


# **A MINIMALIST ANALYSIS OF OBLIGATORY REFLEXIVITY IN TRIPOLIAN LIBYAN ARABIC**

**by**

**Khulud Abdulhakim Elghariani**

Thesis presented in partial fulfilment of the requirements for the degree  
Master of Arts in General Linguistics at the  
University of Stellenbosch

The crest of the University of Stellenbosch is centered behind the text. It features a shield with various symbols, topped with a crown and a banner. The Latin motto 'Pacta suberant cultus recti' is inscribed on a ribbon at the bottom of the crest.

Supervisor: Dr. Johan Oosthuizen

Faculty of Arts and Social Sciences

Department of General Linguistics

December 2016

## **Declaration**

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own original work, that I am the authorship owner thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Khulud Abdulhakim Elghariani

December 2016

Copyright © 2016 Stellenbosch University

All rights reserved

## Abstract

This study deals with the phenomenon of obligatory reflexivity in Tripolian Libyan Arabic (TL-Arabic), a variety of Maghrebi Arabic spoken in North Africa. This phenomenon has not yet been systematically described for TL-Arabic. The study has two major aims. The first is to give a detailed description of reflexive pronouns in TL-Arabic and of the constructions in which they can occur. In this, the focus is placed on those reflexives comprising the REFL element *rooh-* and a personal pronoun, where the reflexive pronoun functions as an independent argument (e.g. as the subject, direct object, prepositional object) but is referentially dependent on some other expression in the sentence (its antecedent). In describing the constructions in which the reflexive pronouns can occur, the focus is on finite verbal object constructions, prepositional object constructions, small clause constructions, and two infinitival constructions, namely control constructions and raising constructions. The second major aim is to provide an analysis of the facts of obligatory reflexivity in TL-Arabic, focusing in particular on the coreferential relationship between a reflexive pronoun and its antecedent. In the course of the discussion attention is also given to the agreement relationship between the subject marker (SM) and the expression functioning as the subject of the sentence, as well as to the relevant aspects of TL-Arabic syntax. The analysis is developed within the broad framework of Minimalist Syntax and, more specifically, within the framework of the Nominal Shell Analysis (NSA) of obligatory reflexivity in Afrikaans proposed by Oosthuizen (2013) and subsequently extended to Chichewa by Msaka (2014). According to the NSA, the coreferential relationship between the reflexive and its antecedent is established within a nominal shell construction, that is, an *nP* that is headed by an identity focus light noun *n*. The reflexive is merged as the complement, and the antecedent as the specifier of the light noun. The coreferential relationship between these two expressions is established in this shell configuration via a process of phi-feature valuation (person, number, gender), with the light noun acting as intermediary. A similar analysis is proposed to account for the agreement relationship between the SM and the subject of the sentence. It is claimed that the proposed analysis provides an adequate description and explanation of the facts of obligatory reflexivity in TL-Arabic.

## Opsomming

Hierdie studie handel oor die verskynsel van verpligte refleksiwiteit in Tripoliaans-Libiese Arabies (TL-Arabies), 'n variëteit van Maghrebi Arabies wat gepraat word in Noord-Afrika. 'n Sistematiese beskrywing van hierdie verskynsel is nog nie tevore vir TL-Arabies aangebied nie. Die studie het twee hoofogmerke. Die eerste is om 'n uitvoerige beskrywing te gee van refleksiewe voornaamwoorde in TL-Arabies asook van die konstruksies waarin hulle kan voorkom. Die fokus word geplaas op refleksiewe wat bestaan uit die REFL-element *rooh-* en 'n persoonlike voornaamwoord, waar die refleksiewe voornaamwoord as 'n onafhanklike argument funksioneer (bv. as die subjek, direkte objek, preposisionele objek) maar referensieel afhanklik is van 'n ander uitdrukking in die sin (sy antesedent). In die beskrywing van die konstruksies waarin die refleksiewe voornaamwoorde kan voorkom val die fokus op finiete verbale-objekkonstruksies, preposisionele-objekkonstruksies, beknopte-sinkonstruksies, en twee infinitiefkonstruksies, naamlik kontrole-konstruksies en raising-konstruksies. Die tweede hoofogmerk is om 'n analise te gee van die feite van verpligte refleksiwiteit in TL-Arabies, met spesifieke fokus op die koreferensiële verhouding tussen 'n refleksiewe voornaamwoord en sy antesedent. In die loop van die bespreking word daar ook aandag gegee aan die kongruensie-verhouding tussen die subjekmerker (SM) en die uitdrukking wat as die subjek van die sin funksioneer, asook aan die tersaaklike aspekte van TL-Arabiese sintaksis. Die analise word ontwikkel binne die breë raamwerk van Minimalistiese Sintaksis en, meer spesifiek, binne die raamwerk van die Nominale Skulp-analise (NSA) van verpligte refleksiwiteit soos voorgestel vir Afrikaans deur Oosthuizen (2013) en vervolgens uitgewerk vir Chichewa deur Msaka (2014). Volgens die NSA word die koreferensiële verhouding tussen 'n refleksief en sy antesedent bewerkstellig binne 'n nominale skulp-konstruksie, dit wil sê, 'n *nP* met 'n identiteitsfokus-ligte naamwoord *n* as funksionele hoof. Die refleksief word saamgevoeg as die komplement, en die antesedent as die spesifiseerder van die ligte naamwoord. In hierdie konfigurasie word die koreferensiële verhouding tussen die twee uitdrukkings tot stand gebring deur 'n proses van phi-kenmerkwaardering (persoon, getal, geslag), met die ligte naamwoord wat optree as tussenganger. 'n Soortgelyke analise word aangebied ter verklaring van die kongruensie-verhouding tussen die SM en die subjek van die sin. Daar word geargumenteer dat die voorgestelde analise 'n toereikende beskrywing en verklaring bied van die feite van verpligte refleksiwiteit in TL-Arabies.

## ملخص الرسالة

تتناول هذه الدراسة ظاهرة الإنعكاس الإجماري في اللهجة الليبية المتحدث بها في طرابلس ونواحيها، وهي لهجة متفرعة من لهجات المغرب العربي المتحدث بها في شمال أفريقيا. هذه الظاهرة لم تدرس (في خصوص اللهجة المذكورة) دراسة منهجية إلى حد الآن. تهدف الدراسة لتحقيق هدفين أساسيين: الأول: إعطاء وصف مفصل للضمائر الإنعكاسية في اللهجة الطرابلسية، وللتراكيب التي توجد فيها هذه الضمائر. وهذا سيكون من خلال ضرب الأمثلة على هذه الضمائر الإنعكاسية في تركيبات مكونة من كلمة (روح) وعدد من الضمائر المتصلة بها، يكون فيها الضمير الإنعكاسي كلمة مستقلة، ويعرب فاعلاً، أو مفعولاً به، أو اسم مجرور، الخ، لكنه في الوقت ذاته يعود على اسم أو ضمير سبق ذكره في الجملة. لوصف التراكيب التي يمكن أن يوجد فيها الضمائر الإنعكاسية سيكون التركيز على تراكيب المفعول به لفعل متعدي، وتراكيب الاسم المجرور، وتراكيب الجملة الإسمية، وتراكيب المصدر المؤول.

الهدف الثاني: اعطاء شرح وتحليل للحقائق حول ظاهرة الإنعكاس الإجماري في اللهجة الطرابلسية، بالتركيز على وجه الخصوص على العلاقة المرجعية المشتركة بين الضمير الإنعكاسي والكلمة التي يعود عليها. ومن خلال مناقشة هذا التحليل تم التركيز أيضاً على علامات الفاعل وعلى الكلمة التي تعمل عمل الفاعل في الجملة وإيضاً التركيز على بعض الخصائص النحوية ذات الصلة في اللهجة الطرابلسية. تم تطوير هذا التحليل في إطار النحو التقليصي وعلى وجه الخصوص نظرية التحليل الإسمي الصدفي (NSA) للإنعكاس الإجماري في لغة الأفريكانز التي اقترحها أوستويزن Oosthuizen (2013)، وبعد ذلك تم تطبيقها على لغة الشيشوا التي كتبها مساكا Msaka (2014). ووفقاً لنظرية (NSA)، العلاقة المرجعية المشتركة بين الضمير الإنعكاسي والكلمة العائدة عليها مشتقة من نفس التركيبة الإسمية والتي يترأسها الإسم المصغر (light noun  $n$ ). في هذه التركيبة الصدفية الإسمية الضمير المنعكس يدمج على أساس أنه الخبر والكلمة العائدة عليها على أنها المبتدأ لهذا الإسم المصغر. وتنشأ هذه العلاقة المرجعية المشتركة بين هاتين العبارتين من حيث التذكير والتأنيب والأفراد والجمع مع وجود الإسم المصغر كوسيط بينهما. وكما قامت الدراسة باقتراح تحليل مشابه لدراسة العلاقة بين الضمير المتصل بالفعل الذي يعود على الفاعل وبين الفاعل من ناحية الأفراد والجمع والتأنيب والتذكير تبين من خلال هذه الدراسة أن التحليل المقترح يوفر وصفاً وتفسيراً كافياً لظاهرة الإنعكاس الإجماري في اللهجة الطرابلسية.

## Acknowledgements

Many people have contributed to the completion of this thesis. Without their help and support it would have remained a dream. My deepest gratitude to all of them.

I would like to express my deep and sincere gratitude to my supervisor, Johan Oosthuizen, for his endless patience, kindness, guidance and insight at every stage of writing this thesis. I would not have been able to achieve this without your guidance. Thank you!

I wish to express my thanks and my deepest gratitude to all my family members. In particular, I wish to thank –

- My father, my mother, my grandfather and my grandmother – your prayers and encouragement were crucial for the completion of this work.
- My loving and dearest husband Ali who accompanied me on every step of this journey – I am grateful for your patience, endurance and support throughout the time of my study in South Africa.
- My children Kadeja, Mohamed, Fatima and Omar – your presence and beautiful smiles give me hope and add joy to my life.
- My sisters and brothers for their support (and for constantly nagging me to come back!)
- My mother-in-law for her prayers and support, and also my sisters-in-law and brothers-in-law for their encouragement.
- All my friends, in Libya and South Africa, for the good times that we shared.

Finally, I wish to thank the Libyan Government for its generous financial support, without which this study would not have been possible.

## Table of Contents

Declaration .....	i
Abstract .....	ii
Opsomming .....	iii
ملخص الرسالة .....	iv
Acknowledgements .....	v
Table of Contents .....	vi
Chapter 1 .....	1
Introduction .....	1
1.1 Topic and General background .....	1
1.2 Main objectives and research questions .....	2
1.3 Organisation of the study .....	3
Chapter 2 .....	4
Reflexive constructions in TL-Arabic .....	4
2.1 General grammatical background of TL-Arabic .....	4
2.2 Reflexives .....	9
2.2.1 Introduction .....	9
2.2.2 Morphological forms of the <i>rooh</i> -reflexive .....	11
2.2.3 Reflexive constructions .....	12
2.2.3.1 Finite verbal object constructions .....	12
2.2.3.2 Prepositional object constructions .....	13
2.2.3.3 Small clause constructions .....	14
2.2.3.4 Infinitival constructions .....	15
2.2.3.4.1 Control constructions .....	15
2.2.3.4.2 Raising Constructions .....	16
2.3 Summary .....	19
Chapter 3 .....	20
Theoretical background .....	20
3.1 Introduction .....	20
3.2 Some assumptions and devices of Minimalist Syntax .....	20

3.3	The Nominal Shell Analysis of Obligatory Reflexivity .....	27
3.3.1	Key assumptions and devices.....	27
3.3.2	Extending the NSA to Bantu languages.....	37
3.4	Summary.....	44
Chapter 4	.....	45
A nominal shell analysis of obligatory reflexivity in TL-Arabic.....		45
4.1	Introduction.....	45
4.2.	An analysis of obligatory reflexivity in TL-Arabic .....	45
4.2.1	Finite verbal object constructions .....	45
4.2.2	Prepositional object constructions.....	54
4.2.3	Small clause constructions .....	60
4.2.4	Infinitival constructions.....	62
4.2.4.1	Control constructions .....	62
4.2.4.2	Raising constructions.....	66
4.	Summary.....	69
Chapter 5	.....	71
Summary, conclusion and final remarks .....		71
5.1	Summary and conclusion.....	71
5.2	Final remarks .....	72
References .....		78
APPENDIX.....		82



# Chapter 1

## Introduction

### 1.1 Topic and general background

This study focuses on the phenomenon of obligatory reflexivity in a specific variety of Arabic used in Libya, namely Tripolitan Libyan Arabic (TL-Arabic). As far as could be ascertained, this phenomenon has not yet been systematically described for TL-Arabic.

As the name indicates, TL-Arabic is predominantly found in Tripoli, the capital of Libya, and is used by approximately 1.7 million people (Versteegh, 2011:548; Algryani, 2012:9). TL-Arabic is not commonly used in written form and is largely found in informal, colloquial settings. This is in contrast to Modern Standard Arabic (MSA) which is the variety that is used, in both spoken and written form, in more formal settings, and which is also the language of education (Ryding, 2005:5).

TL-Arabic is a variety of Maghrebi Arabic spoken in North Africa, which also includes Egyptian Arabic, Tunisian Arabic and Moroccan Arabic, amongst many others.<sup>1</sup> TL-Arabic shows the word order subject-verb-complement and, typical of the Semitic family of languages to which Arabic belongs, it has a synthetic system of verbal morphology, exhibiting both fusional and agglutinative characteristics.<sup>2</sup>

Before proceeding, some remarks are required about the writing conventions and orthography that will be used in this study when presenting the Arabic examples. Arabic is conventionally written and read from right to left. This can be illustrated with the example in (1), where the object *el-kora* (“the ball”) occurs in the leftmost position and the subject *Khadija* in the rightmost position. When reading this sentence, however, the subject is pronounced first and the object last.

1. El-kora [lawḥe-t] Khadija  
     the ball Past-throw Khadija  
     “The ball threw Khadija”

---

<sup>1</sup> Cf. e.g. Versteegh (2011, 2014) and Algryani (2012) for the origin of Libyan-Arabic.

<sup>2</sup> Cf. e.g. Dixon (1994:184) and Ido (2013) for the terms “synthetic”, “fusional” and “agglutinative” languages. Cf. also the references in note (1) as well as Holes (2004), Hetzron (2005) and Matthew (2010) for discussion of word order and verbal morphology in Arabic.

The right-to-left writing convention illustrated in (1) will not be followed in the present study; rather, in presenting the Arabic examples, the constituents will be written in the order that they are spoken, that is, from left-to-right. The example in (1) will thus be presented in its mirror form *Khadija lawḥe-t el-kora*. As regards orthography, Arabic can be written either in the Arabic alphabet (as is standard practise in Arabic countries) or in the Roman alphabet. The difference between these two orthographies can be illustrated with the example in (2). For convenience, and to ensure that the data will be accessible to readers who are not acquainted with the Arabic orthography, the Roman orthography will be used in this study. However, some of the letters/symbols that will be used do not occur in the Roman alphabet; these are listed in the Appendix, together with a brief description of their pronunciation.<sup>3</sup>

- |    |                                    |                             |
|----|------------------------------------|-----------------------------|
| 2. | خديجة لوحت الكرة                   | (Arabic orthography)        |
|    | Khadija lawḥe-t                    | el-kora (Roman orthography) |
|    | Khadija (Past)+throw+SM.3.sing.fem | the ball                    |
|    | “Khadija threw the ball”           |                             |

## 1.2 Main objectives and research questions

The present study has two main objectives. The first is to provide a description of the facts of obligatory reflexivity in TL-Arabic. To achieve this, specific attention will be given to the morphosyntactic properties of the reflexive affix *rooḥ-* and its antecedent(s) in five distinct types of constructions, namely finite verbal object, prepositional object and small clause constructions and two infinitival constructions, namely control and raising constructions. The second main objective is to determine whether the minimalist Nominal Shell Analysis (NSA) of obligatory reflexivity proposed for Afrikaans by Oosthuizen (2013) can provide an adequate framework for analysing the relevant facts of TL-Arabic. In this regard, particular attention will be given to two broad questions: firstly, what are the specific steps in the derivation of the various reflexive constructions in TL-Arabic? and secondly, exactly how and by means of which mechanisms is the coreferential relationship between the reflexive affix and its antecedent(s) established?

<sup>3</sup> For general background on Arabic orthography, see e.g. Habash (2010), Nydell (2006) and Algryani (2012).

### 1.3 Organisation of the study

The rest of the study is organized as follows. Chapter 2 provides general background information about the relevant aspects of TL-Arabic. However, the main aim of this chapter is to give a non-formalistic description of the various forms of the reflexive pronoun and of five specific construction types in which the reflexive pronoun can occur. As mentioned, these constructions are the finite verbal object, prepositional object and small clause constructions, as well as two infinitival constructions, namely control and raising constructions.<sup>4</sup>

Chapter 3 focuses on the theoretical framework that is adopted in this study for the analysis of obligatory reflexivity in TL-Arabic. In section 3.2, a description is given of the core assumptions and devices of Minimalist Syntax, the most recent framework for grammatical analysis within the broad generative approach. Section 3.3 sets out the core hypotheses of the Nominal Shell Analysis of (obligatory) reflexivity as proposed for Afrikaans by Oosthuizen (2013). In this section brief attention is also given to the extension of the NSA to Bantu languages such as Chichewa (Msaka, 2014).

Chapter 4 presents an analysis of the facts of (obligatory) reflexivity in TL-Arabic as described in Chapter 2 within the NSA framework outlined in Chapter 3. The main findings of the study are summarised in Chapter 5, the concluding chapter. In this chapter, brief attention is also given to a number of topics for further investigation.

---

<sup>4</sup> These are not the only constructions where the phenomenon of obligatory reflexivity is found in TL-Arabic. For instance, as will be illustrated in Chapter 5, this phenomenon is also found in possessive constructions and postposed quantifier constructions.

## Chapter 2

### Reflexive constructions in TL-Arabic

#### 2.1 General grammatical background of TL-Arabic

The verbal complex in TL-Arabic can contain several different types of affixes, such as a subject marker (SM), an object marker (OM), and affixes associated with tense/aspect (T/A) and negation (NEG). To illustrate, consider the examples in (1)-(8) below. The sentences in (1) serve to illustrate the ordering of the T/A marker, the verb stem and the SM (here and below the verbal complex is given in square brackets).

1. (a) Fatima [mše-t]  
Fatima (past)+go+SM.3pers.sing.fem  
“Fatima has gone out”
- (b) [mše-t]  
(past)+go+SM.3pers.sing.fem  
“She has gone out”
- (c) \*(Fatima) [mše]

In (1a) the intransitive verbal complex comprises the verb stem *mše-* (“go”) followed by the SM *-t*, which indicates third person, singular, feminine [3pers, sing, fem] in agreement with the subject *Fatima*. In (1b) the subject does not occur as an overt phrase but is only expressed by means of the SM *-t* (interpreted as “she”). As shown by the ungrammaticality of (1c), the SM is obligatory in TL-Arabic.

The sentences in (2) below illustrate the position of the OM relative to the other elements of the verbal complex.

2. (a) Hīya [fhma-t] el-wajəb  
she (past)+understand+SM.3pers.sing.fem the-homework  
“She understood the homework”
- (b) Hīya [fhma-t-ah]  
she (past)+understand+SM.3pers.sing.fem+OM.3.sing.mas  
“She understood it”

- (c) Hīya [fhma-t-ah] el-wajəb.  
 she (past)+understand+SM.3rd.sing.fem.+OM.3pers.sing.mas the-homework  
 “She understood it, the homework”

In (2a) the verbal complex comprises the verb stem *fhm-* (“understand”) and the [3pers, sing, fem] SM *-t* agreeing with the subject *hīya* (“she”). Although the sentence contains an overt object in the form of *el-wajəb* (“the homework”), the verbal complex lacks an OM. In (2b), the verbal complex does contain an OM in the form of *ah* (interpreted here as “it”); in this case the sentence lacks an overt object. The sentence in (2c) contains an OM as well as an overt object. The occurrence of both these elements yields an interpretation where emphasis is placed on what it is that she understands, namely *the homework*.

Past (or perfective) tense is not indicated by means of a separate overt affix in the verbal complex in TL-Arabic, as illustrated by the examples in (1) and (2). However, it has been argued that the SM – e.g. *-t* in (1) and (2) – also serves to indicate past tense (Algryani, 2012; Versteegh, 2011). A summary of the various [verb stem + SM affix] combinations is given in the following table:

Person	Number	Gender	Affix	Verb+affix
	S/P	F/M		
First	S	F\M	-t	ktəbt (“I wrote”)
	P	M\F	-na	ktəbna (“we wrote”)
Second	S	M	-t	ktəbt (“you wrote”)
	S	F	-ti	ktəbti (“you wrote”)
	P	F\M	-tu	ktəbtu (“you wrote”)
Third	S	M	-	ktəb (“he wrote”)
	S	F	-t	kəbt (“she wrote”)
	P	M\F	-u	kəbu (“they wrote”)

Table 1: Perfective verbal morphology in TL-Arabic (Algryani, 2012:19).

Consider next the examples in (3) which express present tense.

3. (a) Hūwa [y-grə] fi el-ktab.  
 he (pres)+SM.3.sing.masc+read in the book  
 “He reads the book”
- (b) Who reads the letter?  
 Fatima [t-grə-ha]  
 Fatima (pres)+SM.3.sing.fem+read+OM.3.sing.fem  
 “Fatima reads it”

In the verbal complex in (3a) the SM *y-* indicates [3pers, sing, masc] in agreement with the subject *hūwa* (“he”). Note that in this case the SM precedes the verb stem *-grə-* (“read”), in contrast to the past tense sentences in (1) and (2) where the SM follows the verb stem. Although the verbal complex lacks a distinct tense affix, the SM is taken to express the present tense in addition to the nominal features associated with it (Algryani, 2012). In (3b) the prefix representing the SM is different in form from the one occurring in (3a); in this case the form *t-* is determined by the feminine gender of the subject *Fatima*. Besides gender, the form of the SM is also dependent on the number and person features of the subject. Firstly, if the subject is first person, the SM takes the form *n-*; however, if the subject is first person plural, an additional suffix *-u* is attached to the verb stem. These facts are illustrated by the sentence pair in (4).<sup>5</sup> Secondly, as illustrated by the examples in (5), the SM *t-* is used for both second person masculine and third person feminine subjects; in such cases, however, the suffix *-i* is attached to the verb stem if the subject is second person singular as in (5a), and the suffix *-u* if the subject is second person plural as in (5b). Thirdly, the SM *y-* is used when the subject is third person plural or third person singular masculine, with the suffix *-u* attached to the verb stem in the plural cases as illustrated in (6a,b) respectively. A summary of the various forms and combinations of the SM and the subject-related verb stem suffix is given in table 2 overleaf.

4. (a) āne [n.ktəb] fi rissalə  
 I (pres)+SM.1.sing.neut.+write in letter  
 “I am writing a letter”

<sup>5</sup> In this study, the term “neuter” (abbreviated as “neut” in (4) and similar TL-Arabic examples) is used for convenience in those cases where the gender of an entity is not specified. It must be noted, however, that the term “common” is conventionally used in Modern Standard Arabic, rather than “neuter”; in fact, according to Ryding (2005:298), neuter gender does not occur in Modern Standard Arabic.

- (b)      ḥne [n.əresm.u]                                      fi warda  
we (pres)+SM.1. Plur.neut+draw+Num in flower  
“We are drawing a flower”
5.      (a)      ənta [t.mʃi]    le el-madersa  
You (pres)+go+SM.2.sing.masc+go+num to the school  
“You are going to school”
- (b)      əntum [t.laʃb.u]    be el-kora  
You (pres)+SM.2.neut+play+Plu by the ball  
“You play with the ball”
6.      (a)      Hūwa [y.ħab]    sǧərə-h  
he (Pres)+SM.3.sing.masc+love kids-his  
“He likes his kids”
- (b)      humma [y.əktəb.u]    fi wajeb-hum  
they (pres)+SM.3.neut+write+plu in homework-their  
“They are writing their homework”

Person	Number	Gender	Affix	Verb+affix
	S/P	F/M		
First	S	F\M	n-	nəktəb (“I write”)
	P	M/F	n—u	nəktbu (“we write”)
Second	S	M	t-	təktəb (“you write”)
	S	F	t-i	təktəbi (“you write”)
	P	M	t-u	təktbu (“you write”)
Third	S	M	y-	yəktəb (“he writes”)
	S	F	t-	təkətb (“she writes”)
	P	M/F	y-u	yəktəbu (“they write”)

Table 2: Imperfective verbal morphology in TL-Arabic (Algryani 2012:18)

Consider next the sentences in (7), which express the future tense.

7. (a) Huma [b-y-ǧsl-u] s-siyyarə.  
 they future+SM.3.plu.neut+wash+plu the car  
 “They will wash the car”
- (b) Huma [ħa-y-ǧsl-u] s-siyyarə.  
 they future+SM.3.plu.neut+wash+plu the car  
 “They will wash the car”

As shown in these examples, the future tense is formed by the use of the verbal affixes *b-* and *ħa-*, where the former serves to express a future intention and the latter a coming future (Versteegh, 2011:55). In addition to the verb stem *-ǧsl*, the verbal complex in (7a, b) both contain the SM *-y-* and the plural number suffix *-u* associated with the subject/SM. A striking difference between sentences expressing past tense and those expressing present or future tense concerns the position occupied by the SM. In the case of past tense sentences, the SM (expressing person, number, gender) occurs to the right of the verb stem. In the case of present/future sentences, in contrast, the SM occurs as a discontinuous element: (i) as a prefix expressing person and gender, and (ii) as a suffix expressing number (Algryani, 2012:18-19).

Turning to sentential negation, this is expressed by means of two affixes in TL-Arabic, both forming part of the verbal complex (Algryani, 2012:16). The first is the prefix *ma-* and the second is the suffix *-š*; these affixes occupy the leftmost and the rightmost affix slots, respectively, as illustrated in the example in (8). As shown by the ungrammaticality of the examples in (8b,c), these affixes are both obligatory.

8. (a) Hīya [ma-fhma-t-ah-š] el-wajeb  
 she not+(past)+understand+SM.3rd.sing.fem+OM+ NEG the homework  
 “She did not understand the homework”
- (b) \*Hīya [fhma-t-ah-š] el-wajeb
- (c) \*Hīya [ma-fhma-t-ah] el-wajeb



## 2.2 Reflexives

### 2.2.1 Introduction

The notion of obligatory reflexivity dealt with in this study can be illustrated with the sentence pair in (9). Both sentences contain a subject as well as an object; in each case, the subject represents an experiencer argument and the object a theme argument. In (9a) the subject *Fatima* (and the associated SM *t-*) and the object *el bent* (“the girl”) refer to two distinct persons. In contrast, in (9b) the object, represented by the reflexive pronoun *rooḥha* (“herself”), can only be interpreted as referring to the person identified by the subject *Fatima*; that is, the reflexive is referentially dependent on the subject. In technical terms, the subject in (9b) represents the antecedent of the reflexive, the latter representing an anaphor.

9. (a) Fatima [t.ḥab] el-bent  
 Fatima (pres) +SM.3.sing.fem +love the girl  
 “Fatima loves the girl”
- (b) Fatima [t.ḥab] **rooḥ-ha**  
 Fatima (pres) +SM.3.sing.fem+love REFL-her  
 “Fatima loves herself”

The reflexive pronoun *rooḥha* in (9b) is morphologically complex in the sense that it comprises the reflexive (REFL) prefix *rooḥ-* (“self”) and the [3pers, sing, fem] personal pronoun *ha* (“her”) (Kremers, 1997).<sup>6</sup> The various forms of *rooḥ*-reflexives will be summarised in section 2.2.2 below. A variant of the REFL *rooḥ-* in TL-Arabic is *nafs-*, which, like *rooḥ-*, also combines with a personal pronoun to form a reflexive pronoun, as shown in (10). The two forms are grammatically equivalent, although *rooḥ*-reflexives are used more commonly than *nafs*-reflexives, which tend to occur in more formal registers.<sup>7</sup> For convenience, the examples discussed below will be confined to *nafs*-reflexives.

10. Khadija [jrah.t] **nafs-ha**  
 Khadija (past) +hurt+SM.3.sing.fem REFL-her  
 “Khadija hurt herself”

<sup>6</sup> It should be noted, though, that *rooḥ* can occur on its own (i.e. used as a free morpheme) in restricted contexts such as proverbs and fixed expressions, as in e.g. (i) *Ya rooḥ mabaṣ dik rooḥ!* (“Myself and only myself!”), (ii) *Ya gatel el-rooḥ ween trooḥ!* (“If you kill someone, you can’t run away from yourself!”), and (iii) *Al kalma zy el-rooḥ law toṣit mṣadiṣ twali!* (“A word is like a soul, if it goes out it can’t return!”).

<sup>7</sup> Cf. e.g. Tawfiq (2009); cf. also the discussion of (13) below.



14. (a) s.šġar [y.laʃb.u] **mʃ bʃd (hum)**  
 the children (pres)+SM.3.plu.neut+play+plu to-each-(them)  
 “The children are playing together”
- (b) s.šġar [y.ʃiʔ u] **kul-hum**  
 the-children (pres) +SM.3.plu.neut+cry+num all-them  
 “The children are all crying”

As in the case of *nafsa-h* and *rooḥ-h* (12) and (13), the expressions *bʃd-hum* (“they together”) and *kul-hum* (“they all”) in (14) both lack a distinct thematic role. In (15), in contrast, these two expressions function as the agent and the experiencer argument, respectively, with *bʃd* in (16a) co-occurring with the preposition *fi* (“on/at”).

15. (a) s.šġar [y.ɖurb.u] **fi bʃd-hum**  
 the children (pres)+SM.3.plu.neut+hit+num in each-them  
 “The children hit each other”
- (b) Ana [ʃraf.t.hum] **kul-hum**  
 I (past)+recognise+SM.1.sin.neut+OM.3.plu.neut all-them  
 “I recognised all of them”

In this study, the focus will be on *rooḥ*-reflexives, as illustrated in (9) and (11). The next section provides a summary of the various forms that reflexive pronouns incorporating the REFL *rooḥ*- can take in TL-Arabic.

### 2.2.2 Morphological forms of the *rooḥ*-reflexive

As mentioned earlier, obligatory reflexivity is found in TL-Arabic constructions where the REFL prefix *rooḥ*- is attached to a personal pronoun. This morphologically complex reflexive pronoun must agree in person, number and gender with the antecedent (Tawfiq, 2009:48).

Although the REFL affix *rooḥ*- is grammatically invariant, the reflexive pronoun of which it forms part takes different forms depending on the person, number and gender features of the personal pronoun to which *rooḥ*- is attached. The various forms of *rooḥ*-reflexive pronouns are shown in the following table:

Person	Number	Gender	Complex
1	Sing	Neutral	rooḥy (“myself”)
1	Plu	Neutral	rooḥna (“ourselves”)
2	Sing	Masculine	rooḥuk (“yourself”)
2	Sing	Feminine	rooḥuk (“yourself”)
2	Plu	Neutral	rooḥkum (“ourselves”)
3	Sing	Neutral	rooḥh (“himself”)
3	Sing	Feminine	rooḥha (“herself”)
3	Plu	Neutral	rooḥhum (“themselves”)

Table 3: Various forms of *rooḥ*-reflexive pronouns

The next section focuses on the various constructions in which *rooḥ*-reflexive pronouns can occur in TL-Arabic.

### 2.2.3 Reflexive constructions

This section describes five constructions in which the reflexive expression *rooḥ*+pronoun is found in TL-Arabic, namely finite verbal object constructions (section 2.2.3.1), prepositional object constructions (2.2.3.2), small clause constructions (2.2.3.3), and two types of infinitival constructions (2.2.3.4).

#### 2.2.3.1 Finite verbal object constructions

It has already been shown in the previous section that the reflexive expression *rooḥ*+pronoun can function as the direct object argument of a finite verb, expressing the thematic role of theme (cf. the sentences in (9) and (11)). Further examples of this type of construction are given in (16a,b) below. In both cases, the reflexive pronoun is interpreted as obligatorily coreferential with the subject of the sentence.

16. (a) Ana [jrah.t] **rooḥ-y**  
 I (Past)+hurt+SM.1.sing.neut REFL-my  
 “I hurt myself”
- (b) Hīya [t.wati] **rooḥ-ha** besurfā  
 she (pres)+SM+3.sing.fem prepare REFL-her quickly  
 “She is dressing herself quickly”





- (b) Hīya<sub>i</sub> [t.ħsabā] [rooħ-ha<sub>i</sub> mǧašra]  
 She (pres) +SM.3.sing.fem+think REFL-her delinquent  
 “She considers herself a delinquent”

### 2.2.3.4 Infinitival constructions

This section deals with two types of reflexive infinitival constructions in TL-Arabic, namely control constructions (2.2.3.4.1) and raising constructions (2.2.3.4.2).

#### 2.2.3.4.1 Control constructions

The sentences in (22) both contain a so-called control construction functioning as the complement of the matrix verb. A control construction can be defined as an infinitival clause in which the subject argument is not phonetically realised but is represented by the abstract pronominal element PRO.<sup>10</sup> In a control construction the subject PRO enters into a coreferential relationship with (in technical terms, is controlled by) some other expression in the matrix clause, such as the subject or the direct object.<sup>11</sup> In (22) the subject PRO of the infinitival clause is controlled by the matrix subject *hūwa* (“he”).<sup>12</sup>

<sup>10</sup> Cf. Radford (2009:266) and Haegeman (1994) for more detailed discussion of control constructions. For a description of control constructions in Arabic, cf. Attia (2005).

<sup>11</sup> If the matrix sentence does not contain a possible antecedent for the PRO, the PRO receives an “arbitrary” interpretation, as in (i) where the subject (= PRO) of the infinitival clause is interpreted as referring to some unspecified person(s).

- (i) [PRO yšrub sim] hada ġaba?  
 -drink poison this stupid  
 “It is stupid to drink poison”

<sup>12</sup> It should be noted that control constructions such as the one in (22) are not commonly used in (colloquial) TL-Arabic, but are rather associated with more formal registers, such as Modern Standard Arabic. More commonly, in TL-Arabic the verbal complex in the subordinate clause in (22) would comprise a tensed verb with a SM, and a subject that is expressed either by an overt pronoun or a covert pronominal element (assumed here to be the finite null subject *pro*; cf. Radford (2009:92-97); both these elements stand in a coreferential relationship with the subject of the main clause. This is illustrated in (i), where the prefix *y-* serves as both a SM (3.sing.masc) and a tense marker (present).

- (i) Hūwa<sub>i</sub> [y.twagʕ] en [hūwa<sub>i</sub> / pro<sub>i</sub> y.rbaħ el-žaeza].  
 he pres+SM.3.sing.masc+expect to he pres+SM+win the prize  
 “He expects to win the prize”

Interestingly, if the main clause contains an (indirect) object, as in (ii), the subject of the subordinate clause must take the form of a covert pronominal element, that is, it cannot be overt:

- (ii) hūwa<sub>j</sub> [gal] le Ahmed<sub>i</sub> (en) [\*hūwa / pro<sub>i</sub> y.kamel el-xedma]  
 he (past) +tell+SM.3.sing.masc to Ahmed<sub>i</sub> to he pres+SM+complete the work  
 “He told Ahmed to complete the work”

22. Hūwa<sub>i</sub> [y.twagʕ] [PRO<sub>i</sub> rbaḥ el-žaeza].  
 he (pres) +SM.3.sing.masc+expect to win the prize  
 “He expects to win the prize”

Consider next the examples in (23). In both cases the direct object of the control construction takes the form of a reflexive pronoun, *rooḥ-h* (“himself”) in (23a) and *rooḥ-ha* (“herself”) in (23b). The reflexive takes as its controller the subject *Mohamed* in (23a) and the object *Marwa* in (23b). In both cases, then, there are two instances of coreferentiality: between the REFL and the PRO, and between the PRO and the subject/object.

23. (a) Mohamed<sub>i</sub> [ybī] [PRO<sub>i</sub> tšawer rooḥ-h<sub>i</sub>  
 Mohamed (pres) +SM.3.sing.masc+want to photograph REFL-him  
 “Mohamed wishes to photograph himself”
- (b) Fatima<sub>j</sub> [t.ʔaḍel] Marwa<sub>i</sub> [PRO<sub>i</sub> ġjseḥ rooḥ-ha<sub>i</sub>]  
 Fatima (pres)+SM.3.sing.fem+prefer Marwa to wash REFL-her  
 “Fatima prefers Marwa to wash herself”

#### 2.2.3.4.2 Raising constructions

In general terms, a raising construction has three prominent characteristics: (i) it comprises two clauses, namely a finite matrix clause and an infinitival subordinate clause;<sup>13</sup> (ii) the subject argument of the infinitival clause occurs in the surface subject position of the matrix clause (in other words, the subject position of the subordinate clause is not filled by a phonetically realised element in derived structure); and (iii) the subordinate clause functions as the complement of a raising verb. Such verbs do not have any descriptive meaning, but rather serve a communicative or pragmatic function, for instance to express uncertainty or an impression.<sup>14</sup> TL-Arabic contains two raising verbs, namely *bda* and *ban*, which both roughly translate into English as “seem” or “appear”.<sup>15</sup> Given their lack of descriptive meaning,

<sup>13</sup> Though see the discussion below concerning the tense properties of the verb of the subordinate clause in TL-Arabic.

<sup>14</sup> Cf. e.g. Haegeman (1994:306-309, 319-320) and Radford (2009: 268-274) for the characteristics of raising predicates, and the differences between raising and control verbs.

<sup>15</sup> For a description of raising constructions in Modern Standard Arabic, cf. Hafiz (2003) and Attia (2005). The Modern Standard Arabic raising verb *dahar* (“appear”) is also used in more formal varieties of TL-Arabic. Similar to what was noted in the case of control constructions (cf. note 11), raising constructions are not commonly used in colloquial TL-Arabic, but are rather associated with more formal registers. An item that is commonly used in expressions that seem to resemble a raising construction, at least as far as interpretation is concerned, is the noun *šakel* (“appearance”), as shown in the sentence in (i). In this case the suffix *-ha* that is attached to the noun represents an SM that encodes the grammatical features [3.sing. fem] associated with the subject *Kadeja*.

(i) Kadeja šakel-ha btorged  
 Kadeja appearance-her (pres)+SM.3.sing.fem sleep  
 “Kadeja has the appearance of someone who wants to sleep”



raising verbs do not have any thematic roles to assign, which means that they do not select any arguments. It is standardly assumed in the literature on generative syntax that the subject of the infinitival clause functioning as the complement of a raising verb is raised into the surface subject position of the matrix clause, hence the term “raising construction”.

The characteristics of raising constructions outlined above can be illustrated with the examples in (24). In (24a) and (24b), respectively, the nominal expressions *Ali* and *Amira* both function as the subject argument of the infinitival complement clause, even though they occupy the surface subject position of the matrix clause.<sup>16</sup> (In these examples, \_ marks the original position of the subject.)

24. (a) Ali [baien] [ \_ ḥub zuwjt-h] min tasarofate-h  
 Ali (past)+seem+SM.3.sing.masc to love wife-his from behaviours his  
 “(From his behaviours) Ali seems to love his wife”
- (b) Amira [baiant] [ \_ ḍaʕf] šaxṣetha] min raddet fʕl-ha  
 Amira (past)+appear+SM.3.sing.fem to have weak personality from her reaction  
 “From her reaction, Amira appeared to have a weak personality”

Consider next the raising constructions in (25). In both cases the direct object of the infinitival complement clause takes the form of a reflexive pronoun, *rooḥ-h* (“himself”) in (25a) and *rooḥ-ha* (“herself”) in (25b). In each case, the reflexive stands in a coreferential relationship with the matrix subject, its antecedent. In these two examples the verbal complex of the complement clause, unlike that of the matrix clause, lacks a SM; in the matrix clause the SM, namely the [3.sing.masc] prefix *y-* in (25a) and the [3.sing.fem] affix *-t-* in (25b). As indicated by means of the subscripts, the reflexive pronoun in (25a,b) stands in a coreferential relationship with the respective SMs as well. In other words, each sentence contains three elements (the reflexive and the two SMs) that take the same expression as their antecedent.

25. (a) Min tasarofha hīya<sub>i</sub> [bainet<sub>i</sub>] {[ḥub] rooḥ-ha<sub>i</sub>}  
 from behaviour her she (past) seem+SM.3.sing.fem] (to) love REFL-her  
 “From her behaviour, she seemed to love herself”

<sup>16</sup> In TL-Arabic the infinitival verb of the subordinate clause is not marked for case. This differs from Modern Standard Arabic where case is expressed by means of a verbal suffix, as shown by the use of the accusative marker *a* in the example in (i).

(i) badaʔ ʕmalu ʔnnajare {[ʕmalan] mothganan}  
 (past)+seem+SM.3.sing.fem work \_carpenter to work(accu) excellent  
 “The carpenter's work seemed to be excellent”



## 2.3 Summary

The aim of this chapter was to provide a non-formalistic description of reflexive pronouns in TL-Arabic, and of the various constructions in which these elements can occur. As far as could be ascertained, such a description has not yet been provided in the literature.

As regards reflexive pronouns, in TL-Arabic these pronouns are morphologically complex, comprising a REFL affix that is combined with a personal pronoun. The personal pronoun can take various forms, depending on the person, number and gender properties that it expresses. Two REFL affixes can be identified, namely *rooh-* and *nafs-*; both are invariant in form and both express the meaning “self/soul”, with *rooh-* used in more informal, colloquial speech.

Restricting the discussion to *rooh-* reflexives, a description was given of several types of construction in which such elements can occur: finite verbal object constructions (section 2.2.3.1), prepositional object constructions (2.2.3.2), small clause constructions (2.2.3.3) and infinitival constructions (2.2.3.4). In the latter case, a distinction was made between control constructions (2.2.3.4.1) and raising constructions (2.2.3.4.2). In finite clauses, the reflexive pronoun generally takes the subject of the sentence as its antecedent; this is true also where the reflexive occurs in an infinitival construction, in which case the subject of the matrix clause serves as the antecedent. It was found, however, that the reflexive pronoun can also take a non-subject expression, for instance a direct object, as its antecedent. Moreover, it was shown that some constructions, although obligatorily reflexive, are ambiguous in the sense that the reflexive can take either the subject or the direct object as its antecedent. It was furthermore pointed out that, similar to the coreferential relationship between the reflexive pronoun and its subject/direct object antecedent, there is also a coreferential relationship between the reflexive and the SM/OM. Such a relationship was also shown to exist between the PRO subject of an infinitival control construction and the antecedent (or “controller”) of PRO in the matrix sentence.

The challenge now is to provide a theoretically adequate analysis of the facts illustrated in this chapter. This challenge is taken up in the next two chapters.

## Chapter 3

### Theoretical background

#### 3.1 Introduction

This chapter has two main objectives. The first is to provide a brief description of some of the core devices and assumptions of Minimalist Syntax, specifically those that are relevant to the present study (section 3.2). The second objective is to describe the core ideas of the Nominal Shell Analysis (NSA) of obligatory reflexivity proposed by Oosthuizen (2013) for Afrikaans and subsequently extended to Chichewa by Msaka (2014) (section 3.3). A brief summary of the main points addressed in this chapter is provided in section 3.4.

Before starting, a few remarks are in order about the description of the phenomenon of reflexivity, and obligatory reflexivity in particular, in Arabic. As noted in Chapter 1, (obligatory) reflexivity has not yet been investigated for TL-Arabic. For Modern Standard Arabic, only two relatively recent works were found in which some attention is given to reflexivity, namely Kremers (1997) and Mashharawi (2012). These two works, both Master's theses, are purely descriptive in nature, with no attempt made to give a proper account of the phenomenon of reflexivity within a generative or other theoretical framework.<sup>18</sup>

#### 3.2 Some assumptions and devices of Minimalist Syntax

This study is conducted within the framework of Minimalist Syntax (MS), the most recent theory of grammar within the broad generative approach to linguistic inquiry.<sup>19</sup> The basic assumption of this approach is that children are born with a Language Faculty (FL), a genetically-determined module of mind that provides a child with the capacity to acquire any language to which the child is exposed. The initial state of FL, that is, before any language acquisition has taken place, is described in the form of a Universal Grammar (UG), which is taken to consist of a restricted set of general, highly abstract grammatical principles and

---

<sup>18</sup> Mashharawi's (2012) thesis was completed at the Islamic University in Gaza, Palestine. It is written in Arabic script, with the title: ظاهرة انعكاس الضمير في اللغة العربية. دراسة وصفية. ("The phenomenon of the reflexive pronoun in Standard Arabic" [own translation – KE]). As she (2012:و/6) herself states, there is a "lack of previous studies that could help the researcher and guide her to talk about related topics or even guide her to the right from the wrong." [own translation – KE]. She refers to one other source, namely Nahla (1990), الضمائر المنعكسة في اللغة العربية, ("Reflexive pronouns in Arabic" [own translation – KE]), which was unfortunately not available for the present study. In her thesis, Mashharawi also briefly compares some of the characteristics of reflexive pronouns and reflexive constructions in Modern Standard Arabic with the corresponding phenomena in English and Modern Hebrew.

<sup>19</sup> For general discussions of the generative approach to linguistic inquiry, and of MS as the most recent model within this approach, cf. e.g. Chomsky (1995, 1998, 2000, 2008), Cook & Newson (2007), Hornstein, Nunes & Grohmann (2005), Ouhalla (1999), Radford (2009).

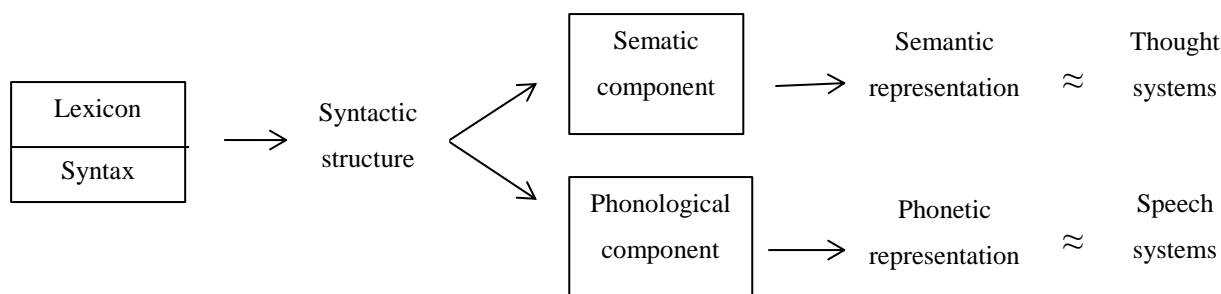
associated parameters.<sup>20</sup> The final or steady state of FL, that is, after the child has acquired a particular language, is described in the form of a descriptive grammar of that language. Such a descriptive grammar is a model of the speaker's grammatical competence, which represents the speaker's tacit knowledge of the structure of the language. Both UG and the various descriptive grammars of languages are cognitive theories in that they make claims about the structure of the human mind (Radford, 2009:11-13).

A basic objective of the minimalist approach to grammar is to minimise the formal devices required to account for the grammars of natural languages. From a UG perspective, then, the objective is to identify an optimally restricted set of principles and parameters that is explanatorily adequate in the sense that it can account for the relatively uniform manner in which children acquire their language as well as the structural similarities between languages. At the same time, though, these principles and parameters need to be descriptively adequate in the sense that they should account for the salient structural differences between languages.

FL is claimed to consist of a lexicon and a computational system (Hornstein et al, 2005:15). The lexicon comprises two basic types of elements: (i) substantive items, which belong to the categories noun, verb, adjective, adverb and preposition, and which express linguistic meaning, and (ii) functional items such as determiners, complementisers, pronouns, auxiliary verbs and various formal features which express grammatical properties such as tense, aspect, definiteness, grammatical case, etc. The derivation of a sentence starts with the selection of a subset of these lexical elements, known as a Numeration (Radford, 2009:2, 14). This array of lexical items serves as the input to the computational system, which combines them into ever larger syntactic structures. These structures, in turn, form the input for two interpretative components. The semantic component (also referred to as the Logical Form component), on the one hand, converts the structure into a representation that can be semantically interpreted, thereby yielding the linguistic meaning of the structure. The semantic component provides the input for the systems of thought, a separate module of the mind, at the conceptual-intentional (C-I) interface. The phonological component, on the other hand, converts the structure into a representation that can be phonetically interpreted, in this way determining the pronunciation or phonetic spellout of the structure. Such a representation forms the input for the speech systems, another module of the mind, at the sensory-motor (S-M) interface. The links between the various systems and components described above can be illustrated with the following diagram (cf. e.g. Hornstein et al.(2005:9); Radford (2009:14).

---

<sup>20</sup> Cf. the references in note 14 for the notions Language Faculty, Universal Grammar, and UG principles and parameters.



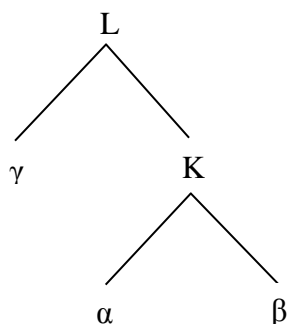
Within MS, the levels of linguistic representation are limited to the two mentioned above, namely the semantic (or LF) and the phonetic (or PF) representations, both taken to be conceptually necessary. According to Radford (2009:10), these two representations “should contain only elements which are legible by the appropriate interface system – so that the semantic representations handed over to thought systems contain only elements contributing to meaning, and the PF representations handed over to speech systems contain only elements which contribute to Phonetic Form (i.e. to determining how the sentence is pronounced)” (cf. also Hornstein et al. (2005:9). If the LF and PF representations only contain features that are legible at the relevant interface, the derivation is said to converge at LF and PF, respectively. In contrast, if the features are illegible the derivation is said to crash at either or both of these interfaces (Hornstein et al, 2005:9; Radford, 2009:446). An important constraint on derivations is that the computational system may not introduce any element that is not already available in the Numeration. Furthermore, every element provided by the Numeration must be semantically or phonetically interpretable at the relevant interface. This constraint is expressed in the form of the Principle of Full Interpretation (Hornstein et al., 2005:15; Nunes, 1998:12).<sup>21</sup>

As regards the operation of the computational system, a distinction is drawn between two types of processes by which elements can be combined or merged into ever larger phrases. The first, known as External Merge, has the effect of combining two items  $\alpha$  and  $\beta$ , of which at least one is selected from the Numeration, to form a new object K, where K can in turn be merged with a further item  $\gamma$  from the Numeration to project a larger object L.<sup>22</sup> The structure resulting from these operations may be represented as in (1) (Hornstein et al., 2005:200-211).

<sup>21</sup> For the principle of Full Interpretation, cf. e.g. Chomsky (2008) and Nunes (1998).

<sup>22</sup> External Merge could also involve merging two phrases that have already been constructed independently of one another, e.g. a DP that is merged as the specifier of a VP.

1.



The category label of K is determined by one of its constituent parts. For instance, if  $\alpha$  is a verb taking  $\beta$ , a nominal expression, as its complement, then K would be labelled VP with the verb forming the head of the phrase. In the configuration just described, the head  $\alpha$  enters into a local relationship with  $\beta$ , specifically a head-complement relationship. Similarly, merger of  $\gamma$  and K in (1) yields a phrasal projection with  $\gamma$  as its head (Hornstein et al., 2005:202).

The second process is known as Internal merge. This involves copying an element  $\lambda$  already in the structure M and remerging it into some other position in M, thus creating the effect of movement within the same structure (Hornstein et al., 2005:209-216; Radford, 2009:186). This type of operation, also referred to as Copy-Merge, is commonly taken to be triggered by some or other grammatical feature or property of one or both of the elements in question. Note that both External and Internal Merge are constrained by the Binariness Principle, that is, they affect two and only two syntactic objects at a time (Radford, 2009:42, 70).

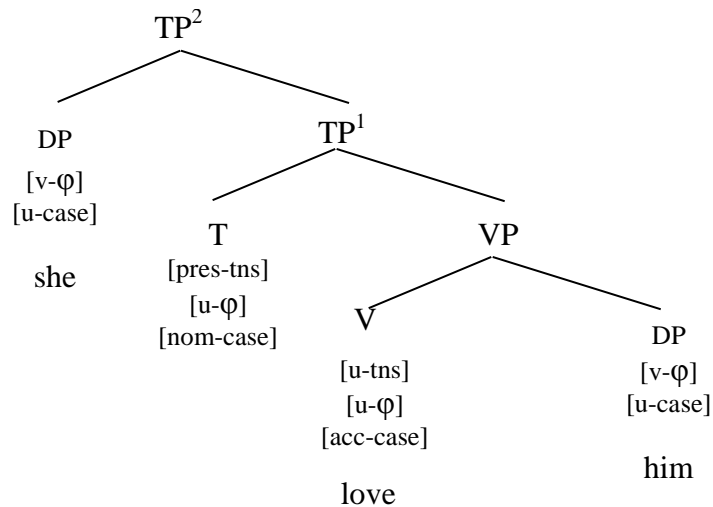
As mentioned earlier, in order for a PF object and an LF object to be legible, they should only carry interpretable LF and PF features respectively. Within MS it is assumed that elements from the Numeration enter the derivation with a set of features, including phi ( $\phi$ )-features (e.g. gender, number, person), tense features (e.g. past, present, infinitive), and case features (e.g. nominative, accusative, genitive). These features can be either valued ([v-feature]) or unvalued ([u-feature]), depending on the type of element involved. To illustrate, consider the sentence in (2):

2. She loves him.

The two pronouns in this sentence enter the derivation with already valued  $\phi$ -features, but their case features are as yet unvalued. Thus, *she* enters with the features [3-pers, sing-num, fem-gen] and *him* with [3-pers, sing-num, masc-gen], and both also carry the feature [u-case]. The verb enters the derivation with an unvalued tense feature [u-tns] whereas the category T(ense) carries the valued feature [pres-tns]). The V and the T moreover both contain a valued case feature, namely [acc(usative)-case] and [nom(inative)-case], respectively, but their  $\phi$ -

features are as yet unvalued.<sup>23</sup> The result of merging these four elements is shown by the highly simplified structure in (3).<sup>24</sup>

3.



An unvalued feature on a category  $\alpha$  gets valued by the corresponding valued feature carried by some other category  $\beta$ , where there is a c-commanding relation between  $\alpha$  and  $\beta$ .<sup>25</sup> For example, the unvalued  $\phi$ -features of the T in (3) are valued by those of the DP *she*, as shown in (4) below. The unvalued case features of the DPs *she* and *him* are likewise valued by the case features carried by the T and the V, respectively.<sup>26</sup> Similarly, the unvalued tense feature of the V is valued by the corresponding feature carried by the T. (In (4) feature valuation is indicated by means of dotted arrows, and features that have been valued in the course of the derivation are underlined whereas the T and V features supplying the relevant values are indicated by means of ~~strikethrough~~; these conventions are followed in all similar structures below.)

<sup>23</sup> Cf. e.g. Oosthuizen (2013:section 3.2) and the references cited there for the ideas presented here and below about features and feature valuation.

<sup>24</sup> In generative studies pronouns are commonly analysed as determiners, each forming the head of a DP, as shown in (3). Cf. e.g. Bernstein (2001), Longobardi (1999), Pollock (1989) and Abney (1987).

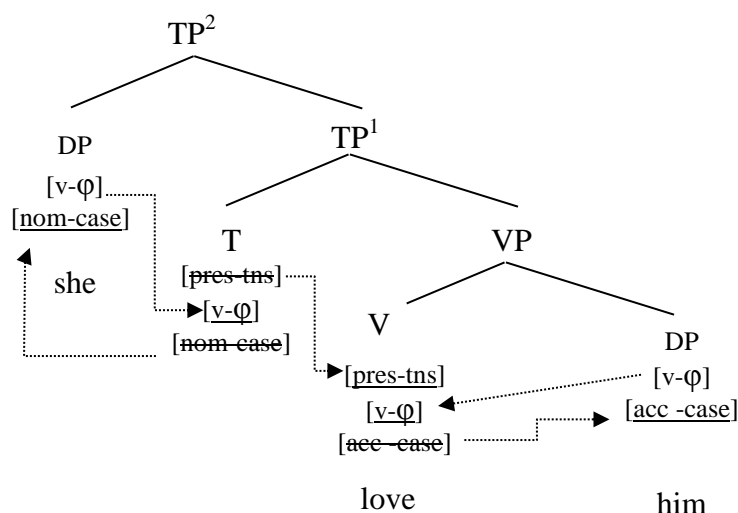
<sup>25</sup> The concept 'c(onstituent)-command' entails the following structural relationship (Chomsky 1995:35):

A constituent A c-commands a constituent B if A does not dominate B and every C that dominates A also dominates B.

<sup>26</sup> Following Oosthuizen (2013:section 2.3), it is assumed that the case features of the T and the V are deleted as part of the process of valuing those of the relevant DPs, as indicated by ~~strikethrough~~.



4.



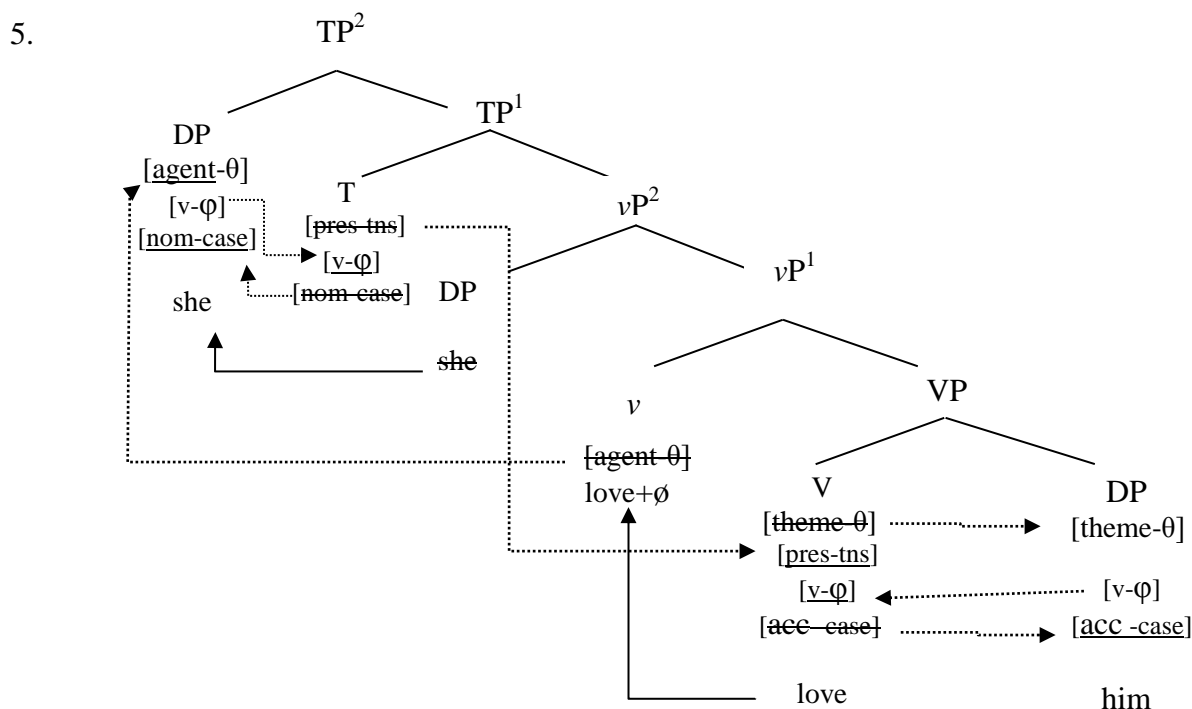
In technical terms, the T and V in (4) represent *probes*, each searching for a *goal*, that is, an element with which it can enter into a feature valuation relationship.<sup>27</sup> There are a number of factors that constrain the accessibility of a goal. Firstly, it must occur within the probe's c-command domain. Secondly, a goal will only be accessible to the probe if no other element with the relevant features intervenes between it and the probe. Thirdly, a goal is only accessible (or active) if it has one or more unvalued features; it becomes inactive and unable to participate in any feature valuation relationships once its features have all been valued (Hornstein et al., 2005:318). Features that are unvalued at LF and PF will cause the structure to crash at the relevant interface (Radford, 2009:288; Hornstein et al., 2005:47).

In addition to  $\phi$ -features and case features, a further type of feature that will be employed in this study is theta ( $\theta$ ) features, which concerns the thematic or semantic relationship between a nominal expression functioning as an argument and a predicate (e.g. a verb or preposition).<sup>28</sup> Consider again the sentence in (2). Here, the subject argument *she* has the thematic role of experiencer, whereas the direct object argument *him* is interpreted as the theme. However, within MS, these expressions are taken to enter the derivation with their  $\theta$ -features unvalued ( $[u-\theta]$ ). The question, then, is how these features get valued. To answer this question, it is necessary to reconsider the positions that the subject argument and the direct object argument occupy when they are initially merged into the structure. The direct object *him*, on the one hand, enters the derivation as the DP complement (i.e. the internal argument) of the lexical

<sup>27</sup> For the notions probe and goal, cf. e.g. Chomsky (2000; 2001), Hornstein et al. (2005:317-318), Radford (2009:ch. 7). For the idea that phrasal constituents can also serve as probes, cf. e.g. Oosthuizen (2013:section 3.2) and the references cited there.

<sup>28</sup> Cf. Oosthuizen (2013:section 3.2) and the references cited there for the idea that the assignment of thematic roles is effected within the syntax by means of  $\theta$ -feature valuation involving lexical verbs, light verbs and prepositions (with valued  $\theta$ -features) and nominal arguments (with unvalued  $\theta$ -features).

verb V, from which it receives the theme  $\theta$ -value (Radford, 2009:248). A subject argument, on the other hand, is standardly assumed to enter the derivation as the DP specifier of a functional verbal element, a so-called light verb  $v$ , which in turn selects the VP as its complement.<sup>29</sup> It is this light verb that serves to value the  $\theta$ -feature of the subject argument (Oosthuizen, 2013:48). In sum, then, there are three important ideas underlying such an analysis. Firstly, the verbal expression comprises at least two projections, namely one headed by the lexical verb V and one headed by a functional light verb  $v$ .<sup>30</sup> Secondly, the direct object argument is merged as the complement of the V and the subject argument as the specifier of the  $v$ ; in other words, the subject does not originate as the specifier of the TP as indicated in the simplified structure in (4).<sup>31</sup> Thirdly, the V and the  $v$  both carry a valued  $\theta$ -feature, which in the case of (2) are [theme- $\theta$ ] and [exp- $\theta$ ], respectively. In terms of these ideas, then, the derivation of the sentence in (2) would not be as indicated in the simplified structure in (4), but rather along the lines in (5). Note that the V in (5) is internally merged to the light verb; following e.g. Biberauer and Roberts (2006:282), it is assumed that this V-to- $v$  raising operation is a general feature of language. (Here and in similar structures below raising operations are indicated by means of solid arrows.)



<sup>29</sup> According to Hornstein et al. (2005:98) a light verb is “a verb whose meaning is heavily dependent on the meaning of its complement.” Cf. also Radford (2009:465).

<sup>30</sup> This conception of the verbal expression can be referred to as the “ $v$ P-Shell Hypothesis”; cf. e.g. Hornstein et al. (2005: ch. 3), Radford (2009:ch. 8).

<sup>31</sup> In the course of the derivation, the subject undergoes Internal Merge which has the effect of moving it into the specifier position of the TP, a process referred to as DP-Raising. The idea that the subject is initially merged into specifier position of the  $v$ P is expressed in terms of the  $v$ P-Internal Subject Hypothesis ( $v$ PISH). For discussion of the content and development of this hypothesis, cf. e.g. Hornstein et al. (2005:80-81), Radford (2009:ch. 7-8).

Having described the main assumptions and devices of MS, the next section provides an outline of Oosthuizen's (2013) Nominal Shell Analysis of obligatory reflexivity (NSA), the specific minimalist framework that will be adopted for analysing this phenomenon in TL-Arabic.

### 3.3 The Nominal Shell Analysis of Obligatory Reflexivity

#### 3.3.1 Key assumptions and devices

According to Oosthuizen (2013:32), "A basic assumption of the NSA is that the structural relationship between a reflexive pronoun and an antecedent expression is established by syntactic devices in a particular syntactic configuration". This assumption can be illustrated with reference to the Afrikaans reflexive construction in (6a) and its non-reflexive counterpart in (7a) (Oosthuizen, 2013:34).

6. (a) Die man<sub>i</sub> haat homself<sub>i</sub>  
 the man hates himself  
 "The man hates himself"
- (b) \*Die man<sub>i</sub> haat homself<sub>j</sub>
7. (a) Die man<sub>i</sub> haat hom<sub>j</sub>  
 the man hates him  
 "The man hates him"
- (b) \*Die man<sub>i</sub> haat hom<sub>i</sub>

As shown by the difference in grammaticality between (6a,b), the direct object, that is, the reflexive pronoun *homself* ("himself"), is interpreted as obligatorily coreferential with the subject *die man* ("the man"), its antecedent. In (7), by contrast, the subject and the pronoun *hom* ("him") cannot be interpreted as coreferential. Oosthuizen (2013:section 3.2) puts forward several hypotheses to account for the facts illustrated in (6) and (7). The first, Hypothesis A, is as follows (Oosthuizen 2013:33):<sup>32</sup>

#### *Hypothesis A*

Non-reflexive and reflexive pronouns are syntactic compounds which are formed from the same category-neutral lexical root  $\sqrt{\text{PRON}}$ .

<sup>32</sup> Both Hypothesis A and Hypothesis B below are taken over from Heintat (2006).

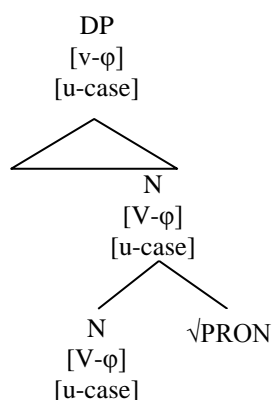
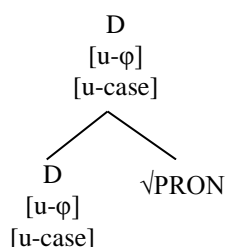
Oosthuizen (2013:34) states that “according to this hypothesis, the difference between a non-reflexive and a reflexive pronoun is described in syntactic rather than lexical terms”. He furthermore argues that the difference between reflexive pronouns such as *himself* in (6a) and non-reflexive pronouns such as *him* in (7a) can be captured in terms of Hypothesis B.

*Hypothesis B*

1. A non-reflexive pronoun is derived by merging  $\sqrt{\text{PRON}}$  with an N constituent that contains interpretable, valued  $\phi$ -features and an uninterpretable, unvalued case feature.
2. A reflexive pronoun is derived by merging  $\sqrt{\text{PRON}}$  with a D constituent that contains interpretable, unvalued  $\phi$ -features and an uninterpretable, unvalued case feature.

According to Hypothesis B, the difference between reflexive and non-reflexive pronouns is not determined by lexical features such as [anaphor] and [pronominal] as employed in Government & Binding (GB) theory (cf. e.g. Chomsky (1981) or, as proposed by Zwart (2002), by a feature [+coreferential] that gets added to a pronoun in a specific structural configuration. Rather, according to Oosthuizen (2013:34) the difference between these two types of pronoun is determined “by the category of the item with which  $\sqrt{\text{PRON}}$  is merged.” A non-reflexive pronoun, on the one hand, is analysed as a derived N which is subsequently merged with a D to form a larger nominal phrase, a DP; a reflexive pronoun, on the other hand, “is a derived D representing both the minimal and the maximal projection of the phrase it heads (i.e. D = DP)” (Oosthuizen 2013:34). On Oosthuizen’s analysis, the two types of pronoun have the structures in (8).

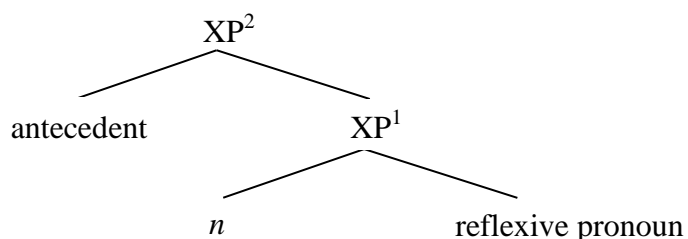
8. (a) Reflexive pronoun (b) Non-reflexive pronoun



Let us now consider the derivation of the sentence in (6a) *Die man haat homself*. In this regard, there are two main issues that need to be clarified, namely (i) the initial positions occupied by the reflexive pronoun and its antecedent, and (ii) the valuation of the features carried by these two elements.

A core idea of the NSA is that the reflexive pronoun and its antecedent “start together” in the derivation of a reflexive construction. More specifically, Oosthuizen (2013:38) posits that the reflexive element and its antecedent are externally merged in a local configuration in a spec-head and head-complement manner. The head is claimed to be a light noun *n*, a functional category which takes the reflexive pronoun as its complement and the antecedent of this reflexive as its specifier, as shown in the schema in (9) (Oosthuizen, 2013:38).

9.



Oosthuizen (2013:39) puts forward the following ideas regarding the nature of the *n*-head in the configuration in (9). Firstly, the light noun carries an *identity focus* feature, [id-focus], that crucially enters into the establishment of a coreferential relationship between the reflexive pronoun and its antecedent. Secondly, this identity focus *n*-head serves as the locus of the *-self* affix which is usually spelled out as part of the reflexive pronoun in Afrikaans.<sup>33</sup> Thirdly, the *n* contains, at least, unvalued  $\phi$ -features and an unvalued case feature. Fourthly, the reflexive in (9) is internally merged with the light *n*. The above ideas are captured by the following hypotheses (Oosthuizen, 2013:41-42):

#### *Hypothesis C*

A reflexive and its antecedent are externally merged within the same nominal shell *nP* as, respectively, the complement and the specifier of an identity focus light noun *n*.

<sup>33</sup> In some Afrikaans constructions, the reflexive pronoun can also occur without the suffix *-self*; cf. Oosthuizen (2013:chapter 2).

*Hypothesis D*

The *n* in the configuration [*nP*<sup>2</sup> [antecedent] [*nP*<sup>1</sup> *n* - reflexive pronoun]] contains

- (i) the feature [id-focus], and
- (ii) a set of  $\phi$ -features and a case feature, which have to be valued in the course of the derivation.

*Hypothesis E*

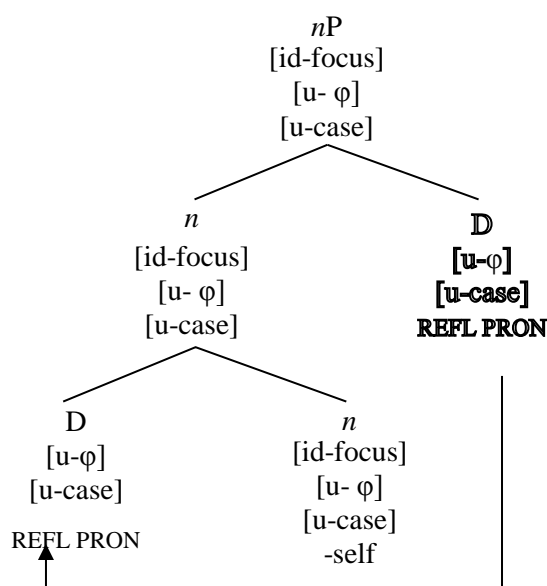
The identity focus *n* in the configuration in Hypothesis D is the locus of the affix *-self*.

*Hypothesis F*

The reflexive pronoun in the configuration in Hypothesis D undergoes D-to-*n* raising, that is, it is internally merged with the *n*.

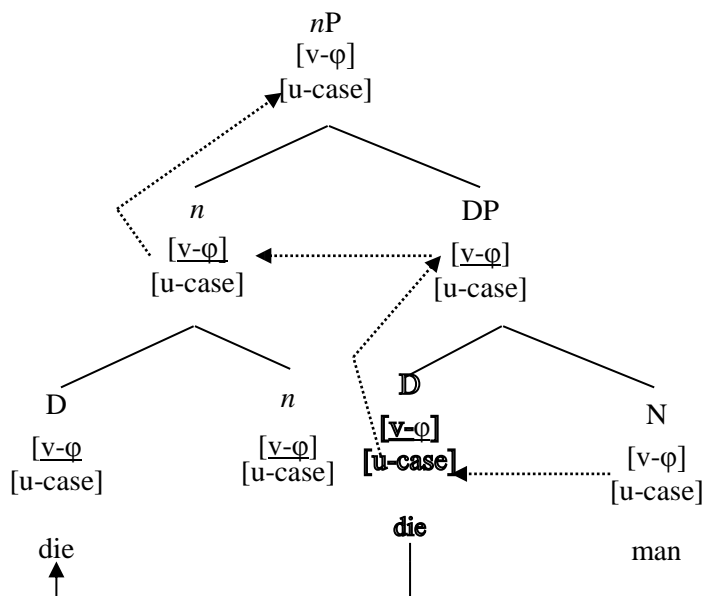
According to Oosthuizen (2013:42), the coreferential relationship between the reflexive and the antecedent in a sentence like (6a) is established via a number of merger and feature valuation processes. First, the identity focus *n* selects and is externally merged with the reflexive expression in (8a), the latter forming the complement of the *n*. Second, the reflexive pronoun is internally merged with the *n* via D-to-*n* raising, leaving behind a copy in its initial position. The resulting structure takes the following form (Oosthuizen, 2013:42; the copy that is left behind during raising is indicated by means of outline font).

10.



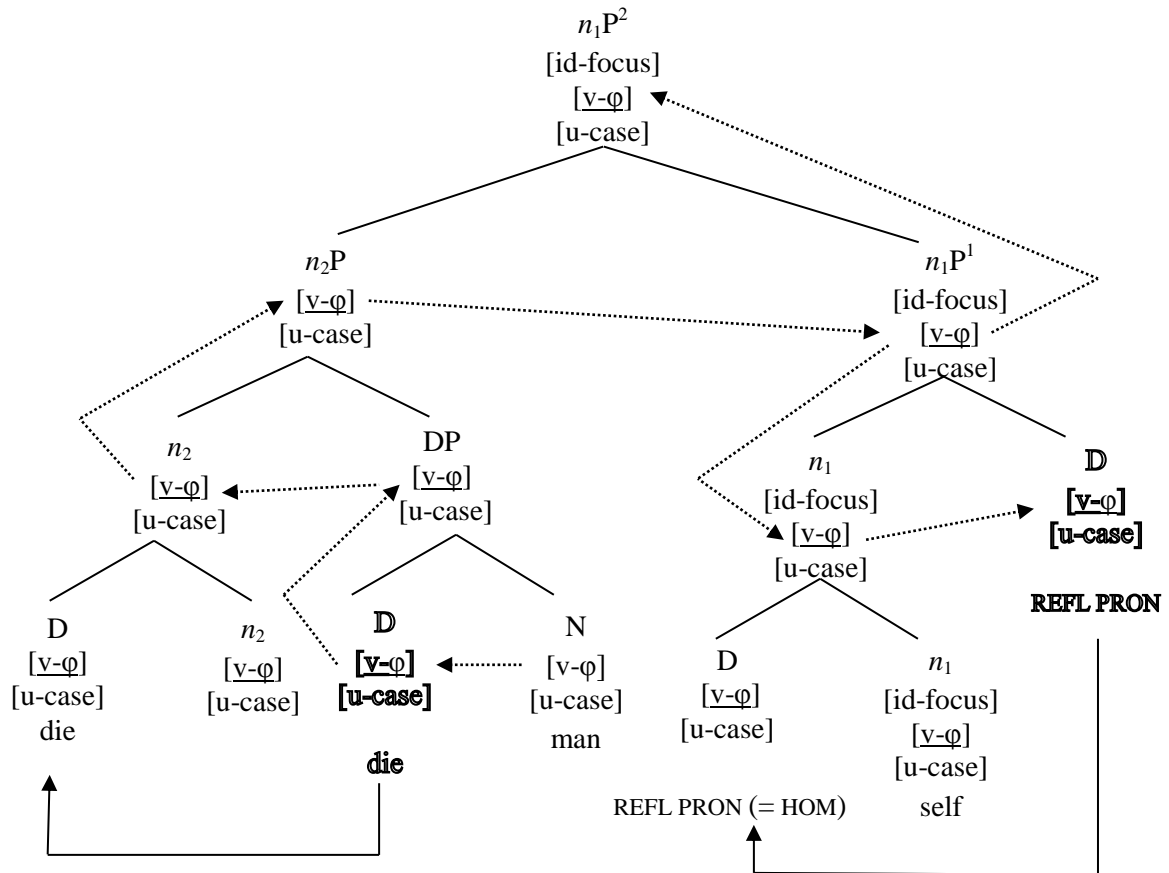
The idea that nominal expressions are projections of a light noun also holds for the expression *die man* in (6a). In this case, the N *man* (“man”) is merged with the D *die* (“the”) to form the projection DP. The D and the N both enter the derivation with an unvalued case feature [u-case]; in contrast to the D, the N also has valued  $\phi$ -features [v- $\phi$ ]. This results in a probe-goal configuration in which the N values the [u- $\phi$ ] features carried by the D. The DP that is formed in this manner is subsequently merged with an *n* containing unvalued case and  $\phi$ -features; this *n* projects into an *nP*. Two further operations take place at this stage. First, the *n* (hence the *nP* as well) is  $\phi$ -valued by the DP. Second, the D *die* is internally merged with the *n*, leaving behind a copy in its original position. The derived structure of the expression *die man* may be represented as follows (Oosthuizen, 2013:43).

11.



The two structures in (10) and (11) are next merged together into an identity focus nominal shell, that is, a nominal phrase headed by the identity focus *n*. In terms of Hypothesis C, the *nP die man* in (11) is merged as the specifier of the identity focus *n* in (10) forming the structure in (12) below (Oosthuizen, 2013:44; for ease of reference, the identity focus light noun in (12) is represented as *n*<sub>1</sub> and its projections as *n*<sub>1P</sub>, and the light noun that is merged with the DP *die man* as *n*<sub>2</sub> and its projection as *n*<sub>2P</sub>.) As indicated by the dotted arrows, the valued  $\phi$ -features of the N *man* serve to value those of the D, which results in  $\phi$ -valuation of the *n*<sub>2</sub> and its projection *n*<sub>2P</sub>; the latter in turn values the  $\phi$ -features carried by the *n*<sub>1</sub> and its projections, as well as the reflexive pronoun D.

12.



The ideas about  $\phi$ -feature valuation illustrated in (12) are captured in the form of Hypothesis G. According to Oosthuizen (2013:44-45), this configuration forms the basis for the establishment of an obligatory coreferential relationship between a reflexive pronoun and an antecedent expression, as stated by Hypothesis H.

### *Hypothesis G*

In the configuration

$[n_1P^2 [n_2P] [n_1P^1 [[D \text{ reflexive pronoun}] + n_1] [D \text{ reflexive pronoun}]]]$

- (i) the  $n_2P$  values the  $\phi$ -features of the  $n_1$  and its projections, and as a consequence,
- (ii) the  $n_1$  values the  $\phi$ -features of the D.

### *Hypothesis H*

The  $\phi$ -valued D in the configuration in Hypothesis G is semantically interpreted as a (reflexive) anaphor and the  $n_2P$  as its antecedent; that is, the D is interpreted as obligatorily coreferential with the  $n_2P$ .



Let us now briefly consider the remaining steps in the derivation of the sentence in (6a) *Die man haat homself*. To start, the  $n_1P^2$  formed in (12) is merged with the verb *haat* (“hate”). According to Oosthuizen (2013:25), a verb such as *haat* can be used reflexively in the sense that it can select as its complement a nominal expression that is headed by an identity focus light noun *n*, that is, an N carrying the feature [id-focus].<sup>34</sup> The verb *haat* enters the derivation with a categorial feature [+V], an unvalued tense feature ([u-tense]), a [c-select] feature<sup>35</sup> and a [theme- $\theta$ ] feature (Oosthuizen, 2013:46). The verb  $\theta$ -values its complement, the  $n_1P^2$  headed by *homself* (“himself”). The structure resulting from the merger of the V and the  $n_1P^2$  is represented in (13) below, with the feature valuations as indicated (Oosthuizen, 2013:47).

The VP in (13) is next merged with a light *v* carrying the features [+V], [c-select], [agent- $\theta$ ], [acc-case] and [u-tense]. This gives rise to a number of operations (Oosthuizen, 2013:48). Firstly, the lexical verb *haat* is raised to the *v* (cf. Biberauer and Roberts (2006:282)). Secondly, the  $\phi$ -features of the (expanded) light verb are valued by the  $\phi$ -features of the identity focus  $n_1P^2$ , and the *v* concurrently supplies the accusative case value to the identity focus  $n_1P^2$  *homself*. Thirdly, the valued  $\theta$ -feature on the light verb values the  $n_2P$  *die man* in the specifier position of the identity focus  $n_1P^2$  as experiencer, [exp- $\theta$ ]. The various operations resulting from the merger of the light verb and the VP in (13) are illustrated in (14) (Oosthuizen, 2013:51).

---

<sup>34</sup> A verb such as *haat* is also compatible with a non-reflexive reading, as shown by the sentence in (7a). This is in contrast to a verb such as *gedra* (“behave”) which is inherently reflexive in that it can only be used in a reflexive construction, as shown by the example in (i) below. An inherently reflexive verb is therefore one which requires an identity focus light *nP* as its complement. (Note that with inherently reflexive verbs, the reflexive pronoun can be used without the *-self* suffix in Afrikaans; cf. Oosthuizen (2013:30).

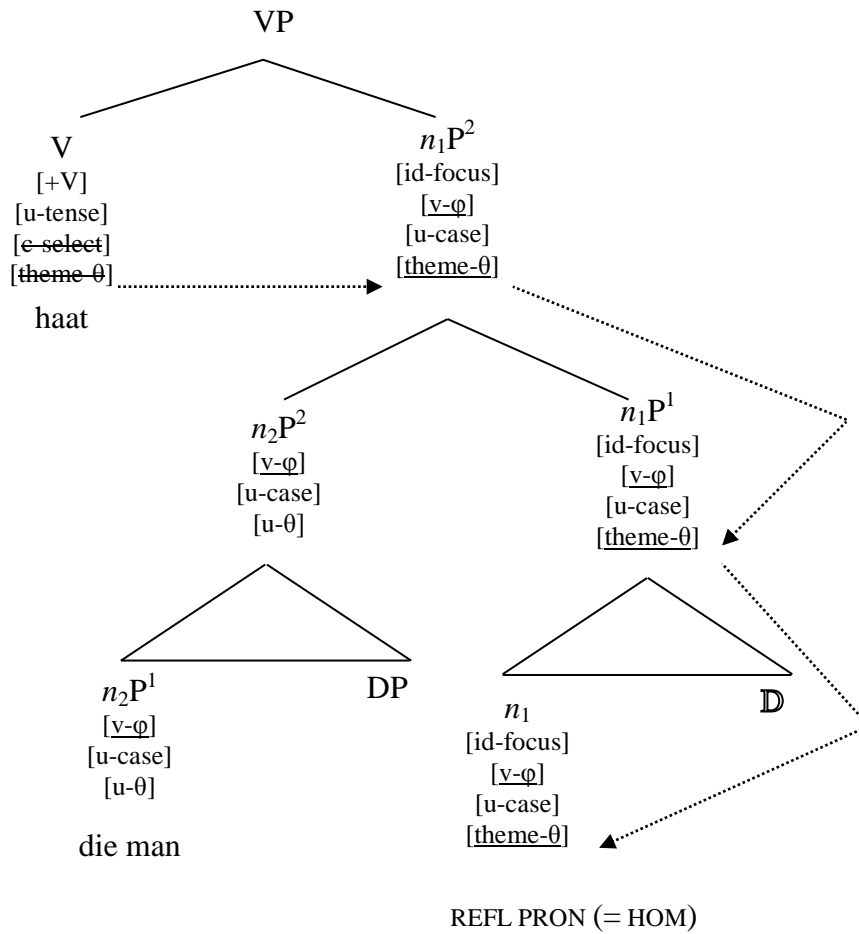
- (i) Die man gedra homself<sub>i</sub> / \*homself<sub>j</sub> / hom<sub>i</sub> / \*hom<sub>j</sub>  
 the man behaved himself/ him  
 “The man behaved himself”

In addition to inherently reflexive verbs (e.g. *gedra*) and verbs which are compatible with a reflexive as well as a non-reflexive reading (e.g. *haat*), Afrikaans also has a category of obligatory non-reflexive verbs. Such verbs are not compatible with a reflexive reading, which means that they cannot select an identity focus light *nP* as their complement. An example of such a verb is given in the following sentence (Oosthuizen, 2013:37):

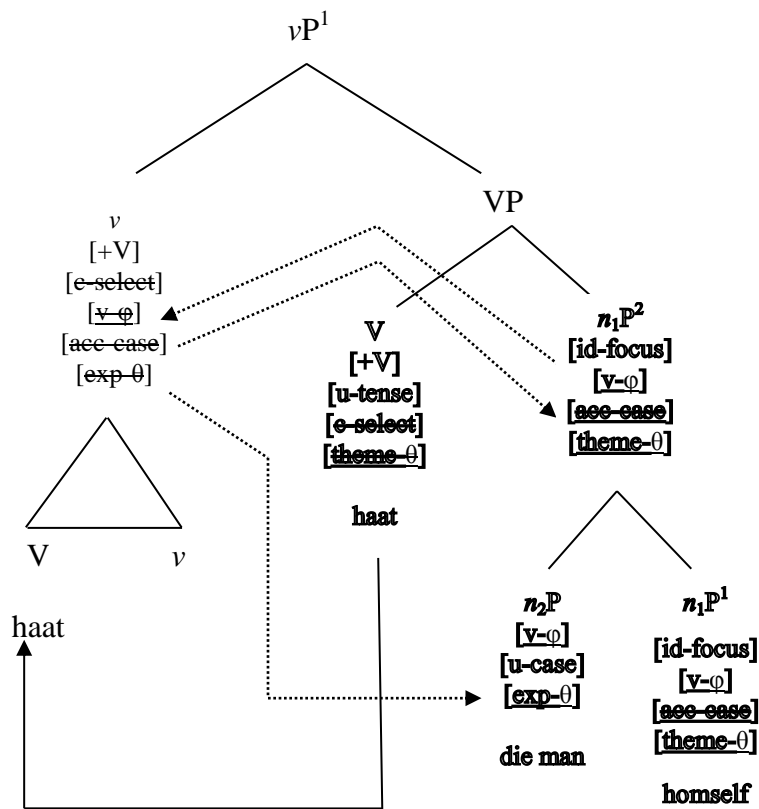
- (ii) Die man<sub>i</sub> vergesel hom<sub>j</sub>/\*hom<sub>i</sub>/\*homself<sub>i</sub> (op die uitstappie).  
 the man accompanies him on the outing  
 “The man is accompanying him (on the outing)”

<sup>35</sup> The fact that a head H may (or must) select a complement belonging to a specific syntactic category is expressed by a particular category selection feature [c-select] carried by H.

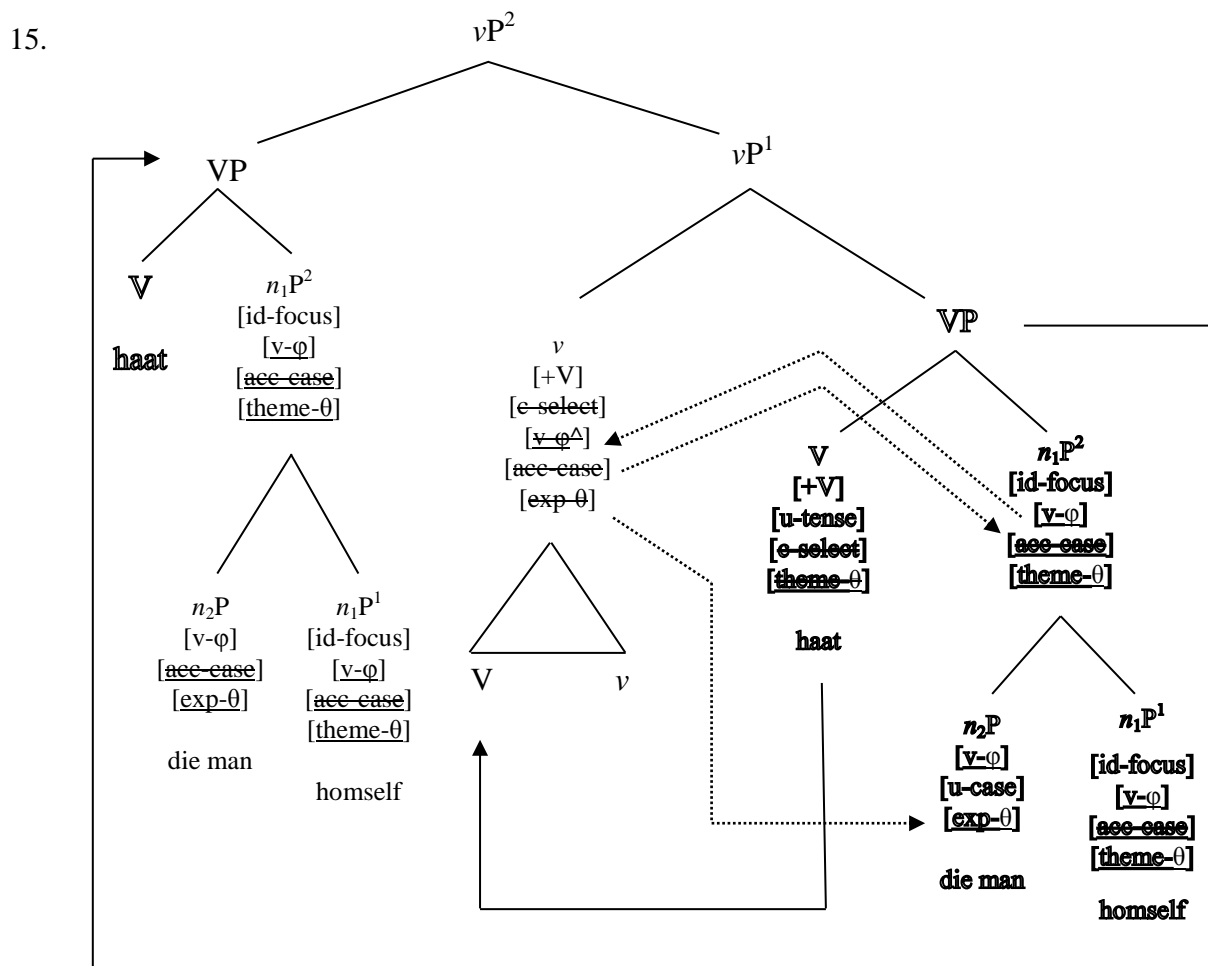
13.



14.



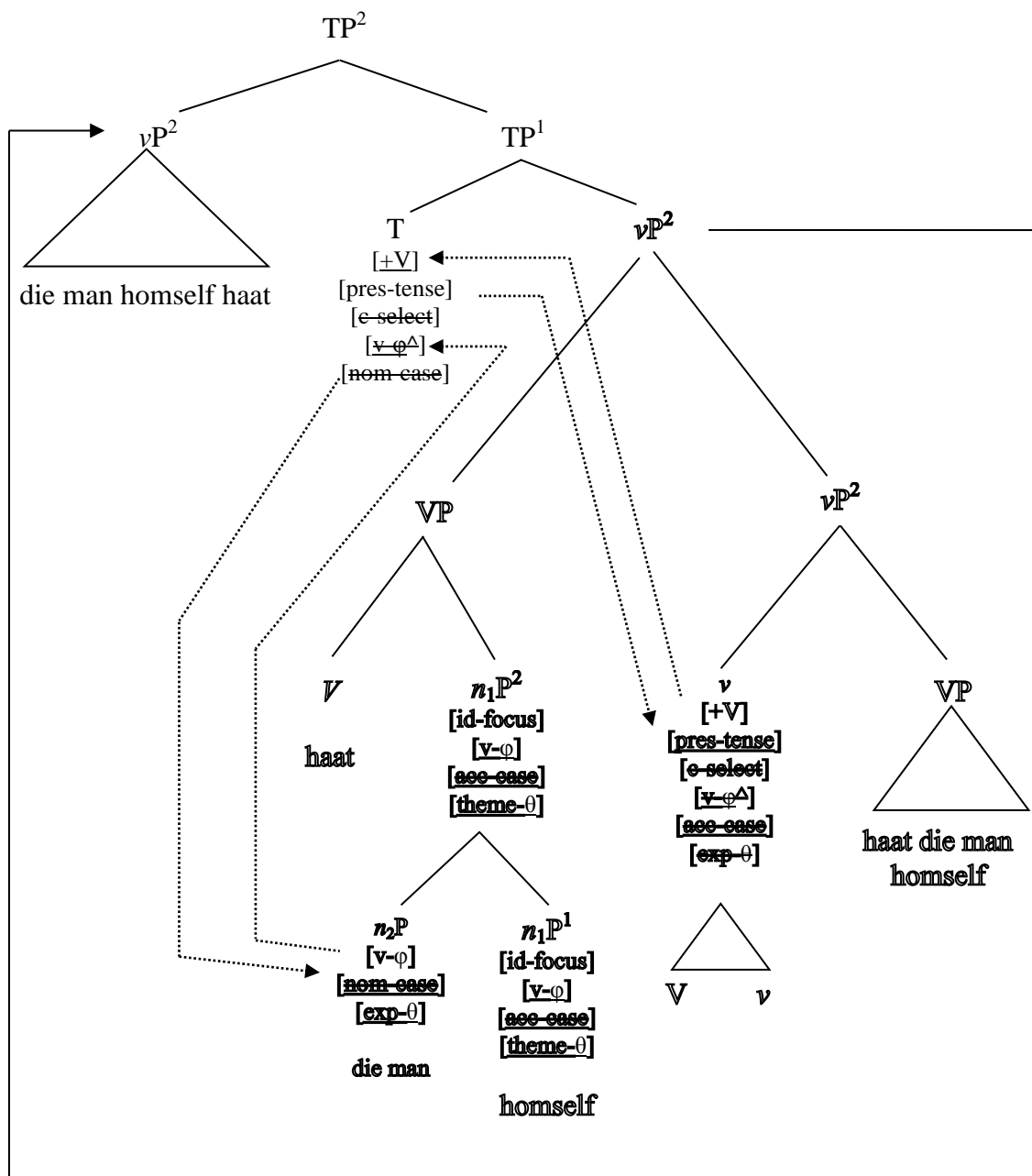
In the sentence in (6a) the subject *die man* occurs to the left of the verb *haat*, whereas in (14) it forms part of the  $nP$  complement of the verb. Clearly, then, the subject must be moved to the left to derive the eventual surface word order. The obvious question is how such a movement is affected. Oosthuizen (2013:50) assumes that a movement operation of this type is triggered by a so-called edge feature associated with the  $\phi$ -features of a probe, where the probe in this case is the light verb.<sup>36</sup> Following Biberauer et al. (2008), Oosthuizen (2013:49-52) takes the edge feature to be in the form of a movement diacritic  $\wedge$  that is appended to the unvalued  $\phi$ -features of the light verb (and also the T, see below), i.e.  $[u-\phi^\wedge]$ . When the goal  $n_1P^2$   $\phi$ -values the light verb, as shown in (14), the movement diacritic triggers raising of this  $nP$  to the specifier position of the  $v$ . However, the raising operation has a “pied-piping” effect in the sense that the VP containing the  $n_1P^2$  is raised along with this expression. The whole VP containing the  $n_1P^2$  is thus internally merged with the  $vP^1$  in (14). The structure resulting from this operation is represented in (15) (Oosthuizen, 2013:51).



<sup>36</sup> According to Oosthuizen (2013:50) such an edge feature “may be thought of as a generalised EPP-feature”. Radford (2009:455) states that EPP is “an abbreviation for the Extended Projection Principle, which posits that each (T) constituent must be extended into a (TP) projection which has a specifier.”

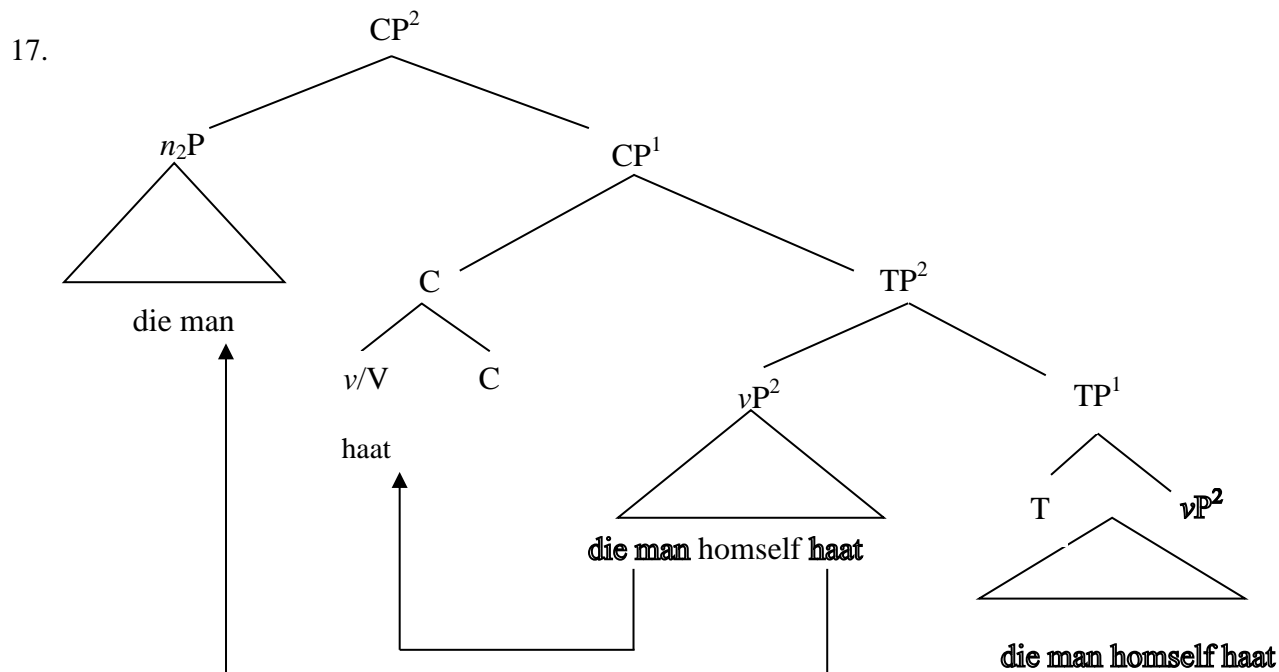
The  $\nu P^2$  in (15) is subsequently merged with a T-head containing the V-related features  $[c\text{-select}]$ ,  $[u\text{-V}]$ , and  $[v\text{-tense}]$ . This gives rise to the following operations. First, the T acquires a positive value for its categorial feature ( $[+V]$ ) from the  $V/\nu$  and supplies the present tense value to the  $V/\nu$ . Second, the  $n_2P$  *die man* (“the man”) receives the nominative case feature from the T, while at the same time valuing the  $\phi$ -features of the T. Since the T’s  $\phi$ -features are associated with a movement trigger  $\wedge$  (see above), the  $n_2P$  *die man* is raised to the specifier position of the T ( $[spec, T]$ ), as shown in (16) (Oosthuizen, 2013:53).

16.



This brings us to the final operations in the derivation of the sentence in (6a). Oosthuizen (2013:54-55) makes several suggestions in this regard, although he emphasises that these are merely working hypotheses and that no firm conclusions can be made. The first operation

involves merging the TP<sup>2</sup> in (16) with a C-head. Secondly, the C is assumed to have D-related and V-related features which are responsible for raising of the subject *n*<sub>2</sub>P *die man* and the verb *haat* to [Spec, C] and the C head, respectively. The resulting structure is illustrated in the simplified structure in (17) (Oosthuizen, 2013:55).



### 3.3.2 Extending the NSA to Bantu languages

The NSA as set out the previous section was initially proposed to account for the phenomenon of obligatory reflexivity in Afrikaans, a member of the West-Germanic language family. Morphologically, Afrikaans represents an analytic language, which means that it is morphologically impoverished showing very few affixes attached to root morphemes. However, Oosthuizen (2013) claims that the NSA can also be extended to agglutinative languages, that is, languages that make extensive use of affixes to express grammatical and functional information.<sup>37</sup> As illustration, he (2013:section 4.2.4) briefly outlines an analysis of obligatory reflexivity in isiXhosa, an agglutinative language forming part of the Southern Bantu family. Adopting Oosthuizen's proposals, Msaka (2014) presents a detailed analysis of this phenomenon in Chichewa, also a member of the Bantu family. The main features of Msaka's analysis will be set out below. The reason for this is that TL-Arabic is also an agglutinative language; hence Msaka's proposals could plausibly provide an NSA-based framework for describing obligatory reflexivity in TL-Arabic.

<sup>37</sup>Cf. the references in note 2 for discussion of the properties of analytic and agglutinative languages.

### 3.3.2.1 An NSA account of obligatory reflexivity in Chichewa

Msaka's (2014: section 5.3) analysis of obligatory reflexivity in Chichewa focuses on three types of reflexive constructions, namely verbal object constructions, infinitival verbal reflexive constructions and infinitival nominal reflexive constructions. In this section I will only briefly outline the proposals dealing with verbal object constructions.

Consider the Chichewa example in (18) (Msaka, 2014:76). This sentence contains a transitive verb, but lacks an overt expression functioning as the direct object DP. On Msaka's (2014:section 5.3.2) analysis, the direct object DP is claimed to be in the form of a phonetically empty pronominal element, *pro*. In the verbal complex (given in square brackets below) the reflexive marker (RFM) *-dzi-* ("self") occupies the position in which an object marker (OM) would normally occur. The RFM enters into an obligatory coreferential relationship with the subject *mtsikana* (as indicated by means of the subscript <sub>i</sub>).<sup>38</sup> Notice that the subject marker (SM) *a-* also stands in a coreferential relationship with the subject *mtsikana*, as shown by the subscript. In other words, the sentence in (18) contains three instances of coreferentiality: (i) between the RFM and the subject, (ii) between the SM and the subject and, by implication, (iii) between the RFM and the SM.

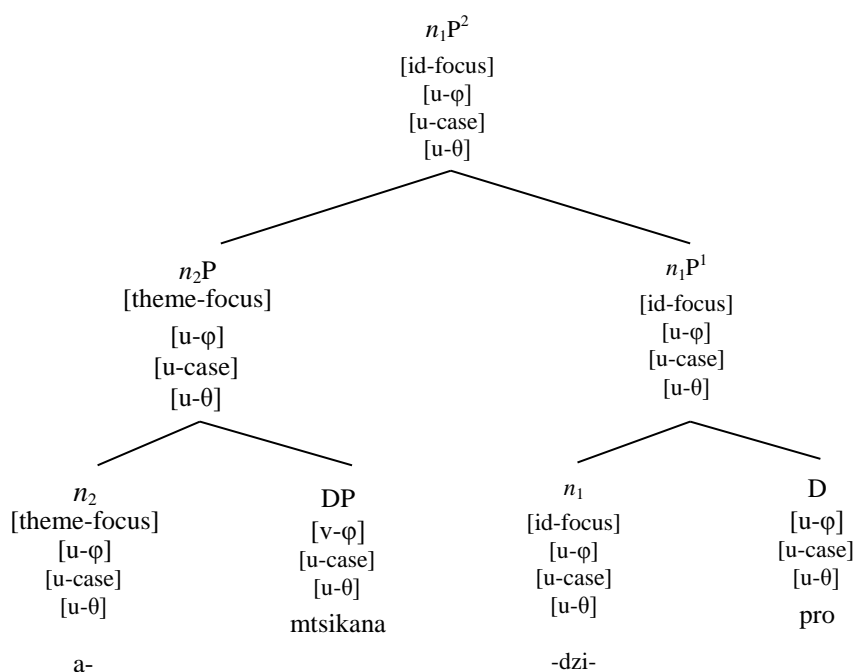
18.           Mtsikana<sub>i</sub>       [a<sub>i</sub> - na - dzi<sub>i</sub> - bay - a]  
               1.girl           1SM-T/A-RFM-stab-FV  
               "The girl stabbed herself"

In terms of the NSA, the subject *mtsikana* and the RFM *-dzi-* are initially merged in the same identity focus nominal shell, as shown in (19) below (Msaka, 2014:74); the SM *a-* is similarly merged with the subject *mtsikana*.<sup>39</sup>

<sup>38</sup> The verbal complex in (18) comprises five different elements: (i) the verb root *bay* ("stab"), to which is affixed (ii) a final vowel (FV) *-a*, which is taken to express the subjunctive and other tense/aspect related information in this context (though cf. Masaka (2014:71) for comments), (iii) the RFM *-dzi-* ("self"), (iv) the tense/aspect (T/A) marker *-na-*, expressing past tense, and (v) the subject marker (SM) *a-*, which is associated with a third person singular subject DP belonging to the noun class 1, in this case the expression *mtsikana* ("the girl").

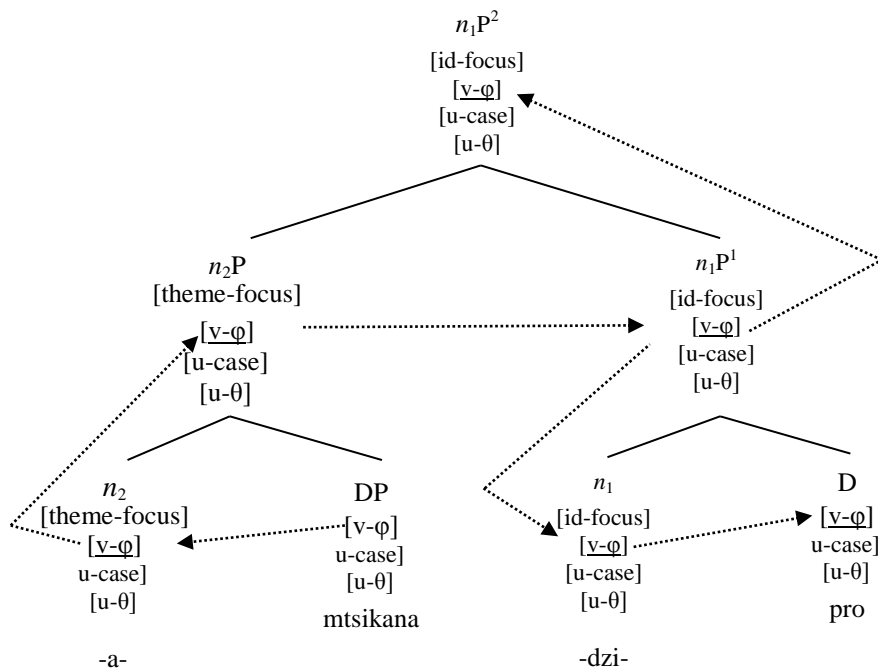
<sup>39</sup> Msaka (2014:73) claims that a subject marker, e.g. *a-* in (18), spells out a light noun with the feature [theme-focus], taking the subject as its complement, as shown in (19). The establishment of a coreferential relationship between the SM and its antecedent (i.e. the subject) will be discussed below.

19.



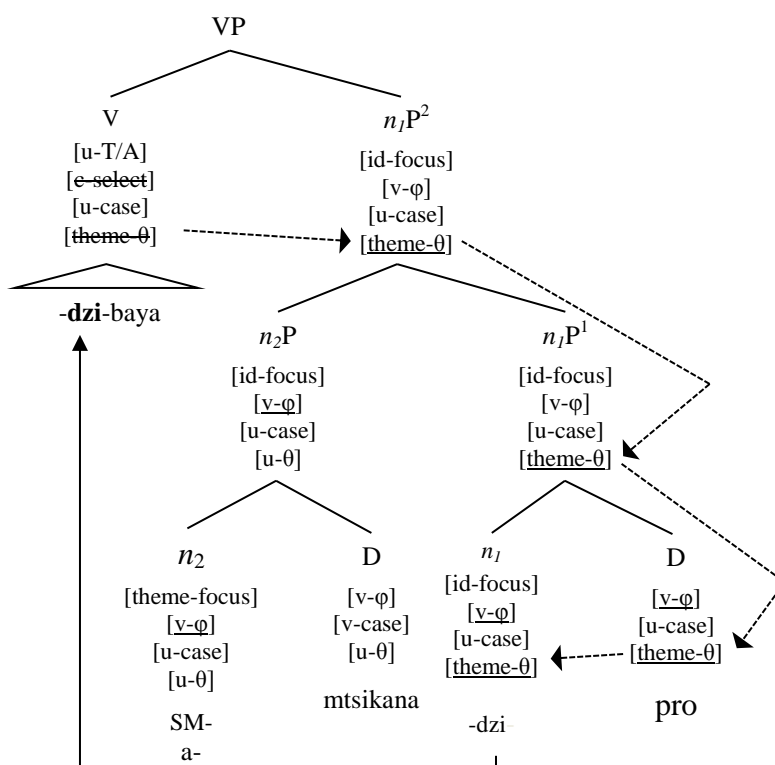
In the configuration in (19), there are two light nouns which represent the locus for the RFM *-dzi-* and the SM *a-*, respectively. The first light noun,  $n_1$ , represents an identity focus light noun and the second,  $n_2$ , a theme focus light noun. The light noun  $n_1$  takes the direct object pro D as its complement, whereas the subject DP *mtsikana* forms the complement of the  $n_2$ . The  $n_2P$  containing the subject DP is merged into the specifier position of the identity focus light noun. Note that the subject DP is the only constituent carrying valued  $\phi$ -features; as shown by the dotted arrows in (20) below, these  $\phi$ -features serve to value the  $\phi$ -features of both the  $n_2$  and the  $n_1$  and, via feature percolation, their respective projections. The result of these valuation operations is that all the  $n$ s and their projections share the  $\phi$ -feature values carried by the subject DP *mtsikana*. In terms of Oosthuizen's (2013:45) Hypothesis H (cf. previous section), the  $n_2$  containing the SM *a-* and the  $n_1$  containing the RFM *-dzi-* are therefore both interpreted as being coreferential with the subject DP *mtsikana*.

20.



According to Msaka (2014:74), the identity focus nominal shell  $n_1P^2$  in (20) is merged with the verbal complex comprising the verb stem *-baya* with the features [u-T/A] and [theme-θ], as well as various unfilled verbal slots such as SM, RFM, T/A, etc. The resulting VP is given in (21) below. In this structure, the θ-feature of the V serves to value the corresponding feature of the  $n_1P^2$  (in effect, the  $n_1$  head and its projections) as [theme-θ]; since the  $n_2P$  containing the subject does not form a projection of the  $n_1$ , the θ-feature of the  $n_2P$  and its constituent parts remains unvalued. As indicated by the solid arrow in (21), the  $n_1$  containing the RFM *-dzi-* is raised to the RFM slot in the verbal complex.

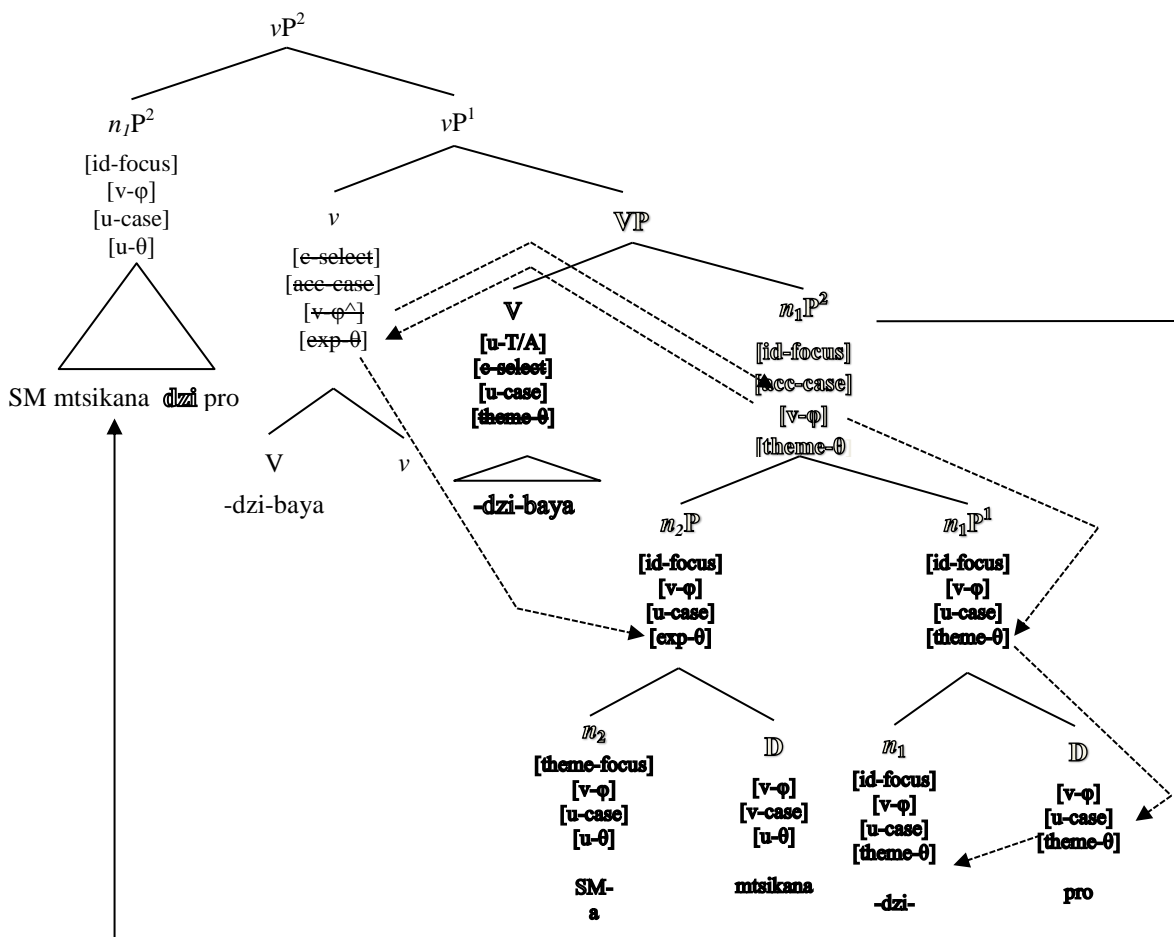
21.





The structure in (21) is subsequently merged with a functional light verb  $v$  which has the features [c-select], [u-tense], [agent- $\theta$ ], [acc-case] and [u- $\phi$ ^] (where  $\wedge$  represents a movement diacritic). Several concurrent operations can take place at this stage, the first being that the lexical verb values the categorial feature of the light verb as [+V]. Second, V-to- $v$  raising takes place. Third, the  $v$  case-values the  $n_1P^2$  as accusative, and the latter supplies the  $v$  with  $\phi$ -values; the movement diacritic carried by the light verb's  $\phi$ -features triggers raising of the  $n_1P^2$  into the specifier position of the  $v$ , creating a second projection of the light verb,  $vP^2$ .<sup>40</sup> Finally, the light verb  $\theta$ -values the subject  $n_2P$  in the specifier position of the  $n_1$  as agent. Since the  $n_1P^2$  headed by the identity focus  $n$  does not contain any unvalued features at this stage, it becomes inactive for any further valuation operations; the  $n_2P$  is however still active because of its unvalued case feature. The various operations are shown in (22) (Msaka, 2014:75).

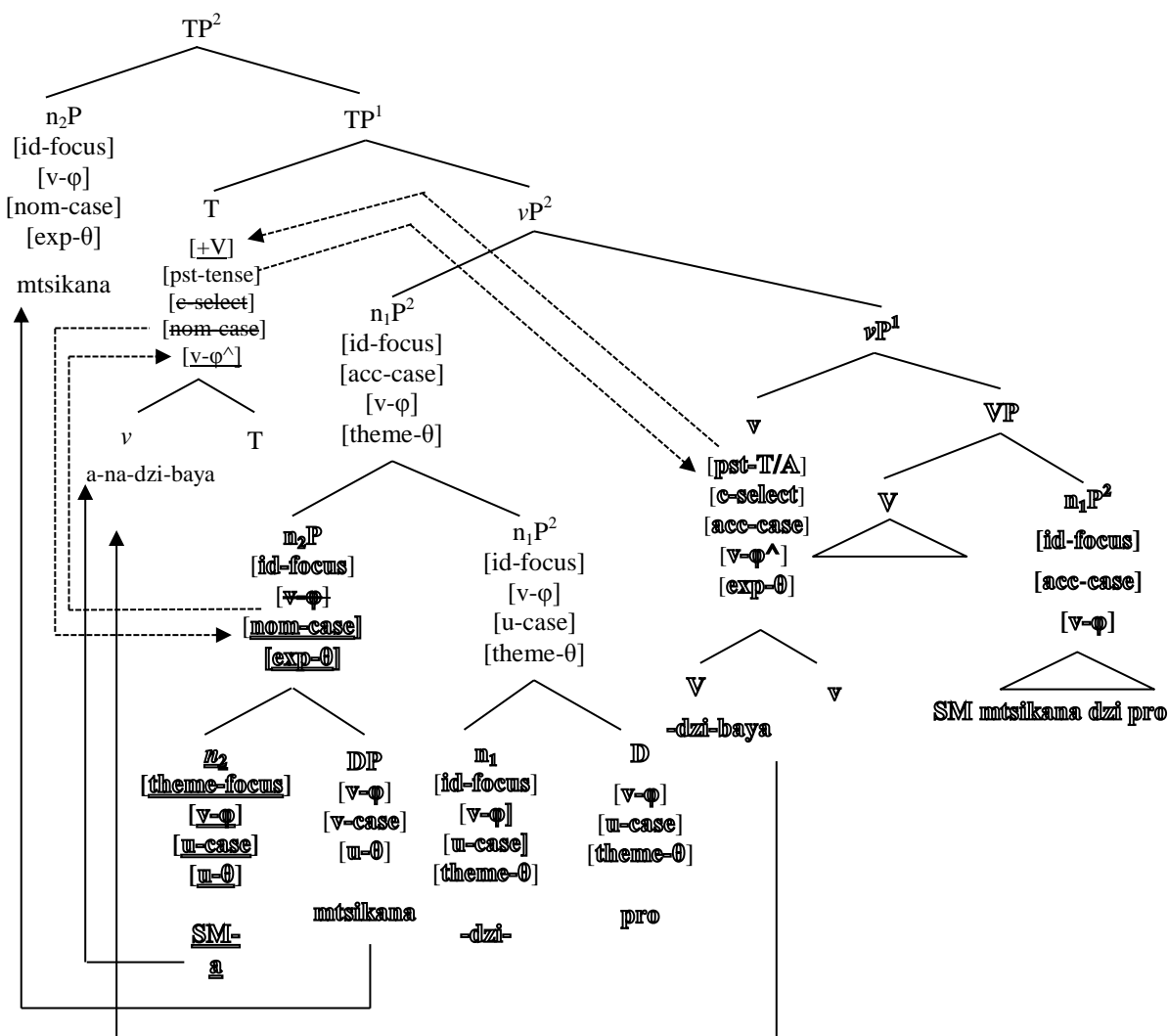
22.



<sup>40</sup> Strictly speaking, the whole VP containing the  $n_1P^2$  is raised into the [spec,  $v$ ] position; however, since the V has already been raised out of the VP and merged with the light verb, the structure in (22) is simplified by only showing the  $n_1P^2$  in the specifier position of the  $v$ .

The next step in the derivation involves merger of the  $\nu P^2$  with a T-head containing the features [c-select], [u-V], [past-tense], [u- $\phi^{\wedge}$ ] and [nom-case] (Msaka, 2014:77). The T values the tense feature of the V/v complex *-dzi-baya* as present, and the V/v in turn values the T's categorial feature as [+V]. The T furthermore case-values the  $n_2P$  as nominative, and the latter provides the T with  $\phi$ -feature values. The movement diacritic carried by the T's  $\phi$ -features triggers raising of the  $n_2P$  into the [spec, T] position. On Msaka's analysis, the V/v is raised to the T;<sup>41</sup> furthermore, the SM forming part of the  $n_2P$  is raised to the relevant slot in the verbal complex. These operations are indicated by means of the solid arrows in (23) (Msaka, 2014:78).

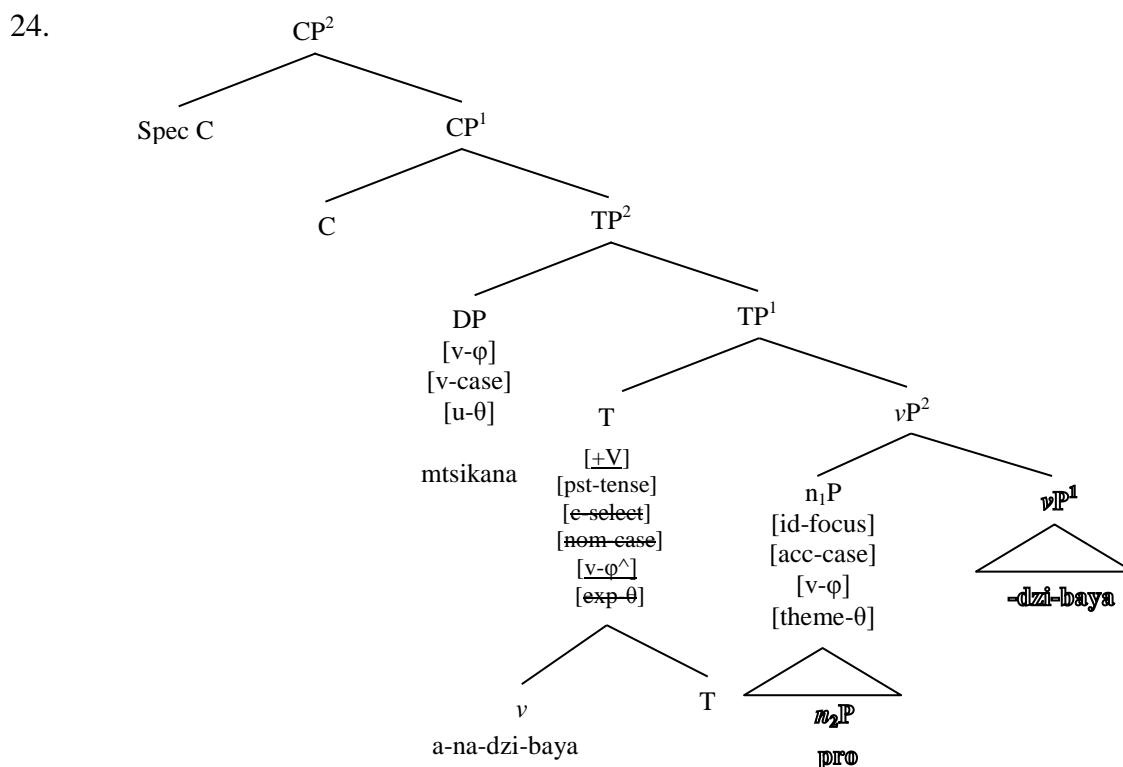
23.



<sup>41</sup> In Msaka's (2014:78) structure, the constituent that is raised to the T is indicated as the  $\nu P^1$ . It is generally assumed, however, that a phrasal constituent (e.g.  $\nu P$ ) cannot be internally merged with a head constituent (e.g. T) (cf. e.g. Kayne 1994).

A few remarks are in order here about the SM in Chichewa. According to Msaka (2014:70-71) the SM is a pronominal affix<sup>42</sup> which is inserted into the relevant slot of the verbal complex in the course of the derivation. He (2014:77) goes on to suggest, as a working hypothesis, that insertion of the SM into the verbal complex is the result of two movement diacritics, one carried by the T's  $\phi$ -features and the other by the lexical verb's  $\theta$ -feature. As a component part of the verbal complex, the raised SM enters into a  $\phi$ -valuation relationship with the T. A question that arises at this point concerns the stage at which the SM is inserted into the verbal complex. It is generally accepted in the literature that operations may not move elements downward or to the right in a structure (cf. e.g. Chomsky (1995, 2000, 2001)). On this view, the SM can only be inserted into the verbal complex after the latter has been raised to the T, and before the  $n_2$ P is raised into [spec, T], as indicated in (23).

The final step in the derivation of the sentence in (18) involves merger of the TP<sup>2</sup> in (24) with a C-head. The resulting structure takes the simplified form in (24) (adapted from Msaka, 2014:79).



<sup>42</sup> Cf. also Bresnan & Mchombo (1987) and Bresnan & Karneva (1989).

### 3.4 Summary

This chapter presented an outline of the main assumptions and devices of (i) the broad framework of Minimalist Syntax and (ii) the Nominal Shell Analysis of obligatory reflexivity (NSA) proposed by Oosthuizen (2013). In terms of the NSA, a reflexive pronoun and its antecedent are initially merged as the complement and the specifier, respectively, of an identity focus light noun. The resulting nominal shell structure, represented in (21), provides the specific syntactic configuration for establishing a coreferential relationship between the reflexive pronoun and the antecedent expression. As discussed in section 3.4, this type of analysis is claimed to hold for both analytic languages (such as Afrikaans) and agglutinative languages such as isiXhosa and Chichewa (Oosthuizen, 2013:section 4.2; Msaka, 2014, sections 4.3.3 and 5.3). The next chapter will address the question of whether the NSA can provide an adequate framework to account for the phenomenon of obligatory reflexivity in TL-Arabic, also an agglutinative language.

## Chapter 4

### A nominal shell analysis of obligatory reflexivity in TL-Arabic

#### 4.1 Introduction

The main aim of this chapter is to examine whether the assumptions and devices of the Nominal Shell Analysis (NSA) of obligatory reflexivity which was initially proposed for an analytic language like Afrikaans (Oosthuizen, 2013: chapter 3) and subsequently extended to agglutinative languages such as isiXhosa (Oosthuizen, 2013: section 4.4) and Chichewa (Msaka 2014 section 5.3) can also provide an adequate framework for analysing this phenomenon in TL-Arabic. The proposed analysis of the TL-Arabic data, which was presented in Chapter 2, is set out in section 4.2 below. The discussion is organised into four subsections, each dealing with a specific type of reflexive construction in TL-Arabic: section 4.2.1 focuses on finite verbal object constructions, 4.2.2 on prepositional object constructions, 4.2.3 on small clause constructions, and 4.2.4 on two types of infinitival constructions. A summary of the main findings of the chapter is given in section 4.3.

#### 4.2. An analysis of obligatory reflexivity in TL-Arabic

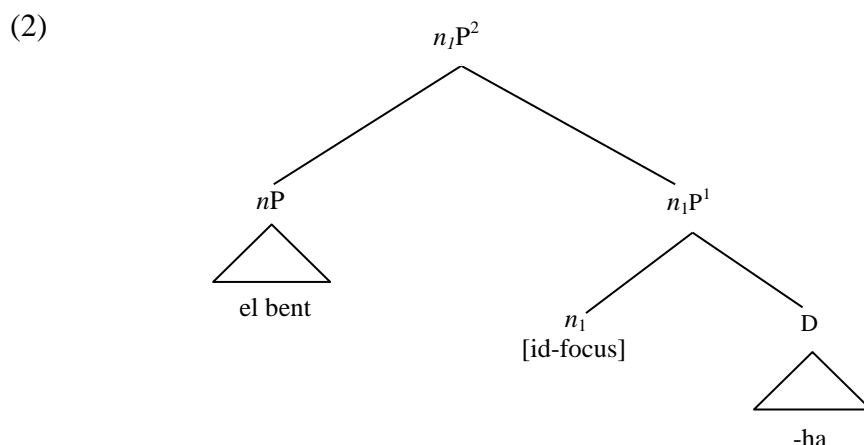
##### 4.2.1 Finite verbal object constructions

Consider the TL-Arabic example in (1). In this sentence the reflexive expression *rooḥ*+pronoun functions as the direct object argument of a finite verb, expressing the thematic role of theme. As indicated by the subscripts, the reflexive pronoun is interpreted as obligatorily coreferential with the subject of the sentence. Note that the SM *-t* also stands in a coreferential relationship with the subject, which means that the reflexive is coreferentially linked to two elements in the sentence.

1.     *El-bent<sub>i</sub>* [*jurḥe.t<sub>i</sub>*]                            **rooḥ-ha<sub>i</sub>**  
           the girl (Past)+hurt+SM.3.sing.fem   REFL-her  
           “The girl hurt herself”

In terms of NSA framework, the subject *el-bent* (“the girl”) and the reflexive pronoun *rooḥ-ha* (“herself”) start together within a nominal shell headed by an identity focus light noun, as shown in (2) below. In this configuration the pronoun *-ha* (“her”) serves as the complement of the light noun *n<sub>1</sub>*, and the subject *el-bent* as its specifier. Note that the subject expression also

represents a light noun phrase, one headed by *n*. The internal structure of the D and the *nP* in (2) will be discussed below.

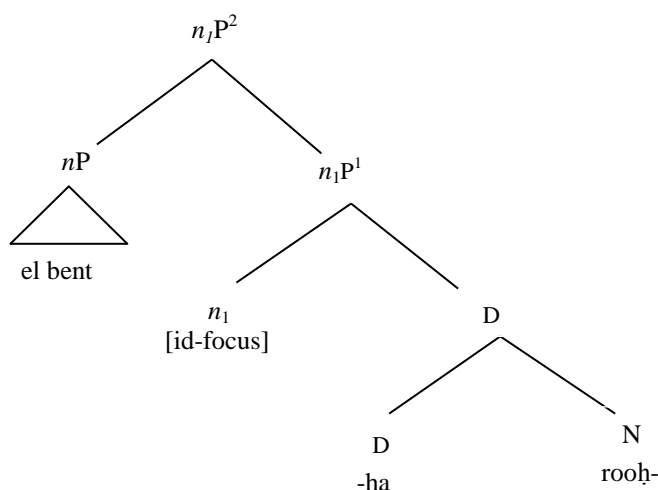


This structure raises the question of the initial position of the REFL element *rooḥ-*. In the analysis proposed for Afrikaans, the identity focus light noun represents the locus for the REFL suffix *-self*, with the pronoun in its complement position being raised to the *n*-head, resulting in a reflexive pronoun such as *homself* (“himself”) (cf. Oosthuizen 2013:section 3.2 and section 3.3.1 above). The identity focus light noun likewise represents the locus for the REFL affix *-zi-* and *-dzi-* (both “self”) in the analyses put forward for isiXhosa and Chichewa, respectively. In both these languages, the complement of the *n* is analysed as an abstract pronominal element *pro*, which undergoes D-to-*n* raising (cf. Oosthuizen 2013: section 4.2.4; Msaka 2014; cf. also section 3.4.1 above). However, if an analysis along these lines were to be adopted for TL-Arabic, with the REFL element *rooḥ-* initially occupying the *n*-head position and its pronominal complement undergoing D-to-*n* raising, it would mean that the pronoun *-ha* (“her”) will end up to the left of the REFL, resulting in the incorrect linear order *\*ha-rooḥ*. One way of overcoming this problem would be to have the pronoun adjoined to the right of the REFL in the *n*-head position. However, in general theoretical terms, this is not a feasible option since it is commonly accepted in the literature that an element undergoing raising can only be merged to the left of the target constituent.

Another way of overcoming the ordering problem just mentioned is to reject the idea that the REFL *rooḥ-* in TL-Arabic originates in the *n*-head position in (2). On this alternative analysis, *rooḥ-* is taken to represent the N complement of a pronominal D such as *ha-* in (1). On this proposal, the structure in (2) would then have a form along the lines in (3).<sup>43</sup>

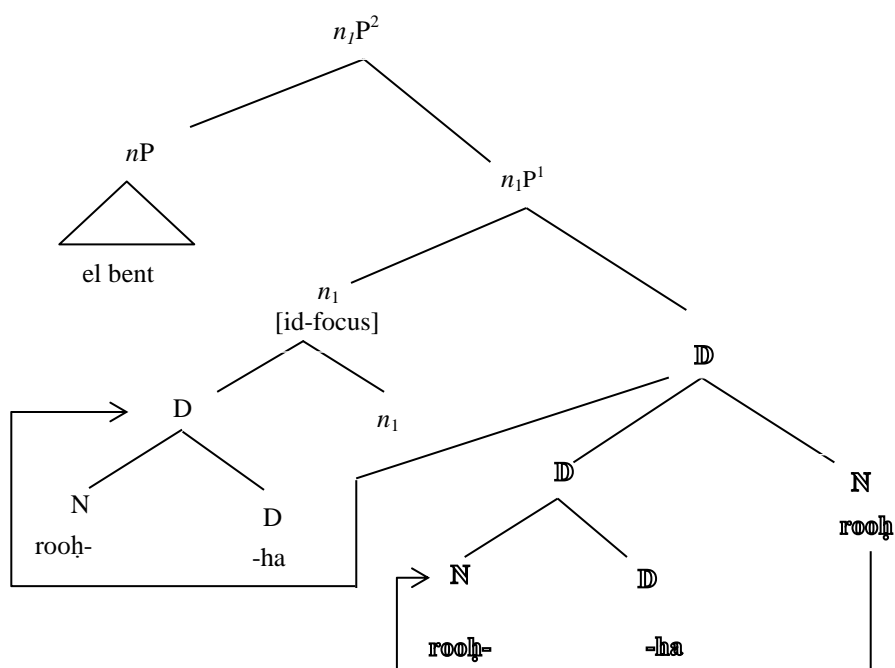
<sup>43</sup> Following Heinat (2006), Oosthuizen (2013:33) takes the D in a structure like (3) to be made up of two distinct elements, namely a D and a category-neutral lexical root  $\sqrt{\text{PRON}}$ ; in Heinat’s structure, however, the  $\sqrt{\text{PRON}}$  precedes its D sister (cf. also Oosthuizen, 2013: chapter 3, notes 5 and 8 and the references cited there,

3.



In terms of an analysis incorporating the structure in (3), the surface reflexive form *rooḥha* is syntactically derived by means of two raising operations. First, the  $N$  *rooḥ-* undergoes N-to-D raising resulting in the correct linear order.<sup>44</sup> Second, the expanded  $D$  *rooḥ-ha* undergoes D-to- $n_1$  raising, similar to the D-to- $n$  raising operation proposed for Afrikaans and Chichewa discussed in sections 3.3.1 and 3.3.2, respectively. These two operations are illustrated by means of the solid arrows in (4).

4.

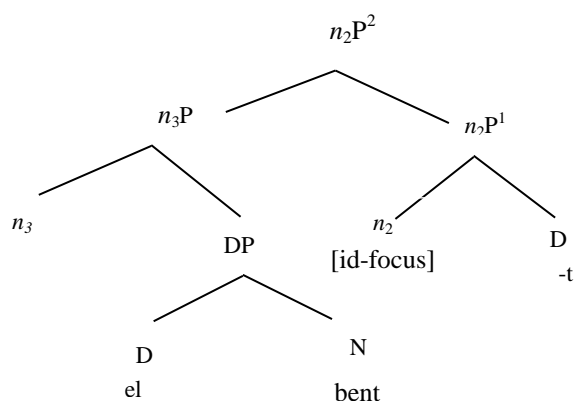


as well as section 4.2.4 above). For the sake of simplicity, the internal structure of the  $D$  is not indicated in (3) and similar structures.

<sup>44</sup> The idea that the  $N$  *rooḥ-* is raised to a  $D$  (e.g. *-ha*) is in line with the analysis of the so-called Construct State DP in Arabic by Bardeas (2008). Citing Benmamoun (2003), Fassi-Fehri (1993), and Mohammad (1999), Bardeas (2008:10) states that “It has been generally assumed in the generative literature that  $N$  always moves to  $D$  in the Semitic languages ... [and that – KA] the obligatory  $N$  raising in Semitic languages is due to the affixal nature of  $D$ .”

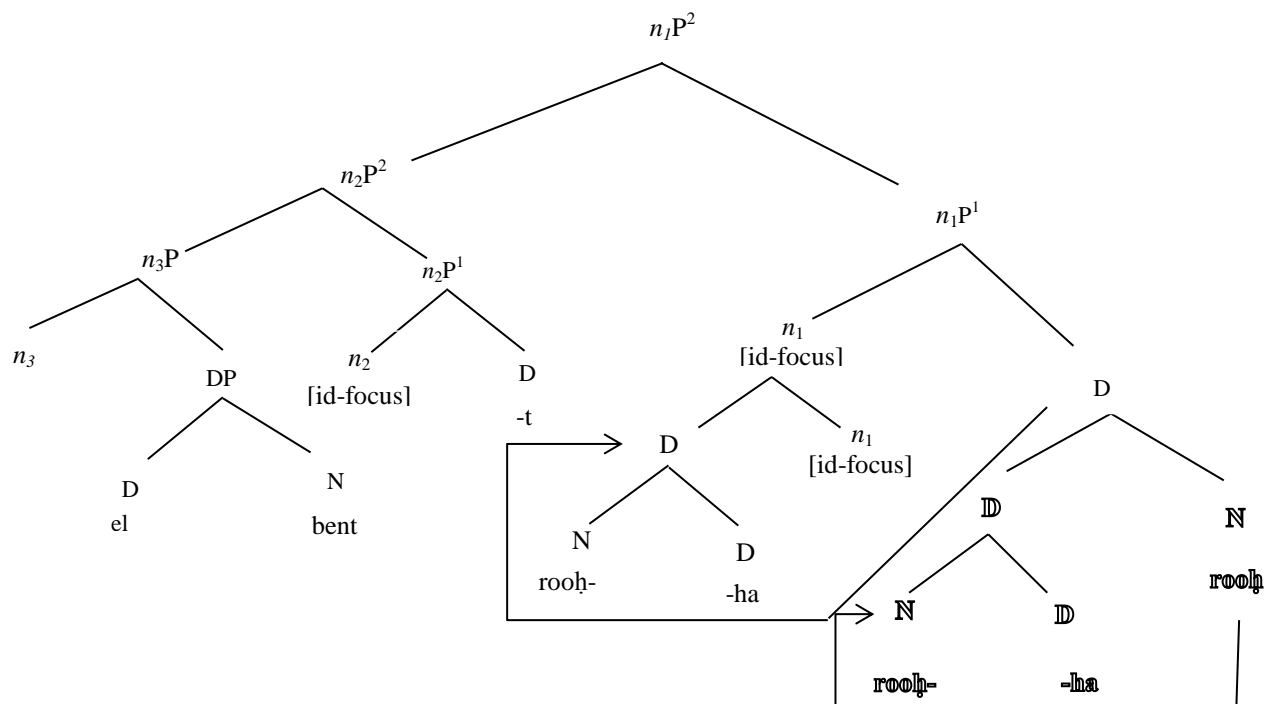
Consider next the internal structure of the subject expression *el bent* (“the girl”) in (4). As noted above, the SM *-t* in the sentence in (1) is coreferential with this expression. In terms of the proposals put forward by Oosthuizen (2013:section 4.2.4) and Msaka (2014), the SM and the subject expression are therefore also merged into a nominal shell headed by an identity focus light noun, with the SM representing the complement and the subject expression the specifier of the *n*, as indicated in (5) below.<sup>45</sup> Notice that the expression *el bent* also represents an *nP*, with the light noun in question taking the DP *el bent* as its complement. (For reference purposes, the light nouns (and their respective projections) in (5) are subscripted as *n*<sub>2</sub> and *n*<sub>3</sub> to distinguish them from each other and also from the identity focus *n*<sub>1</sub> in structure (4) above.)

5.



Given the internal structure of the *n*<sub>2</sub>*P*<sup>2</sup> in (5), the structure in (4) can be expanded as in (6).

6.

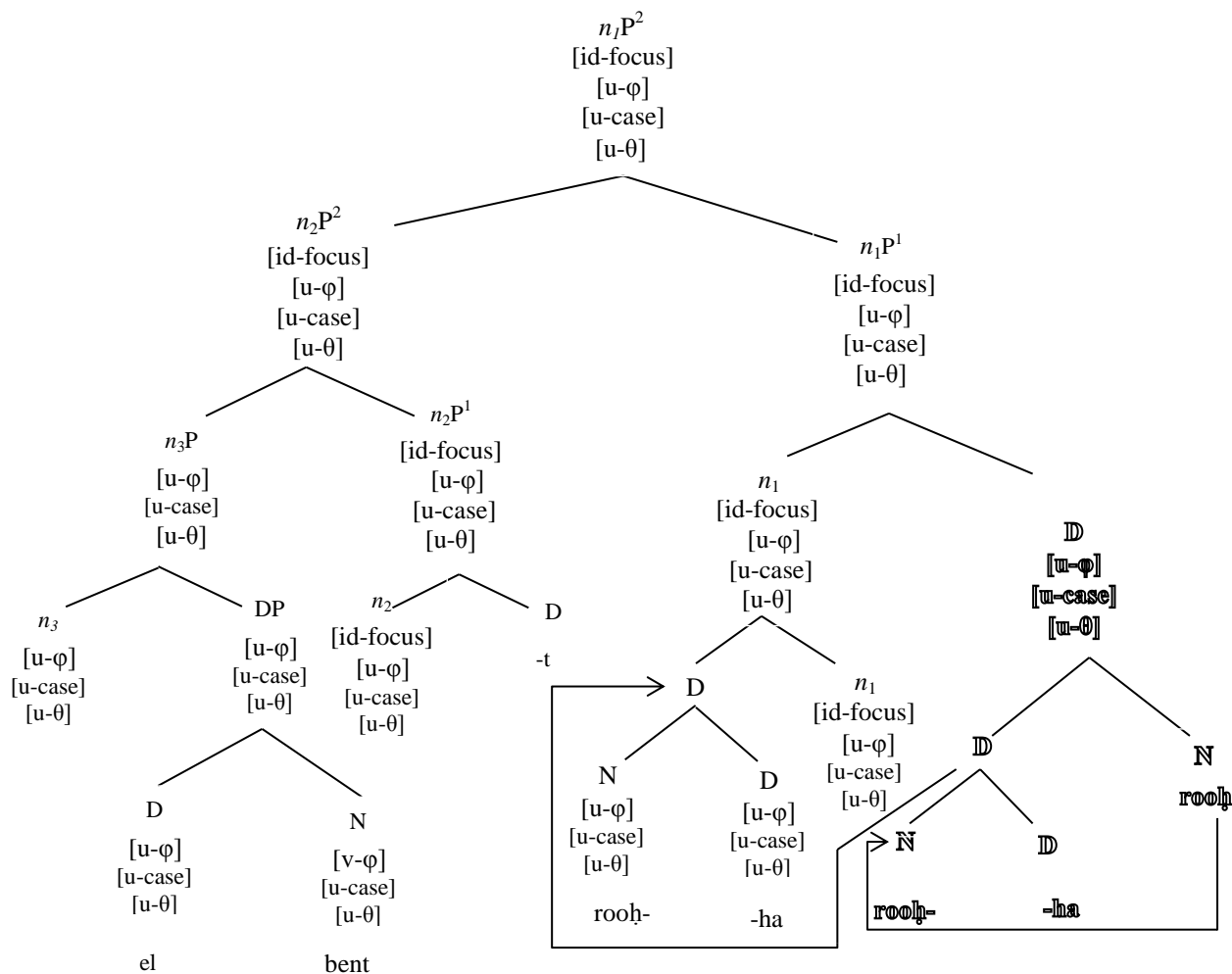


<sup>45</sup> The SM most likely represents a nominal element; however, the question of the particular category to which this element belongs (e.g. N or D) is left as a topic for further investigation. For convenience, the SM will be categorised as a D element in the discussion below.



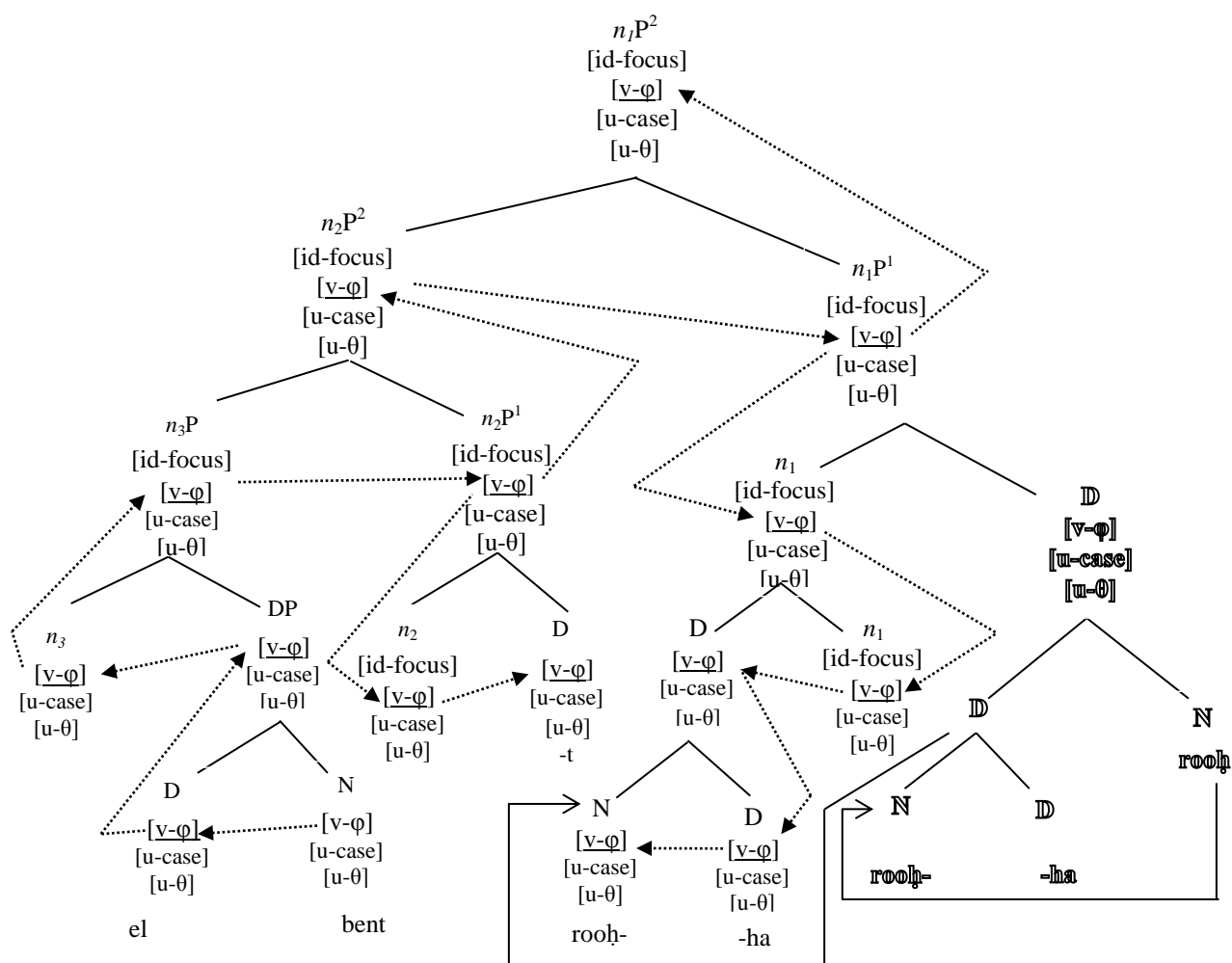
Having considered the initial positions in which the various nominal elements in (1) are merged, we turn our attention now to the feature make-up of these elements, focusing specifically on the case-features,  $\phi$ -features and  $\theta$ -features. The N *bent*, on the one hand, has valued  $\phi$ -features (3person, singular, feminine), an unvalued case-feature and an unvalued  $\theta$ -feature. On the other hand, the remaining nominal elements (i.e. the two Ds *el-* and *-ha*, the three light nouns, the N *rooh-*, and the SM *-t*) all have unvalued case features,  $\phi$  features and  $\theta$ - features. The feature make-up of the various elements is illustrated in (7).

7.



The structure in (7) contains two identity focus nominal shells, namely  $n_2P^2$  and  $n_2P^1$ . The only element in (7) which could supply  $\phi$ -values to the other nominal elements in the structure is the N *bent*. The way in which this valuation takes place and percolates to the various projections in (7) is shown by the dotted arrows in (8). In each case, the feature that is supplied with a particular value is underlined.

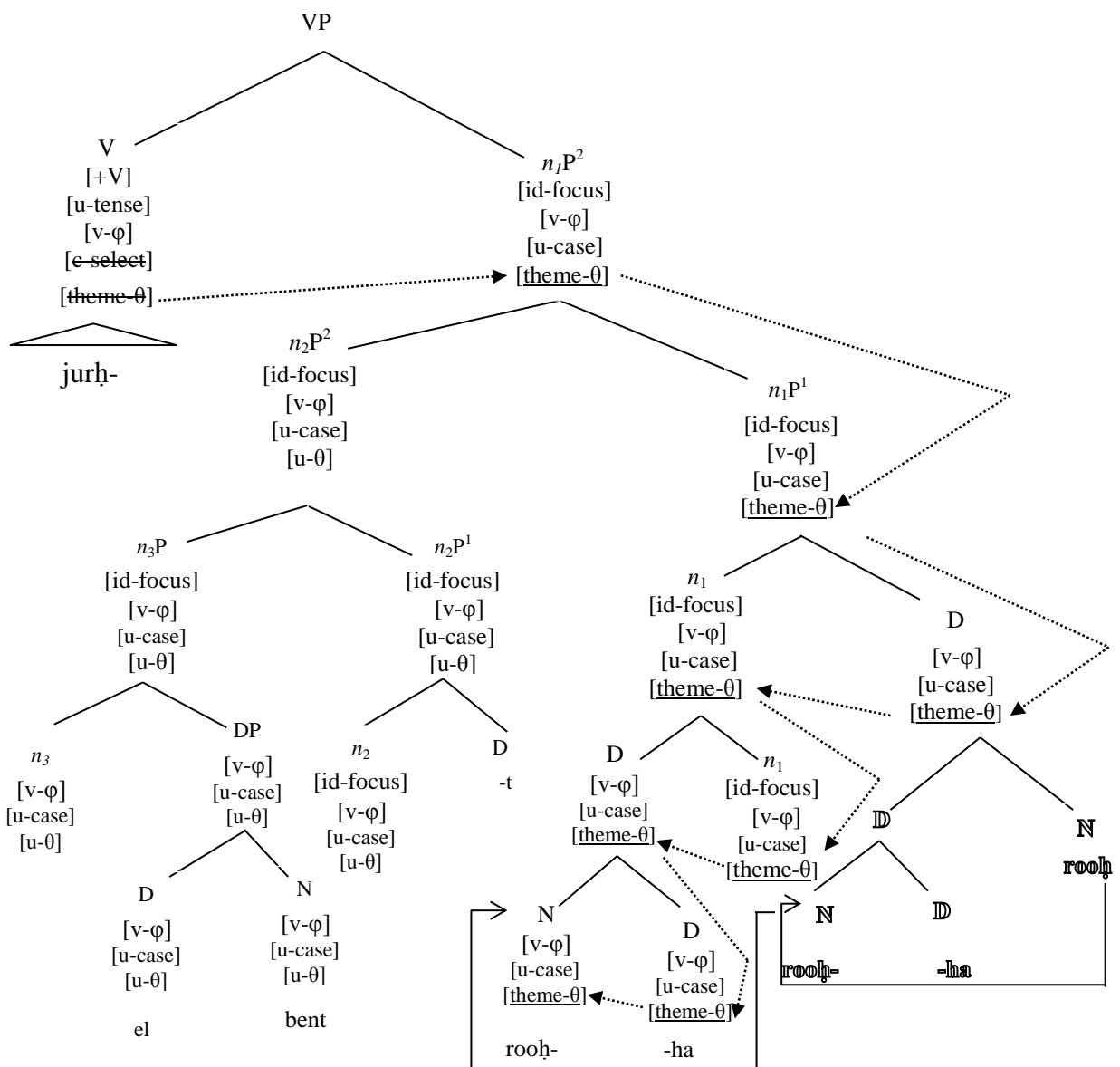
8.



As shown in (8), starting with the  $\phi$ -valued N *bent*, the  $\phi$ -features of each of the different nominal elements in the structure are valued in the following manner: (i) the N *bent* values the D *el*, and this value percolates to the DP; (ii) the DP values the light noun  $n_3$ , with this value percolating to the  $n_3P$ ; (iii) the  $n_3P$  values the  $n_2P^1$  (and all the elements on its projection line, i.e. the  $n_2P^2$  and the  $n_2$ ); the  $n_2$  values the SM *-t*; (iv) the  $n_2P^2$  values the  $n_1P^1$  and, by implication, the  $n_1$  and the  $n_1P^2$ ; (v) the  $n_1$  values the D *-ha*; and finally (vi) the D values the N *rooh-*. In short, then, all the nominal elements in (8) end up with exactly the same  $\phi$ -values as the N *bent*. In terms of Hypothesis H of the NSA, the  $\phi$ -feature valuations at hand result in a configuration where the D *rooh-ha* and the SM *-t* are interpreted as obligatorily coreferential, and where these two elements are also both interpreted as obligatorily coreferential with the subject *el bent*.

Returning to the derivation of the sentence in (1), the  $n_1P^2$  in (8) is merged with the verb stem *jurh* forming the VP. The verb stem is claimed to carry both V-related and N-related features.<sup>46</sup> The V-related features include the valued categorial feature [+V], an unvalued tense/aspect feature [u-T/A], and a c-select feature.<sup>47</sup> The N-related features include unvalued  $\varphi$ -features and a  $\theta$ -feature with the theme value. It is furthermore assumed here that the verb stem is associated with particular grammatical slots to be filled by the relevant verbal affixes, such as the SM, T/A, etc.<sup>48</sup> The merger of the V and the  $n_1P^2$  is illustrated by the simplified structure in (9). Note that the V serves to value the  $\theta$ -feature of the  $n_1P^2$  and all the elements on its projection line, i.e. the  $n_1P^1$  and the  $n_1$ .

9.



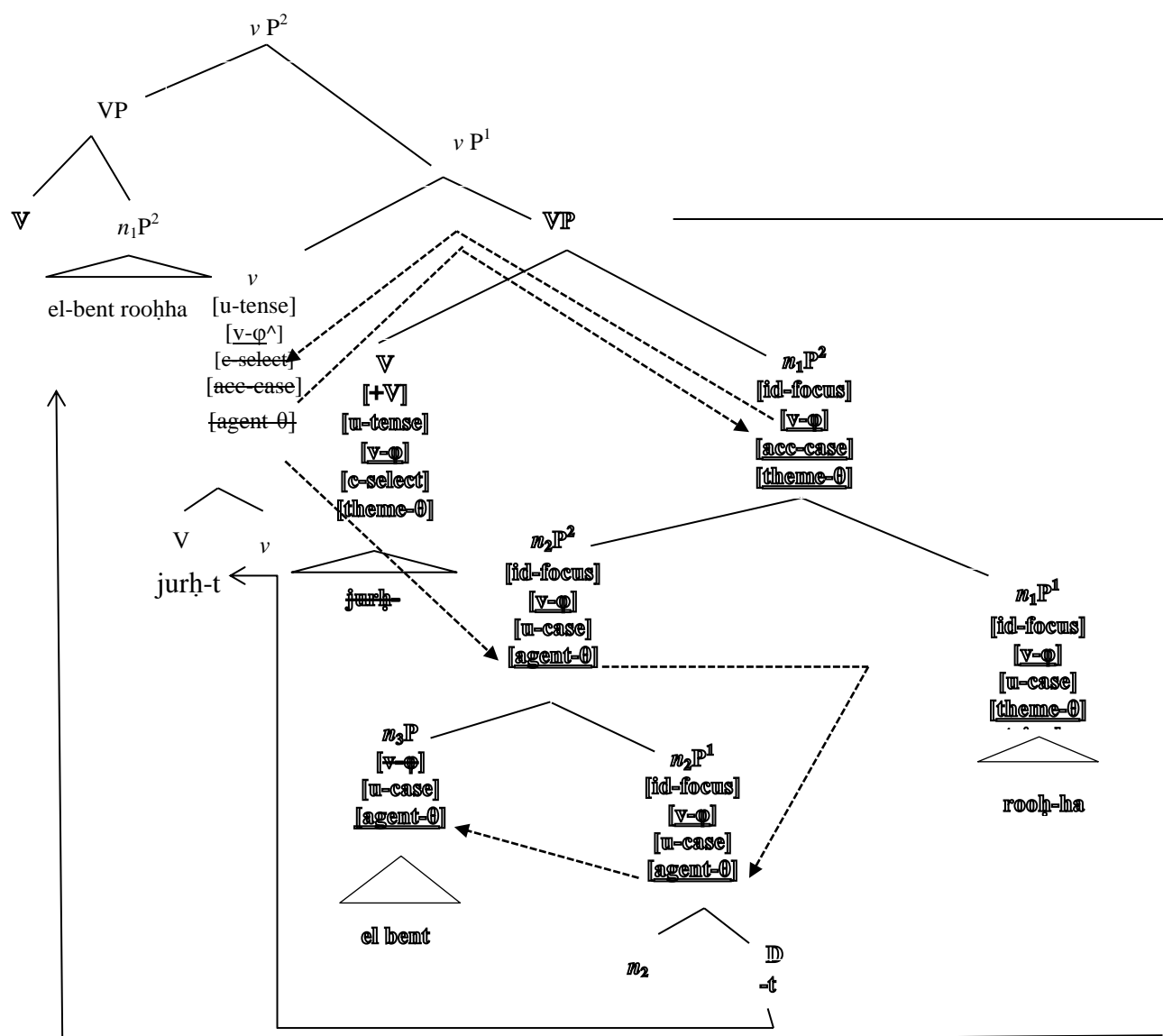
<sup>46</sup> See Oosthuizen (2013: chapter 3) for the terms V(erb)-related and N(oun)-related features.

<sup>47</sup> See e.g. Adger (2003:66) for the term c(onstituent)-select feature.

<sup>48</sup> A detailed discussion of the internal structure of the verbal complex, and the manner in which it can be accounted for falls outside the scope of this study. See the remarks in Chapter 3.

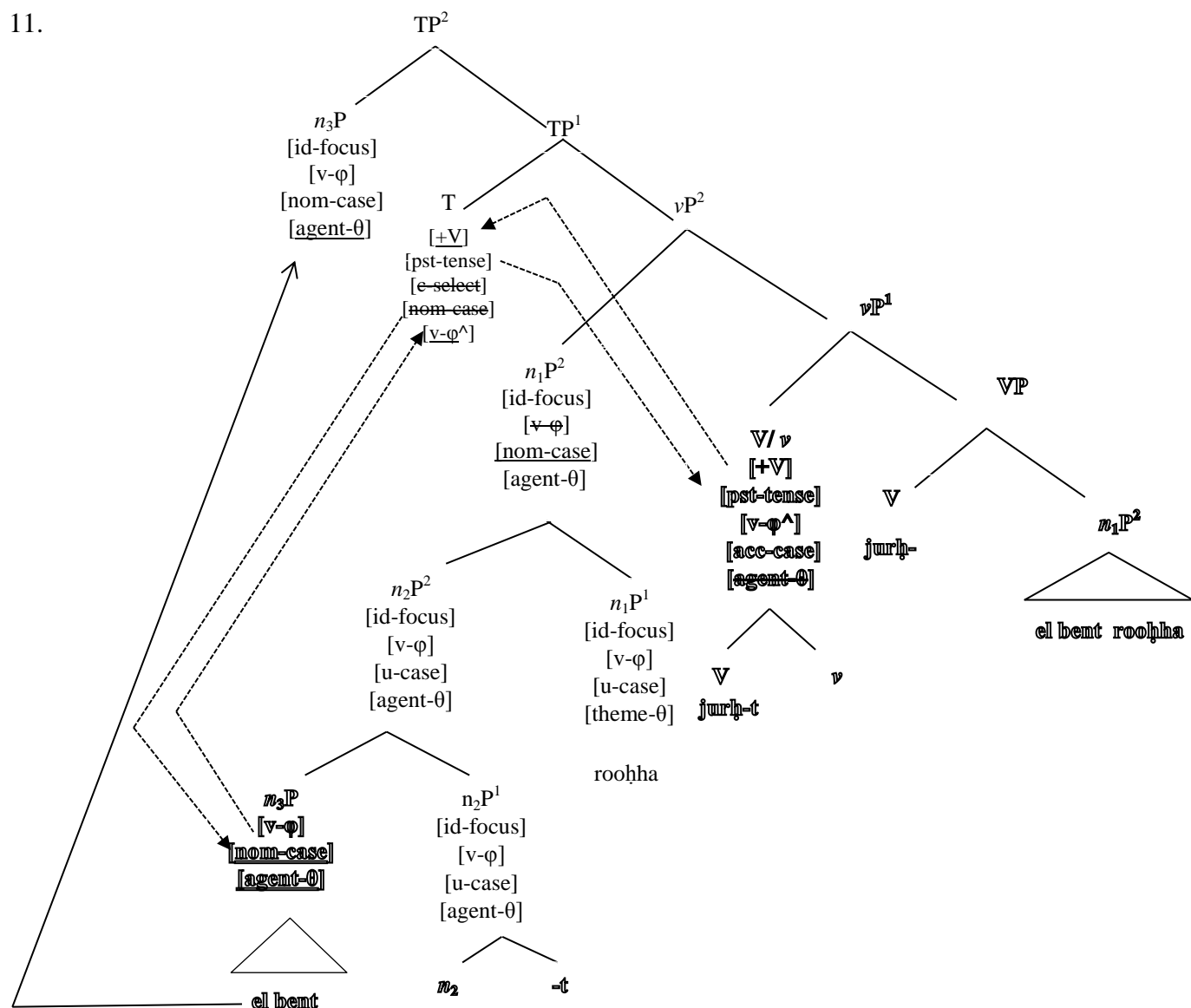
The next step in the derivation is to merge the VP with a functional light verb  $v$  yielding a  $vP^2$  structure. The light  $v$  carries the following features [c-select], [agent- $\theta$ ], [acc-case] and [u-tense]. This merger leads to a number of operations: First, the light verb acquires its categorial feature from the lexical verb and the lexical verb raises to  $v$ . Second, the  $\phi$ -features of the light verb are valued by the  $\phi$ -features of the identity focus  $n_1P^2$ , and the [acc-case] feature of the light  $v$  values the corresponding feature on the  $n_1P^2$ . Third, the light  $v$  values the  $\theta$ -feature of the  $n_2P^2$  as agent; this value percolates to the head  $n_2$ , which in turn serves to value the  $\theta$ -feature of the  $n_3P$  *el bent* (“the girl”) as agent as well. Fourth, the SM *-t* is raised to the relevant grammatical slot in the verbal complex. Finally, since the  $v$ ’s  $\phi$ -features carry a movement diacritic, valuation of this feature by the  $n_1P^2$  triggers raising of the  $n_1P^2$  to the specifier position of the  $v$ . Following Oosthuizen (2013: 87), it is assumed here that this raising operation involves pied-piping of the entire VP containing the  $n_1P^2$ . The various operations resulting from the merger of the light  $v$  and the VP are illustrated in (10) below.

10.



The  $vP^2$  in (10) is subsequently merged with a T-head containing (i) the V-related features [c-select], [v-tense] and an unvalued categorial feature and (ii) the N-related features [v- $\phi^{\wedge}$ ] and [nom-case]. This gives rise to the following operations. First, the T's categorial feature is valued as [+V] by the V/v and in turn the T supplies the past tense value to the V/v. Second, the case feature of the  $n_3P$  *el-bent* ("the girl") receives the nominative value from the T and this  $nP$  values the  $\phi$ -features of the T. Since the T's  $\phi$ -features are associated with a movement trigger  $\wedge$ , the  $n_3P$  *el bent* is raised to the specifier position of the T, as shown in the simplified structure in (11).

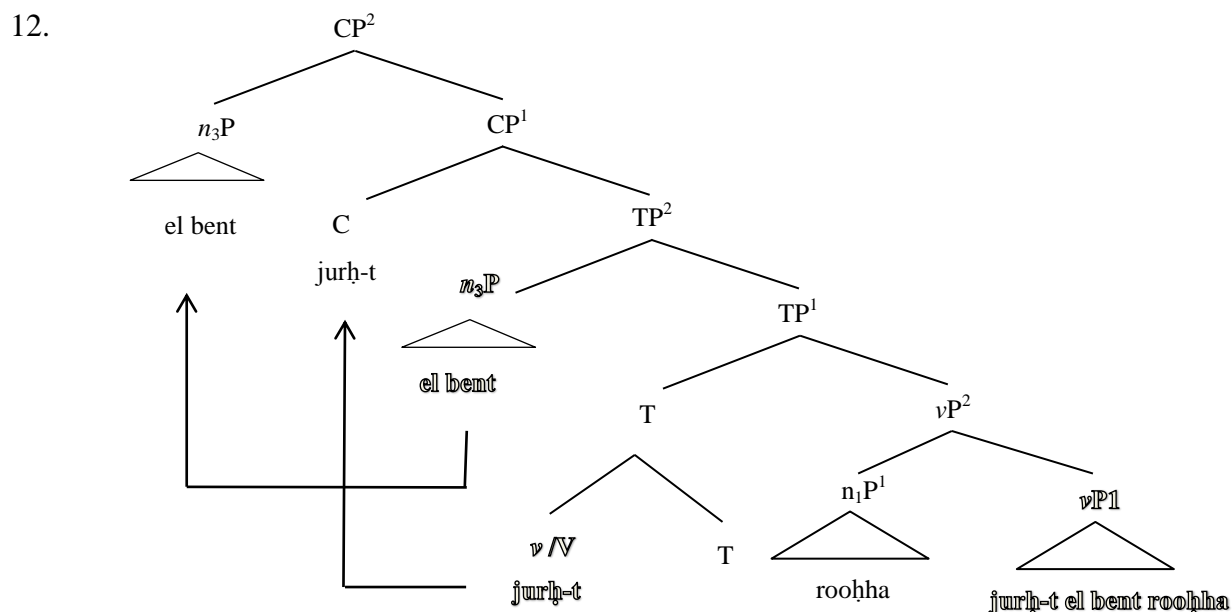
11.



One further operation that takes place when the  $vP^2$  in (10) is merged with the T-head is raising of the V/v *jurh-t* to the T.<sup>49</sup> For the sake of simplicity, this operation is not indicated in (11).

<sup>49</sup>This is similar to the verb raising operation proposed by Msaka (2013:77) for Chichewa.

The final step in the derivation of the sentence in (1) involves merger of the TP<sup>2</sup> in (11) with a C-head. In his discussion of reflexive constructions in Afrikaans, Oosthuizen (2013:55) mentions the possibility that (i) the subject *n*P in the specifier position of the T is raised into the specifier position of the C, and (ii) the finite verb is raised to the C-head. The question whether similar operations are also found in TL-Arabic falls outside the scope of the present study and will not be examined further here. Should these operations indeed occur in TL-Arabic, the resulting structure would take the highly simplified form in (12).<sup>50</sup>



Having analysed the phenomenon of obligatory reflexivity in finite verbal object constructions, we turn our attention next to prepositional object constructions.

#### 4.2.2 Prepositional object constructions

As described in section 2.2.3.2, the reflexive *rooh-* can also occur as the object argument of a preposition. Consider the sentence in (13) below. In this case the reflexive pronoun serves as the complement of the preposition *li* (“to”/“at”), and expresses the thematic role of theme. As indicated by the subscripts, the reflexive pronoun is interpreted as obligatorily coreferential with two elements in the sentence, (i) the subject *el mra* (“the woman”) and (ii) the SM *-t*.

13. el-mra<sub>i</sub>                      [šebħe.t<sub>i</sub>]                      li rooh<sub>i</sub>-ha<sub>i</sub>  
 the woman      (past) look+SM.3.sing.fem to REFL-her  
 “The woman looked at herself”

<sup>50</sup> For a brief discussion of a similar construction in Chichewa, cf. Msaka (2014:78, fn. 92).

The structure in (13) is derived as follows in terms of the NSA framework described in section 3.3. Firstly, *el-mra* and *rooḥ-ha* are merged into the nominal shell structure in (14), with the latter representing the complement and the former the specifier of the identity focus light noun. This structure is identical to the one in (6) above in which the reflexive functions as the object argument of a finite verb.

14.  $[_{n_1P}^2[_{n_2P}^2[_{n_3P}[_{n_3}][_{DP}[D \text{ eI}][_{NMra}]]][_{n_2P}^2[_{n_2}][_{D-t}]]][_{n_1P}^1[_{n_1}][_{D[N \text{ rooḥ-}][_{Dha}]}]_{n_1}][D[N \text{ rooḥ-}][_{Dha}]]]$

Next, the  $n_1P^2$  in (14) is c-selected as the complement of the preposition *li*, as shown in the structure in (15); see also the tree diagram in (17).

15.  $[_{PP}[pli][_{n_1P}^2[_{n_2P}^2[_{n_3P}[_{n_3}][_{DP}[D \text{ eI}][_{NMra}]]][_{n_2P}^2[_{n_2}][_{D-t}]]][_{n_1P}^1[_{n_1}][_{D[N \text{ rooḥ-}][_{Dha}]}]_{n_1}][D[N \text{ rooḥ-}][_{Dha}]]]]]$

In the sentence in (13), the element *li* carries the categorial feature [+P], a c-select feature (that is satisfied through merger with the  $n_1P^2$ ), and the valued features [theme-θ] and [gen-case].<sup>51</sup> Some remarks are in order here regarding the specific case value associated with prepositions in Arabic. Prepositions in languages such as, for instance, English and Afrikaans assign accusative case to their nominal complements, whereas prepositions in a language such as German generally assign dative case. In contrast, prepositions in Modern Standard Arabic assign genitive case (referred to as “al-jarr”), phonetically expressed in the form of the affix [i] on the nominal expression (Versteegh, 2014:111; Ryding, 2014:121), and written as [ِ] in Arabic script and i in Roman script.<sup>52</sup> Note however that in TL-Arabic, a non-standard variety, the genitive marker is not used in either spoken or written forms, as shown in (16); in this case, the object of the preposition occurs without overt case marking.

(16) Ali [ya.kel] fi el-mṭṣum  
 Ali (pres)+SM.3.sing.mas+ eat in the restaurant  
 “Ali eats in the restaurant”

<sup>51</sup> It is possible that the P also contains a set of unvalued  $\phi$ -features (cf. e.g. Oosthuizen (2013:65); this possibility will not be explored further here.

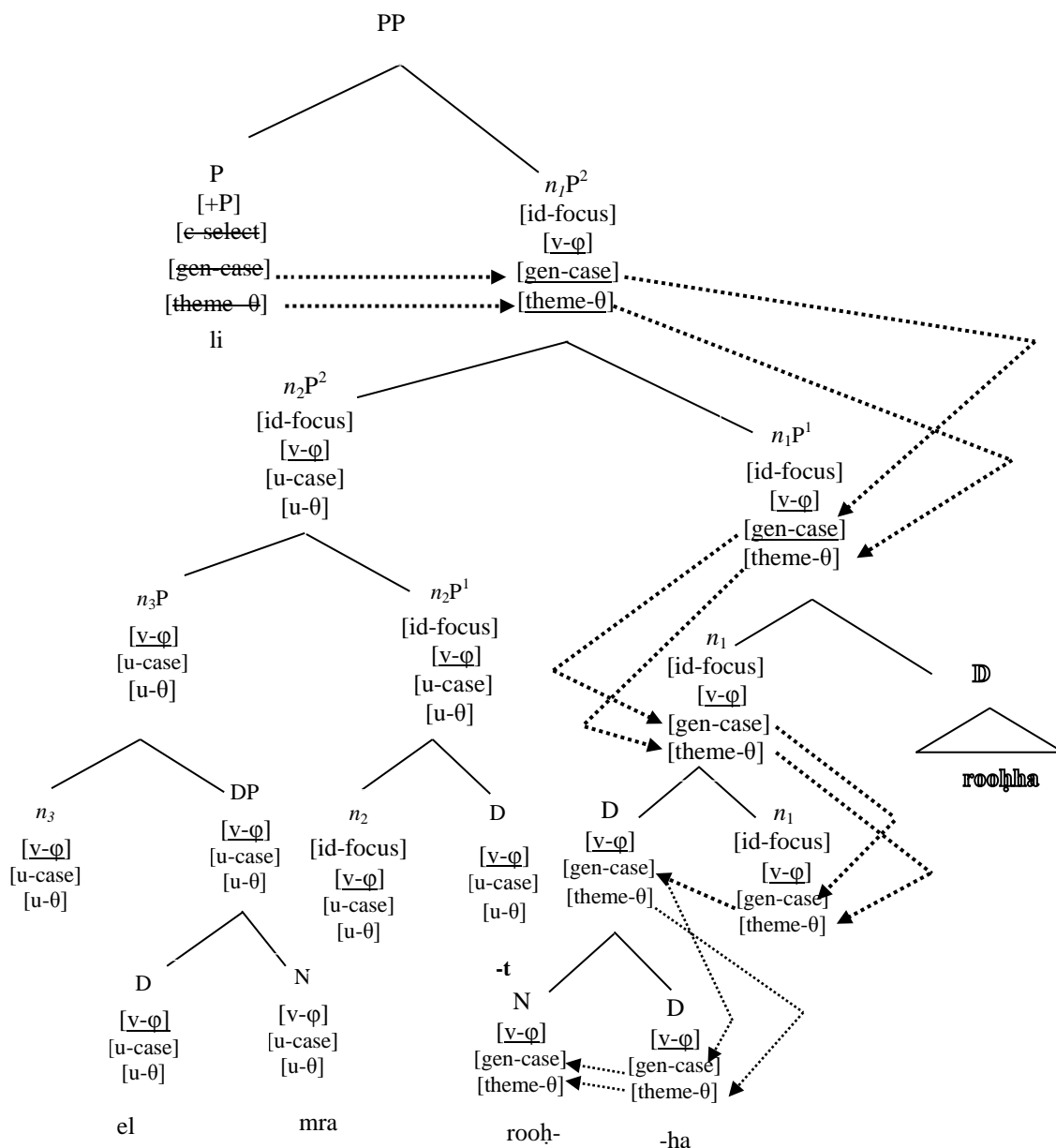
<sup>52</sup> In Modern Standard Arabic nominative case (referred to as “ar-rafṣ”) and accusative case (“an-naṣb”) are also phonetically and graphically expressed, nominative by the affix [u] and the Arabic and Roman symbols ’ and *u* respectively, and accusative by the affix [a] and the symbols ´ and *a*, as shown in (i) (Maisel, 2015:68). According to Ryding (2011:283), Arabic also has dative case, which is assigned to the indirect object in a double object construction (presumably by the relevant verb) and also by the preposition *li* (“to”) in a ditransitive construction, as in (ii); this type of case is however not distinguished from accusative case in spoken and written language.

(i) [yarsemu] Omar. **u** al-wardata.  
 (pres)+SM.3.sing.mas+ draw Omar(nom) the flower(acc)  
 “Omar draws a flower”

(ii) Omar [aṣṭṭṭa] el-kitab li-Lila  
 Omar (past)+ give+SM.3.sing.mas. the book to-Mona  
 “Omar gave the book to Mona”

Returning to the derivation of the sentence in (13), the only element in (15) which could supply  $\varphi$ -values to the other nominal elements in the structure is the N *mra* (“woman”). Hence, all the nominal elements in (15) end up with the same  $\varphi$ -values as *mra*, namely [3 person, singular, feminine]. The diagram in (17) illustrates the feature make-up of the P and the identity focus *nP* and the way in which the relevant feature valuations take place.<sup>53</sup>

17.



The next two stages of the derivation are briefly described in (18).<sup>54</sup>

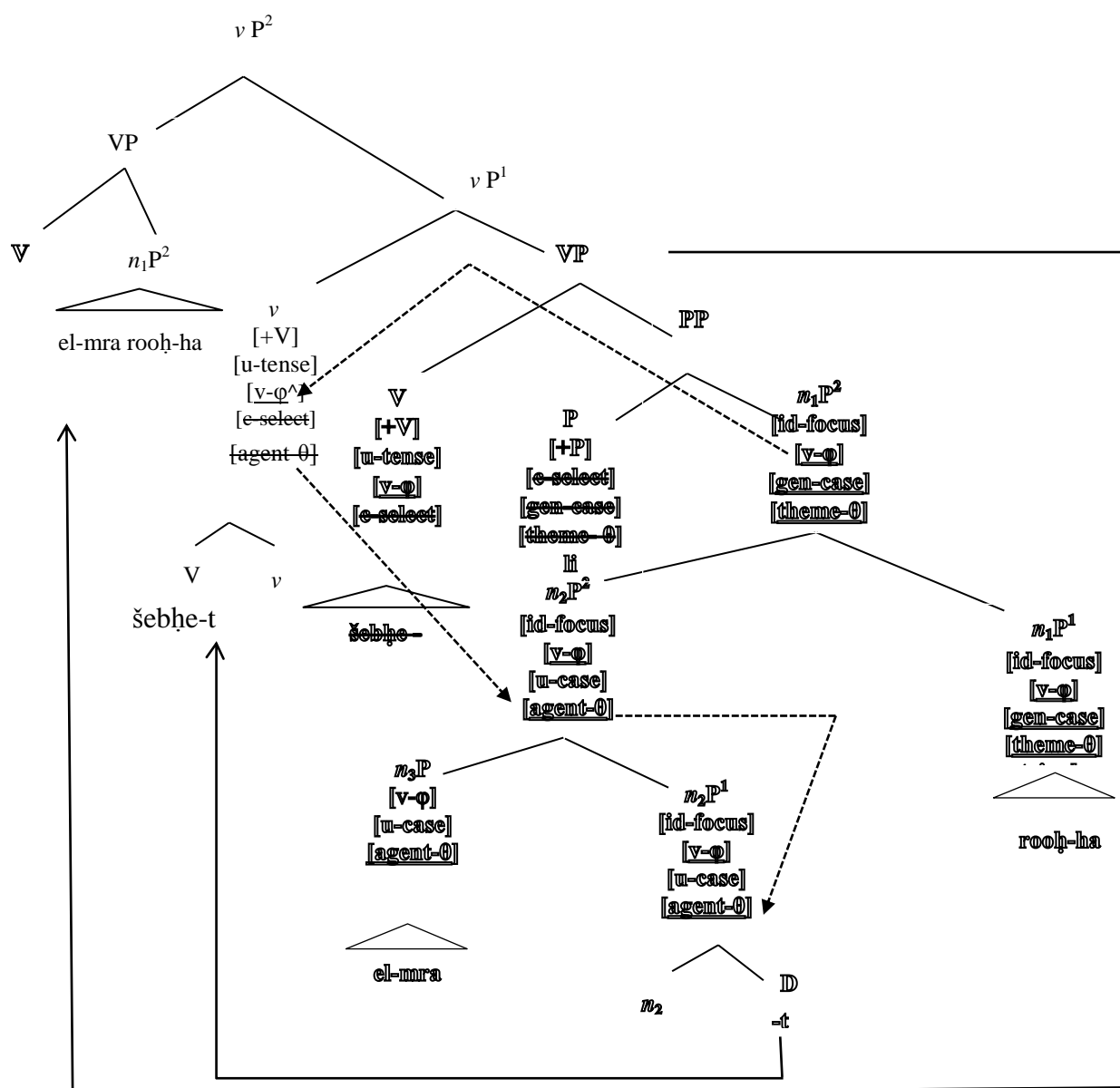
<sup>53</sup> For the way in which the linear ordering *rooh-ha* in (17) is derived, see the discussion of the structure in (4) above.

<sup>54</sup> In the analysis put forward for Afrikaans, Oosthuizen (2013:64) argues that the PP is merged with a light *p*. In view of the limited scope of this study, this possibility will not be explored for TL-Arabic.



18. (a) The PP in (17) is merged with the verb stem *šebħ* (“look”) forming the VP. This stem enters the derivation with a valued categorial feature [+V] and the unvalued features [u-T/A] and [u-φ]. In line with the assumption in section 4.2.1, the verb stem is associated with particular grammatical slots (such as the one for the SM) which, together with the stem, form a verbal complex.
- (b) The VP next merges with a functional light verb *v* containing a valued categorial feature [+V] as well as the features [c-select], [agent-θ], and [u-tense]. Note that the *v* lacks a case feature since it is associated with a lexical verb that is used intransitively, that is, one which does not select an object complement. The following operations can now take place. (i) The V merges with the light verb via the operation of V-to-*v* raising. (ii) The θ-feature on the light verb values the  $n_3P$  *el-mra* (“the woman”) in the specifier position of the identity focus  $n_1P^2$  as agent and in turn the φ-features of the light verb are valued by the φ-features of the identity focus  $n_1P^2$ . (iii) The SM *-t* contained in the  $n_2P^1$  is raised to the relevant grammatical slot in the verbal complex. (iv) The movement diacritic carried by the *v*'s φ-features triggers raising of the  $n_1P^2$ ; this is a pied-piping operation which involves movement of the entire VP containing the  $n_1P^2$  into to the specifier position of the *v*. The resulting *v*P is represented in (19).

19.

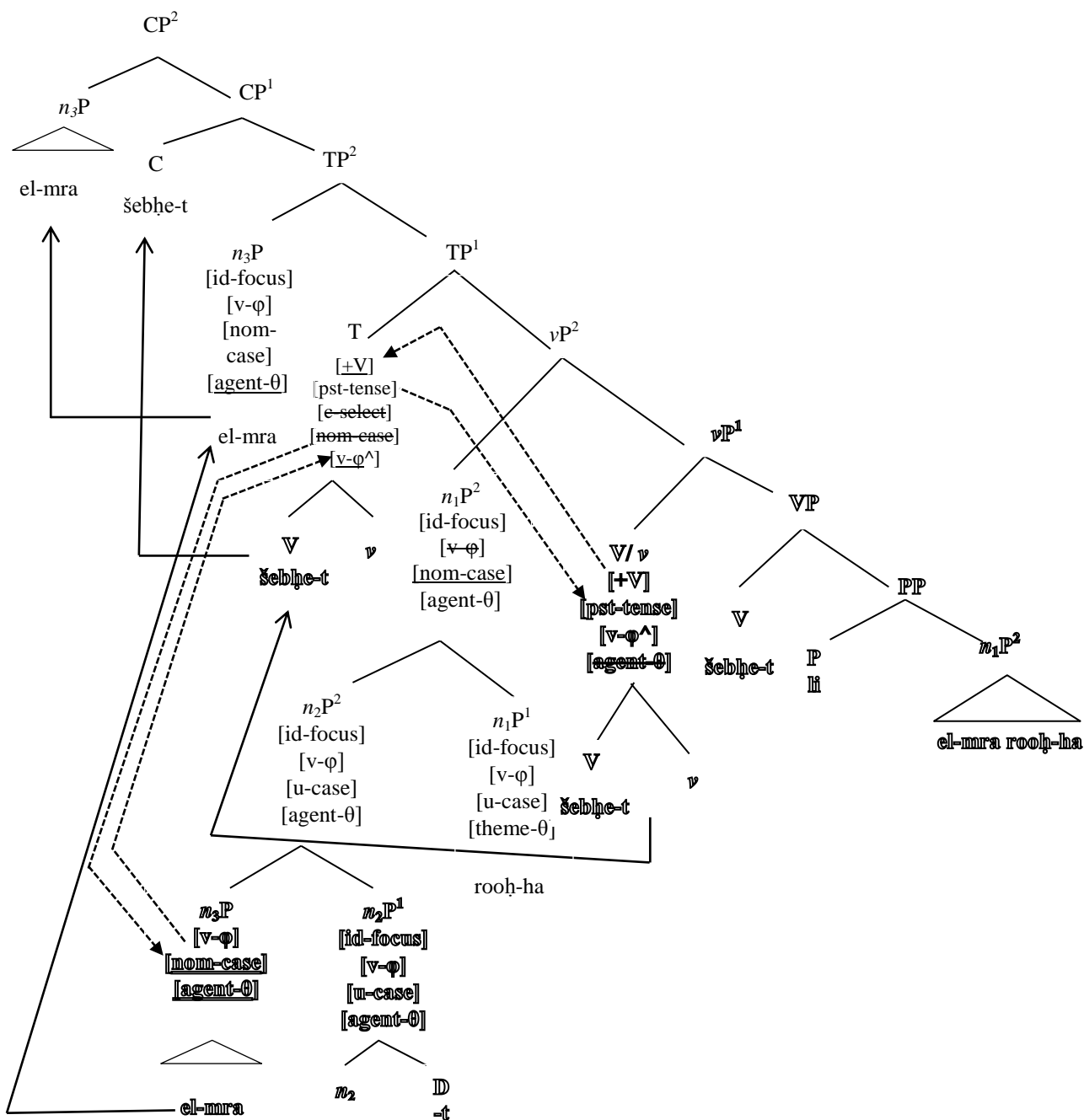


The remaining steps in the derivation are briefly summarised in (20).

20. (a) The  $\nu P$  in (19) merges with a T-head containing an unvalued categorial feature, a set of unvalued  $\phi$ -features  $[u-\phi^{\wedge}]$ , and the valued features  $[c-select]$ ,  $[v-tense]$ , and  $[nom-case]$ . This gives rise to the following operations. (i) The  $V/v$  provides the T with a categorial value  $[+V]$  and in turn the T values the tense feature of the  $V/v$  as past. (ii) The  $\phi$ -features of the T are valued by the  $\phi$ -features of the identity focus  $n_1P^2$  and the latter's case feature is concurrently valued as nominative by the T. (iii) The  $V/v$  *šebḥe-t* raises to the T. (iv) The movement diacritic on the T's  $\phi$ -features triggers raising of the  $n_3P$  to the specifier position of the TP, resulting in the extended projection  $TP^2$ .

- (b) The TP<sup>2</sup> next merges with a C-head. As pointed out in section 4.2.1, it is possible that (i) the subject nP is raised into the specifier position of the C and (ii) the finite verb is raised to the C-head, as shown in the structure in (21).

21.



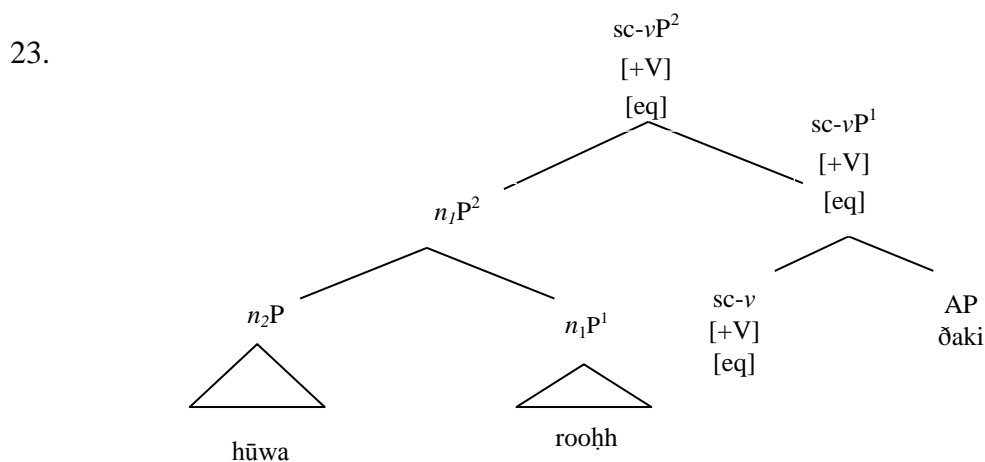
Having examined constructions containing a *rooħ-* reflexive pronoun functioning as the object argument of a preposition, we turn our attention next to small clause constructions.

### 4.2.3 Small clause constructions

As illustrated in section 2.2.3.3, in TL-Arabic a reflexive pronoun can occur in a so-called small clause (SC), that is, a clause that functions as the complement of the matrix verb and that (i) contains a subject and a non-verbal predicate but (ii) lacks a complementiser and an element expressing tense. An example of such a small clause is given in (22). In this case, the reflexive *rooḥ-h* (“himself”) serves as the subject of the SC (enclosed in curly brackets). Note that the reflexive stands in an obligatory coreferential relationship with the subject of the matrix verb, represented by the pronoun *hūwa* (“he”), as indicated by the subscripts.

22. *Hūwa*<sub>i</sub> [ḥsāb]                                {*rooḥ-h*<sub>i</sub> ḏaki<sub>i</sub>}  
 he (past)+SM.3.sing.masc+thinks REFL-him clever  
 “He regarded himself clever”

Let us briefly consider the derivation of the sentence in (22). In terms of the analysis set out in the previous two sections, the subject *hūwa* and the reflexive pronoun *rooḥ-h* are merged into a nominal shell structure headed by an identity focus light noun *n*, with *rooḥ-h* representing the complement and *hūwa* the specifier of the light noun. Adopting the proposals put forward by Oosthuizen (2013:110-113) for the analysis of small clauses in Afrikaans, the identity focus *nP* is taken to be merged into the specifier position of an equative light verb.<sup>55</sup> This light verb forms the head of the small clause construction, *sc-vP*, and takes the adjective *ḏaki* (“clever”) as its complement in the case of (22). The configuration resulting from the various merger operations just outlined is represented in the simplified structure in (23). Except for the use of the pronoun *hūwa* (“he”) and the absence of a SM, the internal structure of the *n<sub>i</sub>P<sup>2</sup>* in (23) is the same as that of the *n<sub>i</sub>P<sup>2</sup>*s in (6) and (17) above.



<sup>55</sup> Citing the typology of SCs put forward by Higgins (1973), Oosthuizen (2013:111) states that “it could be argued that the set of light verbs associated with SCs includes a predicational *v*, a specificational *v*, an identity/equative *v* and an identificational *v*.”

The  $sc\text{-}vP^2$  *hūwa rooḥ-h ḍaki* (“he himself clever”) in (23) next merges with the main clause verb occurring in the form of the uninflected stem *ḥsab* (“regard”). The verb contains the categorial feature [+V], an unvalued [u-T/A] feature, and a  $\theta$ -feature with the theme value. The latter serves to value the  $n_1$  *rooḥ-h* and its projections. Since the  $n_2P$  *hūwa* (“he”) does not form part of the  $n_1$  projection line, its  $\theta$ -feature remains unvalued at this stage. The resulting VP is subsequently merged with a light  $v$  bearing the features [u- $\phi$ ^], [acc-case] and [exp(eriencer)- $\theta$ ]. This gives rise to a number of operations. Firstly, the V merges with the light verb via the operation of V-to- $v$  raising. Secondly, the  $\theta$ -feature on the light verb values the  $n_2P$  *hūwa* (“he”) in the specifier position of the identity focus  $n_1P^2$  as experiencer. Thirdly, the light verb values the case feature of the  $n_1$  *rooḥ-h* (and its projections) as accusative; as in the case of  $\theta$ -valuation, the  $n_2P$  *hūwa* remains unvalued for case since it does not form part of the  $n_1$  projection line. Fourthly, the  $\phi$ -features of the light verb are valued by those of the identity focus  $n_1P^2$  in the specifier position of the  $sc\text{-}vP$ . The movement diacritic carried by the  $v$ 's  $\phi$ -features triggers raising of the  $n_1P^2$ , a pied-piping operation which involves movement of the entire VP containing the  $n_1P^2$  into the specifier position of the  $v$ . These operations yield the structure in (24).

$$24. \quad [{}_{vP}^2[{}_{VP}[v\dot{h}s\bar{a}b][{}_{sc\text{-}vP}^2h\ddot{u}wa\ r\ddot{o}oḥ\text{-}h\ \ddot{d}aki]]][{}_{vP}^1[v][{}_{VP}[v\dot{h}s\bar{a}b][{}_{sc\text{-}vP}^2h\ddot{u}wa\ r\ddot{o}oḥ\text{-}h\ \ddot{d}aki]]]$$

The  $vP^2$  is subsequently merged with a finite T. The T carries the feature [past-tense] which serves to value the tense feature of the V/ $v$ . As claimed in sections 4.2.1 and 4.2.2, the V/ $v$  undergoes raising to the T. Note that the  $n_2P$  *hūwa* (“he”) is still unvalued for case at this point. Hence, being active from a feature-valuation perspective, it can supply the T's  $\phi$ -features with values and concurrently be valued as nominative by the T. The movement diacritic associated with the T's  $\phi$ -features moreover triggers raising of the  $n_2P$  into [spec, T]. The resulting TP next merges with a C-head forming a CP. As noted in the previous two sections, it is possible that this merger gives rise to two further operations: (i) the subject  $n_2P$  *hūwa* (“he”) is raised into the specifier position of the C and (ii) the verb *ḥsāb* (“regarded”) is raised to the C-head. Assuming these operations, the final structure of the sentence in (22) would be along the following lines:

$$25. \quad [{}_{CP}^2[{}_{n_2P}h\ddot{u}wa]][{}_{CP}^1[C[{}_{V/v}\dot{h}s\bar{a}b][{}_{TP}^2[{}_{n_2P}h\ddot{u}wa]]][{}_{TP}^1[T[{}_{v/v}\dot{h}s\bar{a}b]]][{}_{VP}^2[{}_{VP}[v\dot{h}s\bar{a}b][{}_{sc\text{-}vP}^2h\ddot{u}wa\ r\ddot{o}oḥ\text{-}h\ \ddot{d}aki]]][{}_{vP}^1[\dot{h}s\bar{a}b][v][{}_{VP}[v\dot{h}s\bar{a}b][{}_{sc\text{-}vP}^2h\ddot{u}wa\ r\ddot{o}oḥ\text{-}h\ \ddot{d}aki]]]$$

## 4.2.4 Infinitival constructions

A description was given in section 2.2.3.4 of two types of reflexive infinitival constructions in TL-Arabic, namely control constructions and raising constructions. These two constructions are discussed sections 4.2.4.1 and 4.2.4.2, respectively.

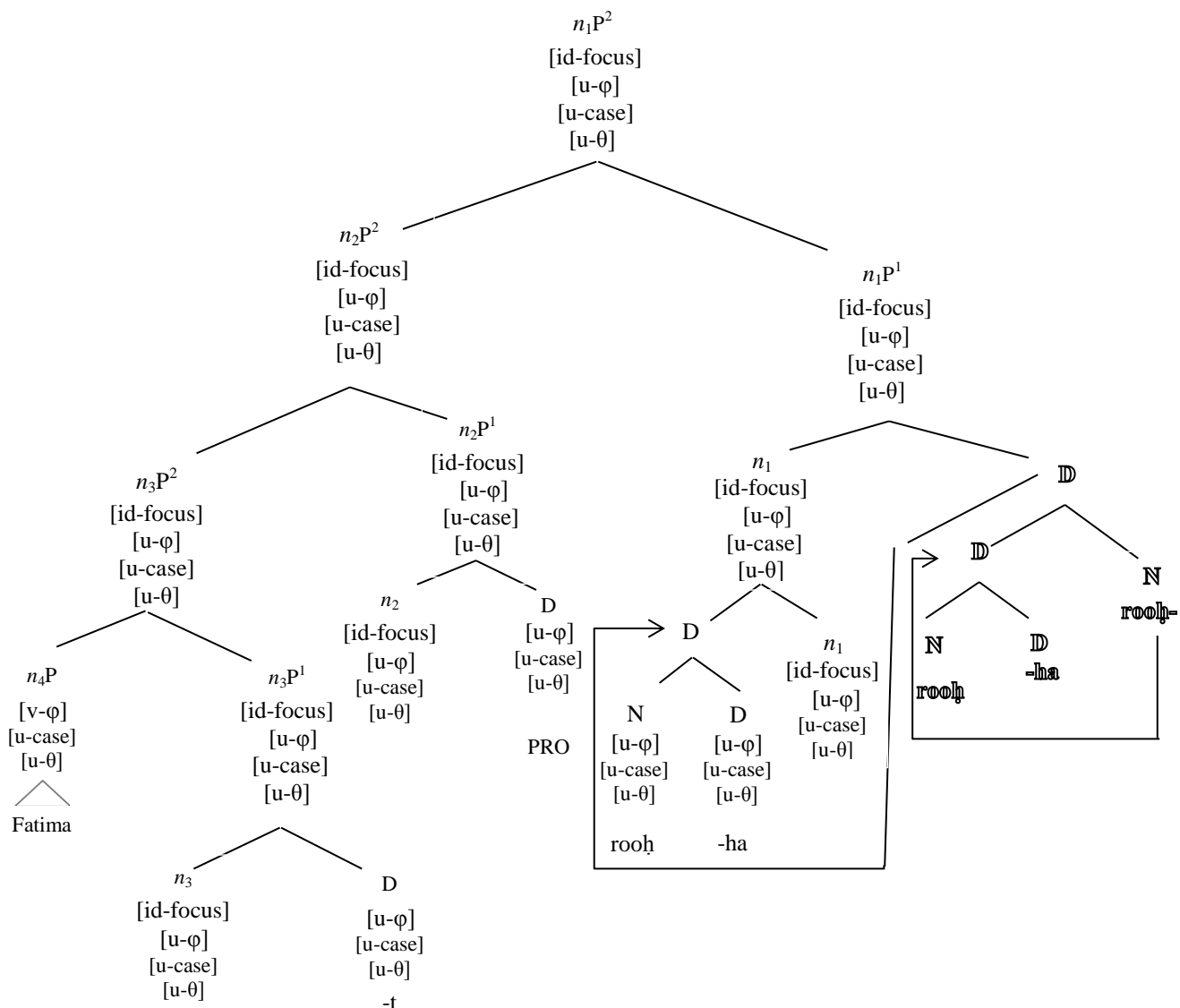
### 4.2.4.1 Control constructions

As was illustrated in section 2.2.3.4.1, a pronoun containing the reflexive affix *rooḥ-* can occur as the direct object argument in a control construction, that is, an infinitival clausal construction in which the subject argument is not phonetically realised but is represented by the covert pronominal element PRO. Consider the sentence in (26) below. In this sentence the reflexive functions as the object argument of the verb *waṣf* (“to describe”), taking as its antecedent the PRO subject of the infinitival clause, where PRO is in turn interpreted as coreferential with the subject *Fatima*. This means that there are three instances of coreferentiality: (i) between *rooḥ-ha* (“herself”) and PRO, (ii) between PRO and *Fatima* and (iii) between *Fatima* and the SM- *t* appended to the verb in the main clause. As a consequence, then, the reflexive enters into a coreferential relationship with the matrix clause subject, the SM and PRO, as indicated by the subscripts in the example in (26). (Here and below the infinitival clause is enclosed in curly brackets.)

26. Fatima<sub>j</sub> [ḥawle.t<sub>j</sub>] {PRO<sub>i</sub> waṣf **rooḥ-ha<sub>i</sub>**}  
 Fatima (past)+ try +SM.3.sing.fem                to describe REFL-her  
 “Fatima tried to describe herself”

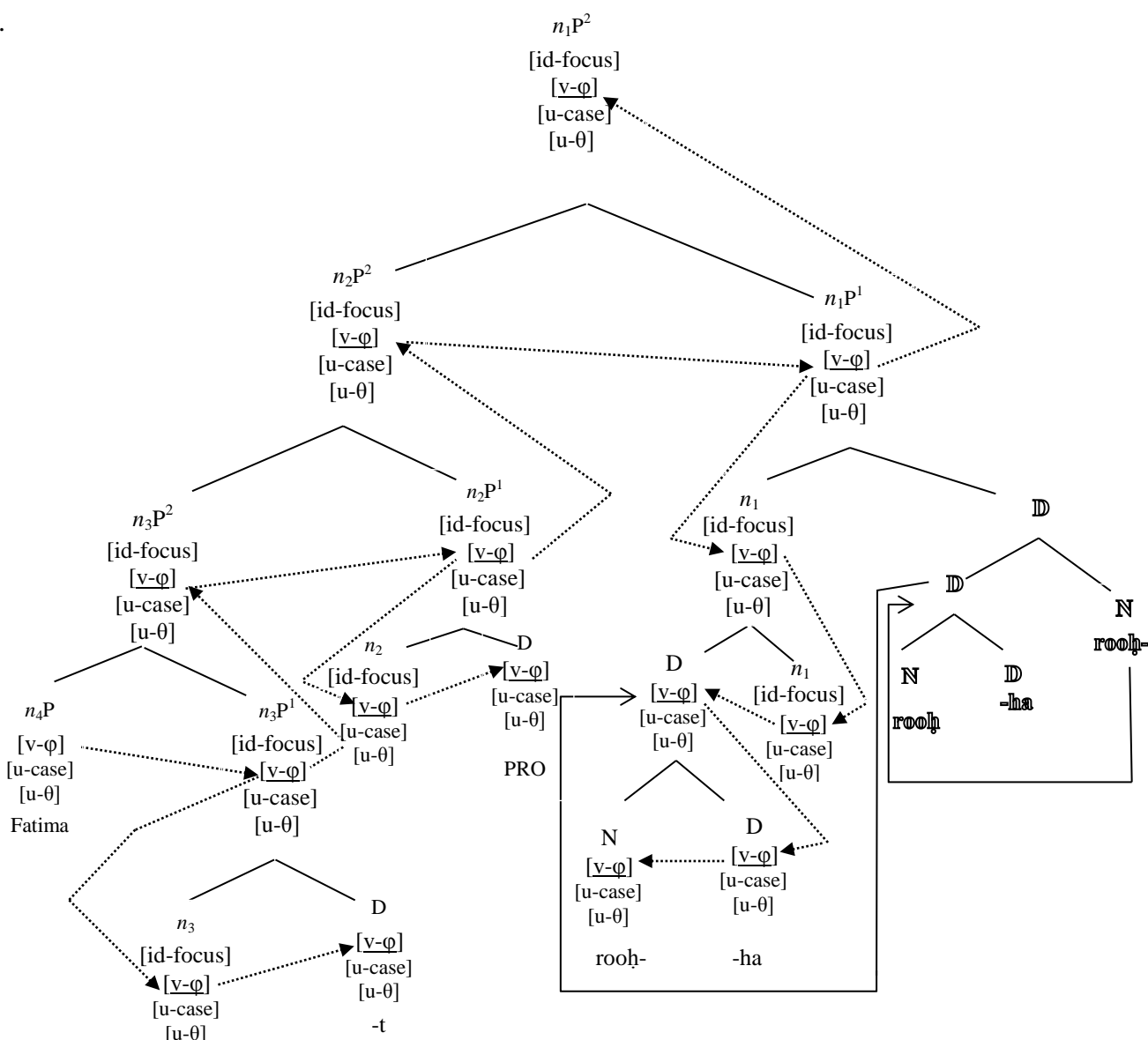
Based on the proposals put forward by Oosthuizen (2013:98-100), the obligatory coreferential relationships in (26) are established by means of three distinct identity focus nominal shells. The first shell contains the reflexive as the complement of the identity focus light noun  $n_1$ , where the latter has the features [u- $\phi$ ], [u-case] and [u- $\theta$ ], as well as a valued focus feature. The second shell is headed by a distinct identity focus light noun  $n_2$ , which has the same features as the  $n_1$ . The  $n_2$  takes PRO as its complement; being a D, PRO carries unvalued case,  $\theta$ - and  $\phi$ -features. The third shell is also headed by an identity focus light noun,  $n_3$ , which carries the same features as the  $n_1$  and the  $n_2$ ; the  $n_3$  contains the SM -*t* as its complement and the subject *Fatima* as its specifier. The three nominal shells and their feature make-up are shown in (27).

27.



The NP *Fatima* contained in the  $n_4P$  is the only constituent in (27) that carries a set of valued  $\phi$ -features. This NP supplies the relevant values (3person, singular, feminine) to the  $n_4$  and its projection  $n_4P$ , from where these values are spread to all the other nominal expressions, as shown by the dotted arrows in (28) below.

28.



Next, the  $n_1P^2$  in (28) is merged with the (infinitival) verb *wasf* (“to describe”), which supplies the theme value to the  $\theta$ -feature of the  $n_1P^2$ .<sup>56</sup> The resulting VP is subsequently merged with an agentive light verb  $v$ . The following operations can now take place. Firstly, the V is raised to the  $v$ . Secondly, the  $v$  gets its  $\phi$ -features valued by the  $n_1P^2$  and in turn values the case feature of this  $n_1P$  as accusative.<sup>57</sup> The movement diacritic that is associated with the  $v$ 's  $\phi$ -features triggers raising of the  $n_1P^2$  into the specifier position of the  $vP$ . Thirdly, the  $v$  provides the agent  $\theta$ -value to the  $n_2P^2$ , in effect, then, to the PRO contained in this  $nP$ . The resulting structure may be presented as in (29).

<sup>56</sup> The  $\theta$ -features of the other  $nPs$  in (28) remain unvalued at this point since valuation proceeds only along the  $n_1$ 's projection spine.

<sup>57</sup> As in the case of the  $\theta$ -features, the case features of the  $n_2P$ ,  $n_3P$  and  $n_4P$  remain unvalued at this point.



29.  $[_{vP}^2[_{VP}[_{vwa\text{ṣ}f}]][_{n1P}^2[_{n2P}^2[_{n3P}^3[_{n4P}\text{Fatima}]][_{n3P}^1[_{n3}][\text{D-t}]]]][_{n2P}^1[_{n2}][\text{DPRO}]][_{n1P}^1\text{rooḥ-ha}]]][_{vP}^1$   
 $[_{v}][_{VP}[_{vwa\text{ṣ}f}]][_{n1P}^2[_{n2P}^2[_{n3P}^2[_{n4P}\text{Fatima}]][_{n3P}^1[_{n3}][\text{D-t}]]]][_{n2P}^1[_{n2}][\text{DPRO}]]][[_{n1P}^1\text{rooḥ-ha}]]]]]]$

The  $vP^2$  in (29) next merges with a non-finite T forming a TP. Adopting the proposals put forward by Oosthuizen (2013:95) for Afrikaans, it is assumed here that this T contains a [infin-tense] feature and only one  $\phi$ -feature, namely [u-num<sup>^</sup>], and that it lacks a case feature.<sup>58</sup> The T's [infin-tense] feature serves to value the tense feature of the V/v and the V/v provides the T with a categorial value [+V]. The V/v is subsequently raised to the T. The T's number feature is valued as singular by the  $n_2P$  containing the PRO, and the movement diacritic associated with the T's  $\phi$ -features accordingly triggers raising of the  $n_2P^2$  out of the specifier position of the  $n_1P^2$  into [spec, T]; this means that the  $n_1P^2$  containing the reflexive *rooḥ-ha* remains in the position to the right of the V/v-T complex. The TP next merges with a phonetically empty C-head forming a CP. The resulting structure may be represented as in (30).

30.  $[_{CP}[_{C}]][_{TP}^2[_{n4P}\text{Fatima}]][_{TP}^1[_{T}[_{v/v}\text{waṣf}]]][_{vP}^2[_{VP}[_{vwa\text{ṣ}f}]][_{n1P}^2[_{n2P}^2[_{n3P}^3[_{n4P}\text{Fatima}]][_{n3P}^1[_{n3}][\text{D-t}]]]][_{n2P}^1[_{n2}][\text{DPRO}]][_{n1P}^1\text{rooḥ-ha}]]][_{vP}^1[_{v}][_{VP}[_{vwa\text{ṣ}f}]][_{n1P}^2[_{n2P}^2[_{n3P}^2[_{n4P}\text{Fatima}]][_{n3P}^1[_{n3}][\text{D-t}]]]][_{n2P}^1[_{n2}][\text{DPRO}]]][[_{n1P}^1\text{rooḥ-ha}]]]]]]$

Following Oosthuizen (2013:102), it is assumed here that the abstract C associated with the infinitival clause in (30) “assigns null case to the  $n_2P$  containing PRO in its head position”.

The subsequent steps in the derivation of the sentence in (26) are briefly summarised in (31).

31. (a) The CP in (30) is merged with the (subject control) main V *ḥawle* (“try”).<sup>59</sup> The resulting VP is in turn merged with the light verb associated with the verb *ḥawle*, which may be called c(ontrol)-v for ease of reference. Being associated with a control verb (specifically, one that does not select a direct object argument), the c-v is assumed to be defective in two respects: (i) it lacks a case feature and (ii) it contains only an unvalued number feature [u-num<sup>^</sup>] instead of a full set of  $\phi$ -features (cf. Oosthuizen 2013:103). However, the c-v does contain a  $\theta$ -feature with an agent (or perhaps experiencer) value.
- (b) The verb V *ḥawle* (“try”) undergoes V-to-c-v raising. The c-v described in (a) receives a number value from the  $n_4P$  and in turn values the  $\theta$ -feature of this  $nP$

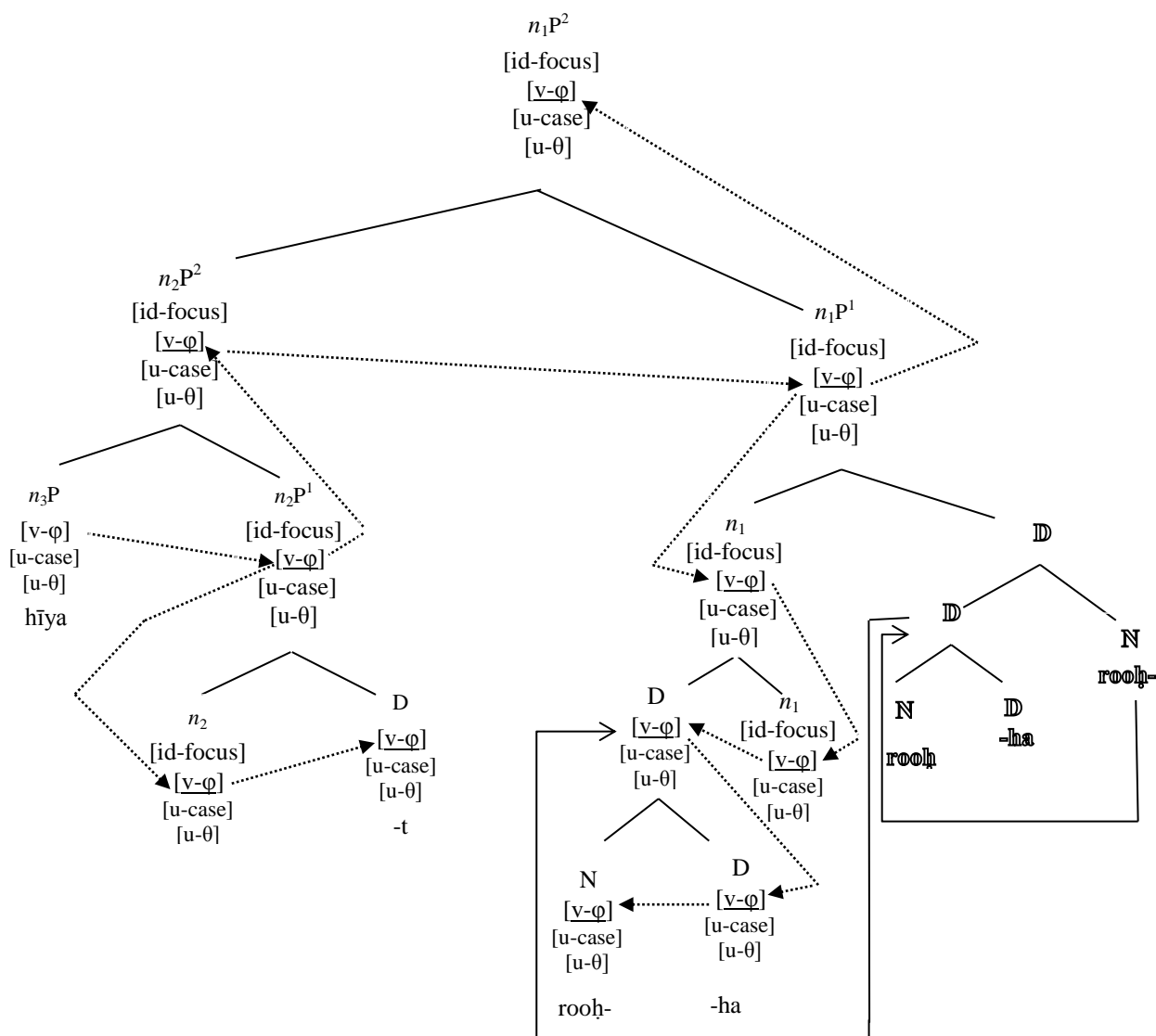
<sup>58</sup> Cf. e.g. Richards (2007) for the idea that the infinitival T is “defective” in terms of  $\phi$ -features.

<sup>59</sup> The verb *ḥawle* (“try”) is used intransitively in (26), which means that it lacks a  $\theta$ -feature; cf. Oosthuizen (2013:103) for discussion of a similar construction in Afrikaans.



The sentence in (32) is derived as follows in terms of the analysis set out in the previous sections. The obligatory coreferential relationships are established by means of two distinct identity focus nominal shells, as shown in (33) below. The first nominal shell contains the reflexive *rooḥ-ha* (“herself”) as the complement of an identity focus light noun,  $n_1$ . The second shell is also headed by an identity focus light noun,  $n_2$ ; in this case the light noun takes the SM *-t* as its complement and the subject *hīya* (“she”) as its specifier. The  $n_2$ P in turn serves as the specifier of the  $n_1$ P containing the reflexive. The two light nouns are both taken to have the features [u- $\phi$ ], [u-case] and [u- $\theta$ ], as well as a valued identity focus feature. The pronoun *hīya* contained in the  $n_2$ P is the only constituent in (33) that carries a set of valued  $\phi$ -features. This pronoun supplies the relevant values (3person, singular, fem) to its immediately dominating  $n_3$ P from where it spreads to all the other nominal elements in the highest containing nominal shell, that is, the  $n_1$ P<sup>1</sup>. In this way, then, both the SM *-t* and the reflexive end up with the same  $\phi$ -values as the subject *hīya*. The various  $\phi$ -valuations are shown by the dotted arrows in (33) below.

33.



The  $n_1P^2$  in (33) is next merged with the verb *hub* (“to love”), which supplies the theme value to the  $\theta$ -feature of the  $n_1P^2$ . The resulting VP is subsequently merged with an experiencer light verb *v*. This leads to the following operations. Firstly, the V is raised to the *v*. Secondly, the *v* gets its  $\phi$ -features valued by the  $n_1P^2$  and in turn values the case feature of this  $n_1P$  as accusative.<sup>62</sup> The movement diacritic that is associated with the *v*’s  $\phi$ -features triggers raising of the  $n_1P^2$  into the specifier position of the *v*P. Thirdly, the *v* provides the experiencer  $\theta$ -value to the  $n_2P^2$ . The resulting structure may be represented as in (34).

34.  $[_{vP}^2[_{VP}[_{vhob}][_{{n_1P}^2}[_{{n_2P}^2}[_{{n_3P}^2}h\bar{i}y\bar{a}][_{{n_2P}^1}[_{{n_2}][D-t]]][_{{n_1P}^1}roo\bar{h}ha]]]][_{{vP}^1}[_{{v}][[_{VP}[_{v\bar{h}ob}][_{{m_1P}^2}[_{{m_2P}^2}[_{{m_3P}^2}h\bar{i}y\bar{a}][_{{m_2P}^1}[_{{m_2}][D-t]]][_{{m_1P}^1}roo\bar{h}h\bar{a}]]]]]]]]]]]$

The  $vP^2$  in (34) next merges with a non-finite T forming a TP. Similar to the infinitival T in control constructions discussed in the previous section, the T contains an [infin-tense] feature and only one  $\phi$ -feature, namely [u-num<sup>^</sup>], and it lacks a case feature. The following operations take place in this configuration. First, the T’s number feature is valued as singular by the  $n_2P$  and the movement diacritic associated with the T’s  $\phi$ -feature accordingly triggers raising of the  $n_2P^2$  into [spec, T]. Second, the T’s [infin-tense] feature serves to value the tense feature of the V/*v* and the V/*v* provides the T with a categorial value [+V]. The V/*v* is subsequently raised to the T. The structure resulting from these operations may be represented as in (35).

35.  $[_{TP}^2[_{{n_3P}^2}h\bar{i}y\bar{a}][_{{TP}^1}[_{{T}[_{V/v}hub}][_{{vP}^2}[_{VP}[_{v\bar{h}ub}][_{{m_1P}^2}[_{{m_2P}^2}[_{{m_3P}^2}h\bar{i}y\bar{a}][_{{n_2P}^1}[_{{n_2}][D-t]]][_{{m_1P}^1}roo\bar{h}h\bar{a}]]]]]]]][_{{vP}^1}[_{v\bar{h}ub}][_{VP}[_{v\bar{h}ub}][_{{m_1P}^2}[_{{m_2P}^2}[_{{m_3P}^2}h\bar{i}y\bar{a}][_{{m_2P}^1}[_{{m_2}][D-t]]][_{{m_1P}^1}roo\bar{h}h\bar{a}]]]]]]]]]]]]]$

According to Oosthuizen (2013:96), it is standardly assumed that “raising verbs select a TP as their infinitival complement, rather than a CP.” Adopting this view, the infinitival clause in (32) therefore lacks a CP. The next steps in the derivation of the sentence in (32) are briefly summarised in (36):

36. (a) The TP in (35) is merged with the raising verb *ban* (“seem”). The resulting VP is in turn merged with the light verb associated with the V *ban* (r(aising)-*v*, for short), which is assumed to be defective in two respects: (i) it lacks both a case feature and a  $\theta$ -feature,<sup>63</sup> and (ii) it contains only an unvalued number feature [u-num<sup>^</sup>] instead of a full set of  $\phi$ -features (cf. Oosthuizen 2013:103).

<sup>62</sup> As in the case of the  $\theta$ -features, the case features of the  $n_2P$  and  $n_3P$  remain unvalued at this point.

<sup>63</sup> Recall that both the (surface) subject *hīya* (“she”) and the SM *-t* in (32) get assigned the experiencer  $\theta$ -role from the *v* associated with the infinitival verb *hob* (“to love”) in the subordinate clause represented in (35).



marker, on the one hand, and the subject marker and the expression functioning as the subject, on the other hand. Besides being able to account for the facts of obligatory reflexivity in the five TL-Arabic constructions that were examined, it should also be noted that the proposed analysis of the phenomenon of obligatory reflexivity in these constructions does not require any novel theoretical devices nor any assumptions and devices that are incompatible with those employed within the broad framework of Minimalist Syntax.

## Chapter 5

### Summary, conclusion and final remarks

#### 5.1 Summary and conclusion

This study focused on the phenomenon of obligatory reflexivity in Tripolian Libyan Arabic. The study addressed two main topics. The first concerns the grammatical properties of reflexive pronouns consisting of the REFL affix *rooh-* (“self”) and a personal pronoun and the constructions in which such reflexive pronouns occur. Secondly, an attempt was made to develop an analysis of obligatory reflexivity in TL-Arabic within the framework of the Nominal Shell Analysis (NSA) of this phenomenon in Afrikaans proposed by Oosthuizen (2013), the core question being whether the NSA can provide an adequate theoretical basis for explaining the way in which the coreferential relationship between a reflexive pronoun containing the affix *rooh-* and its antecedent is established.

Chapter 2 provided some general background information on TL-Arabic grammar. This chapter also provided a non-formalistic description of the morphological properties of *rooh-* reflexive pronouns and their syntactic distribution in the following types of constructions:

- (i) Verbal object constructions, where the reflexive functions as the direct object argument of a finite verb and takes its reference from the subject.
- (ii) Prepositional object constructions, where the reflexive occurs as the object argument of a preposition and enters into an obligatorily coreferential relationship with either the direct object or the subject of the sentence.
- (iii) Small clause constructions, where the reflexive serves as the subject of a small clause complement of the matrix verb, taking as its antecedent the subject of the matrix clause.
- (iv) Control constructions, where the reflexive functions as the direct object of an infinitival clause that represents the complement of a control verb and that contains the abstract pronoun PRO as its subject; in such cases the reflexive stands in a coreferential relationship with both the PRO and the subject of the matrix clause.
- (v) Raising constructions, where the reflexive functions as the direct object of an infinitival clause that represents the complement of a raising verb; in such cases the reflexive takes the subject of the infinitival clause as its antecedent, with the latter being raised into the surface subject position of the matrix clause.

In analysing the coreferential relationships between the reflexive and its antecedent in these five constructions, attention was also given to the same relationship that is found between the reflexive and the relevant subject marker (SM).

Chapter 3 had two main aims. The first was to provide a brief description of the core assumptions and devices associated with the broad theoretical framework of Minimalist Syntax, focusing on those that are employed in the analyses presented in Chapter 4. The second aim was to provide a description of a recent minimalist account of obligatory reflexivity, the Nominal Shell Analysis (NSA), proposed for Afrikaans by Oosthuizen (2013) and subsequently extended to Chichewa by Msaka (2014). It was pointed out at the start of Chapter 3 that no analysis of obligatory reflexivity has yet been proposed for TL-Arabic within Minimalist Syntax or its generative precursors; as indicated, there is also very little theoretical work on this phenomenon within Modern Standard Arabic.

In Chapter 4 an attempt was made to develop a Nominal Shell analysis of obligatory reflexivity in TL-Arabic, focusing on the five constructions outlined above. It was concluded in Chapter 4 that the devices of the analysis of obligatory reflexivity in Afrikaans proposed by Oosthuizen (2013) also provides an adequate framework for the analysis of this phenomenon in the TL-Arabic constructions. In each case, the reflexive pronoun and its antecedent are claimed to form part of the same nominal shell, one headed by an identity focus light noun. The coreferential relationship between the reflexive and its antecedent is established within this shell configuration by means of  $\phi$ -feature valuation.

It was furthermore argued in the course of Chapter 4 that the coreferential relationship between a SM and the subject of a sentence can also be accounted for in terms of the NSA. As in the case of reflexive pronouns and their antecedents, it was claimed that the SM is initially merged as the complement of an identity focus light noun, and the subject expression with which it is associated as the specifier of this light noun. The coreferential relationship between these two expressions is then established via  $\phi$ -feature valuation, with the light noun acting as intermediary.

## **5.2. Final remarks**

The analysis in this study was limited to the syntax of TL-Arabic reflexive constructions involving the reflexive element *rooh-* (“self”). In the course of the discussion, attention was drawn to several topics in TL-Arabic grammar that require further investigation. One such topic concerns the grammar of the subject marker SM, specifically its categorial status, the position in which it is initially merged into the structure, and the exact process by which it



eventually ends up inside the verbal complex. As regards the verbal complex, several assumptions were made about its structural composition – e.g. the SM, object marker, tense marker, etc. – and the possibility that it gets raised to the T, and perhaps also to the C, in the course of a derivation. A detailed investigation of these and related topics falls outside the scope of the present study and is left for further research.

The analysis presented in Chapter 4 focused specifically on obligatory reflexivity in TL-Arabic. Following the suggestions made by Oosthuizen (2013) and Msaka (2014), it could be argued that a similar analysis can be put forward for other phenomena involving a coreferential relationship between a nominal expression and an antecedent. Two such phenomena may be briefly described here. The first concerns the reflexive use of possessive pronouns. The possessor-possession relationship in TL-Arabic can be expressed in two different ways, namely (i) by the possessive pronominal element (POSS) *imtʃ* that is used on its own as illustrated in (1), and (ii) by a possessive pronoun that is either appended to the POSS *imtʃ* (2a,b) or to a noun (2c).<sup>64</sup> In all these cases, the possessive pronominal element stands in a coreferential relationship with the expression representing the possessor, as illustrated by the subscript in (1) and (2). The ungrammaticality of the sentence in (3) shows that the possessor expression cannot co-occur with *imtʃ* if the latter carries a POSS affix.

1. el-ktab **imtʃ<sub>i</sub>** Ahmed<sub>i</sub> raḥ  
the book POSS Ahmed lost  
“Ahmed’s book was lost”
2. (a) Hada el-ktab **imtʃ-h** lgata-h  
it the book POSS-his found-it  
“It is his book that I found”  
(b) el-ḥuta **imtʃ-ha** matet  
the fish POSS-her died  
“Her fish died”

<sup>64</sup> Even though the (finite) verbal complex always contains one or more affixes (see section 2.1), the POSS affix never forms part of the verbal complex. Note also that the noun to which the POSS suffix is attached can in turn serve as the complement of a preposition. In the sentence in (i), for example, the noun+POSS expression forms part of a phrase headed by the preposition *fi* (“in”) (cf. Versteegh (2011)). In this case the noun+POSS expression is obligatorily coreferential with the subject of the sentence.

(i) Fatima<sub>i</sub> [ḥatet] el-fikra **fi-rās-ha<sub>i</sub>**  
Fatima (past) + consider+SM.3.fem.sing the idea in mind POSS (her)  
“Fatima considered the problem in her mind”



Person	Number	Gender	Suffix	<i>imtʃ</i> +suffix
	S/P	F/M		
First	S	F\M	-i	<i>imtʃ</i> -i (“mine”)
	P	M\F	-na	<i>imtʃ</i> -na (“ours”)
Second	S	M\F	-k	<i>imtʃ</i> -k (“yours”)
	P	F\M	-kum	<i>imtʃ</i> -kum (“yours”)
Third	S	M	-h	<i>imtʃ</i> -h (“his”)
	S	F	-ha	<i>imtʃ</i> -ha (“hers”)
	P	M\F	-hum	<i>imtʃ</i> -hum (“theirs”)

Table 2: POSS affixed to *imtʃ*

In the examples in (1) and (2c) the possessive pronominal element enters into a coreferential relationship with one expression in the sentence. The example in (4), in contrast, is three-way ambiguous: the POSS-suffix can refer either to the subject *Ali*, the object *Mohamed*, or some unspecified male already identified in the context.

4.     Ali<sub>i</sub> [rafaʃ]                                     Mahomed<sub>j</sub> le-**madrest-h**<sub>i/j/k</sub>

Ali (past) +take+SM.3.masc.sing Mohamed to school POSS (his)

“Ali took Mohamed to his school” (where “his” = Ali, or Mohamed, or some male specified in the context)

As in the case of reflexive pronouns, it could be argued that the possessive pronominal and its antecedent (that is, the possessor expression) form part of the same identity focus nominal shell in sentences like (1), (2c) and (4). The coreferential relationship between these nominal expressions would then be established by means of  $\phi$ -feature valuation, with the identity focus light noun serving as intermediary.<sup>65</sup>

A second phenomenon that could also plausibly be analysed in terms of the devices and assumptions of Oosthuizen’s (2013) NSA concerns the interpretation of so-called floating (or postposed) quantifiers. Consider the sentence pairs in (5)-(7).

<sup>65</sup> Cf Oosthuizen (2013: section 2.3.5) for an analysis along these lines for Afrikaans.

5. (a) Kul-hum es.šgar labzu hwayej-hum<sup>66</sup>  
 all-them the children (Past)+dirty+SM.3. plu. clothes their  
 “All the children dirty their clothes”
- (b) Es.šgar kul-hum labzu hwayej-hum  
 the children all-them (Past)+dirty+SM. 3. plu. clothes their  
 “The children all dirty their clothes”
6. (a) Zooz bnaweeet raḥu min om-hum  
 two girls (past)+lost+SM.3.plu.neut from mother-their  
 “Both girls lost from their mum”
- (b) l.bnaweeet e.zooz raḥu min om-hum  
 the girls two (past)+lost+SM.3.plu.neut from mother-their  
 “The girls both lost from their mother”

In the (a)-examples the universal quantifiers *kul* (“all”) and *zooz* (“both”) occur before the nominal expression, *šgar* (“children”) and *l.bnaweeet* (“the girls”) respectively, with which they are associated semantically, that is, the expression which each serves to quantify. In the (b)-examples, the elements *kul* and *zooz* occur after the nominal expression; in these cases, *kul* and *zooz* not only serve to quantify the set of entities that the relevant nominal expression refers to, but also have a pronominal function: they stand in a coreferential relationship with the nominal expression in question, the latter representing the antecedent of the quantifier-like element to its right. Note that these elements can also occur after the verbal complex in sentences with an intransitive verb, as shown in (7).

<sup>66</sup> As shown in (5a), a personal pronoun (in this case *hum* (“them”)) can optionally co-occur with the quantifier *kul* (“all”); however, if the quantifier occurs in postposed position, as in (5b), the pronoun is obligatory. Note also that if a pronoun functions as the direct object, it always forms part of the verbal complex, as in (ia); as shown in (ib), in sentences where the direct object is represented by the quantifier *kul*, the pronoun obligatorily occurs both as an affix in the verbal complex and together with the quantifier *kul*. (These observations hold only for *kul*, not for *zooz* (“two,both”).)

- (i) a. Ana [šuft-hum]  
 I (past)+saw+SM.1.sin.neut.+ OM.them  
 “I saw them”
- b. Ana [šuft-hum] kul-hum  
 I (past)+saw+SM.1.sin.neut.them all-them  
 “I saw them all”

7. (a) el-ʔžanib [wuʃlu] kul-hum salmeen  
 the foreigners (past)+arrive+SM.3.plu.neut all-them safely  
 “The foreigners all arrived safely”
- (b) el-wlād [byoregdu] ez.zooz<sup>67</sup>  
 the boys (pres)+sleep+SM.3.plu.masc the two  
 “The boys are both sleeping”

As in the case of reflexive pronouns involving the REFL element *rooḥ*- (“self”) (and possessive pronouns, as was suggested above), it could be argued that the quantifier and its antecedent form part of the same identity focus nominal shell in sentences like (5b) and (6b). On such an analysis, the coreferential relationship between these nominal expressions would then be established by means of  $\phi$ -feature valuation, with the identity focus light noun serving as intermediary. Such an analysis could also plausibly be put forward to account for the coreferential relationship between the pronoun that may (and sometimes must) co-occur with the quantifier and the relevant antecedent, for example between *-hum* (“them”) and the subject in (5) and (6).

A proper analysis of possessive pronouns and postposed quantifiers, and similar phenomena exhibiting obligatory coreferentiality in TL-Arabic, falls outside the scope of the present study and remains as a topic for further investigation.

---

<sup>67</sup> Note that the SM in (7b) takes the neutral gender form; this is in contrast to Modern Standard Arabic where the masculine form would be used.

## References

- Abney, S. 1987. The English noun phrase in its sentential aspect. Doctoral dissertation. MIT.
- Adger, D. 2003. *Core Syntax*. Oxford: Oxford University press.
- Algryani, A. 2012. The Syntax of Ellipsis in Libyan Arabic. A generative analysis of sluicing, VP ellipsis, stripping and negative contrast. Doctoral dissertation. Newcastle University.
- Attia, M. 2005. Functional and Anaphoric Control in Arabic. *The University of Manchester*  
Online: [www.attiaspace.com/functional%20and%20anaphoric%20control.pdf](http://www.attiaspace.com/functional%20and%20anaphoric%20control.pdf)  
(24 October 2014).
- Bardeas, S. 2009. The syntax of the Arabic DP. Doctoral dissertation. University of York.
- Benmamoun, E. 2000. *The Feature Structure of Functional Categories. A Comparative Study of Arabic Dialects*. Oxford: Oxford University Press.
- Bernstein, J. 2001. The DP hypothesis: Identifying clausal properties in the nominal domain. In M. Baltin & C. Collins (eds). *The handbook of contemporary syntactic theory*. Oxford: Blackwell Publishing (pp. 536-561).
- Biberauer, T. & I. Roberts. 2006. The loss of residual “head-final” orders and remnant fronting in Late Middle English. Causes and consequences. In J. Hartmann & L. Molnárfi (eds.). *Comparative studies in Germanic Syntax*. Amsterdam/Philadelphia: John Benjamins Publishing Company (pp. 263-297).
- Biberauer, T., A. Holmberg & I. Roberts. 2008. Disharmonic word-order systems and the Final-over-Final-Constraint (FOFC). In A. Bisetto & F. Barbieri (eds.). *Proceedings of XXXIII Incontro di Grammatica Generativa*. Available online at: [http://amsacta.cib.unibo.it/archive/00002397/01/PROCEEDINGS\\_IGG33.pdf](http://amsacta.cib.unibo.it/archive/00002397/01/PROCEEDINGS_IGG33.pdf) [2010 May 25].
- Bresnan, J. & S. Mchombo. 1987. Topic, pronoun, and agreement in Chicheŵa. *Language*, 63(4):741-782.
- Bresnan, J. & J. Kanerva, 1989. Locative inversion in Chicheŵa: A case study of factorization. *Linguistic Inquiry* 20(1):1-50.
- Chomsky, N. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Chomsky, N. 1995. Bare phrase structure. In G. Webelhuth (ed.). *Government and Binding theory and the minimalist program*. Oxford: Blackwell Publishing (pp. 383-439).
- Chomsky, N. 2000. Minimalist inquiries: The framework. In R. Martin, D. Michaels and J. Uriagereka (eds.). *Step by step*. Cambridge, Mass.: MIT Press (pp. 89-155).

- Chomsky, N. 2001. Derivation by phase. In M. Kenstowicz. (ed.). *Ken Hale. A life in language*. Cambridge, Mass: MIT Press (pp. 1-52).
- Chomsky, N. 2004. Beyond explanatory adequacy. In Adriana Belletti (ed.). *Structures and beyond: The cartography of syntactic structures, Volume 3*. Oxford: Oxford University Press (pp. 104-131).
- Chomsky, N. 2008. On phases. In R. Freidin, C. Otero & M. Zubizureta (eds.). *Foundational Issues in Linguistic Theory*. Cambridge, Mass.: MIT Press (pp. 133-166).
- Chomsky, N. 2006. Approaching UG from below. In U. Sauerland & H. Gärtner (eds.). 2007. *Interfaces and Recursion = Language? New York: Mouton de Gruyter (pp. 1-29)*.
- Chomsky, N. & H. Lasnik. 1993. The theory of principles and parameters. In J. Jacobs, A. von Stechow, W. Sternefeld & T. Venneman (eds.). *Syntax: An international handbook of contemporary research*. Berlin: Mouton de Gruyter (pp. 506-569).
- Cook, V. & M. Newson. 2007 *Chomsky's universal grammar: An introduction (3<sup>rd</sup> ed.)*. Oxford: Blackwell Publishing.
- Fassi-Fehri, A. 1993. *Issues in the structure of Arabic clauses and words*. Dordrecht: Kluwer Academic Publishers.
- Habash, N. 2010. *Introduction to Arabic Natural Language Processing*. University of Toronto: Morgan and Claypool.
- Haegeman, L. 1994. *Introduction to government & binding theory (2<sup>nd</sup> ed.)*. Oxford: Blackwell Publishing.
- Hafiz, A. 2003. Raising to Subject in Standard Arabic and Modern Standard English. *Language Forum* 29 (no.2). Online: <http://sokarno1.tripod.com/favorite.htm> (27 October 2014).
- Heinat, F. 2006. Probing phrases, pronouns, and binding. *The Department of English in Lund: Working Papers in Linguistics*, 6:19-37.
- Hetzron, R. 2005. *The Semitic languages*. New York: Routledge.
- Higgins, R. 1973. *The Pseudo-cleft construction in English*. New York: Garland.
- Holes, C. 2004. *Modern Arabic Structures, functions and varieties*. Washington DC: Georgetown University.
- Hornstein, N., J. Nunes & K. Grohmann. 2005. *Understanding minimalism*. Cambridge : Cambridge University Press.
- Ido, S. 2003. *Agglutinative information. A study of Turkish incomplete sentences*. Wiesbaden: Otto Harrassowitz.
- Kayne, R. 1994. *The antisymmetry of syntax*. Cambridge, Mass.: MIT Press.

- Kremers, J. 1997. How Arabs speak to each other about themselves: A study of *nafs* and *ba`d* in Modern Standard Arabic. MA thesis, University of Nijmegen.
- Longobardi, G. 1999. The structure of DPs: Some principles, parameters and problems. In M. Baltin & C. Collins (eds). 2000. *Handbook of contemporary syntactic theory*. Oxford: Blackwell Publishing.
- Maisel, S. 2015. *Speed Up Your Arabic: Strategies to Avoid Common Errors*. Abington: Routledge.
- Matthew, A. 2010. The Morphosyntax of Arab verb: Toward a Unified syntax prosody. University of California, Santa Cruz.  
Online: <http://web.stanford.edu/~gribanov/downloads/Tucker-QE.pdf> (10 September 2014).
- Mashharawi, H (2012). ظاهرة انعكاس الضمير في اللغة العربية. دراسة وصفية. (“The phenomenon of the reflexive pronoun in Standard Arabic” [own translation – KE]). MA thesis. University of Gaza.
- Mohammad, M.1999. *Checking and licencing inside DP in Palestinian Arabic*. In E. Benmamoun (ed). *Perspectives on Arabic Linguistics XII: Papers from the Twelfth Annual Symposium on Arabic Linguistics*. Amsterdam: John Benjamins Publishing Company (pp. 27-44).
- Msaka, P. 2014. A minimalist analysis of obligatory reflexivity in Chichewa. MA thesis. University of Stellenbosch.
- Nunes, J. 1998. *Linearization of chains and sideward movement*. Cambridge, Mass: MIT Press.
- Nydell, M. 2006. *Understanding Arabs. A guide for modern times*. USA: Intercultural Press.
- Oosthuizen, J. 2013. Obligatory reflexivity in Afrikaans: A minimalist approach. Doctoral dissertation. University of Stellenbosch.
- Pollock, J-Y. 1989. Verb movement, universal grammar, and the structure of IP. *Linguistic Inquiry* 20(3): 365-424.
- Radford, A. 2009. *Analysing English sentences. A minimalist approach*. Cambridge: Cambridge University Press.
- Ryding, K. 2005. *A reference grammar of Modern Standard Arabic*. Cambridge: Cambridge University Press.
- Ryding, K. 2011. Datives, ditransitives and the preposition *li-*. In B. Orfali (ed.). *In the shadow of Arabic: The centrality of language to Arabic culture*. Leiden: Brill (pp. 283-298).
- Ryding, K. 2014. *Arabic. A linguist introduction*. Cambridge: Cambridge University Press.



- Tawfiq, R. 2009. Anaphors in Modern Standard Arabic syntax with reference to modern syntax theories. MA thesis. Middle East University for Graduate Studies, Amman-Jordan.
- Versteegh, K. (ed.). 2011. *Encyclopedia of Arabic Language and Linguistics. Vol II*. Leiden: E.J. Brill Academic Publishers.
- Versteegh, K. 2014. *The Arabic Language* (2<sup>nd</sup> ed.). Edinburgh: Edinburgh University Press.
- Zwart, J-W. 2002. Issues relating to a derivational theory of binding. In S. Epstein & T. Seely (eds.). *Derivation and explanation in the minimalist program*. Oxford: Blackwell Publishing (pp.268-304).

**APPENDIX: Arabic-specific letters and their phonetic transcription (Algryani, 2012)**

Arabic Letter	Symbol	Phonological Transcription
ء	ʔ	glottal stop
ب	b	voiced bilabial stop
ت	t	voiceless alveolar stop
ث	θ	voiceless dental fricative
ج	ʒ	voiced palatal affricate
ح	ħ	voiceless pharyngeal fricative
خ	x	voiceless uvular fricative
د	d	voiced alveolar stop
ذ	ð	voiced dental fricative
ر	r	voiced alveolar flap
ز	z	voiced alveolar fricative
س	s	voiceless alveolar fricative
ش	ʃ	voiceless palato-alveolar fricative
ص	ʂ	emphatic s
ض	ɖ	voiced velarized alveolar stop
ط	ɗ	emphatic t
ظ	D	voiced velarized dental fricative
ع	ʕ	voiced pharyngeal fricative
غ	ɣ	voiced uvular fricative
ف	f	voiceless labiodental fricative
ق	q	velar glottalized plosive
ك	k	voiceless velar stop
ل	l	voiced alveolar lateral
م	m	voiced bilabial nasal
ن	n	voiced alveolar nasal
ه	h	voiceless glottal fricative
و	w	voiced bilabial semi vowel
ي	y	voiced palatal semi vowel

<b>Vowels</b>	<b>Short</b>	<b>Long</b>
Central Open	A	Ā
Front Closed	I	Ī
Back Closed Rounded	U	Ū