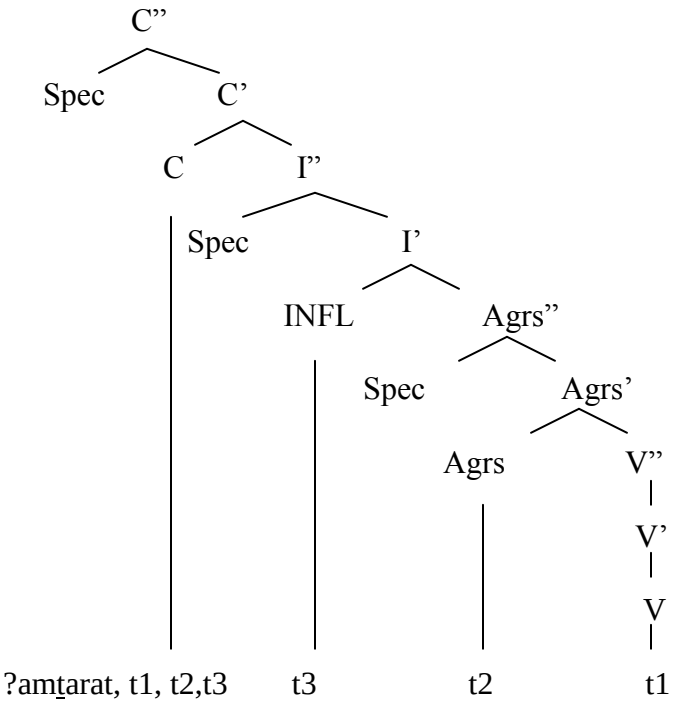
(95d) is the tree-diagram representation for (95c).

95d.



In (95d), the subject position is filled by the category pro which is visible with Agrs that is the feminine marker [t]. The category pro is governed by the case assignor INFL under the maximal projection of I” to which the nominative case is assigned. It obvious that pro can theoretically assign a theta role because it is posited at D-structure to meet the requirement of the EPP at all levels whether the subject is overt or covert. Thus, it is assigned the theta role of instrument by the V’’ *?amṯarat* ‘rained’. The category pro is omitted at the interface level after the verb *?amṯar* ‘rain’ moves to the position of [Agrs, Agrs’] to check the agreement features of the feminine marker [t] and to the position of [INFL, I’] to check the past tense marker of [a]. In a final movement, it has to move to [C, C’] to initiate the word order of Arabic at LF as in (95e).

95e.



Suppose the subject is specified in (95c), then it can be the entity *al- samaa?u* ‘the sky’ ,or *al-ghaymatu* ‘the cloud’. This N” occupies the subject position at all levels getting the same theta role and being assigned the same nominative case by the same case assignor, namely, INFL. The only difference between the two subjects is that in the latter the subject cannot be dropped as it becomes a separate referent expressions (R-expression). The researcher gives other similar verbs that are related to the weather such as *?athlajat* ‘snowed’ that refers to *al- samaa?u* ‘the sky’ ,or *al-ghaymatu* ‘the cloud’, *?ashraqat* ‘rose’ that refers to *al-shmasu* ‘the sun’, *nawwarat* ‘enlightened’ that refers to *al- samaa?u* ‘the sky’ and *?abraqat* ‘enlightened’ that refers to *al-ghaymatu* ‘the cloud’.

The category pro can occur in similar structures which are equal to the expletive in non-drop languages. For instance, the verbs *yabduu* ‘seem’ and *yazhar* ‘appear’ are specimens of the category. The instance (96) illustrates the analysis of the former verb.

LF

96a. ya- bduu- 0 - ø ?anna- hu t̲aalib- un

3rd,sg, masc seem pres. 3rd,sg, masc that he student nom

‘He seems that he is a student’

(96b) is the D-structure representation for (96a).

96b. pro ya- bduu- 0 - ?anna- hu t̲aalib- un

he 3rd,sg, masc seem pres. that he student nom

‘He seems that he is a student’

(96c) is the S-structure representation for (96b).

S-structrure

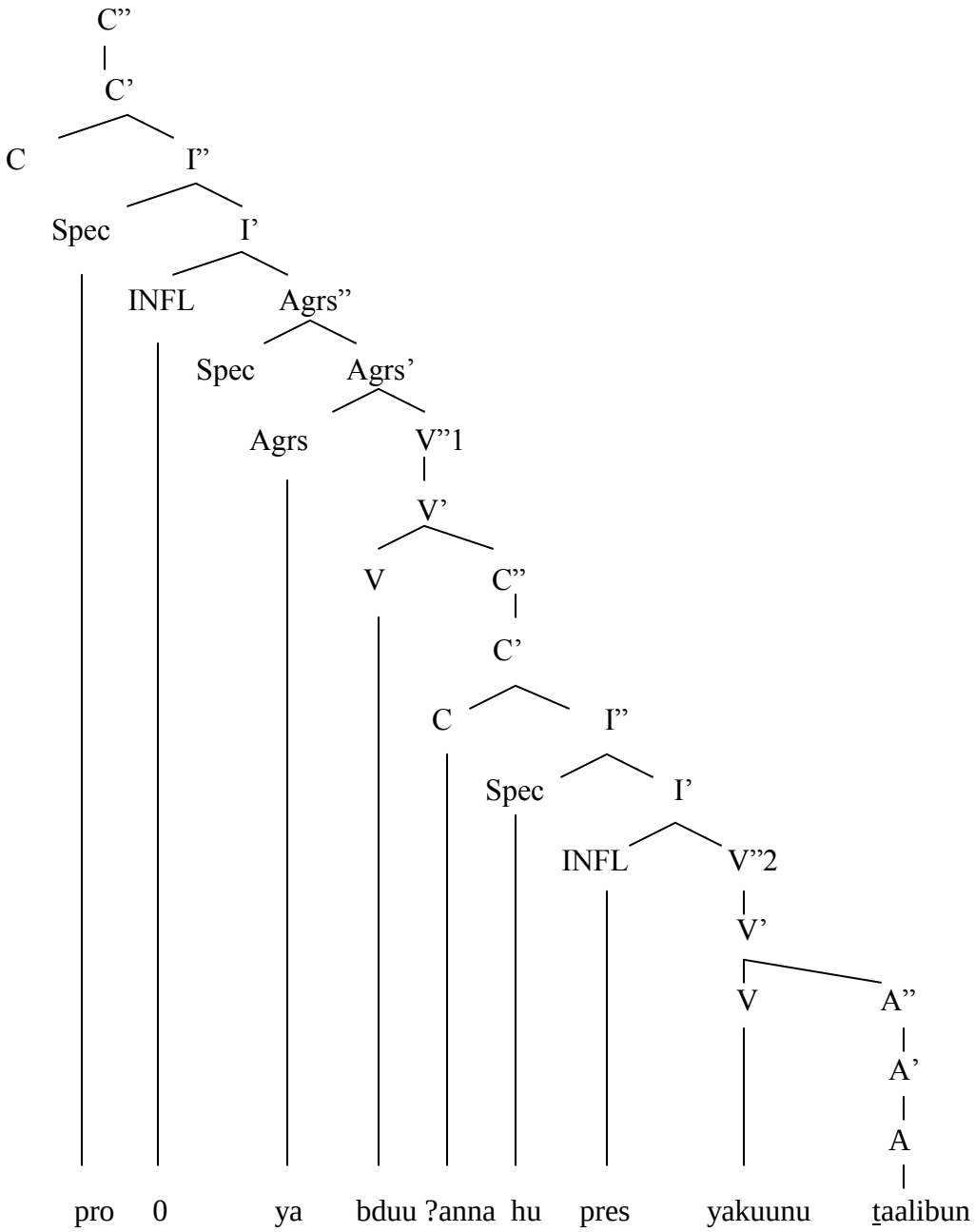
96c. pro ya- bduu- 0 - ?anna- hu t̲aalib- un

he 3rd,sg, masc seem pres. that he student nom

‘He seems that he is a student’

(96d) is the tree-diagram representation for (96c).

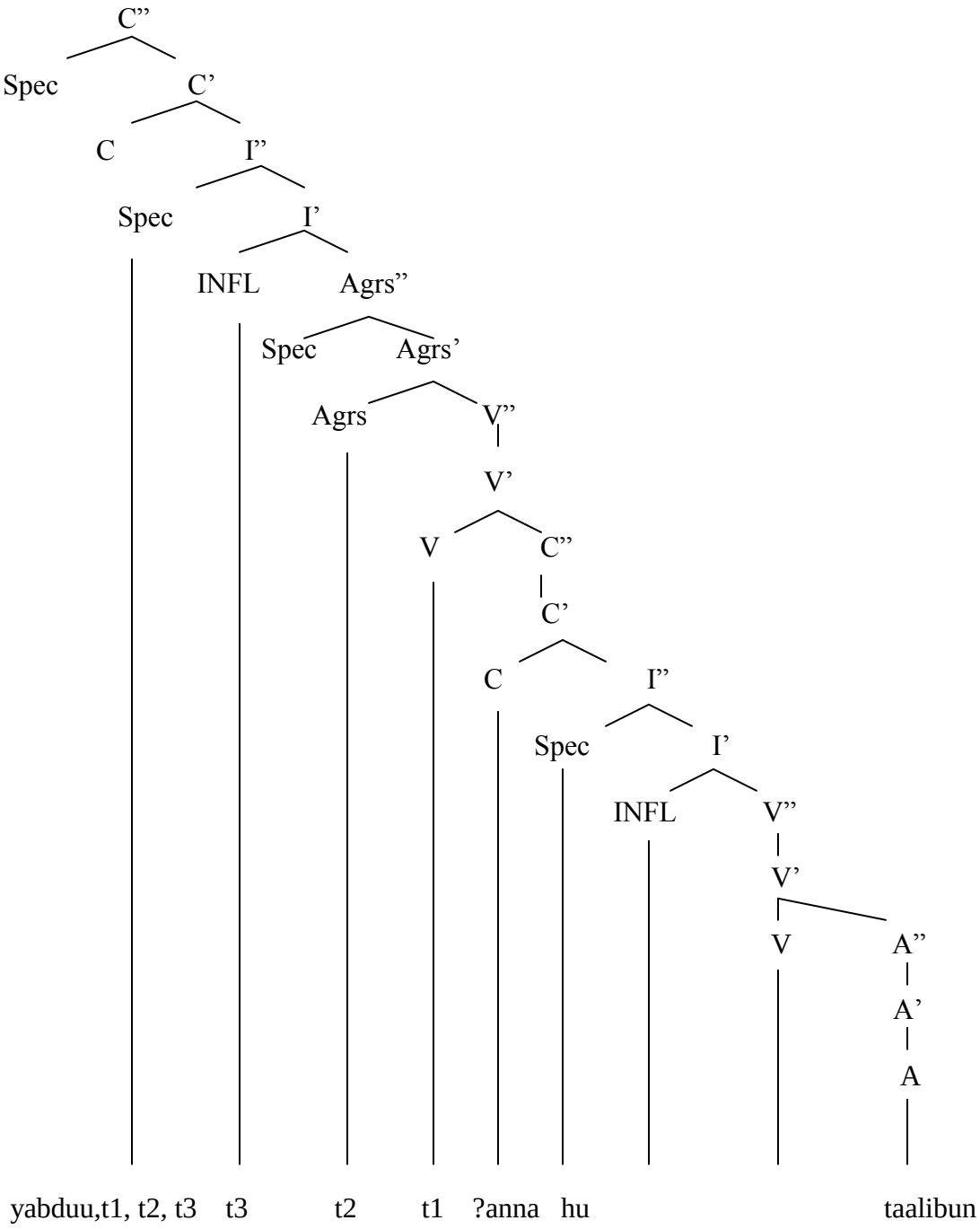
96d.



In (96d), the subject position matrix sentence is filled by the category pro ‘huwa’ which is visible with Agrs that is the third singular masculine marker [ya] which is prefixed to the verb *bduu* ‘seem’. The category pro is governed by the case assignor INFL under the maximal projection of I” to which the nominative case is assigned. It is

assigned the theta role of experiencer by the whole V"1. The category pro is omitted at the interface level after the verb *bduu* 'seem' moves to the position of [Agrs, Agrs'] to check the agreement features of the third masculine marker [ya] and to the position of [INFL, I'] to check the present tense. In a final movement, it has to move to [C, C'] to initiate the word order of Arabic at LF as in (96e).

96e.



In case, the subject of the matrix clause in which pro occurs is changed, Agrs is maintained in the verb *yabdu* ‘seem’ but the embedded subject identifies this pro as *hiya* ‘she’, *hum* ‘they masculine’, *hunna*’ ‘they feminine’, *humaa* ’they daul’, *?annaka*’ you

singular and masculine', *?annaki* 'you singular and feminine', *?annakumaa* 'you dual', *?annakum* 'you plural and masculine', *?annakunna* 'you plural and feminine', *?naa* 'I' and *na<u>h</u>nu* 'we'. In short, the same process is applied to the verb *ya<u>z</u>har* 'appear' in Arabic syntax as it has the same sub-categorization and constituent selects C" headed by the complementizer *?anna* 'that'.

If the researcher compares the above analysis of government, case-assignment, requirement of EPP and replacement of expletive by pro in pro-drop languages as Arabic to the empirical literature, it was noticed that there was a kind of agreement with some studies and disagreement with others. For instance, the researcher agrees with Hyams (1982), Rizzi (1982), Picallo (1984) and Haegeman (1994) in the sense that pro is the covert subject of a finite clause. It is governed and assigned the nominative case by the head governor INFL under the maximal projection I". The researcher disagrees with Huang (1989) in the sense that pro is not governed but the researcher may agree with him in the sense that pro is controlled as PRO and might be studied under the control theory. This is due to the fact that pro in Arabic has various references and not only refers to 'he' and 'they' in most pro drop languages. According to Huang (1984), it was made obvious that rich morphological system is not the only condition for any language to be licensed a pro-drop language since Chinese and Japanese allow their subject to be dropped while they do not have any kind of inflection at all. The category pro in Chinese language is deleted because the language is categorized as a discourse- oriented language whereas the subject is not important for the validity of a sentence. The deleted subject would be recovered via an antecedent. It was evident that Arabic language is a pro-drop language because of the strong agreement system that recovers pro. These agreements features

appear as affixes (i.e. suffixes and prefixes) on the predicate. This result is similar to Rizzi (1982) and Haegeman (1994) who argued that all pro-drop languages must have rich inflectional systems. Fehri (1987) and Kenstowicz (1984) conducted their studies on Arabic agreed that inflections help to recover the identity of the dropped subject. However, Jaeggli and Safir (1989) proposed the formality condition for pro-drop parameter i.e. all pro-drop languages must have morphologically uniform inflection paradigms. The result of this research does not fit with Alexiadou and Anagnostopoulou (1998) who doubted the existence of pro and they argued that the AGR affix replaces pro in fulfilling the requirement of EPP and in receiving the theta role. The researcher proved that pro is the subject of a finite clause and it receives a case at S- structure and a theta role at D-structure. The EPP requirement must be met by pro in Arabic language at D-structure and the subsequent level. The same result was proved by Radford (2009). Alexiadou and Anagnostopoulou (1998) argued that via the V-movement, the EPP would be met since they rejected the existence of pro. V-movement which was propagated by Jalabneh (1992) was adopted by the researcher to meet the directionality of case assignment, to avoid multiple movements of N"s and to meet the word structure order VSO at LF in Arabic syntax. Regarding pro in expletive positions, the researcher disagrees with Rizzi (1982), Haegeman (1994), Jaeggli and Safir (1998) in the sense that null expletives are available in weather verbs in pro drop languages; however, in Arabic syntax it is not because there is no particular expletive entity that can be filled in the subject position and in stead Arabic opts for pro. Thus, the researcher agrees with Alexiadou and Anagnostopoulou (1998) who argued that VSO languages, as Arabic, do not have a covert expletive.

3.2.3 Theta-Marking and pro in Arabic Syntax

The relation between a predicate and its subject is not studied only from a syntactic view but also from semantic view. This semantic relation is the basic for the correct understanding of a sentence at LF, and it is studied under the theta theory. It was evident that every argument must be assigned a theta role in a theta position and each theta role must be assigned to only one argument (theta criterion). The sub - categorization of the predicate decides its thematic relations in its theta grid. Thus, it is the verb that assigns the theta role of the internal arguments and V" assigns the external theta role of the subject whether pro or overt. In this section, the researcher tries to find out possible theta roles which can be assigned to pro in Arabic syntax. The theta roles must be assigned in the D- structure and they are very important for the subject to receive its nominative case. However, expletives are not assigned any theta role because they do not exist in the deep structure but they are assigned the nominative case at S-structure to meet the requirement of EPP. There were certain theta roles that were assigned to the subjects and others to the object. The focus of this study is only on those theta roles assigned to pro in the subject position in Arabic syntax. In an attempt to analyze question (2) of the study, the example (97) is a specimen that illustrates the theta assignment in Arabic syntax.

LF

97a. jalasa- ø ba^{c}da al- ghuruubi

sit 3rd, sg, masc. after det sunset

'He sat after the sunset'

(97b) is the D- structure representation of (97a).

D- structure

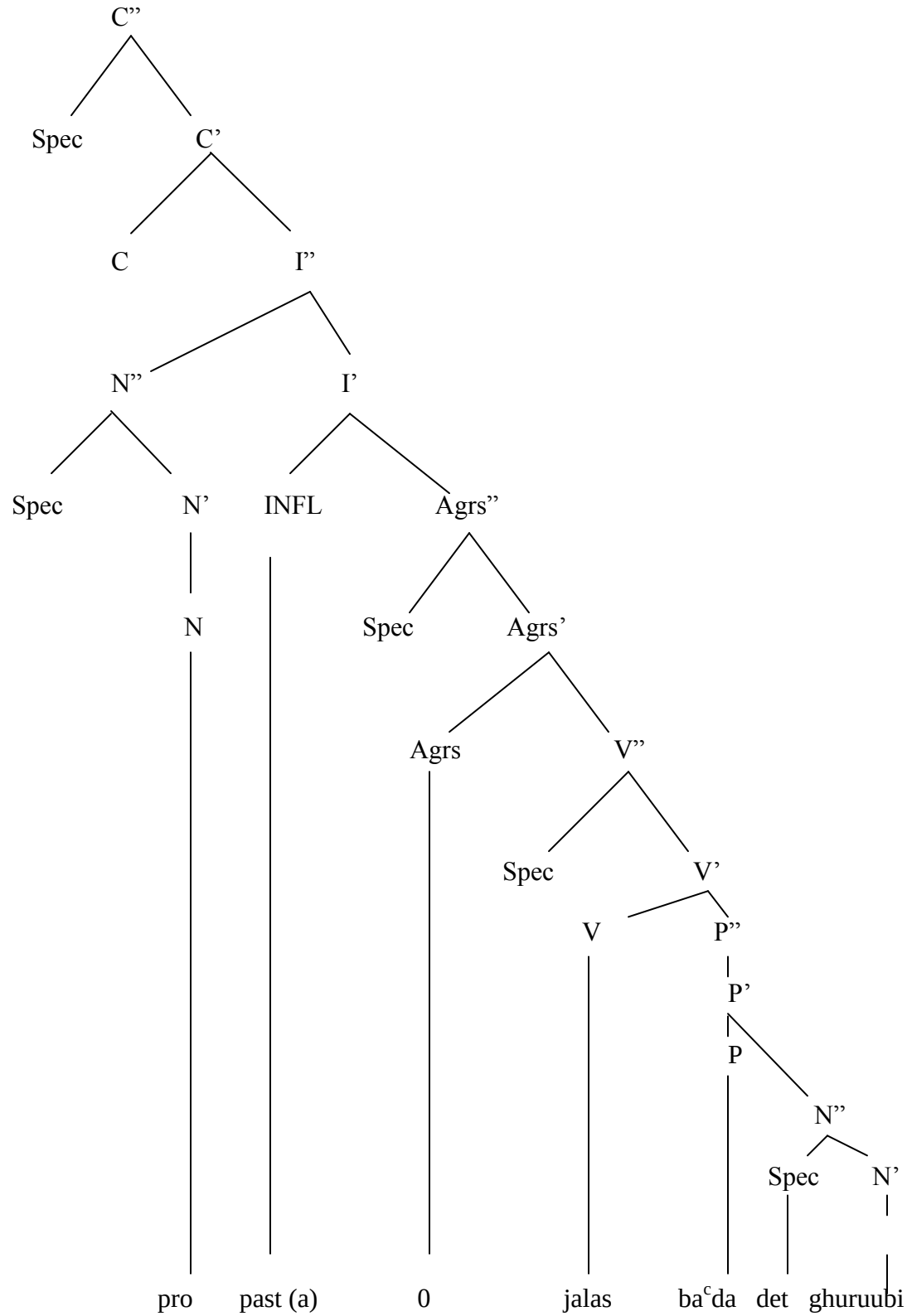
97b. pro jalasa ba^{c}da al- ghuruubi

he sat after det sunset

‘He sat after the sunset’

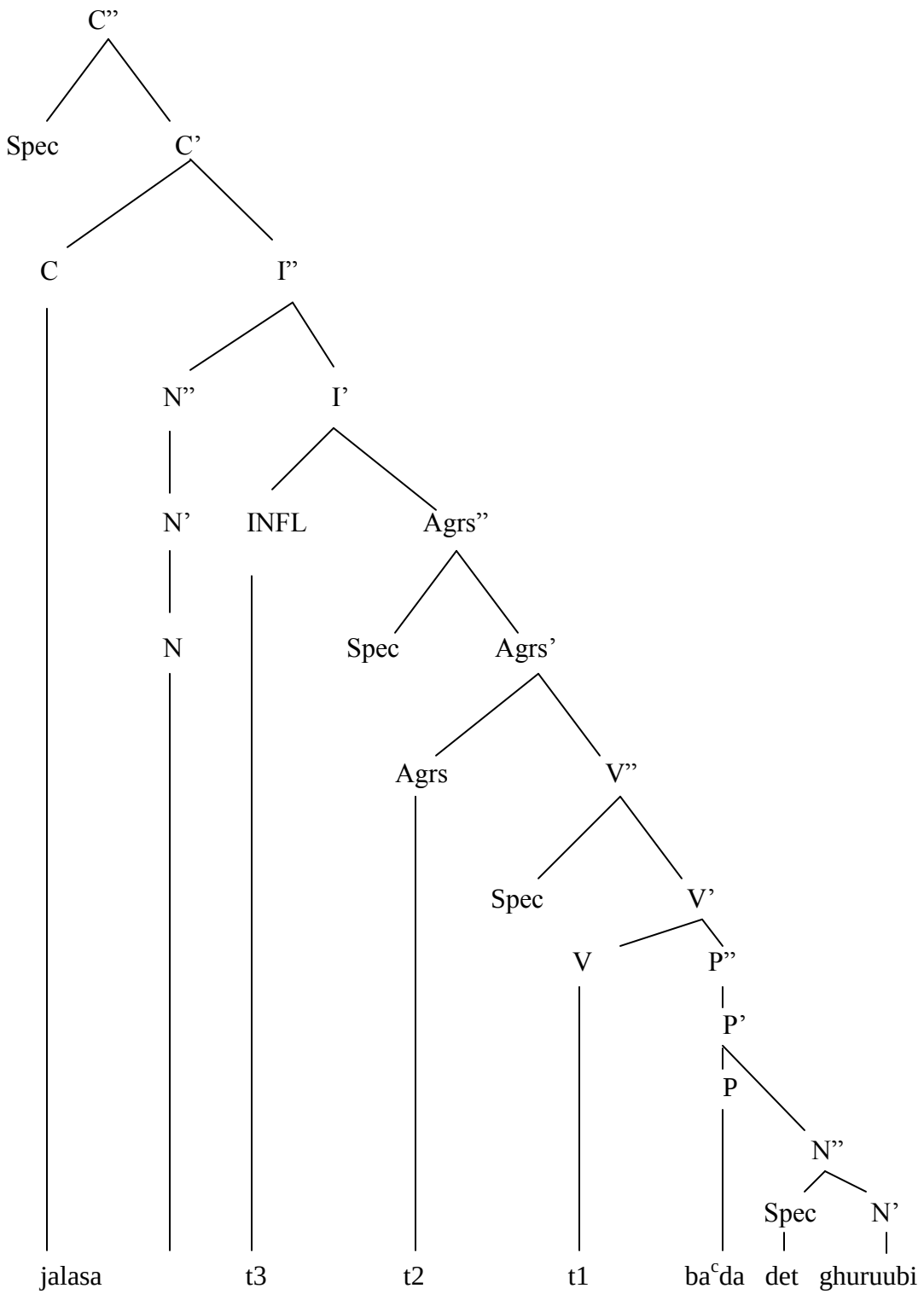
(97c) is the tree diagram representation of (97b).

97c.


C”
Spec
C’
C
I”
N”
I’
Spec
N’
INFL
Agrs”
N
Spec
Agrs’
Agrs
V”
Spec
V’
V
P”
P’
P
N”
Spec
N’
pro
past (a)
0
jalas
baᶜda
det
ghuruubi

In (97c), the predicate *jalas* ‘sat’ assigns the theta role of agent to pro ‘he’ as it instigates the action of sitting in the structure. The LF form is derived after the verb *jalas* ‘sit’ moves to the position of [Agrs’, Agrs] to check the agreement features and then move to the position of [INFL, I’] to check the tense marker [a] of the past. In a final movement to meet the word order, it moves to the position of [C, C’] as in (7d).

97d.


C”
Spec
C’
C
I”
N”
I’
N’
INFL
Agrs”
N
Spec
Agrs’
Agrs
V”
Spec
V’
V
P”
P’
P
N”
Spec
N’
jalasa
t3
t2
t1
ba^c da
det
ghuruubi

There are other Arabic predicates that assign the agent theta role to the subject namely, *sabaha* ‘swam’, *sarakha* ‘cried’, *rakada* ‘ran’ (c.f Jalabneh, 2007, p. 60 - 65). and *daraba* ‘hit’ (c.f Carnie, 2002, p. 168).

The subject pro can take the theta role of theme as in (98). The theme means the element that undergoes some action.

LF

98a. maata- ø fi al- manzili

died 3rd,sg, masc. in det house

‘He died in the house’

D- structure

98b.[$_{I''}$ pro [$_{V''}$ maata fi al- manzili]]

he died in det house

‘He died in the house’

There are other verbs that belong to the same group, namely, *dhahaba* ‘went’, *wasala* ‘arrived’ and *?ikhtafaa* ‘disappeared’.

The subject pro can take the theta role of experiencer as in (99). Experiencer means that the argument that perceives or experiences an event or state. (c.f Carnie, 2002, p. 177).

LF

99 a. ?ahabba- ø ?ummahu

loved 3rd,sg, masc. his mother

‘He loved his mother’

D- structure

99b.[$_{I''}$ pro [$_{V''}$?ah̲abba ?ummahu]

he loved his mother

‘He loved his mother’

In (99), pro is assigned the theta role of experiencer since it is the argument that experiences love. There are other verbs that assign this theta role, namely, *kariha* ‘hated’, *sa*^{c}*ala* ‘coughed’, ^{c}at̲asa ‘sneezed’, *tanahhada* ‘sighed’ and *marid̲a* ‘felt sick’. (c.f Jalabneh, 2007, p. 69 - 72).

In short, pro in Arabic syntax can take the theta roles of agent, theme and experiencer.

Comparing this work to the empirical literature, the researcher agrees with Haegeman (1994) in the sense that pro is originated and assigned its theta role at D-structure. The researcher disagrees with Alexiadou and Anagnostopoulou (1998) in their view that AGR affix is the theta-bearing argument in pro-drop languages. The researcher does not agree with Rizzi (1982) and argues that pro in weather verbs is assigned a theta role in Arabic syntax.

Chapter Four

Conclusions and Recommendations

4.0 Conclusions

Insofar as the theoretical literature is concerned, it was obvious that pro- drop languages allowed the subject of a finite clause to be dropped at the logical form and still the sentence is true. This pro was taken care of amply by Chomsky (1981, 1982 and 1986) in his Theory the Government and Binding. To account for the grammaticality of the sentence at all levels of syntax, Chomsky proposed a mechanism called the Extended Projection Principle which illustrated that a sentence must have a subject whether overt or covert. As pro is a covert subject in pro drop languages, it is visible at D-structure and has certain syntactic and semantic properties. The syntactic properties were represented by the assignment of case to pro under government at S-structure, its relation to the expletive and its Agrs markers. However, the semantic properties were represented by the assignment of theta marking of pro at D-structure and what possible theta roles were carried by pro. To fulfill the requirements of both properties the researcher followed the theory of V-movement proposed by Jalabneh (1992 and 2007) at Arabic syntax for proper government. After the processes of assignments were done without shortcomings, the verb has to move to certain positions to check Agrs and INFL and then to initiate the sentence at LF to get the word order of VSO. It was proved that pro in Arabic acts like an overt subject in fulfilling the requirement of EPP; it is governed by INFL to receive the nominative case at S-structured. It was proved that it receives a theta role at D-structure by V". Those fundamental conclusions fit to Chomsky's views. The researcher contrasted

pro as the subject of a finite clause with PRO as the subject of non finite clauses to find out the differences.

In this study, the researcher referred to some related studies in similar pro drop languages. He agreed with Rizzi (1982), Haegeman (1994) in the sense that pro is the subject of a finite clause to which the nominative case is assigned under government in I". It also receives a theta role in the same node by V". However, the researcher disagreed with them when he proved that Arabic does not allow an expletive to replace pro in weather-type verbs. In other words, it was proved that there are no expletives in Arabic and in stead pro is used in various forms. The researcher concluded that Agrs features help recover the entity of pro in agreement with Rizzi (1982), Al-Abed Al-Haq (1992), Haegeman (1994), Fehri (1987) and Kenstowicz (1989). The researcher argued that pro receives its theta role like other overt subject in the D- structure; whereas, Rizzi (1982) and Haegeman (1994) had the same view while Alexiadou and Anagnostopoulou (1998) argued that AGR affix receives the theta roles but not pro. There were two views to determine a certain language to be a pro- drop language. The first view was adopted by Rizzi (1982) and Haegeman (1994) who argued that only languages with rich inflectional systems are regarded pro- drop languages. The second view was proposed by Jaeggli and Safir (1989) who claimed that languages with morphologically uniform inflection paradigms are pro– drop languages. Arabic can be considered a pro-drop language by both views since Arabic has a rich inflectional system and it has morphologically uniform inflection paradigms.

This study is different from other studies conducted on Arabic in the sense that it studied pro in Modern Standard Arabic from a new perspective. This study is a pioneer

for other studies since it tackled not only syntactic but also semantic properties of pro at one time within GB theory which is universal and applicable to all natural languages. Thus, the conducted study is different from Kenstowicz's (1989) who conducted his study on pro in subordinate Arabic clauses on two colloquial dialects.

The researcher wrote explicitly, in this chapter, the answers of the questions of the study after getting them analysed in the previous chapter. The researcher asked two main questions in this study. Here are the two questions and their answers.

1. What syntactic features might pro have?

i) Is pro governed by a governor?

It was evident that pro is governed by INFL under I". To explain the concept of government in a proper manner, the researcher followed two patterns of government. The first pattern was to deal with Arabic as VSO at the level of D-structure as in (83b, c and d). In this sentence, though the subject is governed by INFL under I", still there are certain shortcomings if the verb has more than one N" as its internal arguments. The first deficiency is the directionality of the assignment of the nominative case in the sense that the subject pro occurs to the right place of the case assignor INFL which of course should occur to its left. The second deficiency is that each N" of the internal position has to move to its specific position in the structure at other levels, namely, S-structure and LF. The third deficiency is that the verb has to move in the same direction to check Agrs and INFL and finally lands in the INFL position which is not the proper position for it at LF. Due to such shortcomings, the researcher opted for theory of V- movement propagated by Jalabneh (1992 and 2007) in Arabic syntax. In this style of government as in (83e), the category pro is assigned the nominative case by INFL under I" as it occurred to its left

direction. The second advantage of this approach is that only the main verb has to move from its position to the position of [Agrs, Agrs'] to check the agreement features and it moves to the position [INFL, INFL'] to check the tense marker and in a final cyclic movement the verb moves outside the I" boundaries to land on the position of [C, C'] to initiate the sentence at the logical form. Thus, in this structure of government, other internal possible N"s that might occur in the sentence are kept untouched though they are assigned cases and theta roles by the respected governors. Thus, the researcher preferred to deal with Arabic as SVO at the level of D-structure and VSO at the level of logical form.

ii) Does it have a case? If yes what is it?

It was proved theoretically that pro must be assigned a case though it is an empty category. It must be assigned the nominative case because it is rich in Agrs which help to specify the type of pro referent at S-structure as in the sentence (83e). It was proved that pro is assigned the nominative case under the government of INFL under I" whether the subject is first person singular as in (85), first person plural as in (86), second person singular and masculine as in (87), third person singular and masculine as in (88) and third person singular and feminine as in (90) whenever the verb is in the imperfective (present). It is also assigned the nominative case if the verb is in the perfective (past) and the subject is third person singular and masculine as in (91) and third person singular and feminine as in (83). Likewise if the form of the verb is in the imperative the category pro is assigned the nominative case in the same process of government if the subject is the second person singular and masculine as in (92). Not only pro is assigned the nominative case in independent clauses but also it is assigned the same case in the subordinate

clauses; whenever, the subject is the third person singular and masculine in the subjunctive clause as in (93), it is assigned the same case. It was proved that in such subjunctive clauses pro could be first person singular, first person plural, second person singular and masculine and third person singular and feminine. Such pro is assigned the nominative case in the same version of government at S- structure. It was also revealed that the category pro can be assigned the nominative case if it occurs as the subject of wh- clause in present tense whenever it is first person singular as in (94). The same position can be assigned the nominative case if pro is first person plural, second person masculine, third person singular and masculine and third person singular and feminine. In case the verb is the perfective, the category pro is the third person singular and masculine or the third person singular and feminine. The third embedded clause in which pro was assigned the nominative case was the adverbial clauses which were dealt with in the same manner as in (94).

iii) Does it fulfill the requirement of Extended Projection Principle?

It was proved in Arabic that no sentence can be constructed without fulfilling the subject position with a subject whether covert or overt. Thus, in (83) and (85-99), the subject position is filled with pro at all levels of syntax. For instance, at D-structure, it is overt to get a theta role whereas the same entity is assigned the nominative case at S-structure. However, at the logical form, the subject position is visible with the relevant Agrs for all the sentences.

iv) Are there special markers attached to the verb that indicate syntactically its number, person and gender?

There are a number of Agrs markers that specify the kind of pro in Arabic syntax at LF. For instance, if the verb is in the imperfective, the visible markers are listed as follows: *?u* as in *?uhibbu* ‘ pro (I) love’, *nu* as in *nuhibbu* ‘ pro (we) love’, *tu* as in *tuhibbu* ‘ pro(you) love’, *tu* as in *tuhibbu* ‘ pro(she) loves’, *yu* as in *yuhibbu* ‘ pro(he) loves’, *?a* as in *?aktubu* ‘ pro(I) write’, *na* as in *naktubu* ‘ pro(we) write’, *ta* as in *taktubu* ‘ pro(you) write’, *ta* as in *taktubu* ‘ pro(she) writes’ and *ya* as in *yaktubu* ‘ pro(he) writes’. If the verb is in the perfective the visible marker is *t* as in *la^{c}ibat* ‘pro(she) played’. The third person singular and masculine does not have any visible marker for pro as in *la^{c}iba* ‘pro(he) played’. In case the verb is imperative, there is no visible marker for pro; but, it is understood to be the third person singular and masculine as in *kul* ‘ pro(you) eat’. The given markers were visible in sentences (83- 99).

v. Can pro be replaced by expletives arguments in Arabic?

Generally, languages fall into two groups with regard to expletives. For example, group A, the non pro- drop languages accept the expletives ‘it’ and ‘there’ to occur with the weather type- verbs in the subject position. Such expletives were assigned the nominative case but not theta roles. However, group B, the pro- drop languages do not accept such expletives and instead pro occurs. This empty category assigns both the nominative case at the S-structure and the theta roles at D-structure. Arabic belongs to the second group and the category pro is referential because the subject could be third person singular and feminine as in (95) which refers to *al- samaa?u* ‘the sky’ or *al-ghaymatu* ‘the cloud’, or *al-shmasu* ‘the sun’. The category pro also could be third person singular and masculine whenever it occurs with subject raising verb of *yabdu* ‘seem’ as in (96). This pro is also represented by third person singular and feminine, third person plural and

masculine, third person plural and feminine, third person dual, second person singular and masculine, second person singular and feminine, second person dual, second person plural and masculine, second person plural and feminine, first person singular and first person plural.

vi. Is the deletion of pro optional or compulsory in Arabic?

As Arabic is a pro- drop language, the subject pro is compulsory dropped at the logical form to mark Arabic as a pro drop language. However, if the subject is to be overt, it has to be a separate pronoun or R- expression as in (84).

2. What semantic features does it have?

i) Does it have a theta role? If yes, what are they?

As far as the semantic roles were concerned, it was proved theoretically that pro constitutes an argument in relation to V". Thus, it is assigned a theta role at the level of D-structure as in (97). This pro is visible only with N" regardless its referent. It was proved that pro in Arabic is assigned the theta role of agent as in (97), theme as in (98) and experiencer as in (99).

ii) At what level a theta role is assigned to pro?

Theoretically, D-structure is the right place to assign theta marking to arguments. Thus, as pro is visible at D-structure it is assigned a theta role under government by V" as in (97).

To sum up, this work attempted to test the validity of case theory and theta theory with regard to pro in MSA and the researcher found it was fit for the analysis.

The researcher looked at various sentences in which the category pro occurs and found that it was assigned the nominative case at S-structure and theta role at D-structure.

The theory also took care of the referent of pro in weather- type structure. It was proved that pro not only is assigned a case but also a theta role as Arabic is a pro- drop language, it is rich in its morphological relations in Agrs. This kind of Agrs specifies the type of referent of the category pro in all positions. This study made it clear that the subject position has the same syntactic and semantic properties whether the subject is overt or covert.

5.1 Recommendations

The researcher recommends that other scholars who are specialized in syntax to conduct similar studies on other pro drop languages. For those who are interested in MSA syntax, the researcher advises them to study other theories and sub-theories of Government and Binding Theory of Chomsky (1981 and 1986) to enrich MSA with recent studies and analyze them from different perspectives. The researcher also recommends those teachers, translators who are interest in teaching and translating Arabic to refer to this kind of study in an attempt to understand deeply the Arabic structures in a better manner.

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Appendix A

Chart of Arabic Segments

Chart of Arabic Consonants

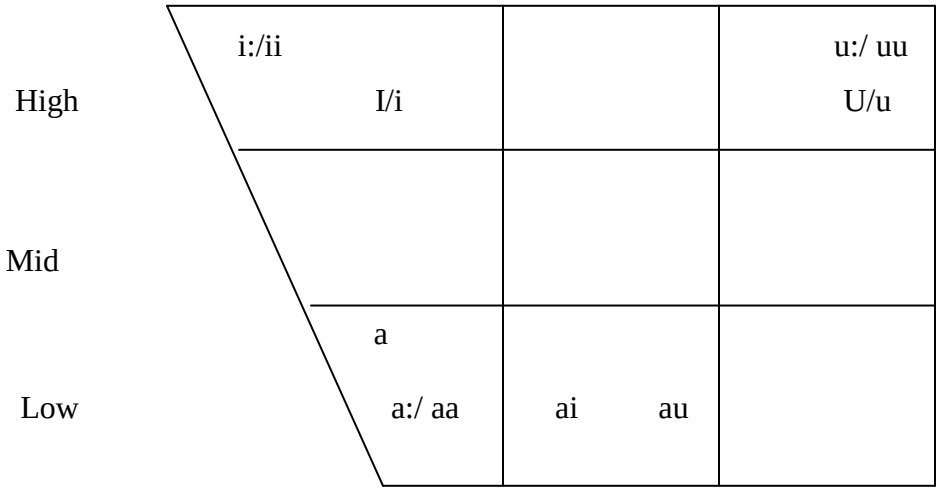
Arabic	Transliteration	Phonetics
أ	?	?
ب	b	b
ت	t	t
ث	th	ø
ج	j	d3
ح	h̲	ħ
خ	kh	x
د	d	d
ذ	dh	ð
ر	r	r
ز	z	z
س	s	s
ش	hs	*ʃ*
ص	s̲	χ
ض	d̲	đ
ط	t̲	ţ
ظ	z̲	ð̲
ع	ᶜI	ɪ
غ	hg	ɣ
ف	f	f
ق	q	q
ك	k	k
ل	l	l
م	m	m
ن	n	n

ه	h	h
و	w	w
ي	y	y

Jalabneh (1992, p. iii)

The researcher used the transliteration forms only in this study

Chart of Arabic Vowels and Diphthongs



Shihdih et al (2006, p.47)

Examples to illustrate the vowels and the diphthongs in MSA used in this work:

Tenses Vowels:

Symbol	**Examples**
1. ii	/tiin/ ‘fig’
2. aa	/maal/ ‘money’
3. uu	/suud/ ‘black’

Lax Vowels:

Symbol	**Examples**	
1. i	/min/	‘from’
2. a	/lan/	‘not’
3. u	/ᶜud/	‘come back’

Diphthongs:

Symbol	**Examples**	
1. ai	/ᶜain/	‘eye’
2.au	/lau/	‘if’

Appendix B

Abbreviations

1st:	First
2nd :	Second
3rd :	Third
Adj:	Adjective
Adv:	Adverb
Acc. :	Accusative case
AGR:	Agreement
C':	Complementizer Phrase bar
C":	Complementizer Phrase
det.:	Determiner
D- structure:	Deep structure
S- structure:	Surface structure
LF:	Logical form
Fem.:	feminine
Masc.:	masculine
dl:	dual
pl:	plural
INFL:	Inflection
Inst:	Instrumental
I':	Infinitival phrase bar
I":	Infinitival phrase

MSA: Modern standard Arabic

N: Noun

N”: noun phrase

Nom.: Nominative case

P: Preposition

P’: Preposition phrase bar

P”: Preposition phrase

Past: past tense

Pres.: present tense

sg : singular

Spec: Specifier

SVO: Subject- Verb- Object

VSO: Verb- Subject- Object

V: Verb

V- movement: Verb phrase movement

V’: Verb phrase bar

V”: Verb phrase

R- expression: reference expression

Appendix C

Instrument of the Study

Dear Professor;

My name is Hamed AL-Alamat. I am a graduate student at Middle East University for Graduate Studies. I am writing a thesis to acquire my M.A degree in English Language and Literature. My supervisor, Dr. Atef Jalabneh, has recommended your name to serve as a juror for the sentences that I am analyzing syntactically in my study.

The title of my thesis is:

‘ pro in Arabic Syntax: A theoretical Study for its Syntactic and Semantic Features with the Help of X-Bar Syntax within Chomsky’s (1981- 1986) Framework of Government and Binding Theory’.

I am investigating the Arabic pro and analyzing its structures. I have enclosed sentences that include the pro category; would you please review the enclosed sentences hoping to provide me with your comments, notes and recommendations on the adequacy of the content and its suitability to judge what is intended to be analyzed?

I would like to thank you for your assistance.

Sincerely Yours,

Hamed Al-Alamat

Please comment on the correctness and grammaticality of the use of pro in the following sentences.

Please notice that the symbol (*) indicates intentionally ungrammatical sentence which I used to prove the ungrammatically of the use of pro. In addition, the use of the symbol (/) indicates the word ‘or’, i.e. using each word separately in the same sentence is grammatical or ungrammatical depending on the sentence. I have also enclosed the chart of transliterating letters I used.

1. ya - ?kul- u - ø al- t̲a^{c}aam- a

   3rd, sg, masc. eat pres 3rd, sg, masc. det food acc

   ‘He eats the food’

2. ya - ?kul- u huwa al- t̲a^{c}aam- a

   3rd, sg, masc. eat pres he det food acc

   ‘He eats the food’

3. ta - ?kul- u- ø al- t̲a^{c}aam- a

   3rd, sg, fem eat pres 3rd, sg, fem det food acc

   ‘She eats the food’

4. ta - ?kul- u hiya al- t̲a^{c}aam - a

   3rd, sg, fem eat pres she det food acc

   ‘She eats the food’

5. ya - ?kul- 0- aani- al- t̲a^{c}aam- a

   3rd,dl, masc eat pres both det food acc

   ‘Both (men) eat the food’

6. ya - ?kul- 0- aani humaa al- t̲a^{c}aam- a

   3rd,dl, masc eat pres. dl, masc both det food acc

‘Both (men) eat the food’

7. ta - ?kul- 0- aani al- t̲a^{c}aam- a

3rd,dl, fem eat pres. dl, fem det food acc

‘Both (women) eat the food’

8. ta - ?kul- 0- aani humaa al- t̲a^{c}aam- a

3rd,dl, fem eat pres. dl, fem both det food acc

‘Both (women) eat the food’

9. ya- drus- 0 - uuna kulla sabaa<u>h</u>

3rd, pl, masc. study pres. they every morning

‘They study every morning’

10. hum ya- drus- 0 - uuna kulla sabaa<u>h</u>

they 3rd, pl, masc. study pres. 3rd, pl, masc. every morning

‘They study every morning’

11. ya- drus- 0- na kulla sabaa<u>h</u>

3rd, pl, fem study pres. they every morning

‘They study every morning’

12. hunna ya- drus- na - 0 kulla sabaa<u>h</u>

they 3rd,pl,fem study 3rd, pl, fem pres every morning

‘They study every morning’

13. raja^{c} - a - ø bi khufai <u>h</u>unain

come past. 3rd,sg,masc with two shoes <u>h</u>unain

‘He came back with the two shoes of <u>H</u>unain’

14. raja^{c}a - 0 - ø huwa bi khufai hunain

come past 3rd,sg,masc he with shoes hunain

'He came back with the two shoes of Hunain'

15. raja^{c} - a- t- ø bi khufai hunain

come past 3rd,sg,fem 3rd,sg,fem with two shoes hunain

'She came back with the two shoes of Hunain'

16. raja^{c} - a- -t hiya bi khufai hunain

come past 3rd,sg,fem she with shoes hunain

'She came back with the two shoes of Hunain'

17. qul- - 0 tu al- haq

said past 1st, sg, masc and fem det truth

'I said the truth'

18. qul- - 0 naa al- haq

said past 1st, pl, masc and fem det truth

'We said the truth'

19. qul- 0- ta al- haq

said past 2nd , sg,masc. det truth

'You said the truth'

20. qul- 0- ti al- haq

said past 2nd , sg, fem det truth

'You said the truth'

21. qul- 0- tumaa al- haq

said past 2nd ,dl, masc./fem. det truth

‘You said the truth’

22. qul- 0- tum al- haq

said past 2nd , pl, masc. det truth

‘You said the truth’

23. qul- 0- tunna al- haq

said past 2nd , pl, fem det truth

‘You said the truth’

24. qaal- 0- aa al- haq

said past 3rd , dl, masc det truth

‘They said the truth’

25. qaal- a- taa al- haq

said pas t 3rd , dl, fem det truth

‘They said the truth’

26. qaal- 0- uu al- haq

said past 3rd , pl, masc. det truth

‘They said the truth’

27. qul- 0- na al- haq

said past 3rd , pl, fem det truth

‘They said the truth’

28. qaal- - 0 uu hum al- haq

say past 3rd, pl, masc they. masc det truth

‘They said the truth’

29. hum qaal- 0- uu al- haq

they. masc say past 3rd, pl, masc det truth

‘They said the truth’

30. ?uktub- - 0- ii risaalat- an

write imp 2nd, sg, fem letter acc

‘Write a letter!’

31. ?uktub- 0 - aa risaalat- an

write imp 2nd,dl, masc/ fem letter acc

‘Write a letter!’

32. ?uktub- 0- uu risaalat- an

write imp 2nd, pl, masc letter acc

‘Write a letter!’

33. ?uktub- 0- na risaalat- an

write imp 2nd, pl, fem letter acc

‘Write a letter!’

34. ?uktub- 0 - ii ?anti risaalat- an

write inp 2nd, sg, fem you letter acc

‘Write a letter!’

35. iqtarah- a muusaa ?an

suggest past Muusaa that

?a- ktub- a- ø resaalat- an

1st, sg, masc/fem write acc 1st, sg, masc/fem letter acc

‘Muusaa suggested that I write a letter’

36.* iqtarah- a muusaa ?an

suggest past Muusaa that

katab- a- ø resaalat- an

write past 3rd, sg, masc letter acc

‘Muusaa suggested that he wrote a letter’

37. laa ?- a ᶜrif- u matha

no 1st, sg, masc./fem know pres what

?a- drus- u- ø

1st, sg,masc.fem study pres 1st, sg, masc/fem

‘I do not know what I am studying’

38. laa ?- a ᶜrif- u matha

no 1st, sg, masc./fem know pres what

daras- a- ø

study past 3rd, sg, masc

‘I do not know what he studied’

39. laa ?- a ᶜrif- u matha

no 1st, sg, masc./fem know pres what

daras- a- t- -ø

study past 3rd,, sg, fem 3rd,, sg, fem

‘I do not know what she studied’

40. yasil- u muusaa ᶜindamaa

arrive pres Muusaa when

?a- ajlis- u ma^{c}a akhii

1st, sg, masc./fem sit pres with my brother

'Muusaa arrives while I am sitting with my brother'

41. wa<u>s</u>al- a muusaa ^{c}indamaa

arrive past Muusaa when

?anhaa- 0 - 0 al- daras- a

finish past 3rd , sg, masc. det lesson acc

'Muusaa arrived when he finished the lesson'

42. wa<u>s</u>al- a muusaa ^{c}indamaa

arrive past Muusaa when

?anha- 0 - t- ø al- daras- a

finish past 3rd , sg, fem 3rd , sg, fem det lesson acc

'Muusaa arrived when she finished the lesson'

43. ?akal- a- t al- tufaahat- a

Eat past 3rd,sg,fem det apple acc

'She ate an apple'

44. ?akal- a- t- lailaa al tuffaa<u>h</u>at- a

eat past 3rd,sg,fem Lailaa det apple acc

'Lila ate the apple'

45 ?u - <u>h</u>ibb- u- al- ^{c}ilm- a

1st, sg, masc./fem love pres. det knowledge acc

'I love knowledge'

46. nu- hibb- u- al ᶜilm- a

1st, pl, masc./fem love pres. det knowledge acc

‘We love knowledge’

47. tu- hib- u- al ᶜilm- a

2nd, sg, masc. love pres. det knowledge acc

‘You love knowledge’

48. yu- hib- u- al ᶜilm- a

3rd,sg, masc. love pres. det knowledge acc

‘He love knowledge’

49. ya - ?kul- u- al tuffaahat- a

3rd,sg,masc. eat pres. det apple acc

‘He eats the apple’

50. ta - ?kul- u- al- tuffaahat- a

3rd,sg,fem eat pres. det apple acc

‘She eats the apple’

51. laᶜib- a- 0- bi al kurat- i

play past 3rd,sg,masc with det ball inst

‘He played with a ball’

52. ?ibtasim 0 !

smile pres.

‘Smile’

53. tamanna- a zaidun ?an yanjaha

wish past Zaid that pass

‘Zaid wished that he pass’

54. laa ya- ᶜrif- u zaidun matha ?ashrabu

no 3rd,sg, masc. know pres Zaid what drink

‘Zaid does not know what I am drinking’

55. ?amtar- a - t al- baarihata

rain past 3rd, sg, fem det yesterday

‘It rained yesterday’

56. ya- bduu- 0 - ø ?anna- hu taalib- un

3rd,sg, masc seem pres. 3rd,sg, masc that he student nom

‘He seems that he is a student’

57. jalasa- ø baᶜda al- ghuruubi

sit 3rd, sg, masc. after det sunset

‘He sat after the sunset’

58. maata- ø fi al- manzili

died 3rd,sg, masc. in det house

‘He died in the house’

59. ?ahabba- ø ?ummahu

loved 3rd,sg, masc. his mother

‘He loved his mother’