Negation in Turaif Arabic:

Not the last word

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Abstract

This study describes a wide range of syntactic aspects of negation in Turaif Arabic (TA), a spoken variety of Saudi Arabia, with some comparison with other varieties, and develops an approach to the syntactic analysis of core aspects of negation in TA within the framework of Lexical Functional Grammar (LFG). The main focus of this study is on the syntax of sentential and constituent negation, negative coordination, and negative sensitive items. I additionally deal with issues related to neg raising predicates and universal quantification.

Building on previous syntactic accounts of negation in LFG, I treat sentential negative particles *mā* and *lā* as non-projecting words occurring under the $\widehat{Neg}$ category as sisters of the verbal predicate at the terminal node level and associated with a feature ENEG + in the f-structure. The negative form *mū* and its inflected negative forms are treated as fully projecting word-forms under the I node, given their function as a negative copula that also expresses the PRESENT TENSE. It is the alternation with inflecting counterparts that signals the negative copula form, as opposed to the presence of invariant *mū/mahu*, which signals constituent negation.

Negative coordination in Arabic is analysed in LFG for the first time, focusing particularly on the emphatic negative coordination construction expressed through *lā* ... *wala* ... both when coordination of sentence predicates (verbal and non-verbal) is involved, and in the coordination of arguments/dependents. A non-flat c-structure schema is proposed, along with the appropriate lexical entries for *lā* and *wala*. In the f-structure, use is made of three features: ENEG + for sentence/main predicate negation, CNEG + for constituent negation, and NC + for negative concord.

In the discussion of negative sensitive items, it is shown how negative concord items and negative polarity items differ in TA only on the simple criterion of occurrence as a negative fragment response to a question. In other respects, each constitutes a heterogeneous category, for example with respect to its occurrence or not, within non-veridical as well as anti-veridical contexts.

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Transcription Conventions

TA		IPA equivalent
ʔ	glottal stop plosive	ʔ
b	voiced bilabial stop	b
t	voiceless dental stop	t
t̲	voiceless inter-dental fricative	θ
ǧ	voiced palatalized affricate	ʤ
ħ	voiceless pharyngeal fricative	ħ
χ	voiceless uvular fricative	χ
d	voiced dental stop	d
d̲	voiced inter-dental fricative	ð
r	dental trill	r
z	voiced dental fricative	z
s	voiceless dental fricative	s
š	voiceless palatal fricative	ʃ
ṣ	voiceless pharyngealized dental fricative	sˤ
ḍ	voiced pharyngealized dental stop	dˤ
ṭ	voiceless pharyngealized dental stop	tˤ
ẓ	voiced pharyngealized inter-dental fricative	ðˤ
ġ	voiced uvular fricative	ʁ
ʕ	voiced pharyngeal fricative	ʕ
f	voiced labio-dental fricative	f
g	voiced velar plosive	g
q	voiceless uvular stop	q
k	voiceless verlar stop	k
l	lateral dental	l
m	bilabial nasal	m
n	dental nasal	n
h	voiceless glottal fricative	h
w	voiced bilabial glide	w
y	voiced palatal glide	j

Table 1: Consonants in TA

TA		IPA equivalent
a	short low central unrounded vowel	a
i	short high front unrounded vowel	i
u	short high back rounded vowel	u
e	short mid front unrounded vowel	e
o	short mid back rounded vowel	o
ə	short mid central vowel	ə
ā	long low central unrounded vowel	a:
ī	long high front unrounded vowel	i:
ū	long high back rounded vowel	u:
ē	long mid front unrounded vowel	e:
ō	long mid back rounded vowel	o:
ey	mid front to high front unrounded diphthong	ei
aw	low unrounded to high back rounded diphthong	au
ay	low unrounded to high front unrounded diphthong	ai

Table 2: Vowels and Diphthongs in TA

List of Abbreviations

1	first person
2	second person
3	third person
ACC	accusative
ACT.PTCP	active participle
ADJ	adjunct
AP	adjective phrase
AUX-FEAT	auxiliary-feature
AUX-PRED	auxiliary-predicate
AMBIG	ambigious
AVM	attribute-value matrices
CNEG	constituent negation
CCA	closest conjunct agreement
CLD	clitic left dislocation
CONJ	conjunction
COMP	complementiser

COP	copula
CP	complementiser phrase
C-STRUCTURE	constituent structure
DAT	dative
DE	downward entailment
DEF	definite
DU	dual
ENC	emphatic negative coordination
ENEG	eventuality negation
F	feminine
FCA	first conjunct agreement
F-STRUCTURE	functional structure
FUT	future
GF	grammatical function
GEN	genitive
GEND	gender
INDIC	indicative
IP	inflection phrase
IMPV	imperfective
LFG	lexical functional grammar
M	masculine
MSA	Modern Standard Arabic
NEG	negative
NC	negative concord
NCI	negative concord item

NOM	nominative
NPI	negative polarity item
NQ	negative quantifier
NP	noun phrase
PFV	perfective
PL	plural
POL	polarity
POS	positive
PP	prespositional phrase
PPI	positive polarity item
PRED	predicate
RA	resolved agreement
RECEP	recipient
REFL	reflexive
SBJV	subjunctive
SG	singular
SFP	scalar focus particle
SN	sentential negation
SUBJ	subject
TA	Turaif Arabic
UNAMBIG	unambigious
VM	verbal marker

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Chapter 1

Introduction

1.1 Aims and significance of the study

Over the last 30 years the study of negation has come to occupy a key place in linguistics. Indeed it has emerged as a core topic which both syntactic and semantic theories need to account for.

There are many reasons why negation is interesting and important. It exists in all languages of the world. It connects directly with one side of a fundamental polarity which comes into play every time that we communicate: we either affirm or negate. Although superficially it can seem to involve quite a simple form (e.g. *not* in English), in detail it exhibits a fascinating variety with respect to the ways in which it can be expressed and interpreted. In addition, it can interact with numerous other phenomena in natural languages, such as word order, constituency, lexical classes, and occurrence with respect to other grammatical elements such as auxiliaries, coordinators, case and quantifiers. Hence the study of negation sheds light on a much wider range of syntactic and semantic phenomena, and on the ways in which they are interconnected.

Despite a considerable amount of work having been done, there still remains much to learn about negation in language. Furthermore, it has long been recognised that in order to understand any linguistic phenomenon fully it is necessary to examine it across a wide range of languages and dialects. The present study therefore aims to contribute to this enterprise by looking in detail at negation in one relatively neglected variety of Saudi Arabic. Negation in this variety will be described in some breadth, and the syntactic theory of Lexical Functional Grammar (LFG) will be adopted to account for many of the core syntactic aspects of negation in this variety.

The variety with which I am concerned is a spoken dialect of the northern region of Saudi Arabia, around Turaif. Hence I will refer to it as Turaif Arabic (TA). Turaif is a city in the extreme north of the KSA, close to the border with eastern Jordan and western Iraq. It is part of a wider dialect area of Saudi Arabia which has no standard name, though some scholars have referred to it as the Northern dialect. AlShammiry (2007) for example terms it the Saudi Northern Region Dialect of Arabic (SNRDA). It differs in some respects from the dialects of the centre around Riyadh (Najdi) and others such as Ghamdi in the South. Since I am a native speaker of this dialect I have relied on myself as the main informant for the data of this thesis, verified where necessary by consultation with other native speakers of that variety.

TA is a neglected dialect in Saudi Arabia. There is no previous documented work on it in the the domain of syntax except AlShammiry (2016), who explicitly referred to 'Turaif Arabic, an undocumented dialect, a dialect that is spoken in the northern region of Saudi Arabia' (p.iii). He however mainly focused just on general syntactic aspects of clause structure in TA. Hence apart from its general contribution to research on negation in language, the present

study fills a gap with respect to the particular dialect involved within the domain of linguistic research on Arabic.

The significance of the current study is at two levels. First it will provide a rich description of a wide range of syntactic and semantic aspects of negation in TA, with comparisons made with other varieties of Arabic. Second, it will provide syntactic analysis of core aspects of negation in TA within a particular theoretical framework, that of LFG. The areas of negation covered may be broadly grouped into three areas, each of which is covered in a separate chapter: (a) sentential and constituent negation; (b) negative coordination (especially emphatic negative coordination); (c) negative sensitive items (including negative concord). Although all these have received some degree of piecemeal description, or treatment in theories other than LFG, in select varieties of Arabic (e.g. Fassi-Fehri (1993) for MSA; Ouhalla (1993) for MSA; Bahloul (1996a) for MSA; Bahloul (1996b) for Tunisian Arabic; Benmamoun (1997) for Moroccan Arabic; Benmamoun (2000) for MSA; Al-Tamari (2001) for MSA; Ouhalla (2002) for Moroccan Arabic) there is no existing LFG account of negative coordination in any language, and only two papers provide an LFG analysis of sentential negation in a variety of Arabic (Al Sharif and Sadler (2009) and Camilleri and Sadler (2017)).

I regard it as important not just to catalogue facts about the grammar of particular languages but also to frame the account within the conventions of a particular theory. Only in this way can I hope to progress to a level of real explanatory understanding of the phenomenon in question, as against just a collection of detailed facts. Numerous theories of syntax are available, ranging from those that rely on the notion of a transformation or movement to create one related structure from another (e.g. a passive sentence from an active

one), to those that rely rather on the notion of correspondence, where related structures are shown as connected by the fact that they correspond to similar representations at another level of analysis. LFG is of the latter type, and was chosen for a variety of reasons. It is flexible, computationally friendly, and has an established if limited record of use in analysing negation (Sells (2000), Laczkó (2014); Laczkó et al. (2015) and Przepiórkowski et al. (2015)), including negation in Arabic (e.g. Al Sharif and Sadler (2009) and Camilleri and Sadler (2017)), which could be built on. Furthermore, the researcher is studying in a university Linguistics department which is a recognised centre for LFG research.

In sum, the current study therefore aims to answer the following questions:

(1) a. How does TA express sentential and constituent negation, negative coordination (especially emphatic negative coordination), and negative sensitive items (including negative concord)?

b. How far is TA similar to, or different from, other varieties of Arabic in these respects?

c. How can LFG best capture TA phenomena of negation?

In the remainder of this chapter I will first introduce the reader to the main kinds of negation phenomena which are covered in language descriptions, and which I will take up for TA later. I then introduce the key general features of the LFG approach to syntactic analysis, again with special reference to certain areas which will be called upon later in the account of TA. The chapter concludes with an outline of the structure of the thesis.

1.2 Introduction to core aspects of negation in language

1.2.1 Sentential negation and constituent negation

A widespread distinction is drawn between at least three levels of structure within which negation seems able to operate in languages: the sentence level or the clause level as a whole; the constituent level, also termed local (Haegeman, 1995), and the lexical level. The last of these is exemplified by words with inherent negative meaning such as English *unwilling, deny, rarely* and *failure*. The lexical level of negation is primarly a level that has to do with lexical meaning, however. Consequently, since my study is concerned with syntax, this aspect will not pursued further in this thesis.

Sentential negation (SN) can be defined as negation where a negator accompanies the main predicate in the clause or sentence (2), while constituent negation (CN) arises where a negator accompanies some other constituent in a clause in c-structure (3)(Penka, 2015). Under this definition, whatever structure follows the occurrence of a negative item, either in a sentence (for SN) or a constituent (for CN), is said to be in its scope.

(2) a. He did **not** find a job.

b. He did **not** find a job nearby.

(3) a. **Not** all students came to London.

b. He found a job **not** far away.

Similar to English, in Polish, the same negative form *nie* can be used to mark both types of negation, however with different syntactic behaviour and

distributions. SN triggers the genitive of negation in the OBJ of the verb as in (4a), whereas CN does not as in (4b). In (4b), it is clear that it is only the NP *Janek* that falls in the scope of *nie*, and not the whole clause, so the OBJ takes the normal ACC form found in affirmative sentences.

(4) a. Janek **nie** lubi Marii
Janek.NOM NEG likes Maria.GEN
Janek doesn't like Maria. Przepiórkowski et al. (2015, p.324)

b. **Nie** Janek lubi Marię /*Marii
NEG Janek.NOM likes Maria.ACC Maria.GEN
It's not Janek who likes Maria. Przepiórkowski et al. (2015, p.326)

In my account I will adopt a (morpho)-syntactic approach with which to differentiate between SN and CN. That is to say I put aside issues that concern semantic definitions of CN, and restrict ourselves to a simple constituent-based 'definition', such that 'not all students' in (3a) is an instance of negation of a constituent XP in itself. Such an approach must be clearly separated from a semantic one, as noted by e.g. Zeijlstra (2004). In the semantic approach what distinguishes between sentential and constituent negation is rather the semantic scope of the negator, and consequently, the meaning that results. Thus for (2a) what is negated is the meaning of the whole idea of 'getting a job', while in (2b), however, we would normally understand that what is negated is just the idea of 'nearby'; i.e it typically means that 'he found a job' but not 'nearby'. Thus the semantic scope of SN here includes one particular constituent, not the whole sentence. The fact that the semantic scope of the negation includes only one constituent may also be signalled by the location of a negator in that constituent (CN), such as in (3b). Additionally the same sort of scoping can be expressed through spoken stress and intonation (5a), or the addition of a *but* expression making the meaning clear through an explicit

contrast (5b). A combination of these may also occur, as in (5c) where the negated constituent is signalled as negated both by the occurrence of a negator with it (CN), as well as the overt contrast being expressed.

(5) a. He did **not** find a job NEARBY.

b. He did **not** find a job nearby, but in London.

c. He found a job, **not** nearby, but in London.

Given what I have said above, some argue that CN (in the semantic sense) is always associated with some expressed or implied contrast. Constituent negation has often been seen as conveying some form of contrastive meaning, and indeed, some regard this as its defining characteristic, e.g. McCawley (1991). More recently, however, contrastiveness in meaning has been shown to not be a necessity by Borschev et al. (2006). Borschev et al. (2006) cite (6) and argues that although the constituent *na meste* 'not at' is clearly signalled as CN syntactically in Russian, by the position of the negator *ne* before it, there can be no implied contrast, as the speaker may well not know where the person actually was. One might however respond that there could still be an implied contrast of the type 'not in his proper place but somewhere else'.

(6) Dežurnyi ∅ be (byl) **ne** na meste
person on duty is (was) NEG at place
The person on duty is (was) not at his/her proper place.

Associated with the discussion of SN vs CN, the behaviour and interpretation of constituent negative forms with quantifiers (3a) has also generated much discussion. In English, for example, there is a difference between CN (7a) and SN (7b). The former, involving the negator scoping narrowly over

the quantifier, implies that 'some students stayed in London' while the latter is ambiguous between that reading and the more likely one where: 'no students stayed in London'. By contrast CN (7c) conveys unambiguously that 'no students stayed in London'.

(7) a. **Not** all the students stayed in London.

b. All the students did **not** stay in London.

c. All the students stayed **not** in London (but in Colchester).

This is paralleled for Russian, according to Borschev et al. (2006): (8a) corresponds to (7b) and (8b) to (7c). This data further shows that when there is no overt main verbal predicate as in (8c), one cannot easily identify whether the negator *ne* accompanies the main predicate (SN), or the constituent *v Londone* (CN). They argue however that the interpretation that results provides us with evidence that the latter (CN) is the case. That is demonstrated by the fact that reading of (8c) is the same as that of (8b) rather than (8a).

Context: We are talking (perhaps in Moscow) about why the Royal Ballet won't be performing in London.

(8) a. Vse baleriny **ne** budut v Londone.
All ballerinas-NOM NEG will.BE in London.
None of the ballerinas will be in London.

- AMBIG (i) $\forall >$ NEG : All of the ballerinas will not be in (will be out of) London; i.e. None of the ballerinas will be in London; or.

- AMBIG (ii) NEG >∀ [dispreferred but possible with a marked THEME-Rheme structure] not all will be in London.

b. Vse baleriny budut **ne** v Londone.
All ballerinas-NOM will.BE NEG in London.
All of the ballerinas will be not in London.

- UNAMBIG only (i): ∀> NEG: All of the ballerinas will be not in (will be out of) London, i.e. None of the ballerinas will be in London.

c. Vse baleriny **ne** v Londone.
All ballerinas-NOM NEG in London.
All of the ballerinas are not in London.

- UNAMBIG only (i): ∀> All of the ballerinas are not in (are out of) London, i.e. None are in London.

A further complication arises if 'floating' of the quantifier occurs as well. For instance examples in (9) are possible in English, in addition to those in (7) above.

(9) a. The students all did **not** stay in London.

b. The students did **not** all stay in London.

Arguably both these are syntactically instances of SN. However, while (9a) is understood as indicating that 'no students stayed in London', (9b) is understood as indicating that 'some students stayed in London', just as (7a). Clearly this is a semantic phenomenon where, regardless of whether the negator is in a SN position with the verb, or in some other CN location, what really counts when interpreting the meaning of negation with a quantifier is simply whether

it precedes the quantifier or follows it. If *all* precedes *not* then the 'none do' reading is preferred; if *not* precedes *all*, then the 'some do' reading emerges.

In this subsection I have attempted to show the distinction in languages between sentential and constituent negation, both of which will be addressed for TA in later chapters. I move now to consider the phenomenon that both those types of negation can be involved in co-ordinate structures.

1.2.2 Emphatic negative coordination

The literature distinguishes different types of coordination in many ways. For present purposes I highlight the distinction between positive (e.g. *and*, *or*) and negative (e.g. *nor*) coordination, and the distinction between conjunctive (e.g. *and*) and disjunctive (e.g. *or*) coordination. There is then an additional distinction that has to do with the number of elements that are coordinated (the coordinated terms), which can be two (bivalent), which is what concerns us most, or more than two. There is yet a further important distinction which has to do with overtness of marking or non-overtness, of marking: syndetic/ monosyndetic, bisyndetic/ polysyndetic, and asyndetic (Watson (1993); Cowell (1964); Haspelmath (2004); Haspelmath (2007)). Syndetic coordination occurs where the coordinated terms are linked by an overt coordinator (such as *and* or *or* in English), and there is always at least one coordinator less than the number of terms. In bisyndetic/polysyndetic coordination, two or more coordinators occur together, one with each of the terms (with most languages displaying this marking in front of the coordinated terms), as in English *both* ... *and*, *either* ... *or* ... *or* and *neither* ... *nor* ... *nor* constructions. In such types of coordination structures, the number of overt coordinators is the same as the number of coordinated elements. Bisyndetic coordination thus refers to when two coordinators are required. Polysyndetic coordination refers to when

more than two coordinated elements are involved. The above types contrast with asyndetic coordination, which I do not consider here, where the coordinated elements are just juxtaposed with no overt coordinator.

Haspelmath (2004, 2007) specifically describes coordinated structures of the bisyndetic and polysyndetic types as instances of **emphatic coordination** or (**focusing coordination**), arguing that when every term has a coordinator, the elements are indicated as being in some contrast. For example the syndetic sentences in (10), have bisyndetic counterparts in (11). The latter however have 'more emphatic flavour', as they emphasize that each of the coordinated elements belongs to the same group and yet, at the same time, act separately. Thus the word *together* could be added after *travel* much more felicitously in (10a) than in (11a).

(10) a. Franz **and** Sisi will travel to Trieste.

b. Brahms **and** Bruckner **did not** reach Beethoven's level of fame. Haspelmath (2007, p.3)

(11) a. **Both** Franz **and** Sisi will travel to Trieste.

b. **Neither** Brahms **nor** Bruckner reached Beethoven's level of fame. Haspelmath (2007, p.3)

In this thesis I am concerned particularly with negative coordination of the bivalent and bisyndetic or emphatic type. Here, much of the cross linguistic discussion has been concerned with whether negative coordination should be represented at some level of analysis as the negation of a disjunction, $\neg$ (P$\vee$ Q), or as a conjunction of two negations, ($\neg$P) $\wedge$ ($\neg$Q). In formal logic, these formulations are equivalent by De Morgan's Law.

According to the literature (Wurmbrand, 2008; de Swart, 2001) there is an issue concerning 'nor', in terms of whether this should be represented as coordination under negation or as a disjunction. Languages, however, employ syntactic structures which do not perfectly match these formulations, and may not have identical meaning. For example, (11b) seems to exhibit the disjunction of the first logical formulation but the two negative forms characteristic of the second. By contrast, (10b) shows the single negation of the first formulation, but with a conjunction instead of a disjunction of negation.

The overt association of bisyndetic negative coordination with disjunction is seen in English *(neither . . . nor . . . ,* cf. *either . . . or . . .)* and also in German *(weder . . . noch*, cf. *entweder . . . oder* 'either . . . or'). Bisyndetic negative coordination is however closely linked to conjunction rather than disjunction in Latin *neque . . . neque . . .* , where *ne* is a negative particle and *que* is a conjunctive suffix available to coordinate nouns (as in *senatus populusque Romanus* 'The senate and the Roman people'). The same is true of Hungarian *sem . . . sem . . .* , which is diachronically based on *is* 'also' plus negative *nem* 'not'.

Negative coordinators in a few languages have an additional non-coordinating function as negative scalar focus particles equivalent to *not even* in English. For instance in Polish 'neither . . . nor . . . ' is conveyed by *ani . . . ani . . .* (12a). However, *ani* can also be used as in (12b)[1].

(12) a. **ani** mnie, **ani** jemu się **nie** udało
neither 1.DAT nor he.DAT REFL NEG succeeded
Neither I, nor he succeeded

[1]Other languages displaying similar behaviours are: Russian, Hungarian, Modern Greek, Albanian and Romanian: Haspelmath (2007, 2004)

b. Karliczek **ani** słówka **mi** **ni** powiedział
Karliczek not.even word me.DAT NEG said
Karliczek didn't even say a word to me Polish: Haspelmath (2007, p.18)

I will present more about negative co-ordination in later chapters when an account is offered of how it is represented in TA. I move now to another more detailed aspect of negation in language, that of negative sensitive items.

1.2.3 Negative Sensitive Items

Negative Sensitive items (NSIs) are specific expressions in a language which exhibit a certain sensitivity to the presence of negation and may have a limited or distinctive distribution. The literature distinguishes two different types of negative sensitive items: (i) negative polarity items (NPIs) and (ii) negative concord items (NCIs): Linebarger (1987, 1980), Laka (1990),Ladusaw (1997), Progovac (1994), Haegeman and Zanuttini (1996), Giannakidou (1997a, 1999, 1997b), Vallduví (1994), Przepiórkowski and Kupść (1997), Giannakidou (2006, 2000) Watanabe (2004). Although the two sets of items seem to belong to one class, in that they all in some sense favour negative contexts, they however show considerable distributional differences. I discuss them individually below.

1.2.3.1 Negative Polarity items (NPIs)

According to Kearns (2000) 'Negative polarity items (NPIs) are expressions which can only occur in special contexts, including contexts which are in some sense in the scope of negation' (p.188). They are a class of words that only occur in negative sentences and in other environments that in some sense share some properties with negation or at least are not affirmative (e.g. questions). Nevertheless, they do not themselves have an independent negative meaning

unlike NCIs (see next section 1.2.3.2). Bakker (1969, 1970) states that 'whereas most words and idioms may may occur in both affirmative and negative sentences, there are a handful which might be termed 'polarity-sensitive', in that they may occur only in affirmative, or only in negative sentences'. (p.196). Therefore, words that can only appear in affirmative sentences are referred to as positive polarity items (hereafter, PPIs), whereas words that can only occur in negative sentences, or at least not in affirmative ones, are referred to as negative polarity items (hereafter, NPIs).

NPIs can be of distinct categories, e.g. determiners, *any*; adverbs such as *ever*; pronouns such as *anything*; and idioms such as *red cent, budge an inch*. These expressions are acceptable in negative sentences as in (13a,14a), but not acceptable in the corresponding affirmative sentences (13b,14b).

(13) a. Bill did **not** buy **any** books.

b. *Bill bought **any** books. Giannakidou (2008, p.1)

(14) a. John has**n't ever** read *War* and *Peace*.

b. *John has **ever** read *War* and *Peace*. Giannakidou (2008, p.2)

NPIs can be licensed in other environments in addition to contexts that involve overt negation. These contexts include questions (15b), the antecedent of a conditional (15c), and complements of adversative predicates (15d).

(15) a. Mary did **not** insult **anyone**.

b. **Did** Mary insult **anyone**?

c. **If** Mary insulted **anyone**, she should apologise.

d. I **doubt** that Mary insulted **anyone**. Progovac (1994, p.2)

Different approaches have been proposed in the literature as to how to account for NPI licensing. These approaches vary, and include semantic, syntactic and pragmatic proposals. Studies on NPI licensing have been concerned with: (i) what elements can license NPIs; and (ii) whether the nature of the licensing is purely semantic (Ladusaw (1997), Giannakidou (1998)); purely syntactic (Progovac (1994), Benmamoun (1997)); or a combination of both syntax and semantics (Linebarger (1987, 1980)). To illustrate this debate, I here present two semantic accounts: the downward entailment (DE) account and the account based on non-veridicality.

DE is one of the most influential approaches that aims to account for NPI licensing, and was proposed by Ladusaw (1997). Ladusaw assumes that NPIs are only acceptable if they are interpreted in the scope of downward-entailing expressions or expressions which are synonymously monotone decreasing. He proposes the necessary condition for NPI licensing in (16), where the term 'triggers' refers to licensing.

(16) α is a trigger for negative polarity items in its scope iff α is downward entailing.

(17) demonstrates the mechanisms of how DE works. Where a statement allows valid inferences from superset to subset, as in (17), then an NPI will be licensed (17c). In the reverse case, however, this will not be possible (18c): there the valid inferences are from the subset to the superset, and NPIs are not licensed.

(17) a. John does **not** own a vehicle.$\longrightarrow$ (entails that)

b. John does **not** own a BMW.

c. John does **not** own any car.

d. [[vehicle]] $\supseteq$ [[BMW]]

(18) a. John owns a BMW.

b. John owns a vehicle.

c. *John owns **any** car.

DE remained popular for some time as an account of NPI licensing and makes adequate predictions about some environments which license NPIs. However it is not sufficient to rely on, since NPIs can be licensed in contexts which are not DE or have nothing to do with DE. These contexts include yes/no questions, imperative and superlative contexts ((Linebarger, 1980), (Hoeksema, 1986)). In the following pair in (19), where a superlative structure licenses the NPI *ever*, it may be observed that although a downward entailment from (19a) $\nrightarrow$ to (19b) is not valid, nevertheless *ever* is still licensed.

(19) a. John is the greatest man who **ever** lived.

b. John is the greatest man who **ever** lived in Japan.Linebarger (1980, p.136)

An alternative to the DE semantic account is the non-veridicality account proposed by Giannakidou (1998) to account for NPIs in Greek but which was meant to have cross linguistic validity. In general, the term veridicality is related to the concept of truth and sometimes to that of existence. Montague

(1969) considers the verb *see* as being veridical, since if *I see a unicorn* is true, then it must be true that *a unicorn* exists, at least in my personal world. The verb *look for* is non-veridical, on the other hand, as if *I am looking for a unicorn*, it not necessary that *a unicorn* exists.

Giannakidou (1998) argues that the distribution of NPIs is based on the notion of (non)-veridicality, which is formalised as a definition of propositional operators, as shown in (20). She proposes that NPIs are allowed in non-veridical environments but excluded in veridical ones.

(20) a. A propositional operator F is veridical iff p entails P: F $p \longrightarrow$ P. Otherwise F is nonveridical.

b. A propositional operator F is antiveridical iff F $p \longrightarrow \neg$ P.

In all, Giannakidou distinguishes three operators: veridical, non-veridical and anti-veridical. Only non-veridical and anti-veridical operators license NPIs. Additionally, the anti-veridical operators form a subset of the non-veridical operators. An illustration of each of these operators in provided below in (21, 22, 23).

(21) a. Yesterday, Paul saw some snakes.

b. It is the case that Paul saw some snakes.

c. *Yesterday, Paul saw **any** snakes. (# veridical operator)

(22) a. Did Paul saw snakes?

b. *It might be true that Paul saw **any** snakes.

c. **Did** Paul see **any** snakes? ($\surd$ non-veridical operator)

(23) a. Paul did **not** see snakes.

b. It is **not** the case that Paul saw **any** snakes.

c. Paul did **not** see **any** snakes. ($\surd$ anti-veridical operator)

Giannakidou consequently classifies NPIs in Greek into two separate types: (i) NPIs which are constrained in distribution to occur only in anti-veridical (negative) contexts, and (ii) NPIs with wider distribution which appear in non-veridical environments, including both negative and some non-negative contexts.

Her proposal seems to work more successfully than the DE in accounting for NPIs, although it is not clear how superlative examples like (19) would be accounted for. Those examples appear to be veridical but yet allow the NPI *ever*. It could however be argued that they are logically equivalent to a negative statement of the type 'There is not any greater man than John who ever lived' and for that reason may be regarded as disguised anti-veridicals.

Van der Wouden (1997) and Zwarts (1998) consequently classify NPIs into two distinct groups: (i) NPIs which are narrow in distribution and are restricted to appear only in anti-veridical (negative) contexts, and (ii) NPIs which have a broader distribution and appear in non-veridical environments, which includes both negative and some non-negative contexts. On the basis of this, *any* in English is a type (ii) NPI, while *some* is a PPI, and does not appear in anti-veridical contexts.

This kind of distinction among NPIs is widely made nowadays although different terminology is used, such as referring to (i) as strong or strict NPIs

and (ii) as weak or semi-NPIs. It is also now widely recognised that languages do not in fact usually yield neat subgroups of NPIs at all, but rather a cline from those that only appear in negative contexts to those that appear also in a range of non-negative and even affirmative ones (Hoeksema, 1994).

Hoeksema (1994) considers some expressions to be semi-NPIs, since they occur in veridical (declarative affirmative) sentences due to what he calls layering. He remarks that 'layering is in fact so rampant that there are hardly any **pure NPIs** that have no other uses as well. This makes it virtually impossible to automatically detect NPIs in a corpus: first the different uses have to be distinguished' (p.274). By layering he means that NPIs usually are polysemous, and can alternate between an earlier unrestricted use and a more recent grammaticalised NPI version of the same word.

With that brief introduction to NPIs and two semantic approaches which have been proposed to account for their distribution, we now turn our attention to understand the other main NSIs mentioned in the literature.

1.2.3.2 Negative concord items (NCIs)

NCIs constitute another type of NSIs and are normally restricted so that they occur only in negative or anti-veridical environments. On the assumption that the realisation of NEG at the clausal level (SN) constitutes an anti-veridical context, then the expectation is that NCIs are licensed in this context. NCIs, however, are items in languages which typically are not just licensed by sentential negation, but which can also at times express NEG themselves (unlike NPIs), and where in the context of sentential negation, for instance, the two negative elements used within the same structure do not cancel each other out. Rather they yield one negative reading, as shown through the definition

in (24a), which is adopted from Hoyt (2010). Such items are also known as n-words. This term was coined in Laka (1990).

(24) a. **Negative concord (NC)**: The failure of an n-word to express negation distinctly when co-occuring in a sentence with another negative expression

b. **N-word**: A word that can be used to express negation in a sentence fragment

We can understand how NC works through the Spanish example in (25), where the NCI *nada* occurs with a sentential negation marker *no* and gives rise to a reading with single logical negation. The n-word is also able to provide a negative fragment answer to a question without being accompanied by negation, as in (26).

(25) **No** funciona **nada**
NEG functions nothing
Nothing works de Swart and Sag (2002, p.405)

(26) a. Qu'e viste?
what you saw
What did you see?

b. Nada
nothing
Nothing

The phenomena of NC are observed in many languages such as Romance (Italian, Spanish, French, Portuguese); Slavic languages (Czech, Polish, Russian, Serbo-Croatian); Greek; Hungarian and Hebrew. However, the behaviour

of this phenomenon is not homogenous since NC languages can be either strict or non-strict. Slavic languages, Greek, Romanian, Hungarian and Hebrew are considered to be strict NC languages. Romance languages (but not Romanian) are considered as non-strict NC languages (see (Aranovich, 1993);(Haegeman and Zanuttini, 1996); (Dziwirek, 1998); (Tóth, 1999); (Giannakidou, 2000); (Progovac, 2000);(Herburger, 2001); (Zeijlstra, 2004)). The difference between the two types can be better understood through the contrast between (28) and (30). In (28) the Russian n-word *nikto* 'nobody' before the verb must be in the context of *ne*, which is the sentential NEG marker. On the other hand, it is only after the verb and not before that *nada* needs to be accompanied by sentence negator *no* in Spanish. In none of these cases is there cancellation of one negative by another.

(27) **Strict Negative Concord**: N-words are not permitted to occur in clauses by themselves, but must be accompanied by a single negative marker (except in fragments). In the Russian example below, the n-word *nikto* 'nobody' must be in the context of *ne*, which is the NEG marker.

(28) **Nikto ne** lubit **nikogo**
NCI NEG loves NCI
Nobody loves anybody (Russian; strict NC)

(29) **Non-strict NC**: N-words are permitted to occur by themselves i.e. in the absence of any NEG markers, in the preverbal position.

(30) **Nada** funciona
Nothing functions
Nothing works. (Spanish: not-strict NC)

In the post verbal position both strict and non-strict must be accompanied

with a negative marker, just as in (28) and (31), and engage in NC.

(31) **No** funciona **nada**
NEG functions nothing
Nothing works (de Swart & Sag, 2002, p. 405)

Non-strict NC languages also may exhibit 'spreading' behaviour. Spreading occurs when n-words license each other and engage in NC without the presence of the sentence negator. This is observed through (32), where the presence of *nadie* licenses *nada* without the presence of the sentence negator *no*.

(32) **Nadie** habla de **nada**
no.one speak.PRES.3SG of nothing
No one speaks about anything (Spanish: spreading NC)

A further point with NC concerns what occurs when a language also displays negative coordination as described earlier in section (1.2.2). I first consider non-strict NC in languages such as Spanish, Italian and Portuguese. With respect to the effect on bisyndetic emphatic negatives, this means that when negatively coordinated items precede the verb as in (33a) and (34a), no sentence negator is required (and indeed, if it was used, this would generate double negation, resulting in a positive reading). However, when the verb precedes the negative coordination, as in (33b) and (34b), a sentence negator is required (with the overall reading remaining negative).

(33) a. **Ni** Juana **ni** Pedro vinieron
neither Juana nor Pedro came
Neither Juana nor Pedro came . Spanish: Camacho (2003, p.35)

b. **No** vinieron **ni** Juana **ni** Pedro
NEG came neither Juana nor Pedro
Neither Juana nor Pedro came. Spanish: Camacho (2003, p.35)

(34) a. **Nem** o Bruno **nem** o irmão dele falam inglês
neither DEF Bruno nor DEF brother his speak English
Neither Bruno nor his brother speak English Modern Brazilian Portuguese: (Whitlam, 2017, p.106)

b. **Não** tenho aula **nem** hoje **nem** amanhã
NEG have class neither today nor tomorrow
I do not have class either today or tomorrow Modern Brazilian Portuguese: (Whitlam, 2017, p.106)

This is different from strict NC, however. In a language such as Polish which exhibits strict negative concord, even when negative coordination appears before the verb, as in (12a), a sentence negative particle *nie* is also required. The same is true in the Serbian Language (35).

(35) a. **Né** možeš **ni** jédno **ni** drugo
NEG have either DEF-one or DEF-other
You can't do/have either the one or the other. Bosnian Croatian Serbian: Alexander (2006, p.72)

b. **Ni** on **ni** ja né mi̲li̲mo taḱo
Neither he nor I NEG think that
Neither he nor I think that. Bosnian Croatian Serbian: Alexander (2006, p.72)

All the kinds of negative sensitive items described above will be revisited in the later account of TA, along with consideration of negative concord. A final more detailed aspect of negation in language that I introduce next, because it will be considered later in TA, is neg raising.

1.2.4 Neg-Raising

In this section I return to sentential negation and its interaction with what have come to be called Neg-raising predicates. The term Neg-raising (NR) labels a class of predicates which take complement clauses for which the inference schema: Not [Pred] [S]] ⇒ Pred [Not[S]] holds (Gajewski, 2007, 2005). When such predicates (termed NR predicates) are negated, the negation preferentially only scopes over the dependent clauses, although they also generally allow a second reading where negation scopes high. These readings can be illustrated for English NR predicates *want* and *think*, as in (36), where (36a) and (36b) essentially mean the same. These are in contrast to non-NR predicates such as *say* and *know* in (37) where (37a) and (37b) are never synonymous.

(36) a. Bill does**n't** think that Mary is here.

b. Bill thinks that Mary is **not** here. NR: Gajewski (2007, p.2)

(37) a. Bill did **not** say that Mary is here

b. Bill said that Mary is **not** here. non-NR: Gajewski (2007, p.2)

Horn (1978) provides a classification of NR predicates for English which includes five semantic classes of such predicates (38).[2]

(38) a. [OPINION]: *think, believe, expect, suppose, imagine, reckon*

b. [PERCEPTION]: *seem, appear, look like, sound like, feel like*

c. [PROBABILITY]: *be probable, be likely, figure to*

[2]It should be noted that some of these are predicates, which, due to their meanings, I will revisit in our account of modality expressions (e.g. *be probable, be supposed to, want, intend*).

d. [INTENSION/VOLITION]: *want, intend, choose, plan*

e. [OBLIGATION]: *be supposed, ought, should, be desirable, advice*

Aside from the paraphrase characteristics illustrated in (36a)-(36b), a further property that characterises NR predicates is the distribution of NPIs in relation to them. NR predicates are unlike other predicates in that they permit the so-called strict NPIs such as punctual *until* in the embedded clause, as we see in (39). In English, some non-NR predicates such as *claim, know, regret, certain* permit only the so-called weak NPIs like *ever* in the complement clause while other non-NR predicates do not allow any NPIs at all. The contrast between *think* and *claim* and their interaction with NPIs is provided in (39).[3]

(39) a. Bill does **not** think that Mary will leave **until** tomorrow. NR

b. *Bill does**not** claim that Mary will leave **until** tomorrow. non-NR

Having provided some introduction to the specific topics within the field of negation that I will pursue later for TA, I now provide a sketch introduction to LFG.

1.3 Lexical Functional Grammar

Lexical Functional Grammar (LFG) was originally developed by Kaplan and Bresnan (1982). It is a non-transformational constraint-based theory of language and employs a parallel architecture that involves a number of distinct modules of linguistic analyses. It is called a lexical theory since a great deal of the analysis provided by this framework depends upon what is specified in the lexicon, as opposed to derivations assumed to take place at the syntactic

[3]The interaction between NR-predicates and NPIs is examined further in Chapter 5.

level, as in transformational theories. It is also termed a functional theory of language because grammatical functions such as subject and object are central to the formalism.

The theory makes use of two parallel levels to represent the syntax, which is our main focus of attention in this study. These are the constituent structure (c-structure) and the functional structure (f-structure) which are independent of one another, and related by a mapping correspondence function.

These two distinct levels of syntactic representation adhere to different conditions which constrain their wellformedness. I here discuss these two in detail below.

1.3.1 The c-structure

The c-structure is concerned with external syntactic properties which are related to the organisation and the ordering of different constituents in languages. Behaviours which have to do with word order considerations, constituency, syntactic categories such as NP or verb and precedence are all considered as part of the domain of the c-structure. Words in the sentence are organised into constituents represented in the form of a tree structure. The phrase structure tree captures the relations between words, phrases, and larger constituents which are ordered on the basis of set phrase structure rules.

The c-structure in LFG allows for two broad constituent types: endocentric and exocentric. When phrases are maximal projections of their heads, as in the case of a noun phrase (NP) being a projection of a noun (N), then they are endocentric. However, phrases or sentences may not have a head, and are said to be exocentric (S). For endocentric behaviours and for configurational

languages, the principles of X-bar theory are employed. X-bar theory assumes that 'lexical items appear as heads of phrases and may be associated with specifier or complement position within the same phrase' (Dalrymple, 2002, p.56). Within X-bar theory, it is lexical (open class) categories which are primarily related to projections in the phrase, and either maximal or non-maximal projections may be involved. Lexical categories include nouns (Ns), prepositions (Ps), verbs (Vs) and adjectives (As) which are assumed to head their own phrases, e.g NP is the maximal projection of a phrase headed by the noun. Aside from lexical categories, c-structure may also include functional (closed class), categories which also project (such as I), and non-projecting categories (see later section (1.3.4). For any c-structure which adheres to the endocentric principles of X-bar theory, the relationships between constituents within an endocentric phrase may be summarised as follows (40):

(40) a. Complement of lexical category (open class) = a GF (argument) or a co-head;

b. Specifier of a lexical category is dependent;

c. Complement of a functional category (closed class) = a co-head; i.e syntactic head at the c-structure that also functions as a PRED in the f-structure Bresnan (2001a, pp. 118-119).

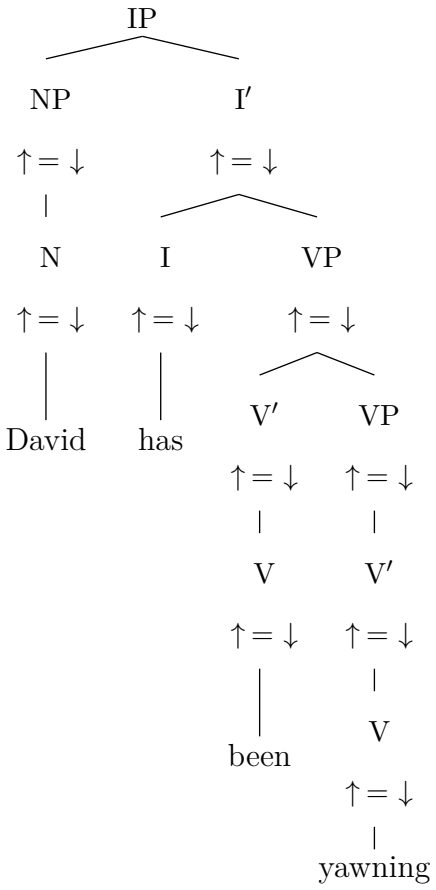
d. Non-projecting nodes must be adjoined to another head, which can be either a functional or a lexical category, and can be an argument of a co-head (Toivonen, 2003).

In addition to lexical categories heading endocentric constituents, LFG also assumes a set of functional phrase structure categories which are grammatical in nature rather than lexical, but quite distinct from the set of functional

categories utilised at the level of f-structure. Such c-structural functional categories typically include IP and CP.

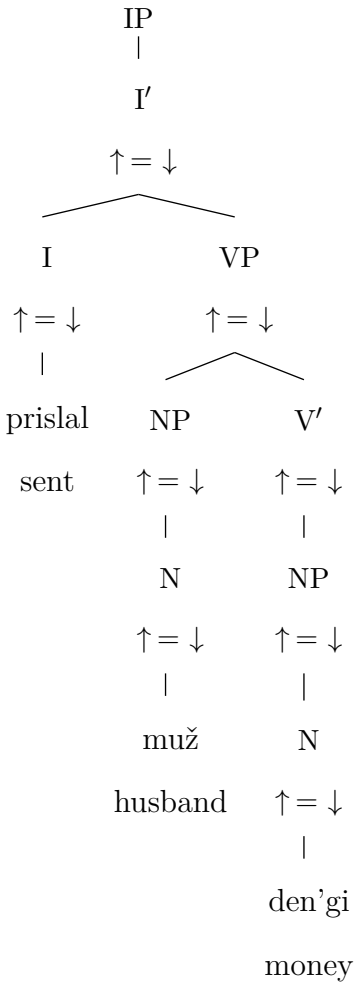
I here concentrate on the functional c-structure category I, which is the functional category which LFG, following Falk (1984), assumes to be the place that hosts English auxiliaries. The presence of IP is typically representative of a finite clause, whose maximal projection is IP. According to Bresnan (2001b) 'I is the category of the temporal/ aspectual finite auxiliary and modal verbs' (p. 99). Also Dalrymple (2002) considers that 'the tensed auxiliary verb appears in I, and the rest of the verb complex appears inside the VP' (p. 61). Languages differ, however with respect to what sort of items can fill the functional category I. While the functional I position can be occupied by tensed auxiliaries in English, in Russian it can be occupied by finite verbs as shown in (41, 42), as cited in Dalrymple (2002). Furthermore, as noted by Dalrymple (2002), a key feature of LFG is that it does not dictate a single universal structure for what items appear where in the c-structure, because, the theory does not require that phrasal organisation is identical in all languages. In fact, there is a lot typological variation in constituent structure organisation between languages. Thus LFG allows the IP to appear differently in c-structure in English and Russian, and with a different internal constituent structure (41, 42).

(41) Example of English IP **c-structure:**



Dalrymple (2001, p.62)

(42) Example of Russian IP **c-structure: 'The husband sent the money'**



Dalrymple (2001, p.63)

One of the main reason for analysing the main verb in V rather than I in english is based on the fact that negation must always be expressed on auxiliary must always be expressed before the auxiliary rather than the main verb as illustrated through (43b). In English, therefore, the main lexical verb cannot be negated without having negated the auxiliary, as even in the absence of any auxiliary, a dummy auxiliary *do* has to be introduced, as shown in (44b).

(43) a. David will win the prize.

b. David will **not** win the prize.

(44) a. *David wins **not** the prize every year.

b. David does **not** win the prize every year.

Dalrymple (2001) additionally presents evidence showing that the English VP forms a separate constituent from I within the IP, and this comes from the fact that, like other focused constituents, it can be preposed as illustrated by the example in (45a). However it is not possible to prepose both the auxiliary and the verb, since they do not form a constituent, as shown through the ungrammaticality of (45b).

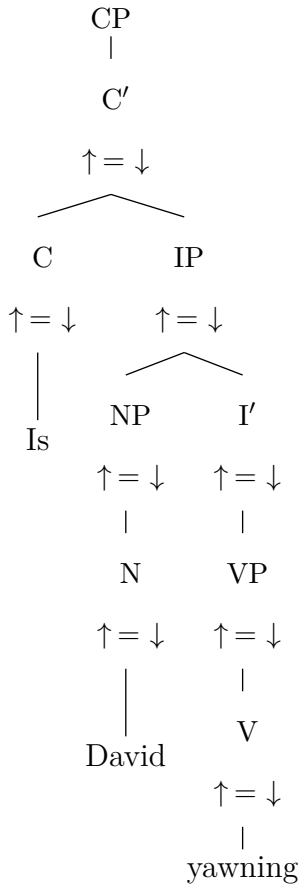
(45) a. David wanted to win the prize, and [win the prize] he will.

b. *David wanted to win the prize, [will win] he the prize.

The other main functional category in LFG c-structure is C, which heads a CP. Depending on what a language allows for, C can be filled by different elements. In English, for example, it can be filled by the complementiser *that* which then introduces an IP complement clause. The choice of how C is filled is determined by properties of the clause, such as for example whether it is an interrogative or declarative clause. In (46) below, for instance, it is the auxiliary verbs that fills in the C position in English if the clause is interrogative.

(46) a. Is David yawning?

b. **c-structure:**



Dalrymple (2001, p.63)

There are three conditions which LFG imposes upon the c-structure, as listed in (47).

(47) a. Economy of Expression. 'All syntactic phrase nodes are optional and are not used unless required by independent principles (completeness, coherence, semantic expressivity)'. Bresnan (2001a, p.188)

b. Lexical Integrity. 'Morphologically complete words are leaves of the c-structure tree and each leaf corresponds to one and only one c-structure node'. Bresnan (2001a, p.188)

c. Extended Head principle. This permits 'different categories to share the same head in f-structure, not c-structure'. Bresnan (2001a, p.6)

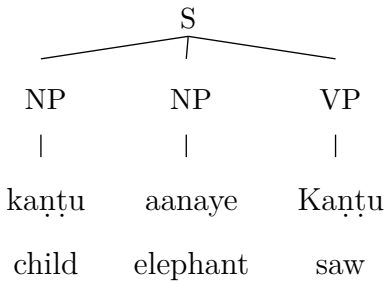
I now consider the case of the second type of c-structure, which is displayed by exocentric constituents in languages. Here no lexical or functional head is available, from which the larger constituent can be considered to be a projection, and a flat c-structure is assumed with no binary branching distinguishing specifiers and complements. This is the case at high level for Warlpiri, whose overall sentence structure may be considered to be exocentric. To account for such syntactic behaviour, LFG employs the category S, indicating an exocentric type of sentence, where words (or more precisely phrases like NP and VP) can appear in any order. The S category then implies that any order of the constituents on the branches is possible; in (48) then NP NP IP and NP IP NP are also possible in Malayalam. Indeed it is claimed by Falk (2001) that the adoption of the single non-projective exocentric category S, distinct from IP, is a major contribution of LFG to c-structure theory.

Languages which have a more or less fixed order of the elements within constituents, and whose c-structure is typically endocentric, are often termed configurational, while languages which allow free word/phrase order and typically have exocentric c-structure are termed non-configurational. It worth mentioning however that Bresnan (2001a) states that 'the exocentric category S is not always present only in non-configurational languages'. Some languages like Warlpiri (see Dalrymple (2001)) can be a mix of both endocentric and exocentric organisation.

(48) a. Kuṭṭi aanaye kaṇṭu
child.NOM elephant.ACC saw

The child saw the elephant. Malayalam: Dalrymple (2001, p.40)

b. **c-structure:**



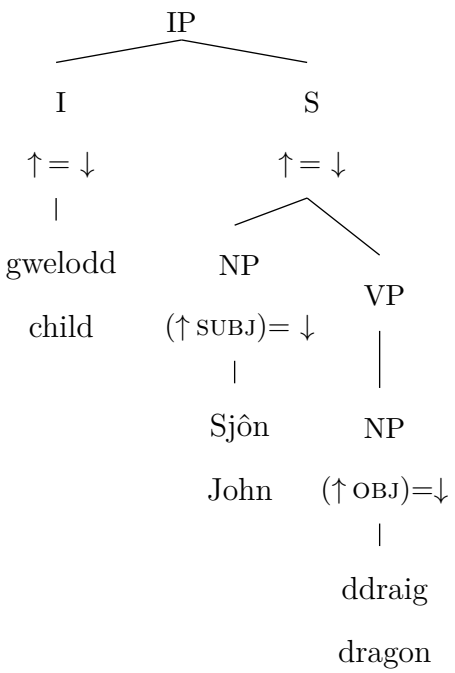
As we have seen above, the LFG c-structure can account naturally and insightfully for the phrase structure variation in both configurational and non-configurational languages. In addition to that however, the exocentric category S in LFG c-structure has also been employed to deal with phenomena which in some other syntactic theories would be regarded as classical configurational movement phenomena, such as 'head movement'. This can arise where the language has relatively fixed word order but nevertheless exhibits instances where apparently exocentric constituents arise at lower levels than the sentence as a whole (Dalrymple, 2001). Once such language is Welsh, where the prevailing word order on the sentence is IP NP NP (or VSO) (49a). The order NP IP NP (SVO) is also possible in certain circumstances (49b), but Welsh does not have fully free word order like Warlpiri. For instance NP NP IP is not possible.

The c-structure for an example such as (49b) then has a form (50) where the sentence as a whole is endocentric (an IP headed by an I), but also includes the combination of two NPs, neither of which can be regarded as the head of any lower constituent phrase. That phrase then is assigned the LFG category S as a sign of its exocentric status. In this connection, Bresnan (2001b) observed that 'The exocentric category S is not everywhere non-configurational'.

(49) a. Gwelodd Sjôn ddraig
saw-3.SG.PAST John dragon
John saw a dragon

b. Gwnaeth Sjôn weld draig
do-3.SG.PAST John see.VN dragon
John saw a dragon Welsh: (Nordlinger and Bresnan, 2011, 19-20)

(50)



Finally, when it comes to the c-structure structure phrase rules which LFG employs, it may observed that their conventions are more expressive than those in other theories, in the sense that the right hand side of the phrase structure rule consists of a regular expression which admits a sequence of category labels, which can further show the optionality of some categories along with repetitions of some others, their disjunction, and a number of constraints as to where they can or cannot appear.

To exemplify, the rule in (51a) specifies that the VP on the left-hand side dominates two nodes, which are V and NP. This in words shows that a lexical verb takes a complement NP. In (51b) the parentheses around the NP constituent label indicate that the NP is optional. In this way, it is possible make a disjunction between an obligatory and an optional constituent, depending on the presence of brackets. It is not a necessity to follow this practice, however,

as one can simply make use of the Economy of Expression principle which states that 'all c-structure nodes are optional' (Falk, 2001, p.47). In its phrase structure rules, LFG can indicate a disjunction by using curly brackets and a vertical bar, as in (51c), showing that either an NP or a PP can appear in the specifier position of IP. This disjunction disallows the appearance of both of them together. It does not additionally imply that neither of them appears. Finally, (51d) makes use of the kleene star (∗), which is meant to represent none or as many as required. The (∗) on the PP thus indicates that zero or any number of PPs can appear as complements to the right of the verb.

(51) a. VP $\longrightarrow$ V NP

b. IP $\longrightarrow$ (NP) I'

c. IP $\longrightarrow$ {NP|PP} I'

d. VP $\longrightarrow$ V PP∗

In configurational languages, following phrase structure rules such as (51), NPs are located in c-structure which map onto entities defined in f-structure. For instance, the specifier of I' is an NP which maps onto the SUBJ GF. PPs such as PP* map to the OBL GF (see (50) and next section).

I now turn to consider the other level of syntactic representation.

1.3.2 The f-structure

The f-structure, as opposed to the c-structure, is concerned with internal syntactic properties, which are believed to be universal in nature. It encodes

the abstract functional syntactic organisation of the sentence, captured traditionally through the use of terms such as predicate, subject, object, adjunct, as well as grammatical features or categories such as tense, gender and case. The f-structure is represented as an attribute value matrix (AVM) rather than a tree, as illustrated in (53), for example. It takes the form of a function from attributes to values, i.e. a set of pairs where the attribute or general category is stated first and the second member is its value. For example, TENSE PRES indicates that the attribute tense in the sentence has the value of present. SUBJ [PRED 'ALICE'] indicates that the subject of the sentence is a predicate, which in turn has the specific lexical value *Alice*. Sets functioning as values are unordered. Overall, the syntactic analysis at the f-structure level captures the predicate argument structure and the relevant grammatical relations or grammatical functions (GFs) and other syntactically relevant features involved in a syntactic construction.

Three different types of attributes are found in the f-structure. These are: (1) GFs (such as SUBJ and OBJ), (2) grammatical features (such as NUMBER with values SG and PL), and (3) the PRED attribute for lexical items, which unlike other features is semantic in nature, and exceptional in that each is a unique form. The PRED contributes the functional head in the f-structure and takes an argument list (if there is one). This is usually represented as GFs enclosed in angle quotes (< >). Dalrymple (2002) states that 'The value of the PRED attribute is special: it is a semantic form' (p. 3). This is shown by placing single quotes (' ') around the value, indicating that the value is unique and that the list of its arguments is relevant to its subcategorisation requirements, as illustrated through the verb *continue* in (52).

(52) PRED 'CONTINUE <SUBJ>'

The governable GFs (SUBJ, OBJ, XCOMP, COMP and OBL), and modifiers (ADJ, XADJ) are themselves attributes in the f-structure. In addition to such GFs, there are also the discourse functions TOPIC and FOCUS. SUBJ and OBJ are the core GFs, whereas the non-core GFs include OBL, and the clausal GFs: COMP and XCOMP. All of these are subcategorisable or governable by a predicate, meaning that particular predicates require them. By contrast, other categories present in the f-structure do not function as arguments. These are ADJS and UDFS (unbounded discourse functions), used as an umbrella term for the discourse functions: TOPIC and FOCUS (Asudeh, 2012, 2004). While GFs typically involve a functional head with semantic content, the grammatical features which can be present in the f-structure, such as the TENSE, ASPECT, PERSON, NUMBER, CASE and POLARITY, take atomic values, such as 1,2 and 3 for PERSON, and POS or NEG for POLARITY.

The required information that eventually ends up appearing in the f-structure comes from the lexical entry, which also forms the basis of the information present in the annotation of the c-structure node. An example of a simple sentence with its f-structure and a lexical entry which supplies some of the information for the f-structure appears in (53b). As can be seen, the f-structure in (53b) is based around the information that the main PRED in the sentence is 'DRINK', which takes (governs) two GF arguments, SUBJ and OBJ, and the TENSE of the sentence is PRES. Each GF is then shown to consist of a PRED with a particular specific lexical semantic content. The lexical entries such as that in (10c) then provide information about each particular lexical PRED. For instance, the PRED 'PETER' is defined by a set of defining equations (using the = sign), specifying that 'Peter' is a PRED with a given part of speech GF and additionally has associated with it information about the grammatical feature NUMBER with value SG, and the attribute GEND with value MASC.

(53) a. Peter is drinking coffee.

b. **f-structure:**

$$\begin{bmatrix} \text{PRED} & \text{`DRINK} < \text{SUBJ, OBJ} > \text{'} \\ \text{TENSE} & \text{PRESENT} \\ \text{SUBJ} & \left[ \text{PRED} \quad \text{`PETER'} \right] \\ \text{OBJ} & \left[\text{PRED} \quad \text{`COFFEE'} \right] \end{bmatrix}$$

c. *Peter* N $(\uparrow \text{PRED}) = \text{`PETER'}$

$(\uparrow \text{NUM}) = \text{SG}$

$(\uparrow \text{GEND}) = \text{MASC}$

$(\uparrow \text{PERS}) = 3$

An important additional feature of the lexicon is to capture a number of functional constraints. These are essentially dependencies between categories, including constraints of the type that are implicational, for example, i.e where if one feature value is present, then another one must be also. A constraining equation, where the = is followed by lowered $_c$, before the value that follows necessitates the presence of a given value for a specific feature in the f-structure. An example of this is (54), which does not just specify that 'both' is a PRECONJ with value BOTH, but also that it requires the attribute CONJ with value AND to be present in the f-structure. The reverse is not true, since the entry for 'and' does not specify anything about any requirement for a PRECONJ. The equation $(\uparrow \text{CONJ}) =_c \text{AND}$ thus means that this equation must be true of the f-structure denoted by $\uparrow$, i.e it functions as a 'filter'.

(54) a. *both* *both* $(\uparrow \text{PRECONJ}) = \text{BOTH}$

$(\uparrow \text{CONJ}) =_c \text{AND}$

b. *and* *and* ($\uparrow$ CONJ) = AND

The f-structure is required to meet certain wellformedness conditions in order for it to be an appropriate. These are: Completeness, Coherence and Constituency, whose definition is given below:

(55) a. Completeness: 'An f-structure is locally complete if and only if it contains all the governable grammatical functions that its predicate governs. An f-structure is complete if and only if it and all its subsidiary f-structures are locally complete'.

b. Coherence: 'An f-structure is locally coherent if and only if all the governable grammatical functions that it contains are governed by a local predicate. An f-structure is coherent if and only if it and all its subsidiary f-structures are locally coherent'.

c. Consistency: 'In a given f-structure a particular attribute may have at most one value'. Dalrymple (2002, p.39)

In contrast with the variation found between languages at the level of the c-structure, it is believed that the f-structures of languages are more universal in nature. In what follows I will discuss the nature of the link or the correspondence between the c-structure and the f-structure.

1.3.3 Correspondence between c-structure and f-structure

Although in LFG the c-structure and f-structure levels of syntactic analysis each have an independent existence, the relationship between them must also

be stated. A mapping function exists such that it links c-structure nodes to f-structure AVMs.

The mapping is captured by annotating the rules which produce the c-structure, using the metavariable ↑ and ↓ on each node, while adding to them all the information that is required. This represents the way in which the functional information is connected with the phrase structure information. The up arrow (↑) refers to the node immediately dominating the node which is annotated, while the down arrow (↓) refers to that which annotates the node itself. The effect is best seen in (56b) which revisits the example whose f-structure was illustrated in (53b) above. (56b) shows the annotated version of the phrase structure rules that produce the c-structure of (56a). The mapping required between the c-structure and f-structure is visually shown in (57). The mapping is formally achieved by the fact that, for example, the annotation (↑ SUBJ)= ↓ of the NP in the first rule tells us that the annotated NP (↓) is the subject within the immediately dominating node (↑) arrow, i.e. the subject of IP. The annotation ↑ = ↓ added to a node simply states that the information on that node ↓ goes into the same f-structure as the information of immediately dominating (mother) node (↑). In this way, the annotation of the NP in the third rule (56d) as OBJ, is information that gets passed up the c-structure, illustrating that it functions as an argument of the predicate that heads the IP, along with the SUBJ.

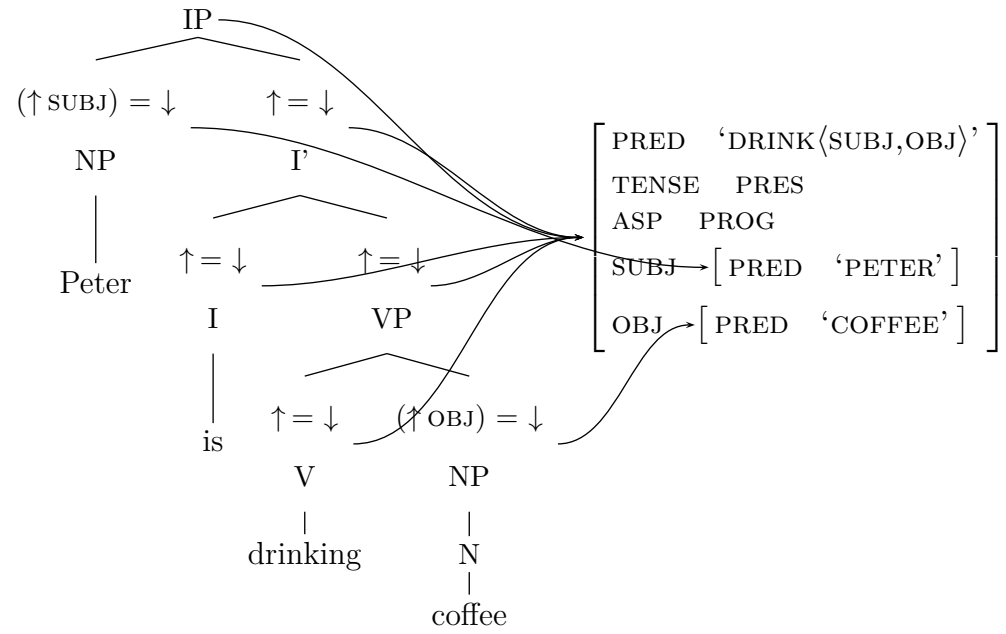
(56) a. Peter is drinking coffee

b. $\text{IP} \longrightarrow \underset{\uparrow(\text{SUBJ}) = \downarrow}{\text{NP}} \quad \underset{\uparrow = \downarrow}{\text{I}'}$

c. I′ ⟶ I VP
↑ = ↓ ↑ = ↓

d. VP ⟶ V NP
↑ = ↓ ↑ (OBJ) = ↓

(57)



1.3.4 Non-projecting words

In the LFG the default assumption is that words are projecting. That is to say that they are analysed as potentially combining in the c-structure with a specifier and/or a complement. Their maximum projection is thus not a single word but a phrase. This typically applies to words of the major classes such as verbs, nouns and adjectives, which head phrases with the same name. The elements which enter into construction with projecting words in this way often correspond to their arguments in f-structure.

However, it is widely accepted that there also exist words which can only be analysed as themselves, at the bottom or zero level, and do not project any larger structure. Toivonen (2001) was the first to argue for the treatment of verbal particles in Swedish as non-projecting words Prt-^{0} adjoined to a verb

at V^0, which is the lowest level of V phrase structure. The 'hat' symbol is also used to indicate a non-projecting element, such as $\hat{y}$ to represent the non-projecting element Y. To justify the claim that such verbal particles in Swedish should be analysed as non-projecting elements, Toivonen (2001) shows how the particles in question cannot be analysed as any other type of element, given the following behaviours which they exhibit:

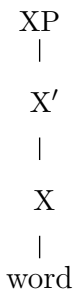
- A particle is stressed.
- A particle immediately follows the verbal position within the VP.
- A particle cannot have a modifier or a complement.

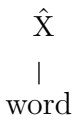
Toivonen (2001, p.2).

Thus, these Swedish non-projecting words always immediately follow the verb with no possibility for the object NP to occur in between. At the same time V+Prt cannot be regarded as a single complex word (59).

Although the recognition of the existence of non-projecting items is not consistent with X-bar theory, which is what provided the original basis for the c-structure in LFG, it does accord with a number of sensible logical principles. Firstly, it is in line with the lexical integrity principle (Bresnan, 2001b, p.92) which states that 'Morphologically complete words are leaves of the c-structure tree and each leave corresponds to one only one c-structure node'. Since non-projecting verbal particles are separate words they are attached to a separate branch from the verb itself. Second, it is in line with principles of economy

of expression echoing Occam's Razor, where: 'All syntactic phrase structure nodes are optional and not used unless required by X′ constraints or completeness' (Toivonen, 2001, p.70). This means that c-structure fragments of the type seen in (58b) are used in place of (58a), which is what the c-structure rules would generate for a non-projecting word, if all words had to be regarded as projecting.

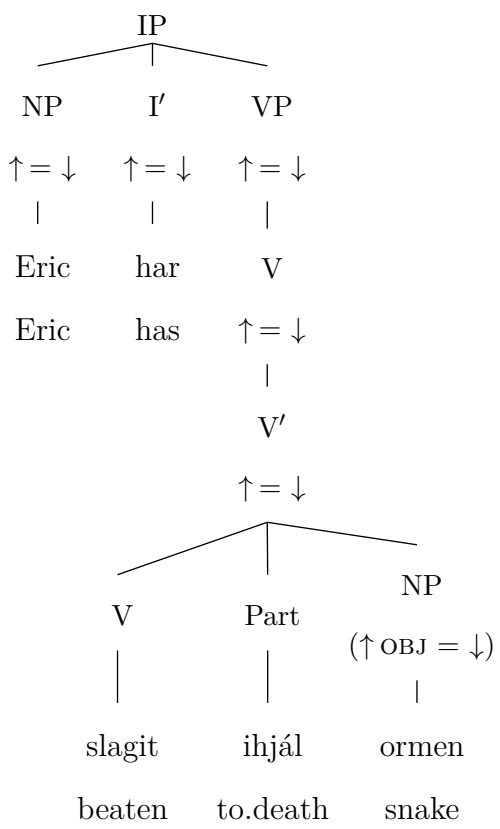
(58) a.


b.


(59) a. Eric har slagit ihjál ormen
E. has beaten to.death snake.the

Eric has beaten the snake to death

b.



In the following sections I will selectively elaborate on the LFG analysis of auxiliaries and copulas, and coordination. This is because these will be themes which will come up in this thesis, where I later discuss sentential negation and its interaction with complex tense and aspect structures, and since in Chapter 4 I will discuss negative coordination, that will require us to have some knowledge of how coordination works in LFG.

1.4 Auxiliary and copula in LFG

This section briefly reviews the possible treatment of auxiliaries and copulas in LFG. I group these together here because a sub-set of the auxiliaries to be discussed in this study also function as copulas.

Auxiliaries are 'a closed class of verbal elements' (Butt et al., 1999), and broadly distinct from lexical main verbs, and usually co-occurring with them

in a sentence, adding tense, aspect or modality meaning of some sort. In LFG, following Falk (2003), there are two distinct accounts of how auxiliaries can be analysed: a feature analysis (AUX-FEATURE) and a main predicate analysis (AUX-PRED), which imply treating sentences with auxiliaries as having mono-clausal vs. bi-clausal f-structures, respectively. This boils down to the question as to whether the auxiliary has a PRED value and takes arguments in its f-structure or not.

Under the first analysis, as was illustrated in (60b), the auxiliary is the f-structure's co-head, along with the main verb, although it is only the main lexical verb that is an argument-taking predicate. The auxiliary is merely feature-bearing in the structure. Under the second analysis, the auxiliary is the functional head or the main predicate in the sentence and the lexical verb is its complement. The auxiliary is treated as a distinct type of raising predicate which subcategorises for the arguments/ GFs SUBJ and XCOMP, sharing its (nonthematic) subject with its verbal complement. The distinct structure representations that result on the basis of these two analyses, for a sentence such as (60a), are illustrated in (60b) and (60c). The difference at the c-structure level lies in whether the node where the auxiliary is placed, takes an $\uparrow = \downarrow$ notation, which marks it as a co-head, or whether it takes a ($\uparrow$ PRED)=$\downarrow$ annotation, which then associates the auxiliary with the PRED function in the f-structure.

(60) a. The children will take syntax.

b.
$$\begin{bmatrix} \text{PRED} & \text{'TAKE <SUBJ, OBJ>'} \\ \text{TENSE} & \text{FUTURE} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'THE CHILDREN'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'SYNTAX'} \end{bmatrix} \end{bmatrix}$$

c.
$$\begin{bmatrix} \text{PRED} & \text{'WILL} < \text{XCOMP}> \text{SUBJ'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'THE CHILDREN'} \end{bmatrix} \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{'TAKE} <\text{SUBJ, OBJ}>\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & [] \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'SYNTAX'} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

Similarly to auxiliaries, copulas in LFG are also treated in two basic ways, in the sense that two distinct analyses have been proposed. In other words, Nordlinger and Sadler (2007) suggest that copulas can be regarded either as participating in a single-tier or a double-tier f-structure analysis, depending on whether they are analysed as contributing a feature in the f-structure where it is then some other expression that functions as the main PRED, or whether they are treated as the main PRED itself. Furthermore, Dalrymple et al. (2004) modifies the second option by proposing two alternative argument structures for a copula viewed as a main predicate in a sentence such as (62). They argue that in some circumstances the GFs accompanying *be* are best analysed, as above, as 'open', using XCOMP (62a). In other instances, however (62b), the 'closed' analysis using the GF PREDLINK is better.

(61) The books are flimsy.

(62) a. PRED 'BE < XCOMP > SUBJ'.

b. PRED 'BE < SUBJ, PREDLINK >'.

In (63) I illustrate a single-tier vs double-tier analysis, for a Russian sentence with a zero copula, since it will be shown later that this is a feature of Arabic. The type of complement adopted in the two-tier version (XCOMP or PREDLINK etc.) is left open here and just written as GF (Nordlinger and Sadler, 2007). Thus a sentence (63) is associated with the f-structure in (63b)

in a single-tier analysis, and (63c), in a double-tier analysis, where it is the zero copula that functions as the f-structure's main PRED.

(63) a. Ona vrač
3SGF.NOM doctor.SG.NOM
She is a doctor. Russian: Fennell (1961, p.288), cited in Nordlinger and Sadler (2007)

b. **single-tier analysis**

$$\begin{bmatrix} \text{PRED} & \text{'DOCTOR <SUBJ>'} \\ \text{CASE} & \text{NOM} \\ \text{NUM} & \text{SG} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'PRO'} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{F} \\ \text{PERS} & 3 \\ \text{CASE} & \text{NOM} \end{bmatrix} \end{bmatrix}$$

c. **double-tier analysis**

$$\begin{bmatrix} \text{PRED} & \text{'NULL-BE <SUBJ, GF>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'PRO'} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{F} \\ \text{PERS} & 3 \\ \text{CASE} & \text{NOM} \end{bmatrix} \\ \text{GF} & \begin{bmatrix} \text{PRED} & \text{'DOCTOR'} \end{bmatrix} \end{bmatrix}$$

Nordlinger and Sadler (2007) further point out that a single-tier analysis is particularly suited to languages that allow predicative nouns or adjectives to inflect for main clause tense, or to languages such as Turkish and Arabic, where predicative adjectives and nouns display agreement with the subject, just like verbs. This is something which does not occur in English. Languages such as Tariana, where two distinct tense markers with distinct values can appear in a copular sentences, would however require a double-tiered f-structure, where one tier allows marking of the tense of the copula, and the other that

of a predicative noun.

I return finally to the issue (Dalrymple et al., 2004) of the precise nature of the complement in the double-tier analysis. The use of the closed option, PREDLINK, seems appropriate where there is essentially no morphosyntactic relation between the SUBJ and the other element, as in the case of English: *I am a student, He is fond of Mary.* Indeed, if the second element is a clause with its own subject, a two tier analysis with PREDLINK is the only one possible (Dalrymple et al., 2004): *the problem is that they appear.* The analysis using XCOMP is the open complement account and seems to apply best where the copula 'be' or the 'null-be' PRED subcategorises for a complement GF, as well as a SUBJ. The analysis is argued by Dalrymple et al. (2004) to lead to a simpler and more standard way of stating subject agreement with predicative nouns, adjectives etc. within copular sentences. Subject-predicate agreement such as that which occurs in French or Arabic will be dealt with through the sharing of the SUBJ between the two tiers, via the open XCOMP complement.

Since Arabic does exhibit subject agreement with predicative nouns and adjectives in NUMBER and GENDER, either the single tier or the open-GF double tier analysis could be taken as candidates for the analysis of such copular sentences. What is more important here, however, is perhaps not so much the details of these analyses, but rather the principle that LFG readily offers a variety of analyses and does not insist on rigid uniformity of choice, even within the same language.

1.5 Coordination in LFG

As mentioned by Dalrymple (2001) coordination in LFG was first discussed in Bresnan et al. (1985) and Kaplan and Maxwell (1988). In LFG, coordination is represented as membership of a set of f-structures, given that this can accommodate as many coordinated items as required, each treated as an individual conjunct.

Example (64a) shows an instance of sentential coordination which includes two IPs linked together through CONJ *and*. The coordination is constrained by the phrase structure rule in (64b), which indicates that one or more IP can precede the CONJ, but only one IP can follow it. The convention using up and down arrows indicates that what is below is a member of a set of things specified higher up.

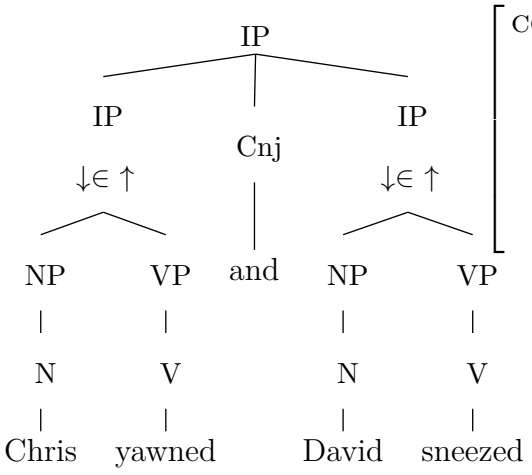
(64) a. Chris yawned and David sneezed

b.

IP	⟶	IP^+	Conj	IP
		$\downarrow \in \uparrow$	$\uparrow = \downarrow$	$\downarrow \in \uparrow$

c.

(65) a. **c-structure:**



b. **f-structure:**

$$\begin{bmatrix} \text{CONJ} & \text{`AND'} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{`YAWNED<SUBJ>'} \\ \text{PRED} & \text{CHRIS} \end{bmatrix}, \begin{bmatrix} \text{PRED} & \text{`SNEEZED <SUBJ>'} \\ \text{PRED} & \text{DAVID} \end{bmatrix} \right\} \end{bmatrix}$$

Dalrymple (2001, p.362)

In the context of the coordination of two predicates, some arguments/elements often shared so not repeated. Such a situation is more complex, since the completeness and coherence requirements must be met.

As an example, I now consider the annotated phrase structure rule for coordinated verbs when these are coordinated with the use of *both ... and ...* (i.e. emphatic positive coordination) as in sentences like *Chris both yawned and sneezed*. The rule in (66b) makes reference to a PRE-CONJ as well as a CONJ. As illustrated in (66b), from the information contributed by the conjunction and pre-conjunctions like *both* or *either* in the lexical entries, we see that these latter forms impose a constraint on the type of CONJ form they can appear with, such that with *both* this can only be *and*. This is what accounts for the ungrammaticality of a phrase such as **both selected or hired*. Given the lexical entries in (66c), the c-structure and f-structure for the phrase *both selected and hired* are displayed in (67a, 67b), and the features PRECONJ and CONJ are classified as non-distributive features.

(66) a. Chris both yawned and sneezed.

b.

V	⟶	(PreConj)	V^+	Conj	V
		$\uparrow = \downarrow$	$\downarrow \in \uparrow$	$\uparrow = \downarrow$	$\downarrow \in \uparrow$

c. *both* Pre Conj

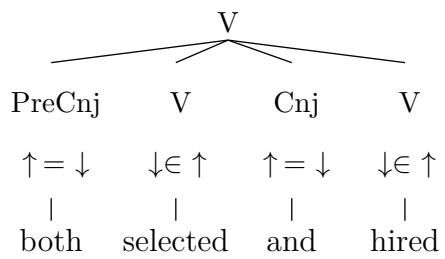
($\uparrow$ PRECONJ) = 'BOTH'

($\uparrow$ CONJ)$=_c$ AND

and Conj

($\uparrow$ Conj) = AND

(67) a. **c-structure:**



b. **f-structure:**

$$\begin{bmatrix} \text{PRECONJ} & \text{'BOTH'} \\ \text{CONJ} & \text{'AND'} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{'SELECTED'} \end{bmatrix} \right. & \\ \left. \begin{bmatrix} \text{PRED} & \text{'HIRED'} \end{bmatrix} \right\} & \end{bmatrix}$$

Dalrymple (2001, p.364)

The LFG mechanisms described above will be referred to later when I address LFG analysis of negative co-ordination in TA. Next I move to introduce the LFG treatment of negation itself and negative concord.

1.6 Negation and negative concord in LFG

In this section I aim to present some different LFG accounts that have been proposed in the literature to account for the syntax of negation and negative concord (NC) phenomena from a syntactic standpoint [4].

The topic of negation has not attracted a great deal of attention in the LFG approach. Indeed Przepiórkowski et al. (2015) have recently pointed out that 'there is no standard representation of negation in LFG f-structure; the issue is not mentioned in the most popular LFG textbooks/reference books, namely Bresnan (2001a) and Dalrymple (2002)'.

Notwithstanding the limitations, recently syntactic aspects of negation and NC in LFG have been discussed, even if only partially, in the work of Sells (2000), Al Sharif and Sadler (2009), the PARGRAM community within LFG, Laczkó (2014); Laczkó et al. (2015), and Przepiórkowski et al. (2015). The PARGRAM group uses the Xerox Linguistic Environment (XLE) as a compu-

[4]For an earlier formalisation of the semantics of negation in LFG from a logical semantics standpoint, using glue semantics, also see Fry (1999)

tational platform to support LFG grammar development, and attempts to develop standardised analyses of parallel phenomena in various languages within the LFG framework. Recent examples of such analyses are the analysis of Hungarian negation in Laczkó (2014); Laczkó et al. (2015) and of Polish negation in Przepiórkowski et al. (2015). It should be noted, however, that I could find no LFG studies whatever of negative coordination in any language. Hence this is one of the central topics of the present work.

Broadly, LFG researchers have proposed two distinct ways in which to account for negation (including the capturing of the syntactic aspects of negative concord without accounting for anything beyond that): (i) the ADJ(unct) analysis where the negative element is treated as a predicate and (ii) the NEG + analysis where it is treated as a value of a binary feature. The two alternative analyses are illustrated in the following fragment f-structures, with (68a) illustrating the ADJ analysis, and (68b) the feature analysis.

(68) a. **f-structure:**

$$\left[\text{ADJ} \quad \left\{ \left[\begin{array}{ll} \text{PRED} & \text{`NOT'} \\ \text{ADJ-TYPE} & \text{NEG} \end{array} \right] \right\} \right]$$

b. **f-structure:**

$$\left[\text{NEG} \quad + \right]$$

Similar to (68b), Al Sharif and Sadler (2009) for example adopt a feature POL which takes values POS and NEG, whereby POL NEG is the value taken in the f-structure in their analysis of sentential negative particles and the negative auxiliary in Modern Standard Arabic (MSA). I will here expand somewhat on this account, since I will be relying on their analysis as a guide to my own analysis of negative particles in TA in Chapter 3.

The negative particles in MSA are *lā*; tensed negative particles *lan* (used in FUT), and *lam* (used in PAST); and the negative auxiliary *laysa*, which inflects for NUM, GEN and PERS like verbs generally, but is TENSE PRES only. The three negative particles *lā, lan, lam* negate the verb in the imperfective form and must always occur immediately preceding the verb. The auxiliary *laysa* also negates imperfective verbs but may be separated from it by the subject, and exhibits agreement with it in gender, number and person. These items exhibit detailed differences in terms of verb-form and selection. The invariant *lā* occurs with indicative imperfective verbs (69a), as does *laysa*; *lam* occurs with imperfective jussive verbs, expressing PAST TENSE (69c); and *lan* (69b) with imperfective subjunctive mood verbs expressing FUTURE TENSE. All these characteristics make it difficult to analyse these forms as any sort of ADJ. It makes much better sense to treat negation as a feature associated with non-projecting particles (e.g. *lā*) or with fully projecting auxiliary verbs (*laysa*), all of which enter into agreement and or other restrictions with respect to the lexical verb.

(69) a. zayd-un **lā** y-aktub-u al-risālat-a
Zayd-NOM NEG 3M-write.IMPV-3MS.INDIC DEF-letter-ACC
Zayd is not writing the letter

b. zayd-un **lan** y-aktub-a al-risālat-a
Zayd-NOM NEG.FUT 3M-write.IMPV-3MS.SBJV DEF-letter-ACC
Zayd will not write the letter

c. zayd-un **lam** y-aktub al-risālat-a
Zayd-NOM NEG-PAST 3M-write.IMPV-MS.JUSS DEF-letter-ACC
Zayd did not write the letter (tensed negative particles)

(70) al-awlad-u lays-ū ya-ktub-ūn
NEG-3MS DEF-boys-NOM 3M-write.IMPV-MP-IND
The boys do not write (negative auxiliary)

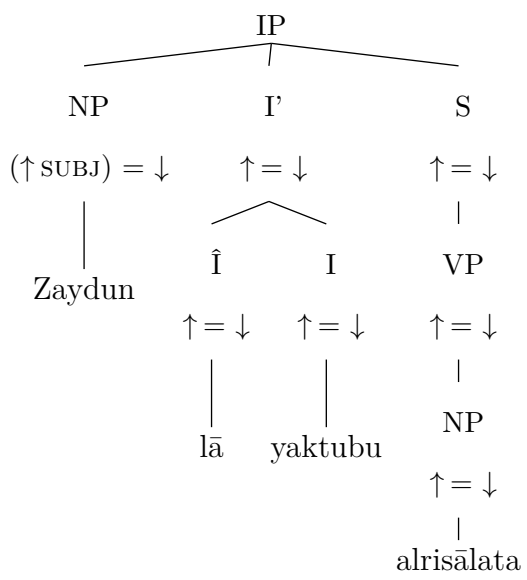
The negative particles and the auxiliary are given the same analysis in the f-structure, in the sense that they are all associated with a [POL NEG] feature value in the lexical entry, along with the other TENSE related values they express and requirements related to the form of the verb. The negative particles are however treated in a different way from *laysa* in the c-structure. The analysis by Al Sharif and Sadler (2009) of the negative particles essentially relies on the similarities which they perceive between the negative particles in MSA, and Swedish verbal particles as identified by Toivonen (2003).

They analyse the negative particles as non-projecting words attached to I/V-zero. The evidence they use includes the fact that they bear stress, but must be always adjacent to the verb, and cannot be modified or take complements. They thus adjoin onto the lexical verb if there is one. As illustrated in (71a), the finite verb in Arabic can be either in V or in I. If an auxiliary is present, then the verb is in V. It is for this reason that negative particles can be also adjoined to V^0. By contrast, the negative auxiliary *laysa* is analysed as a fully projecting word located under the I node, i.e. it is a negative auxiliary. The contrast can be illustrated by the two c-structures in (71b) and (71c).

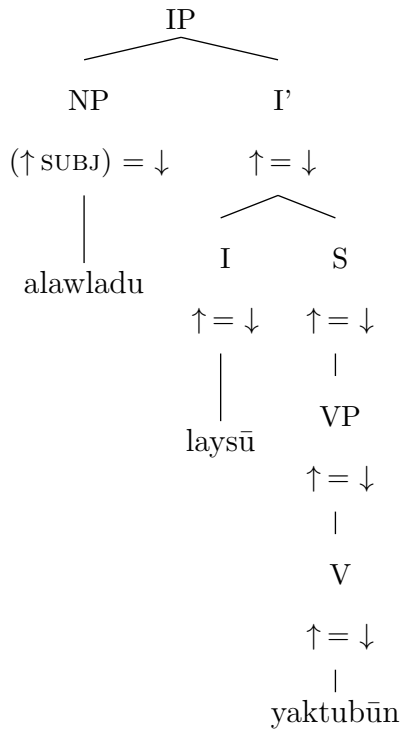
(71) a. $\mathrm{I} \longrightarrow \quad \hat{\mathrm{I}} \quad \mathrm{I}$

$\uparrow = \downarrow \quad \uparrow = \downarrow$

b.



c.



I now move on to introduce the work that has been done on NC in LFG. Sells (2000), Laczkó (2014); Laczkó et al. (2015), and Przepiórkowski et al. (2015) all discuss the syntactic aspects of NC.

In Sells' (2000) account of negation and NC in Swedish is a set within a realisation model of the syntax-morphology interface. A feature approach (NEG +) is employed to represent both clausal and constituent negation associated

with different f-structure levels. His account links the different f-structures in which the NEG + feature can occur with different morphological realisations. To account for the licensing of NC in Italian, Sells treats the negative word *non* in Italian as that which provides NEG + to the clause within the f-structure, given that it expresses sentential negation. On the other hand, the n-word *nessuno* 'nobody' engages in NEG CONCORD and requires the presence of sentential negation, at least when it is in a post-verbal position (72). Ensuring that this is the case is achieved via imposition of the restriction ((GF ↑) NEG)$=_c$ + as a part of the lexical entry of *nessuno*. His account is partial however, given that he does not discuss the negative quantifier function of *nessuno*.

(72) **Non** ha telefonato **nessuno**
NEG has phoned no-one
No one has phoned Swedish: Sells (2000, p.7)

Laczkó (2014) by contrast adopts the ADJ(unct) analysis for both constituent and clausal negation in Hungarian arguing that this analysis will permit the occurrence of multiple negatives without NC as illustrated in (73a). They therefore use lexical entries such as (73b) for the negator *nem*.

(73) a. **Nem** mindenki-t **nem** Péter hívott fel
Not everybody-ACC not Peter-NOM called up
It is not true for every body that it wasn't Peter that didn't call them up

b. *nem* NEG (↑ PRED) = 'nem'
(↑ ADJUNCT-TYPE)= NEG

A further interesting point in this study is that a FOCUS category is introduced in relation to some negative particles based on the c-structure position

(Spec of VP) (this will also be observed in our study of scalar focus particles in TA). This is required due to the fact that in Hungarian, a constituent which is negated has to appear in focused position preverbally, as is the case for 'everybody' and 'Peter' in (73a). In this way he suggests that one and the same negative item may display distinct behaviours and interact in a different way, with respect to NC, depending on whether it is in Spec of VP, as opposed to its behaviour when it is attached to the verb.

In (2015), while maintaining the ADJ(unct) analysis for the negative particles, Laczk also introduces features into analysis: POL= negative and NEG +. The POL feature he adopts in order to capture the sensitivity of n-words to the presence of negation, saying that 'I think the most natural feature here is POL = negative. This truly and even mnemonically expresses the essence of this phenomenon'. N-words in Hungarian must be always licensed by negation, since it is a strict NC language, and for this reason he goes on to discuss n-word licensing with respect to their linear c-structure placement. Essentially he then provides the analysis NEG =+ for the item expressing sentential negation. By this means an NC item will only ever surface in contexts where NEG =+, since such items are themselves marked as POL = negative.

(74) János *(**nem**) lát meg **senki-t**
John.NOM NEG see VM nobody-ACC
Neither/ Not even John catches sight of anybody Hungarian: Laczkó et al. (2015, p.179)

(74) is an illustration of a sentence that involves the NEG concord item *sem*, which expresses POL in words like *senkit*, to obligatory occur in the presence of sentential NEG +, expressed through *nem*.

Przepiórkowski et al. (2015) again provide an account of negation for Polish that incorporates reference to sentential and constituent negation, as well as NC, where Polish is a strict negative concord language which also does not allow spreading: thus NCIs are only licensed via sentential NEG. Employing a feature treatment of negation, they propose two different types of negation feature at the f-structure syntactic level, which will be adopted in this study. These are (i) ENEG (eventuality negation) and (ii) CNEG (constituent negation). The same negative form *nie* 'not' in Polish can be used in both constructions and corresponds to both ENEG and CNEG features but with distinct syntactic distributions and behaviours (75). In this way, both types of negation can co-occur in the same f-structure as illustrated in (76b).

(75) a. *nie* ENEG: $(\uparrow \text{ENEG}) = +$

b. *nie* CNEG: $(\uparrow \text{CNEG}) = +$

(76) a. kościółkatolicki **nie** **nie** potrafi, ale **nie** chce
church.NOM catholic.NOM ENEG CNEG can but ENEG want
It's not that the Catholic Church cannot, but rather that it doesn't want to Polish: Przepiórkowski et al. (2015, p.327)

b. **f-structure:**

$$\begin{bmatrix} \text{PRED} & \text{'CAN} < [1], [2] > \text{'} \\ \text{SUBJ} & [1] \quad \begin{bmatrix} \text{PRED} & \text{'CC'} \end{bmatrix} \\ \text{XCOMP} & [2] \\ \text{CNEG} & + \\ \text{ENEG} & + \end{bmatrix}$$

As mentioned above, an important difference in behaviour between ENEG-expressing *nie* and CNEG-expressing *nie* is that only ENEG *nie* triggers the genitive of negation as shown in (77a), where *nilogo* 'nobody' is GEN, and licenses n-words more generally. When the same negative form is used as a

CNEG marker it does not display this behaviour, in that it does not trigger the genitive of negation nor license n-words, as shown in (77b). These together are all taken as evidence that indeed there are syntactically two *nie* in Polish, and hence the presence of two features.

(77) a. Janek **nie** lubi Marii
Janek.NOM NEG likes Maria.GEN
Janek doesn't like Maria. Przepiórkowski et al. (2015, p.324)

b. **Nie** Janek lubi Marię/*Marii (lecz Tomek)
NEG Janek.NOM likes Maria.ACC/Maria.GEN but tomek
It's not Janek who likes Maria (but Tomek). Przepiórkowski et al. (2015, p.326)

In order to account for n-words and their requirement in some languages to display NC, the researchers assume lexical entries such as that in (78a), which involve the precedence of a constraint that an n-word requires an ENEG + feature value to be present in the structure.

The lexical entry illustrates how *nikt* 'nobody' can be any GF from the set of GFs in (78b), and this GF can itself be involved in how NC items in Polish can be licensed non-locally, at least when the n-word is in an XCOMP, as illustrated by example (78b), where an infinitival embedded clause is involved, but the n-word 'not any' still triggers sentence negation in the higher clause.

(78) a. *nikt* N: (↑ CASE)= NOM ((XCOMP* GF+ ↑) ENEG $=_c$ +

b. GF ≡ { SUBJ| OBJ| OBL| ADJ }

c. Karpowicz **nie** chcia pisać żadnych wierszy
karpowicz.NOM NEG wanted write.INF none.NW poems.GEN
Karpowicz didn't want to write any poems Przepiórkowski et al. (2015, p.331)

The lexical entry of *nikt* implies that it is essentially a NOM NP, and it functions as a GF that can be embedded long-distance, and which requires the hosting f-structure to have the feature value ENEG= + in it.

In the above section I have attempted to prepare the reader with some of the core LFG apparatus for handling negation and negative words. It is time now to close this chapter and move in the next to the account of TA.

1.7 Outline of the thesis

Chapter one has introduced the topic of the study and its research questions, and described its importance. It has also provided a general background introduction to negation phenomena in language, and to the LFG approach to syntactic analysis.

Chapter two provides both a description and LFG analysis of a range of syntactic features of TA which serve as a basis for the account of negation in TA in chapters 3-5. The account centres around the distinction between verbal sentence structure, and non-verbal sentence structure, since in Arabic many other aspects of grammar, including negation, relate to that.

Chapter three describes, and provides LFG analyses for, TA sentence negation, in both verbal and non-verbal sentences, and constituent negation. Chapter four describes, and provides LFG analyses for, negative coordination in TA,

especially emphatic negative coordination.

Chapter five describes the nature and distribution of negative sensitive items in TA, including those that engage in negative concord, and those that are termed negative polarity items.

Chapter six summarises the main contributions of the study both to the description of negation and to LFG, and suggests some areas for future research.

Chapter 2

Clause structure in Turaif Arabic

2.1 Introduction

This chapter introduces some important general aspects of clause structure in Turaif Arabic (henceforth TA), which need to be understood for our current study, which is negation. It therefore serves as an introduction to subsequent chapters. I start by discussing the language itself (§2.2), then move to describe some key features of affirmative verbal sentences in TA, including word order, subject-verb agreement, morphological verb forms, compound tenses, pseudo-verbs and finally modals. Next is introduced the structure of affirmative verbless sentences in TA, where both predicational and equational sentence types are discussed. Section (2.6) will provide an LFG analysis presented in terms of c-structure and f-structure. (2.7) then concludes this chapter.

2.2 The language

Arabic is a Semitic language, closely related to Hebrew, Aramaic and Amharic. Two varieties of Arabic which I will not be concerned with, because they are predominately written, yet used across the Arab world, are Classical Arabic, which is the language of Quran, and Modern Standard Arabic (MSA), widely used in newspapers and magazines. In addition, Arabic has many spoken varieties (vernaculars), differing considerably between, and even within, national boundaries.

The nomenclature for referring to spoken dialects in Saudi Arabia is not well established. Some writers refer to them by cities, as I will do, e.g. Taif, Abha, or Makka dialects. Others distinguish them by tribes or ethnic groups, e.g. Bedouin, Rwalah, Anizah, or Alghamdi dialects. Yet others use broader regional labels, e.g. Southern, Central (Najdi), or Northern.

This thesis will describe negation in one particular spoken variety of Saudi Arabic, which I will refer to as Turaif Arabic. This is the variety currently spoken in and around Turaif city, which is in the Northern Borders province of Saudi Arabia.

Studies of the grammar or phonology of varieties close to our chosen dialect have been conducted using labels such as Northern (AlShammiry, 2016), or referring to cities such as Turaif (AlShammiry, 2007).

The dialect of our targeted region is characterised by being distinct from the dialects of Jordan and Iraq, even though this dialect is spoken relatively close to the border. The dialect under discussion is usually seen as quite similar to the Central dialect of the Riyadh province. As Ingham says of the Rwalah

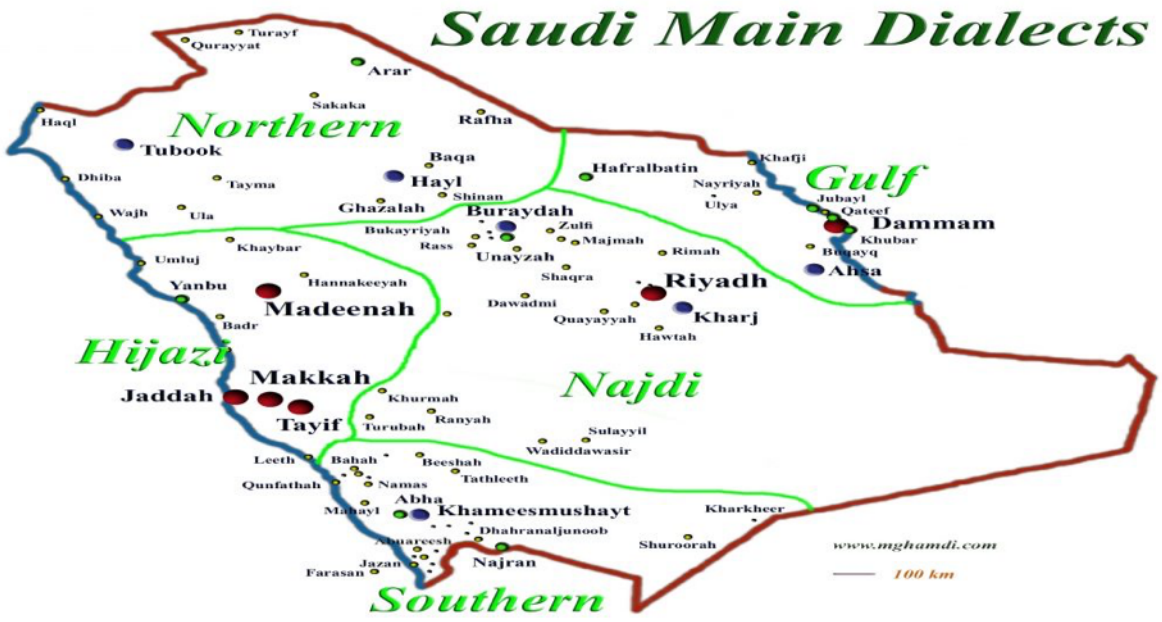


Figure 2.1: Map of dialects of Saudi Arabia, adopted from Nakamura (1992)

tribe of Turaif: 'their dialect can be expected to be of a fairly pure Najdi type' (Ingham, 1995). The choice of this dialect is largely due to convenience. The researcher is a native speaker of it, and will serve as the primary informant for all the data cited, subject to consultation with other native speakers in cases of doubt.

Turaif is located on a main road out of Saudi Arabia into Jordan (2.1). It has a population of around 50,000 people, including the Northern Borders University, and people are employed predominantly in the service industries.

2.3 The verbal sentence structure

In this section I start by considering some key features of verbal clauses and sentences in TA, which will be relevant later to understand how negation works (discussed in Chapter three). These include word order, subject verb agreement, verb morphology, and the formation of compound tenses through

the combination of auxiliaries and lexical verb forms.

2.3.1 Word order

The basic or canonical word orders in verbal sentences in TA are SVO and VSO, as shown in (1). Other word orders are possible. I will however omit them from consideration here as these orders are not neutral, in the sense that they convey some type of distinctive discourse meaning (e.g. topicalisation, contrastive emphasis etc), issues I largely omit from our consideration of negation in TA.

(1) ʔaħmad gābal huda
ʔaħmad meet.PFV.3SGM Huda
Ahmad met Huda. (SVO)

gābal ʔaħmad huda
meet.PFV.3SGM Ahmad Huda
Ahmad met Huda. (VSO)

In TA, an SVO word order is only possible if the subject is DEFINITE (e.g. a proper name or NP with *al*), or as may be seen below, is in some way made more specific. The subject in (1), for example, is DEF by virtue of being a proper name. Simple indefinite subjects cannot occupy the initial position, as illustrated by the ungrammaticality of (2b). They only appear in the VS order, as in (2a). Modifying the indefinite subject by an adjective, however, makes the SUBJ more specific and hence licensed to occur pre-verbally, as illustrated in (3). This phenomenon is widely noted in other varieties of Arabic, including MSA Aoun et al. (2010), as well as other Arabic dialects such as Palestinian Arabic Mohammad (2000), and Moroccan Arabic Aoun et al. (2010).

(2) a. ǧā-t bint
come.PFV-3SGF girl
A girl came.

b. *bint ǧā-t
girl come.PFV-3SGF
A girl came.

(3) bint ṭwīla
girl tall-SGF come.PFV-3SGF
A tall girl came.

A further notable feature of Arabic is that its rich verbal morphology allows it to be a PRO-DROP or null subject language. This therefore means that the subject does not have to be overt, and can be indicated solely by the inflection on the verb, as shown in (4b). This results in the presence of a verb-form on its own, or a VO order, if an OBJ is present.

(4) a. gābal huda
meet.PFV.3SGM Huda
He met Huda.

b. ǧā-t
come.PFV-3SGF
She came.

2.3.2 Subject-verb agreement

The verb in TA shows full agreement in person, number and gender with a definite subject in both SVO and VSO orders, as seen in (5a)-(5b). If a verb shows only partial agreement with the subject, where agreement is observed for person and gender, but not in number, as in (5c), the sentence is ungrammatical.

(5) a. l-ʕīal šāf-aw l-mubār-a
DEF-boy.PLM see.PFV.3-PLM DEF-match
The boys watched the match. (svo)

b. šāf-aw l-ʕīal l-mubār-a
see.PFV.3-PLM DEF-boy.PLM DEF-match
The boys watched the match. (vso)

c. *šāf l-ʕīal l-mubār-a
see.PFV.3SGM DEF-boy.PLM DEF-match
The boys watched the match. (vso)

This behaviour is in contrast with MSA, which shows asymmetry of agreement in the two orders SVO and VSO, as illustrated in (6). In (6a) the verb exhibits full agreement with the subject *the teacher* in the SV order, whereas in the VS order (6c) the verb displays only partial agreement. It agrees with the subject in person and gender but not in number, since a singular inflected form appears, despite the subject being plural. If the verb were inflected to show full agreement, the sentence would be ill formed as in (6d).[1]

(6) a. l-muʕallim-ūn ʔakal-ū
DEF-teacher.PLM-NOM eat.PFV-3PLM
The teachers ate. MSA: Aoun et al. (2010, p.58)

b. *l-muʕallim-ūn ʔakala
DEFteacher.PLM-NOM eat.PFV-3PLM
The teachers ate. MSA: Aoun et al. (2010, p.57)

c. ʔakal l-muʕallim-ūn
eat.PFV-3SGM DEF-teacher.PLM-NOM
The teachers ate.

d. *ʔakal-ū l-muʕallim-ūn
eat.PFV-3PLM DEF-teacher.PLM-NOM
The teachers ate.

[1] Agreement on the verb in the context of coordinate subjects will be discussed in Chapter four.

2.3.3 Morphological forms of verbs

In this section, I present the the system of verbal morphological forms in TA, which will turn out to be useful background for my discussion of sentential negation and the requirements imposed by negative particles with respect to the different forms involved.

Verbs in TA inflect for two morphological Moods: the Indicative and the Imperative. The Indicative Mood involves two morphological aspectual forms: perfective (e.g *kitəb* 'he wrote') and imperfective (e.g *ya-ktib* 'he writes'). Throughout this study the terms perfective and imperfective will be used to refer to the morphological form. Table (2.1) provides the perfective and imperfective verb-forms and Table (2.2) provides the imperative verb-forms. For simplicity, I detail here the subject related gender, number and person forms (which in a fuller labelling would be designated NOM). Further suffixes (labelled ACC) can in fact be also added to indicate the gender, number and person of an object pronoun.

	PFV	**IMPV**
1.SG	ktəb-**t**	ʔ**a**-ktib
1.PL	kitəb-**na**	**na**-ktib
2.SGM	kitəb-**t**	**ta**-ktib
2.SGF	kitəb-**ti**	**ta**-ktib-**in**
2.PLM	kitəb-**tu**	**ta**-ktib**un**
2.PLF	kitəb-**tin**	**ta**-ktib-**in**
3.SGM	kitəb	**ya**-ktib
3.SGF	kitəb-**at**	**ta**-ktib
3.PLM	kitəb-**aw**	**ya**-ktib-**un**
3.PLF	kitəb-**an**	**ya**-ktib-**an**

Table 2.1: Paradigm of verbal NOM indicative morphological forms

Morphosyntactic form	Imperative form
2.SGM	i-ktib 'write'
2.SGF	i-ktib-**i** 'write'
2.PLM	i-ktib-u 'write'
2.PLF	i-ktib-**in** 'write'

Table 2.2: Paradigm of imperative verb forms

2.3.3.1 Perfective verb forms

I turn now to present the grammatical functions of these forms in the absence of any auxiliary. I begin with the perfective/imperfective distinction, which applies to full verbs. In TA the perfective morphological verb form (showing gender, number and person agreement, through suffixes) expresses PERFECTIVE ASPECT with a PAST TENSE reading, as illustrated in (7).

(7) huda gar-at l-ktāb (ams)
Huda read.PFV-3SGF DEF-book.SGM yesterday
Huda read the book.

In contexts where a past time reference point is specified through some adjunct, the function of the simple perfective form is to indicate an action or event completed before that time (8).

(8) lamma rəǧəʕ-t l-bēt s-sāʕa 6, manṣūr
when back.PFV-1SG DEF-house.SGM DEF-hour.SGF 6, Mansour
akel l-akil kil-a
eat.PFV.3SGM DEF-food.SGM all-SG
When I got home at 6pm clock, Mansour had already eaten all the food.
(PAST PERFECTIVE)

For AlShammiry (2007), the interpretation of the perfective form is only associated with 'completed actions'. However, I will argue here that this is not always the case. Apart from expressing the PERFECTIVE ASPECT in the

PAST TENSE, this form can in fact be associated with a present time adjunct, and allow a PRESENT PERFECT interpretation. It then indicates an action that happened in the past, but has an effect which still persists at the present time of speaking, similar to the English PRESENT PERFECT which holds at the present time of speaking (9).

(9) manṣūr tawa ṭalaʕ
Mansour now go.PFV.3SGM
Mansour has now left. (PRESENT PERFECT)

This same behaviour has been observed as well by Brustad (2000) for Moroccan and by Fassi-Fehri (2004) for MSA, as in (10b). The latter describes perfective forms as occurring 'polyfunctionally' in that they are compatible both with past temporal deictic adverbs such as 'yesterday' and present ones such as 'now'.

(10) a. daba fehm-et-kom
now understand.PFV-3SGF-2PL.ACC
Now she understands / she has understood you. Moroccan Arabic: Brustad (2000, p.174)

b. katab-a r-risālat-a l-ān-a
write.PFV.3SGM-INDIC DEF-letter-ACC DEF-now-ACC
He has now written the letter. MSA:Fassi-Fehri (2004, p.87)

2.3.3.2 Imperfective verb forms

The imperfective verb form (expressed by prefixes and, in some instances, suffixes) marks HABITUAL or PROGRESSIVE ASPECT, with present time interpretation, when used on its own, as in (11).

(11) huda ta-šrib gahwa
Huda 3SGF-drink.IMPV coffee.SGM
Huda drinks / is drinking coffee. (PRESENT HABITUAL/ PRESENT PROGRESSIVE)

Usually there are adjuncts (ADJs) in the context which make it clear whether the interpretation of the imperfective form is progressive or habitual, as in (12).

(12) a. manṣūr yi-rūħ l-ğim kil yom
Mansour 3SGM-go.IMPV DEF-ğim.SGM every day
Mansour goes to the gym every day. (PRESENT HABITUAL)

b. manṣūr yi-rūħ l-ğim l-ħīn
Mansour 3SGM-go.IMPV DEF-gym.SGM DEF-now
Mansour is going to the gym now. (PRESENT PROGRESSIVE)

Ingham (1994) describes this in his account of Najdi Arabic. He considers the PROG interpretation of the imperfective form to be one that looks at 'the action from point of view of its internal structure and presents it as a continuous uncompleted event' (p.87). The HABITUAL reading by contrast indicates 'a series of separate actions over a long period' (p.92). For AlShammiry (2007) also, when no auxiliary/particle is present, the imperfective verb form in TA expresses either habitual HABITUAL or PROGRESSIVE ASPECT in the PRESENT TENSE.

However, it must also be noted that, if the bare imperfective form occurs with a future time ADJ, as shown in (13), this can be associated with a FUTURE TENSE reading. This is again mentioned by Ingham (1994) for Najdi Arabic. Furthermore, FUTURE TENSE tense reading of the imperfective typically refers to a single instance of the event, and not a habitual or progressive activity in the future.

(13) ʔa-šōfak-um bukra
1SG-see.IMPV-3PLM.ACC tomorrow

I will see you/meet you tomorrow. (FUTURE TENSE)

Table (2.3) summarises the semantic interpretations associated with the perfective and imperfective forms, respectively.

Morphosyntactic form	**Semantic interpretation**
Perfective	PAST PERFECTIVE
	PRESENT PERFECTIVE
Imperfective	PRESENT HABITUAL
	PRESENT PROGRESSIVE
	FUTURE TENSE

Table 2.3: The set of semantic interpretations associated with simple verb forms

2.3.4 Compound verb tense forms

The above morphological forms need not occur as the only verbal predicate in a clause structure. Rather, they may co-occur with various auxiliary verbs and particles. When they interact with these other forms, compound tense and aspectual values come about, as discussed by: Ingham (1994) for Najdi Arabic; Brustad (2000) for different Arabic vernaculars; Benmamoun (1999a) for MSA, Fassi-Fehri (2004) for MSA, Benmamoun (2003) for MSA; AlShammiry (2007) for Turaif Arabic; Al Sharif and Sadler (2009) for MSA; Alotaibi (2014) for Taif dialect; Camilleri (2016) for Maltese; and ElSadek (2016) for Egyptian Arabic. Here in this section I look at the most common auxiliaries and particles that build the different compound tenses found in TA, specifically concentrating on forms of the auxiliary *kān* 'be', the future particle *rāħ* 'will', and the active participle *gāʕid* 'sit', and their combinations with different lexical verbs.

2.3.4.1 The perfective form 'be'

The perfective form of the auxiliary *kān* is regarded as one of the main verbal auxiliaries in Arabic. As Eisele (1992) notes, the fact that *kān* occurs with all types of predicate whether verbal, nominal, adjectival or prepositional, makes it effectively an auxiliary/copula (p.152-153). For that reason I will revisit it in 2.4 below. In all uses, however, its function is to realise the PAST TENSE. With respect to its use with verbal predicates, it can be said that, depending on what morphological verb-form it combines with, distinct compound tenses are formed.

***kān* + imperfective form**

kān in TA can in simple affirmative sentences combine with an imperfective verb-form (15) but not a perfective one, as illustrated through the ungrammaticality of (15c). In (15a), the combination of *kān* with the imperfective form and an appropriate ADJ results in a PAST HABITUAL reading. The same combinational possibility with a different ADJ however results in a PAST PROGRESSIVE, in (15b).[2] *kān* always agrees in gender, number and person with the main verb.

[2]The combination of *kān* with a perfective verb however is available in the context of unreal conditionals with a past tense interpretation. This is illustrated in (14b), which is based on a very similar example in Taif dialect (14a) from Alotaibi (2014), where the conjunction *law* can occur either with or without *kān* in the protasis , and is required in the apodosis. Thus one is able to observe the combination of *kān* preceding a perfective verb.

(14) a. law (*kān*) ğa ali, kān mar χālid
if be.PFV.3SGM come.PFV.3SGM Ali, be.PFV.3SGM visit.PFV.3SGM Khaled
If Ali had come, he would have visited Khaled. Taif Arabic: Alotaibi (2014), p. 165-167)

b. law (*kān*) ğ-a ali, kān mar χālid
if be.PFV.3SGM come.PFV.3SGM Ali, be.PFV.3SGM visit.PFV.3SGM Khaled
If Ali had come, he would have visited Khaled.

(15) a. ʔaħmad kān ya-mši kil yom fi l-ħadīq-a
Ahmad be.PFV.3SGM 3SGM-walk.IMPV every day in DEF-garden
Ahmad used to walk every day in the garden. (PAST HABITUAL)

b. ʔaħmad kān i-sūq s-sayyāra lamma
Ahmad be.PFV.3SGM 3SGM-drive.IMPV DEF-car when
šəft-a
see.PFV-1SG-3SGM.ACC
Ahmad was driving the car when I saw him. (PAST PROGRESSIVE)

c. *lamma rəǧʕ-t l-bēt s-sāʕa 6, manṣūr
when back.PFV-1SG DEF-hour.SGF hour-SGF 6 Mansour
kān akel l-akil kil-a
be.PFV.3SGM eat.PFV.3SGM DEF-food.SGM all-SGM
When I got home at 6pm, Mansour had already eaten all the food.
(PAST PERFECTIVE)

The restriction displayed in TA, where *kān* cannot combine with a perfective lexical verb in normal affirmative sentences is not present in some other Arabic dialects, such as Egyptian and Moroccan, for example. In these dialects *kān* can combine with a perfective form, as seen in the data in (16).

(16) a. kān ʕamal ʔabl-aha film
be.PFV.3SGM do.PFV.3SGM before-3SGF.ACC movie
He had done a movie before it. Colloquial Egyptian: ElSadek (2016, p.58)

b. kān-u leʕb-u
be.PFV-3PL play.PFV-3PL
They had played. Moroccan: Ouali and Fortin (2007, p.182)

2.3.4.2 The future/prospective marker *rāħ*

I next consider the invariable grammatical particle *rāħ* 'will', which I take to realise FUTURE TENSE, when preceding a lexical imperfective verb form, or PROSPECTIVE ASPECT when it follows *kān* and precedes an imperfective verb

(Jarad, 2014). In both uses, it can be seen as indicating a future event from the standpoint of the present (Comrie, 1976, p.66).

While the synchronic form is invariant, diachronically it is morphologically the 3SGM perfective form of the lexical verb meaning 'go'. When functioning as a lexical predicate, as opposed to its auxiliary function, *rāḥ* inflects as a normal verb, as shown in (17),where it agrees in number, person, and gender with its subject.

(17) huda rāḥ-at lil-bēt
Huda go.PFV-3SGF to.DEF-house.SGM
Huda went to the house.

The invariant future particle/marker *rāḥ* in TA must be obligatorily followed by a verb in the imperfective form as illustrated in (18a), and cannot be combined with a verb in the perfective form (18b). The adjacency between the future marker and the imperfective lexical verb is obligatory and nothing can intervene between them, as illustrated by the ungrammatical example in (18c), which involves the sentence's subject intervening between them.

(18) a. huda rāḥ t-sāfar bukra
Huda FUT 3SGF-travel.IMPV tomorrow
Huda will travel tomorrow. (SIMPLE FUTURE)

b. *huda rāḥ sāfar-at bukra
Huda FUT travel.PFV-3SGF tomorrow
Huda will travel tomorrow.

c. *rāḥ huda t-sāfar bukra
FUT Huda 3SGF-travel.IMPV tomorrow
Huda will travel tomorrow.

d. rāħ t-sāfar huda bukra
FUT 3SGF-travel.IMPV Huda tomorrow
Huda will travel tomorrow.

The future particle *rāħ* can however occur preceded by the perfective auxiliary *kān*, resulting in an interpretation of 'what was a future plan or intention at a certain point in the past that may or may not have taken place' (Jarad, 2014, p. 107), as seen in (19).

(19) mansūr kān rāħ i-ǧi, bas nām
Mansour be.PFV.3SGM FUT 3SGM-come.IMPV, but sleep.PFV.3SGM
Mansour was going to come, but he slept.

The combinations of *rāħ* with an imperfective verb can result additionally in a future habitual reading as in (20a), or a future progressive reading, as in (20b), depending on the nature of the adjuncts involved. I have also in (20) used the lexical verb *rāħ* 'go', on purpose, to show how the invariable *rāħ* has indeed grammaticalised as a FUT marker and can co-occur with the original lexical verb in its grammaticalised form.

(20) a. huda rāħ t-rūħ kil yom landan
Huda FUT 3SGF-go.IMPV every day London
Huda will go to London every day. (FUTURE HABITUAL)

b. huda rāħ t-rūħ landan l-ħīn
Huda FUT 3SGF-go.IMPV London DEF-now
Huda will go to London now. (FUTURE PROGRESSIVE)

rāħ + imperfective of kān + perfective verb form

As has seen above, *rāħ* cannot precede a verb in the perfective form, however, the combination of *rāħ* with *yikūn*, which is the imperfective form of *kān*, can precede a verb in the perfective form. When this is the case, as shown in

(21), a FUTURE PERFECTIVE reading results, which refers to a situation that will be finished and completed in the future. In (21), the situation that may be viewed as possibly occurring in the future is seen as having finished. Here *rāħ* marks the future tense, while the lexical verb denotes a completed action, due to the use of a perfective morphological form.

(21) ʔaħmad rāħ yi-kūn χallaṣ aχtibar-āt fī ǧūn
Ahmad FUT 3SGM-be.IMPV finish.PFV.3SGM exam-PLF in June
Ahmad will have finished exams in June. (FUTURE PERFECT)

2.3.4.3 The active participle *gāʕid* 'sitting'

Here I consider the function of the active participle *gāʕid* of the verb *gaʕad* meaning 'sit/stay/remain'. This participle inflects, as participles normally do, for number and gender, but is used not only, like other participles, in its literal meaning 'sitting' but also as a grammatical marker, i.e as an auxiliary form indicating PROGRESSIVE ASPECT. In the latter case it is always followed by an imperfective form. In (22) a simple example may be seen where the sentence has two readings, depending on whether the participle is being used with its lexical meaning or is being used as an auxiliary.[3]

(22) l-walad gāʕid ya-ktib l-wāǧib
DEF-boy.SGM sit.ACT.PTCP.SGM 3SGM-write.IMPV DEF-homework.SGM
Lexical: The boy is sitting and writing the homework.
Grammatical: The boy is writing the homework.

Naturally, the type of reading where *gāʕid* has its full lexical meaning will not be able to combine with main verbs with unsuitable incompatible semantics. In (23), for example, it is only the progressive meaning that is

[3]Camilleri and Sadler (2017) use the terminology lexical vs. grammatical, where by lexical it is the real lexical meaning that is being referred to, and by grammatical, it is the auxiliary use that is understood.

possible. The meaning 'sitting' is not compatible with 'running', (unless we imagine a scenario where the boy is disabled and in a wheelchair).

(23) l-walad gāʕid ya-rkəẓ bi-ssaraʕa
DEF-boy.SGM sit.ACT.PTCP.SGM 3SGM-run.IMPV with-DEF-street
The boy is running in the street. (PRESENT PROGRESSIVE)

In most cases pragmatics makes it obvious that it is not the lexical form of *gāʕid* that is used, but rather the grammaticalised form. In (24a) it is clear that a new born baby cannot sit. Additionally in (24b), the inanimate 'time' does not have any physical properties that can associate with the lexical interpretation of *ǧāʕid*.

(24) a. l-bēbī gāʕid ya-bki
DEF-baby sit.ACC.PTCP.SGM 3SGM-cry.IMPV
The baby is crying.

b. l-wag-t gāʕid ya-mši bi-ssaraʕa
DEF-time.SGM sit.ACT.PTCP.SGM 3SGM-walk.IMPV with-quickly
The time is running quickly.

While the combination of the auxiliary *gāʕid* along with an imperfective provides a PRESENT PROGRESSIVE interpretation, it is possible for perfective *kān* to precede the auxiliary *gāʕid* + imperfective combination. When this is the case, a PAST PROGRESSIVE reading results, as mentioned in AlShammiry (2007).

(25) ṭ-ṭullāb kān-aw (gāʕid-īn) i-drus-un
DEF-student.PLM be.PFV-3PLM sit.ACT.PTCP-PLM 3-study.IMPV-PLM
The pupils were studying. Turaif Arabic: AlShammiry (2007)

In combination with a PP, *gāʕid* can be used as a copula, as illustrated in (26b), as an answer to (26a), where *gāʕid* will mean something more like 'unemployed' rather than 'sitting'.

(26) a. wiš ti-štaġil huda?
what 3SGF-work.IMPV Huda
What is Huda's job?

b. gāʕid-a fī l-bēt
sit.ACT.PTCP-SGF in DEF-house.SGM
Lexical: She stays at home.
Grammatical: She is unemployed.

The aspectual auxiliary *gāʕid* exists in various forms in many Arabic vernacular dialects, realising a PROGRESSIVE ASPECT in a similar way to TA: Southern and Northern Iraqi; Sudanese (Agius and Harrak, 1987); Kuwaiti (Al-Najjar, 1991); Tunisian (Saddour, 2009); Emirati (Persson, 2013); Taif Arabic (Alotaibi, 2014); Hassawi (Alabdullah et al., 2017). Camilleri and Sadler (2017) also provide a description of the way in which the active participle *gāʕid* grammaticalises into a PROGRESSIVE-expressing auxiliary. They mention how in some of these dialects the form *gāʕid* as a progressive marker is becoming further distinct from its form as a participle. Such is the case in Kuwaiti, for example, where the SGM form is grammatically frozen, and can be optionally used regardless of the gender and the number of the subject, as in (27). Furthermore, the same dialect also uses the form *gaʕ* derived through morphological erosion to express the PROGRESSIVE. This is not the case in TA, where both the lexical and auxiliary uses of *gaʕid* take the same form.

(27) maryam gaʕ ti-kteb
Maryam PROG 3SGF-write.IMPV
Maryam is writing. Kuwaiti: Al-Najjar (1991)

To conclude this section, a summary of the compound tenses reviewed above, with the use of the auxiliaries *kān*, *rāħ* and *gāʕad*, is provided in table (2.4).

'be'	**'be'**	**lexical** V	**Semantic interpretation**
be.PFV		lex.verb.IMPV	PAST HABITUAL
			PAST PROGRESSIVE
be.PFV		lex.verb.PFV	*
be.FUT		lex.verb.IMPV	SIMPLE FUTURE
			HABITUAL FUTURE
			PROGRESSIVE FUTURE
be.PFV	be.FUT	lex.verb.IMPV	PAST PROSPECTIVE
be.FUT	be.IMPV	lex.verb.PFV	FUTURE PERFECT

Table 2.4: Compound Tenses in TA

2.3.5 Pseudo-verbs

The term 'pseudo-verbs' is used for a group of items or expressions that function in some respects like verbs in Arabic and Maltese, as described by: Comrie (1991); Lucas (2009); Qafisheh (1977); Brustad (2000); Peterson (2009); Camilleri (2016).

Pseudo-verbs are typically derived from various non-verbal stems, including: nouns (e.g. *nafs* 'soul', 'desire', *wudd* 'wish', 'desire') and prepositions (e.g. ʕ*ind* 'at', *ma*ʕ 'with', *fī* 'in'). However, they clearly convey different meanings from those of the source forms from which they are derived, as noted by Brustad (2000) and Camilleri (2016). In TA, for instance, the locative prepositions ʕ*ind 'at', ma*ʕ 'with' and *fī* 'in' function as pseudo-verbs where the first two mean 'have' and the last 'there is/are'. The contrast between the pseudo-verb use in the possessive and existential constructions can be illustrated in (28) as opposed to the locative prepositional function in (29).

Pseudo-verbs in verbal sentence

(28) a. huda **ʕind-aha/maʕ-aha** sayyāra
Huda have-3SGF.GEN/have-3SGF.GEN car.SGF
Huda has a car. (Possessive construction)

b. **fī** iğtimāʕ bil-madrasa
there meeting.SGM with-school.SGF
There is a meeting at school. (Existential construction)

Prepositional use in verbless sentence

(29) a. s-sayyāra **ʕind/maʕ** huda
DEF-car.SGF at/with Huda
The car is at Huda's place/ The car is with Huda.

b. l-iğtimāʕ **fī** l-madrasa
DEF-meeting.SGM in DEF-school.SGF

The meeting is at school (Locative construction)

Crucially for us, pseudo-verbs resemble verbs in that they are negated with *mā* in the same way that normal (non-imperative) verbs are negated, and not for example in the way that prepositions in verbless sentences are negated (see separate coverage in Chapter 3).

Pseudo-verbs also resemble verbs in that they express subject agreement in gender, number and person. They do this, however, through morphological means which differ radically from those employed by normal verbs. Instead of employing a set of NOM affixes, as normal verbs do (2.1), they require the obligatory attachment of what in normal functions would be ACC/GEN pronominal forms attached on verbs and prepositions, which are with normal lexical verbs only required when there is no overt object. A normal verb, as seen in (30), expresses a 1SG subject through the NOM affix *-t*, indicating the gender, number and person of the subject. The ACC suffix *-a* indicates the gender, number and person of the object, at least when such an object is third person and not expressed as a NP (30b).

(30) a. šif-t-a
see.PFV-1SG-3SGM.ACC
I saw him.

b. šif-t Mansūr
see.PFV-1SG Mansour
I saw Mansour.

By contrast, in (31), we can see that the pseudo verb uses the GEN suffix *-i* and *-a* to express agreement with the subject in gender, number and person.

(31) a. (ʔana) ʕind-i sayyāra
I have-1SG-GEN car.SGF
I have a car.

b. mansūr ʕind-**ah** sayyāra
Mansour have-3SGM.GEN car.SGF
Mansour has a car.

Pseudo-verbs do not have distinct perfective and imperfective forms as normal verbs do, but in some ways behave more like imperfective. As a result, the above mentioned pseudo-verbs are all associated with a default present tense interpretation in the absence of any auxiliary/copula. The copula *kān* is then used with pseudo verbs to express the PAST TENSE, either invariantly in its a default 3SGM form, or with full number, gender and person agreement, as in (32a). When ʕ*ind/ ma*ʕ*/fī* etc. function as prepositions in copular sentences, however, only the fully agreeing forms of the copula *kān* are allowed, as in (32b) see (2.4).

(32) a. huda **kān/kān-at** ʕind-aha sayyāra
Huda be.PFV.3SGM/be.PFV-3SGF have-3SGF.GEN car.SGF
Huda had a car. (Psuedo-verb in possessive construction)

b. s-sayyāra **kān-at** **(*kān)** ʕind Mansūr
DEF-car-SGF be.PFV-3SGF/ *be.PFV.3SGM at Mansour
The car was at Mansour's place. (Prepositions in locative construction)

In order to associate a pseudo-verb with a FUTURE TENSE interpretation, one can either use the future particle *rāh* with *yi-kūn* (as will be seen to be the case in copular sentences), or one simply adds a future time adverb such as *bukra* 'tomorrow' (33).

(33) a. (rāħ yi-kūn) fī iğtimāʕ bukra
FUT 3GM-be.IMPV there meeting.SGM tomorrow
There will be a meeting tomorrow.

b. (rāħ yi-kūn) ʕind-i iğtimāʕ bukra
FUT 3SGM-be.IMPV have-1SG.GEN meeting.SGM tomorrow
Tomorrow I will have a meeting.

An additional pseudo-verb which behaves as above but has an important further function is the preposition *li* 'to'. The preposition originally functions as a dative marker with ditransitive verbs, as may be seen in (34a).[4] As a pseudo-verb it means 'have/own' as illustrated by (34b) and (34c).

(34) a. ʕali ʕaṭa l-ktāb l-huda
Ali give.PFV.3SGM DEF-book.SGM to-Huda
Ali gave the book to Huda. (Preposition-dative pronoun)

b. manṣūr **l-a** bēt fī briṭānia
Mansour have-3SGM.GEN house.SGM in Britain
Mansour owns a house in Britain. (Possessive construction)

c. ṭ-ṭullāb **la-hum** 30% χaṣam
DEF-student.PLM have-3PLM.GEN 30% discount.SGM
The students have 30% discount. (Possessive construction)

The pseudo-verb *li-* however does not function only as a pseudo-verb with lexical context. It also occurs as an aspect marker both in verbal sentences and verbless copular sentences, so adds to the compound tense resources of TA which was covered in 2.3.4 above. Here it contributes a universal perfect aspectual meaning, i.e., in the sense that, at the time of utterance, the state or activity denoted by the sentence is not understood as completed but still ongoing (McCoard, 1978), and must be followed by a time-durational adverb.

[4]For more discussion about dative pronouns see Camilleri et al. (2014).

The pattern is: *li-* 'to' + GEN suffix agreeing with subject + temporal adverbial + imperfective verb/active participle. Examples in (35) illustrate different aspectual variants associated with *li-*+ temporal adverb, with the verb *ṣār* 'become' optionally being able to co-occur with it, with no change in meaning (in invariant 3SGM perfective form).

(35) a. (ṣār) **l-i** sāʕt-īn nāima
become.PFV.3SGM have-1SG.GEN hour.DU sleep.ACT.PTCP.SGM
I have been sleeping late for two hours.

b. (ṣār) **l-i** yom-īn a-ḏaker fī
become.PFV.3SGM have-1SG.GEN day.DU 1SG-study.IMPV in
l-maktiba
DEF-library-SGF
I have been studying in the library for two days.

c. (ṣār) la-hum sant-īn i-drs-ūn
become.PFV.3SGM have-3PLM.GEN year.DU 3-study.IMPV-PLM
bi-briṭānia
with-Britain
They have been studying for two years in Britain.

Similar data to that in TA exemplified above has been discussed by Ingham (1994) for Najdi Saudi Arabic; Hallman (2016) for Syrian Arabic; and Camilleri (2016) for Maltese. It is only the latter two that described this structure as a universal perfect one, however. Furthermore, it is only Camilleri (2016) that has made a link with the pseudo-verbal function. The pseudo-verb *li* can occur in TA as a pure aspectual marker also in verbless sentences with non-verbal predicates, as in (36). Here the interpretation is again the universal perfect.

(36) l-i yom-īn fī l-bēt
1SG-GEN day.DU in DEF-house.SGM
I have been at home for two days.

A summary of the different pseudo-verbs in TA is provided in table (2.5).

Pseudo-verb	**meaning**	**Stem-form**	**meaning**
ʕ*ind*	'have'	preposition	'at'
*ma*ʕ	'have'	preposition	'with'
fī	'there' (existential)	preposition	'in'
li	'have/own'	dative pronoun	'to'
nafs/wudd	'wish'	noun	'soul, desire'/'wish, desire'

Table 2.5: The set of common pseudo-verbs in TA

2.4 Verbless sentences and their structure

It is well known that the Arabic language permits certain sentences without a verb or pseudo-verb in the present tense. Such sentences involve non-verbal predicates, and are referred to as nominal, copular or verbless sentences (Fassi-Fehri (1993); Plunkett (1993); Benmamoun (2000); Shlonsky (2002); and Aoun et al. (2010)). Such sentence types in the present tense may include only a subject and non-verbal predicate.

One feature which is common to all affirmative verbless sentences is that they must have an overt subject expressed. Hence, while an overt NP is optional in verbal sentences, where a NOM inflection is present on the verb, as in (37a), this is not possible in verbless sentences, where there is no verb present to carry such an inflection. The subject pronoun ħ*ina* 'we' in (37b) is therefore obligatory.

(37) a. (ħina) raħ-na l-bēt
we go.PFV-1PLM DEF-house
We went to the house. (Verbal)

b. ħina fī l-bēt
we in DEF-house.SGM

We are in the house. (Verbless)

Next to be considered separately are the important subtypes of verbless sentence and clause.

2.4.1 Predicational sentences

The first type of verbless sentence is the predicational sentence, which consists of a definite subject followed by an indefinite predicate, as in (38). This predicate can be either an indefinite NP (38a), AP (38b), or PP (38c), and no overt copula is allowed in PRESENT TENSE contexts.

(38) a. ʕali imdarris
Ali teacher.SGM
Ali is a teacher.

b. huda ħelw-a
Huda beautiful-SGF
Huda is beautiful.

c. l-ktāb ʕala ṭ-ṭawla
DEF-book.SGM on DEF-table.SGF
The book is on the table.

Other non-verbal predicates include active and passive participle forms, which I consider to be distinct from the verbal forms, given that the morphosyntactic behaviour they display is parallel to that of adjectives. Like adjectives, they inflect for number and gender, in agreement with the subject, in predicational contexts such as (39).[5]

[5]The expression of NEG will further distinguish verb-forms from participle forms.

(39) a. manṣūr ǧā-y l-ħīn
Mansour come.ACT.PTCP.SGM DEF-now
Mansour is coming now. (active participle)

b. r-risāla ma-ktub-a bil-ʕarabi
DEF-letter.SGF PASS.PTCP-write-SGF with-DEF-Arabic
The letter is written in Arabic. (passive participle)

In predicational contexts of the type just seen in (38)-(39), an overt verbal copula becomes obligatory in non-present tense contexts, i.e. in the past and future.[6] For instance in (40a), the copula *kān* is inserted to express the PAST TENSE, while the copula *rāħ* with *yikūn* (the imperfective counterpart of *kān*) in (40b), expresses the FUTURE TENSE. Both link the subject of the sentence with the predicate.

(40) a. ʕali kān imdarris
Ali be.PFV.3SGM teacher.SGM
Ali was a teacher.

b. ʕali rāħ yi-kūn imdarris
Ali FUT 3SGM-be.IMPV teacher.SGM
Ali will be a teacher.

2.4.2 Equational sentences

The other main type of verbless sentence is the equational sentence. As the term equational implies, there is an equal status between the subject and the predicate. In such a construction both the subject and the predicate are definite NPs (Eid, 1991). More specifically, following Eid (1991) and Choueiri (2016), there are subtypes of equational sentences: equational-predicational, equative-identificational, and equative-identity. Eid (1991) states that 'predicates of equational sentences can be either predicational in the sense that they

[6] I will have more to say about the presence of copulas in negative contexts in the following chapter.

assign a certain property/attribute to their subjects; or they may be referential in the sense that they refer to/identify an individual or an entity' (p. 43-44).

The most common type of equational sentence is the equational-predicational, where the predicate is not referential. Rather it describes the subject with a definite NP in contrast with the non-referential indefinite NPs such as in example (38a). Equational sentences in Arabic display a systematic pattern including two definite NPs, usually separated by a subject pronoun which is referred to as a pronominal copula in Eid (1991, 1983) and Choueiri (2016). The subject may be of any person, but the pronominal copula is always in the third person and agrees in gender and number with the subject, but not in person. In (41a) and (41c) the 3rd person pronominal copula occurs between the subject and the definite nominal predicate, and agrees with the subject in number and gender. (41d) is meant to illustrate that the order of the pronominal copula cannot be altered, and it must follow the subject.

(41) a. huda **hī** l-mudīr-a
Huda COP.3SGF DEF-director-SGF
Huda is the director.

b. *huda **hū** l-mudīr-a
Huda COP.3SGM DEF-director-SGF
Huda is the director.

c. ʕali **hū** l-mudīr
Ali COP.3SGM DEF-director.SGM
Ali is the director.

d. ***hī** huda l-mudīra
COP.3SGF Huda DEF-director.SGF
Huda is the director.

The pronominal copula is optional in such types of equational sentences, but the sentence is then spoken with distinctive prosody. In (42), equivalent to (41c) with the pronominal copula, a distinct pronunciation results, including a pause between the two NPs, as illustrated by the comma between the two NPs.

(42) ʕali, l-mudīr
Ali DEF-director.SGM
Ali is the director.

This behaviour is what one also finds in many Arabic vernaculars, and indeed in MSA. The Syrian example in (43a) shows that there is not only a pause but also higher intonation on the first NP, as indicated by a comma as well as an arrow in the transcription. Razaq (2012) also mentions that the pronominal copula is not the only means that can be employed to remove the ambiguity between the phrasal and sentential interpretations. Rather, prosody too can help us recognise the sentential interpretation in such structures.

(43) a. ʔabū-hum↑, ʕadel
father-their Adel
Their father is Adel. Syrian: Cowell (1964) in (Razaq, 2012, p.30)

b. ʔħmad, l-muhandis.
Ahmad DEF-engineer.SGM
Ahmad is the engineer. Jordanian Arabic: (Razaq, 2012, p.33)

c. l-ǧunūd-ū (hum) l-masʔūl-īn
DEF-soldiers-NOM they DEF-responsible-NOM
The soldiers are the responsible ones. MSA: (Fassi-Fehri, 1993, p.117)

There has been much discussion in the literature about the status of the pronominal copula element in the equational sentence. Some like Razaq (2012)

regard the pronominal copula as the subject in a clitic left dislocation (CLLD) structure, while others treat it simply as a copula. Since this issue is beyond the scope and focus of this thesis, this issue will not be discussed any further. For more details see: Eid (1991); Razaq (2012); Choueiri (2016); and Alotaibi (2018).

In general, then, the pronominal copula is limited in distribution, since it occurs only in equational sentences, and is not permitted in non-equational, i.e. predicational sentences of the type discussed in (2.4.1), where the predicate is indefinite, as illustrated by the ungrammaticality of (44b).

(44) a. huda hī l-mudīr-a
Huda COP.3SGF DEF-director-SGF
Huda is the director.

b. *ʕali hū masʔūl
Ali COP.3SGM responsible.SGM
Ali is responsible.

Apart from using a comma without a pronominal copula, a pronominal copula may also be optionally used in equational-predicational sentences of the type in (45), where the subject is a personal pronoun (45a) or a demonstrative (45b). Observe the lack of PERSON agreement between the subject and the pronominal copula in (45a), given that the pronominal copula remains 3rd PERS in a first person context.

(45) a. ʔana (hī) l-mudīr-a
I COP.3SGF DEF-director-SGF
I am the director.

b. haḏa (hū) l-mudīr
this.SGM COP.3SGM DEF-director

This is the director.

In addition to the use of the pronominal copula, or no copula, equational sentences also in the PRESENT TENSE allow the copular verbs *yikūn* and *yiṣīr*, which are respectively the imperfectives of *kān* and *ṣār*.[7]

(46) a. huda ta-kūn/ta-ṣīr aχt ʕali
Huda 3SGF-be.IMPV/3SGF-be.IMPV sister ali
Huda is Ali's sister. (equational sentence)

b. huda ta-kūn/ta-ṣīr l-mudīra
Huda 3SGF-be.IMPV/3SGF-be.IMPV DEF-director
Huda is the director. (equational sentence)

Equational-predicational sentences parallel the same requirement observed for predicational sentences in requiring the presence of the auxiliary *kān* and *rāħ* in PAST and FUTURE tenses as illustrated in (47).

(47) a. huda kān-at l-mudīr-a
huda be.PFV-3SGF DEF-director-SGF
Huda was the director

b. ʕali rāħ yi-kūn l-mudīr
Ali FUT 3SGM-be.IMPV DEF-director.SGM
Ali will be the director

Forms with both the auxiliary and the pronoun may also occur together, as shown in (48). The pronominal form in that case comes either after or before the verbal auxiliary.

[7] *ṣār* 'become' in TA can be used as a lexical phrasal verb 'become' and also with a 'bleached' *be*/copula meaning where it has the ability to substitute for *yikūn* as shown in (46), in equational sentences.

(48) a. ʕali, kān hū l-mudīr
Ali be.PFV.3SGM he DEF-director.SGM
Ali, he was the director.

b. kān ʕali hū l-mudīr
be.PFV.3SGM Ali he DEF-director.SGM
Ali, he was the director.

c. huda, kān-at hī l-mudīr-a
huda be.PFV-3SGF she DEF-director-SGF
Huda, she was the director

d. ʕali, rāħ yi-kūn hū l-mudīr
Ali FUT 3SGM-be.IMPV he DEF-director.SGM
Ali, he will be the director

As shown through the use of the comma, the data in (48) requires a pause between the subject nominal item and the rest of the sentence. I take this to indicate a special highlighting of the fact that the items *Huda* and *Ali* have been extracted and fronted, leaving the pronominal form to function as the subject. This means that the pronominal form in these cases is not functioning as the pronominal copula. Given however that such non-neutral configurations fall outside of the scope of this thesis, I will not discuss this further.

Parallel data is also present in MSA and other Arabic vernaculars as illustrated by (49).

(49) a. kāna l-ǧunūd-ū hum l-masʔūl-īn
be.PFV.3SGM DEF-soldier.PLM-NOM they DEF-responsible-PLM
The soldiers were the responsible. MSA: Fassi-Fehri (1993, p.120)

b. ʔali huwwa kān l-mudarris
Ali he be.PFV.3SGM DEF-teacher.SGM
Ali, he was the teacher. Iraqi Arabic: Razaq (2012, p.55)

The equational-predicational verbless sentences just discussed differ from equational-equative sentences. Equational-equative sentences involve a predicate NP that is not only definite, but also referential. There are two subtypes: identificational and identity.

The equative identificational sub-type is illustrated in (50). Here, opposite to the equational predicational type above, it is the subject NP which plays the role of providing a definite description. It is then the predicate NP that refers to an individual.

(50) a. l-mudīra (hī) ʔana
DEF-director.SGF COP.3SGF I
The director is me.

b. l-mudīr (hū) haḏa
DEF-director COP.3SGM this.SGM
The director is this one.

The equative identity sub-type, on the other hand, is one such as (51). Here, both NPs refer to unique individuals, providing definite descriptions of individuals or the two individuals are in fact one and the same, hence there is 'identity', as is clear in (51a). (51b) equates the pseudonym of a well-known Egyptian writer with his real name. Note that in this verbless sentence type, the pronominal copula become obligatory.

(51) a. ʕali hū ʕali
Ali COP.3SGM Ali
Ali is Ali. (Equative-identity)

b. almutanabbi hū ʔaḥmad ǧaʕfar
almutanabbi COP.3SGM Ahmad Jaffar
almutanabbi is Ahmad Jaffar. (Equative-identity)

2.5 Modality

TA possesses many forms expressing modality, which make reference to the semantic areas of permission, obligation (deontic), probability (epistemic) and volition, as indicated by Nuyts (2005).

TA does not have a specific set of verbs of this type which can be syntactically and morphologically demarcated from other verbs, like modal verbs in English. Instead TA uses a variety of forms, some of which inflect in the usual way, while others do not.

2.5.1 Inflectionally variable forms expressing modality

The normally inflected verbal-forms which will be discussed here display the usual inflection, and occur with an inflected verb in their complement clause. Such modal expressions show variable subject inflection in gender, number and person just like other verbs or pseudo-verbs. Participles used to express modality, as usual, display agreement in number and gender only. Fully inflecting verbs include *yegdar* 'be able/be permitted', *yebaġa* 'want', and the normally inflecting participles such as *nāwi* 'intended', while *nafs-i* 'wish' and *wudd-i* 'wish' are inflecting pseudo-verbs.

I begin with an example of a lexical verb with modal meaning. Such verbs take verbal complement clauses, as in (52). The verb here carries the same ambiguity as English *can/be able*, with respect to modal (permission) meaning and physical ability meaning.

(52) ti-gdar-īn (inn-ik) ta-ħaẓar-īn l-musābaqa
2-able.IMPV-SGF COMP-2SG.ACC 2-attend.IMPV-SGF DEF-competition
You can (are allowed to) attend the competition.

The volition verb *yebaġa* 'want' occurs in a similar structure (53).

(53) ʕali ye-baġa (inn-a) i-sāfar bukra
Ali 3SGM-want.IMPV COMP-3SGM.ACC 3SGM-travel.IMPV tomorrow
Ali wants to travel tomorrow.

Pseudo-verbs taking modal meanings are exemplified in (54).

(54) nafs-i / wudd-i (inn-ī) a-štər-i
wish-1SG.GEN / wish-1SG.GEN COMP-1SG.ACC 1SG-buy.IMPV
s-sayyāra
car.SGF
I want/wish to buy a car.

(55) illustrates the modal predicate expressed by an inflecting participle.

(55) nāwi-a (inn-i) ʔa-bd-a daīt min
intend.ACT.PTCP-SGF COM-1SG.ACC 1SG-start.IMPV diet from
bukra
tomorrow
I intend to start a diet from tomorrow.

2.5.2 Invariant forms expressing modality

The invariant modals do not change their form. Their fixed form may exhibit inflections, however. They include verbs such as *yaṣla*ħ 'can/be possible', and *yimkin* 'may/be possible', which both have fixed forms exhibiting a 3SGM inflection.

Other invariant examples are not inflected, and include the definite noun formed from a passive verbal participle *l-mafrūẓ* 'the supposed', the non-definite noun *momkin* 'possibility', the noun *ẓarūri* 'necessity', the active participle *lāzim* 'must', and the active participle *i*ħ*timāl* 'possible'. All these forms

are followed by complement clauses introduced with the optional complementizer *inni*, which itself is inflected for person, number and gender in the ACC form.

Data illustrating invariant uninflected modals are provided in (56).

(56) a. lāzim (inni-k) t-sāfar l-yom
must COMP-2SG.ACC 2SGM-travel.IMPV DEF-today
You must travel today/It is obligatory that you travel today.

b. iħtimāl (inn-i) ʔa-i bukra
possible COMP-1SG.ACC 1SG-come.IMPV tomorrow
It is possible that I come tomorrow/ I might come tomorrow.

c. l-mafrūẓ (inn-a) n-ǧīb la-ha
DEF-suppose COMP-1PL.ACC 1PL.bring.IMPV to-3SGF.GEN
hadi-a
present.SGF
We are supposed to buy a present for her.

Verbal invariant modals are seen in (57):

(57) a. ya-ṣlaħ (inn-ik) ta-ħẓrīn
3SGM-can.IMPV COMP-2SG.ACC 2SGF-attend.IMPV
l-musabaq-a
DEF-competition
You can attend the competition

b. yi-mkin (inn-i) ʔa-sāfar bukra
3SGM-may.IMPV COMP-1SG.ACC 1SG-travel.IMPV tomorrow
Maybe I will travel tomorrow/It is possible that I will travel tomorrow

2.6 An LFG analysis

Before turning to negation in the following chapter, I here provide the basis of a syntactic analysis for the affirmative sentences, both verbal and non-verbal, based on the behaviour of the data shown above. While the focus

of this study is negation, I judge it is important to provide an LFG account of the affirmative sentences, which will constitute a useful background for the following chapter which focuses on sentential negation. I will start by analysing the verbal sentence and then will move on to to provide an LFG account of verbless sentences.

2.6.1 Verbal sentences

A number of syntactic issues will be considered in this section. One of the most important issues is whether the TA main verb should occur in I or V position in the c-structure. As mentioned in chapter1, LFG assumes that in languages like English it is only auxiliaries which occupy the functional category I, which functions as the (categorial) head of the projection of the phrase IP, which in many languages corresponds to the sentence. Another important issue is how we account for SVO and VSO word order which as we saw in other languages may involve the category S.

Related to the syntactic placement of verbs in I or V, is also the issue of how the auxiliaries *kān*, *rāħ* and *gāʕid* combine with lexical verbal predicates in the f-structure, i.e. whether they form bi- or mono-clausal f-structures, also referred to as multi- vs. single-tiered f-structures, giving rise to an AUX-PRED or AUX-FEATURE analysis in the f-structure as described by Falk (2003), and as reviewed in Chapter one. On the basis of the first analysis, the auxiliary is an argument-taking predicate whereas in the second, the auxiliary is merely a feature.

2.6.1.1 The simple verbal sentence

As I have mentioned in section (2.3.1), the SVO order is the basic neutral word order in the verbal sentence in TA. While the VSO order is also possible, this is less common. The phrase structure rules in (58) account for both SVO

and VSO sentential word orders. The SUBJ can either occur as a specifier of the IP in the SVO order, or following I as an argument category within S which contains the SUBJ and an XP where XP = VP, AP, PP, NP, or in other words, any category functioning as 'predicate final'.

(58) a. IP $\longrightarrow$ (NP) $\uparrow(\text{SUBJ}) = \downarrow$ I′ $\uparrow = \downarrow$

b. I′ $\longrightarrow$ I $\uparrow = \downarrow$ S $\uparrow = \downarrow$ | VP $\uparrow = \downarrow$

c. S $\longrightarrow$ (NP) $\uparrow(\text{SUBJ}) = \downarrow$ VP $\uparrow = \downarrow$

d. VP $\longrightarrow$ V′ $\uparrow = \downarrow$ XP $\downarrow \in (\uparrow \text{ADJ})$

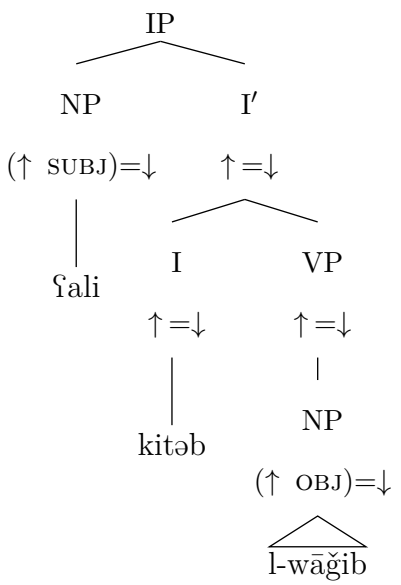
e. V′ $\longrightarrow$ V $\uparrow = \downarrow$ NP $\uparrow(\text{OBJ}) = \downarrow$ | VP $\uparrow = \downarrow$

As illustrated through the c- and f-structure in (59), the initial SUBJ in an SVO clause pattern occupies the specifier position of the IP, and the finite verb is located under the functional category I which is usually occupied by a finite tense-bearing verb that functions as the functional head of the IP.[8]

(59) a. ʕali kitəb l-wāǧib
Ali write.PFV.3SGM DEF-homework
Ali wrote the homework.

[8]Note that in the c-structure, I abbreviate by omitting the $\bar{\text{X}}$ level in the tree for convenience.

b.



c.
$$\begin{bmatrix} \text{PRED} & \text{`WRITE}\langle\text{SUBJ,OBJ}\rangle\text{'} \\ \text{TENSE} & \text{PAST} \\ \text{SUBJ} & \left[\text{PRED} \quad \text{`ALI'}\right] \\ \text{OBJ} & \left[\text{PRED} \quad \text{`HOMEWORK'}\right] \end{bmatrix}$$

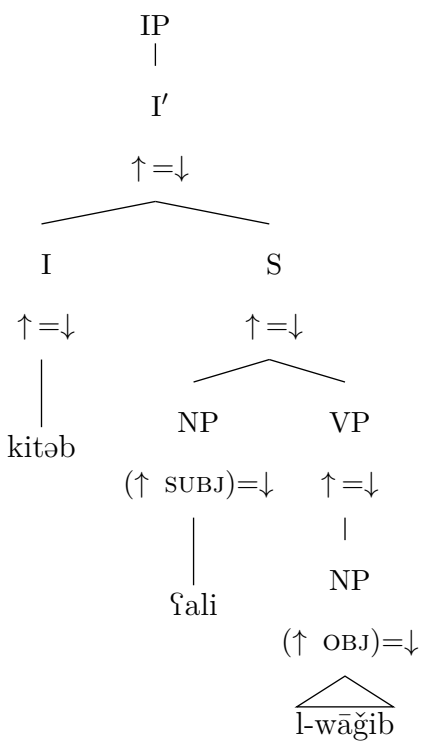
In the case of VSO order, the sentence will have exactly the same f-structure as above, yet the SUBJ will occur under the S category in the c-structure.[9]

(60) a. kitəb ʕali l-wāğib
write.PFV.3SGM Ali DEF-homework

Ali wrote the homework

[9]Note that spec of IP and spec of VP correspond to IP internal and VP internal SUBJ positions of other frameworks.

b.



c.
$$\begin{bmatrix} \text{PRED} & \text{`WRITE } \langle \text{SUBJ,OBJ} \rangle \text{'} \\ \text{TENSE} & \text{PAST} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`ALI'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`HOMEWORK'} \end{bmatrix} \end{bmatrix}$$

2.6.1.2 The presence of auxiliaries

In this sub-section, I provide an analysis for the auxiliary *kan*, the auxiliary *gāʕid* and the future particle *rāħ*. As we noted above, these auxiliaries combine with indicative verb forms to form compound constructions where broadly, the auxiliary expresses the tense and the verb expresses the aspect, following Al Sharif and Sadler (2009). In the current analysis I treat all the auxiliaries in verbal sentences under the FEATURE approach, rather than as PREDs which take arguments.

kān

The auxiliary verb *kān* provides us with grammatical information related to tense. As seen above, in declarative sentences, the auxiliary *kān* combines only with an indicative imperfective verb-form, and the combination expresses for example PAST HABITUAL meaning (61a). I here omit reference to circum-

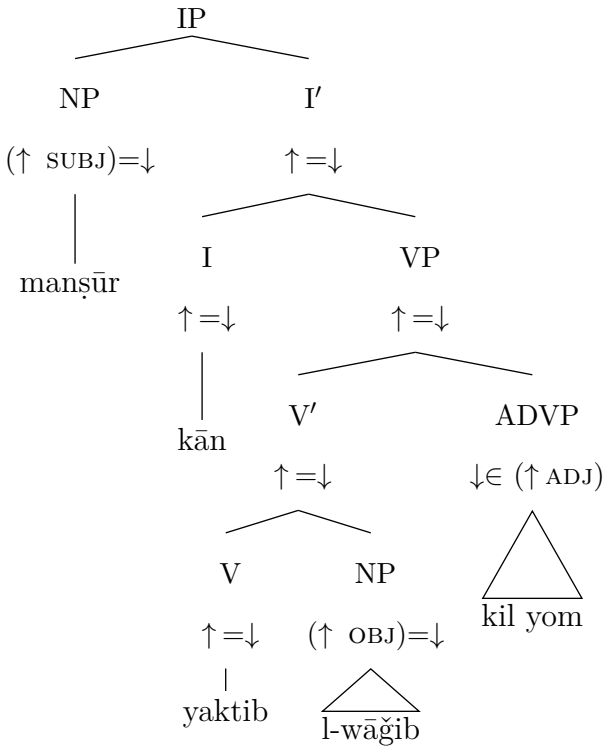
stances in unreal or counterfactual conditional sentences, where the auxiliary can combine with a perfective form.

The auxiliary *kān* will be treated simply as a feature carrier/bearer which does not have its own argument structure, since the lexical verb functions as the main predicate. *kān* simply corresponds to the feature TENSE PAST in the f-structure. This analysis involves a single tier or 'flat' f-structure which will still allow us to state relevant morphological restrictions through the information present in the lexical entry, such as the requirement for a an imperfective verb-form, as is shown in (61d). Turning to the c-structure, in a sentence including both the auxiliary *kān* and a main verb, the auxiliary occurs in the I node since it expresses TENSE, while the main verb appears in the V position, as illustrated in (61b), and the I node is annotated with $\uparrow = \downarrow$. *kān* is treated as an I rather than $\hat{\text{I}}$ (cf. *rāħ* below) because elements such as SUBJ and ADJ can occur between it and the verb.

(61) a. manṣūr kān ya-ktib l-wāǧib kil yom
Mansour be.PFV.3SGM 3SGM-write.IMPV DEF-homework every day

Mansour used to write the homework every day. PAST HABITUAL

b.



c. $\begin{bmatrix} \text{PRED} & \text{`WRITE}\langle\text{SUBJ,OBJ}\rangle\text{'} \\ \text{TENSE} & \text{PAST} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`MANṢŪR '} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`HOMEWORK'} \end{bmatrix} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{`KIL YOM'} \end{bmatrix} \right\} \end{bmatrix}$

d. **lexical entry**

kān

(↑ TENSE) = PAST

(↑ SUBJ NUM) = SG

(↑ SUBJ GEND) = M

(↑ SUBJ PERS) = 3

(↑ μ PRED VFORM) $=_c$ IMPV[10]

<u>*rāħ*</u>

Turning to the grammatical marker/particle *rāħ*, I here argue that this auxiliary's position in the c-structure is variable, and can be in I or V, de-

[10]The μ string is used to present the morphological verb form in LFG.

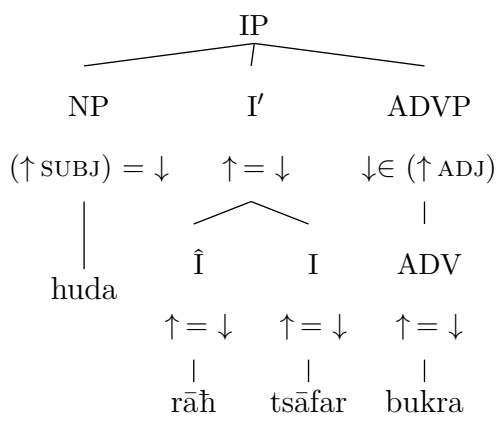
pending on the function expressed. When it occurs alone with the imperfective lexical verb, it is assumed to be a FUTURE TENSE marker, so appears as a non-projecting Î category in I. In contrast, when I is filled by *kān*, expressing PAST TENSE, *rāħ* takes on the role of a PROSPECTIVE ASPECT marker which is a function typical of verbs, so it falls in V. Since *rāħ* must always be adjacent to the verb and nothing can intervene between them, not even the subject or an adverb, the auxiliary *rāħ* will therefore be treated as a non-projecting item in the sense of Toivonen (2001), with the status of either Î or V̂. The first of these is illustrated in (63) together with the relevant lexical entry. To account for the two options which it can occupy in c-structure, I further present in (62) the relevant rule, modifying earlier I and V rules. Note that μ indicates reference to the actual morphological form of an entity.

(62) a. I $\longrightarrow$ Î ($\uparrow = \downarrow$) I ($\uparrow = \downarrow$)

b. V $\longrightarrow$ V̂ ($\uparrow = \downarrow$) V ($\uparrow = \downarrow$)

(63) a. huda rāħ t-sāfar bukra
Huda FUT 3SGF-travel.IMPV tomorrow
Huda will travel tomorrow.

b.



c. $\begin{bmatrix} \text{PRED} & \text{'TRAVEL <SUBJ>'} \\ \text{TENSE} & \text{FUTURE} \\ \text{SUBJ} & \left[\text{PRED} \quad \text{'HUDA'}\right] \\ \text{ADJ} & \left\{\left[\text{PRED} \quad \text{'TOMORROW'}\right]\right\} \end{bmatrix}$

(64) *rāħ* $\hat{\text{I}}$ ($\uparrow$ TENSE) = FUTURE

($\uparrow \mu$ PRED VFORM) $=_c$ IMPV|($\uparrow \mu$ VFORM)$=_c$ IMPV

On the other hand, in the presence of preceding *kān* in I, *rāħ* appears in a V position, as a $\hat{\text{V}}$ adjoined to the lexical verb in V. There it expresses PROSPECTIVE ASPECT. This analysis thus requires us to propose an additional lexical entry where *rāħ* is a $\hat{\text{V}}$, as shown in (65).

(65) *rāħ* $\hat{\text{V}}$

($\uparrow$ ASPECT) = PROSPECTIVE

($\uparrow \mu$ PRED VFORM) $=_c$ IMPV

gāʕid

I here consider the analysis of the grammaticalised form of the active participle *gāʕad*, which also functions as an auxiliary when preceding the verb in the imperfective form. The auxiliary expresses PROGRESSIVE ASPECT, so is treated as falling under V in c-structure rather than I, following Camilleri (2016).

In f-structure, like auxiliaries above, this auxiliary will be analysed under the AUX-FEATURE and single-tier f-structure analysis, as presented recently by Camilleri and Sadler (2017). They prefer this analysis on the basis of simplicity since there is no obvious evidence for treating the auxiliary as PRED. Furthermore, there is no survival of the meaning of 'sit' which pertains to the corresponding lexical verb which would of course be analysed as PRED with arguments.

An example is shown in (66b), together with c-structure, f-structure and lexical entry in (66b),(66c), and (66d). It can be seen that *gāʕid*, as V, is

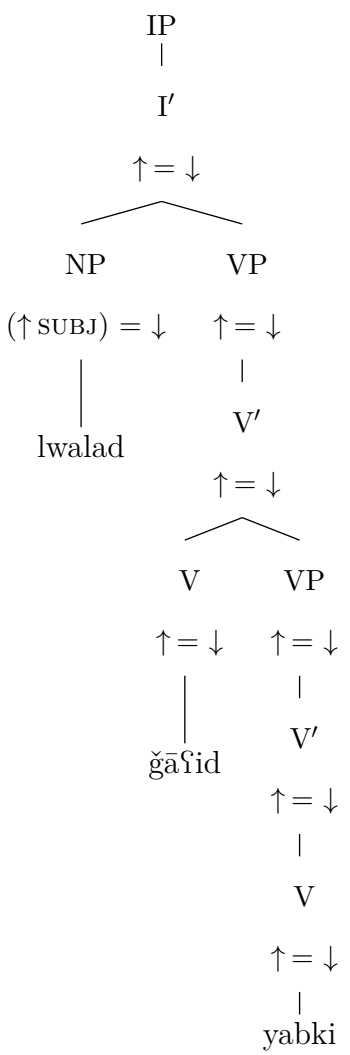
adjoined to VP, which is headed by the main verb. This treatment is based on the fact that *gāʕid* is a non-finite form and it realises progressive aspect. When associated with *kān* as an auxiliary, *kān* will as usual be in I and *gāʕid* in V. The difference is that the resulting reading would be PAST PROGRESSIVE. [11] When associated with *kān* as an auxiliary, *kān* will be in I and *gāʕid* in V. The difference is that the resulting reading would be PAST PROGRESSIVE.

(66) a. l-walad gāʕid ya-bki
DEF-boy sit.ACT.PTCP.SGM 3SGM-cry.IMPV

The baby is crying.

[11] Lexical active and passive participles which are predicational, will be analysed as APs, as will be seen later in the following sub-section.

b.



c.
$$\begin{bmatrix} \text{PRED} & \text{`CRY <SUBJ>`} \\ \text{ASPECT} & \text{PROGRESSIVE} \\ \text{TENSE} & \text{PRESENT} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`THE BOY'} \end{bmatrix} \end{bmatrix}$$

d. *gāʕid V*

$(\uparrow \mu \text{ ASPECT}) = \text{PROGRESSIVE}$

$(\uparrow \text{SUBJ NUM}) = \text{SG}$

$(\uparrow \text{SUBJ GEND}) = \text{M}$

$(\uparrow \mu \text{ PRED VFORM }) =_c \text{IMPV}$

2.6.2 Verbless sentences

As discussed in section 2.4, there are two distinct types of verbless copular sentences, namely: predicational and equational sentences. The phrase struc-

ture rule in (67) licenses the c-structure of verbless sentences with or without a copula. n (67b) we see the LFG use if the ε symbol which stands for an empty string in c-structure.[12]

(67) a. IP $\longrightarrow$ NP I′
$\uparrow(\text{SUBJ}) = \downarrow$ $\uparrow = \downarrow$

b. I′ $\longrightarrow$ ε | I S
$\uparrow(\text{TENSE}) = \text{PRESENT}$ $\uparrow = \downarrow$ $\uparrow = \downarrow$

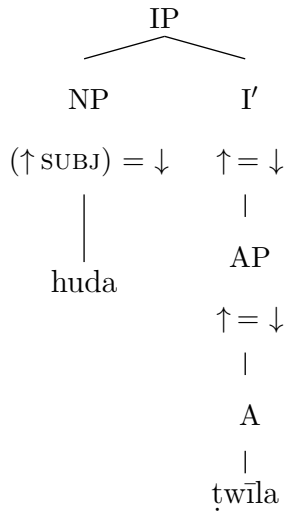
c. S $\longrightarrow$ NP XP
$\uparrow(\text{SUBJ}) = \downarrow$ $\uparrow = \downarrow$

As discussed in chapter 1, in LFG there are two different ways in which copular sentences can be analysed: the single-tier analysis and the double-tier analysis as remarked by Sadler and Nordlinger (2006). Here I suggest that the two types of copular sentences are to be analysed differently. Firstly, the single-tier analysis will be adopted for the predicational sentences such as the one in (68) and (69), where the non-verbal predicative adjective or participle is the main predicate which subcategorises for a SUBJ and agrees with its SUBJ in number and gender. The empty string is reflected by the fact that, in line with (67), a TENSE PRESENT feature-value is assumed to be present in the f-structure, as shown in (68c).

(68) a. huda ṭwīla
Huda tall-SGF
Huda is tall.

[12]The presence of the string ε implies the lack of a c-structure node that is however associated with the presence of a feature in the f-structure. As stated in Dalrymple (2001, pp.175-176) 'ϵ corresponds to an empty string and represents the absence of a phrase structure constituent. Importantly [when this is present], the rule does not license the presence of an empty category or node in the c-structure tree. It simply constitutes an instruction to introduce some functional constrains in the absence of some overt word or phrase'.

b.

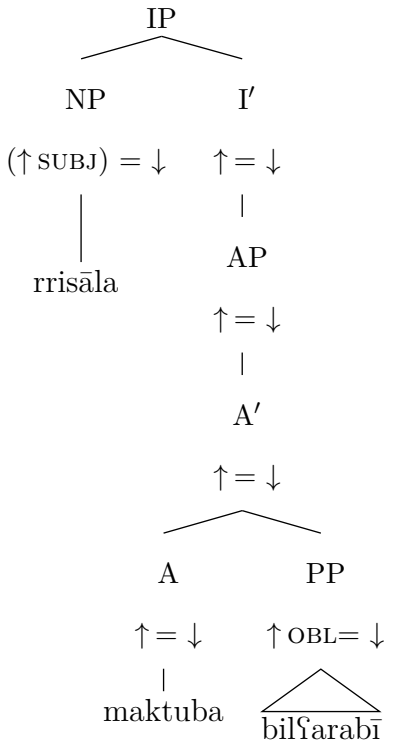


c.
$$\begin{bmatrix} \text{PRED} & \text{`TALL} < \text{SUBJ} > \text{'} \\ \text{TENSE} & \text{PRESENT} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`HUDA'} \end{bmatrix} \end{bmatrix}$$

(69) illustrates how the same analysis is used for participles, both active and passive, which are taken to function as non-verbal predicates, occurring under the AP node. The reason for treating participles in this way is because, as mentioned earlier, they share a number of their behaviours with adjectives. They specifically show agreement only in number and gender. Also, they can carry a definite article *l-* in attributive contexts or in equational sentence types. In the next chapter it will additionally be shown how they also behave like other adjectives in the context of the expression of negation.

(69) a. r-risāla ma-ktub-a bil-ʕarabi
DEF-letter.SGF PASS.PTCP-write-SGF with-DEF-Arabic
The letter is written in Arabic.

b.



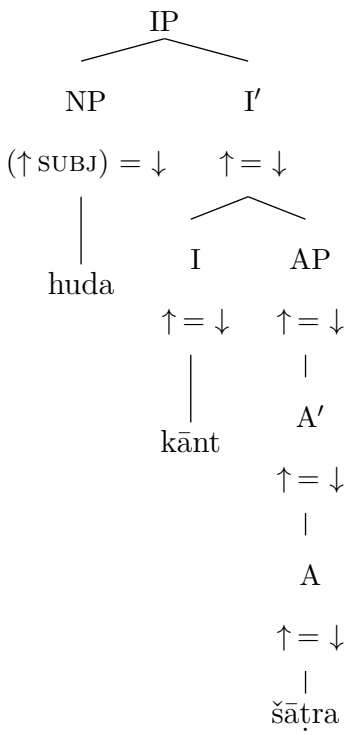
c.

$$\begin{bmatrix} \text{PRED} & \text{`WRITTEN <SUBJ, OBL>'} \\ \text{TENSE} & \text{PRESENT} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`LETTER'} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{FEM} \\ \text{PERS} & 3 \\ \text{DEF} & + \end{bmatrix} \\ \text{OBL} & \begin{bmatrix} \text{PRED} & \text{`WITH < OBJ>'} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`ARABIC'} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{MASC} \\ \text{NUM} & \text{SG} \\ \text{DEF} & + \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

When the copula *kān* is inserted in I to express the PAST TENSE in such structures, nothing differs from what was observed to be happening in the previous section on verbal sentences. Here too, *kān* is treated as a feature carrier (70).

(70) a. huda kān-t šāṭra
Huda be.PFV.3SGM smart.SGF
Huda was smart.

b.



c. **f-structure:**

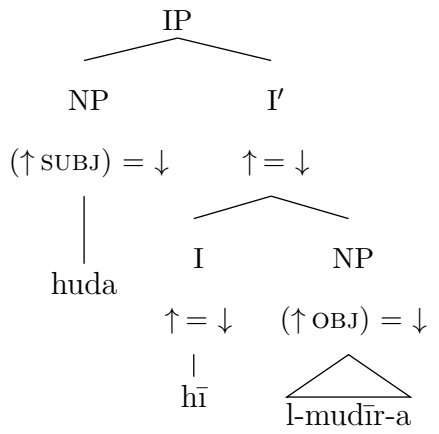
$$\begin{bmatrix} \text{PRED} & \text{`SMART <SUBJ>'} \\ \text{TENSE} & \text{PAST} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`HUDA'} \end{bmatrix} \end{bmatrix}$$

In equational sentences such as (71), which contain a subject and a definite noun separated by a pronominal copula, the pronominal copula will be treated as occurring under the I node, where it expresses PRESENT TENSE. In the f-structure it functions as a main PRED with argument, not just a feature. Similarly, later I will be considering the negative copula in this context as a transitive predicate taking a SUBJ and OBJ.

An analysis involving a SUBJ and an OBJ is being assumed, as in Camilleri & Sadler (2018-LFG presentation), rather than an XCOMP or PREDLINK analysis.

(71) a. huda hī l-mudīr-a
Huda COP.3SGF DEF-director-SGF
Huda is the director.

b.



c. **f-structure:**

$$\begin{bmatrix} \text{PRED} & \text{`HI <SUBJ, OBJ>'} \\ \text{TENSE} & \text{PRESENT} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`HUDA'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`DIRECTOR'} \\ \text{DEF} & + \end{bmatrix} \end{bmatrix}$$

d. **lexical entry:**

(↑ PRED) = 'HI <SUBJ, OBJ>'

(↑ TENSE) = PRESENT

(↑ OBJ DEF)$=_c$ +

In a similar way, in the PAST TENSE, *kān* in such equational sentences is treated as a copula which takes a PRED value in the f-structure, with the difference that a TENSE PAST feature value is present in the f-structure.

2.7 Conclusion

This chapter was concerned with the basic syntactic aspects of the affirmative clause structure in TA in both verbal and verbless sentences.

In the discussion of verbal sentences, it was shown that the available canonical word orders in TA are SVO and VSO. It was also mentioned that the verb displays obligatory full agreement with its subject in both word orders.

I then moved on to discuss the nature of verbal morphology in TA, along with a discussion of the auxiliaries *kān*, *gāʕid* and *rāħ*, and how these form different compound tenses when in combination with different forms of the lexical verb. I additionally made reference to the category of pseudo-verbs and modals in TA.

In the discussion of verbless sentences, I highlighted two different types of verbless sentences: predicational and equational sentences. In the predicational sentence, the non-verbal predicate must be indefinite. No present-tense copula is available. In the past, the copula *kān* is used. In contrast, equational sentences involve a subject and a predicate that must both be definite, and separated by what is in the literature called a present tense pronominal copula, which is however in some cases optional.

I ended this chapter by introducing an LFG analysis for declarative non-negative sentences in TA, providing us with a background for the next chapter, which discusses sentential negation, which is divided once again based on the observed differences between verbal and verbless sentences.

Chapter 3

Sentential and Constituent Negation in TA

3.1 Introduction

The main aim of this chapter is to introduce the negative particles in TA, and to provide an LFG analysis to account for their behaviour. Once again, the LFG analysis will comprise both c- and f-structures and lexical entries.

Negation across Arabic dialects is expressed by a number of particles, and these are sensitive as to whether what is being negated is a verbal or non-verbal sentence or a constituent. In TA, four negative particles are used to express negation. *mā* and *lā* negate verbal sentences, and their placement is directly before and adjacent to the verb. In verbless constructions of both predicational and equational types, negation is through *mū* or its inflected forms, in the 'PRESENT TENSE'.

This chapter, which concentrates primarily on sentential negation without coordination, is divided into four main parts: verbal sentential negation, nega-

tion in verbless sentences, constituent negation and then a representative LFG analysis of various aspects of the data.

The negation of verbal sentences will be discussed in (3.2), and verbless negation in (3.3). Neg-raising predicates will be discussed in (3.5), along with the negation of modal expressions (3.6). Before moving to the LFG analysis, in section (3.4) I briefly look at another type of negation: constituent negation. In section (3.7), an LFG analysis for sentential negation in both verbal and verbless sentences is provided.

3.2 Negation of verbal sentences

3.2.1 *mā*

The first negative particle to be discussed, and which is used to express sentential negation, is *mā*. *mā* negates finite verbal predicates, which are either perfective or imperfective, as shown in (1).

(1) a. ʕali **mā** kitəb l-wāǧib
Ali NEG write.PFV.3SGM DEF-homework
Ali did not write the homework. (perfective verb form)

b. ʕali **mā** ya-ktib l-wāǧib
Ali NEG 3SGM-write.IMPV DEF-homework
Ali does not write the homework. (imperfective verb form)

mā always precedes the verb and must be adjacent to the verb regardless of the sentence word order, which can be SVO or VSO. This can be illustrated by the ungrammatical examples in (2), where *mā* is not adjacent to the verb.

(2) a. ***mā** ʕali ya-ktib l-wāǧib
NEG Ali 3SGM-write.IMPV DEF-homework
Ali does not write the homework.

b. *ya-ktib **mā** ʕali l-wāǧib
3SGM-write.IMPV NEG Ali DEF-homework
Ali does not write the homework.

In addition to negating lexical perfective and imperfective verbs, *mā* also negates the auxiliary verb *kān* 'be' (which is perfective in form), and which realises the PAST TENSE, and the future particle *rāħ* 'will', which is also perfective in form.

In the presence of the auxiliary *kān*, the NEG marker *mā* can be either expressed before the auxiliary *kān* as in (3a) or before the lexical verb as in (3b). No change in the semantic interpretation occurs. What appears to be added is an emphasis on the PAST TENSE reference of the whole sentence.

(3) a. ʕali **mā** kān ya-ktib l-wāǧib dayman
Ali NEG be.PFV.3SGM 3SGM-write.IMPV DEF-homework always
Ali did not always used to write the homework. (PAST HABITUAL)

b. ʕali kān **mā** ya-ktib l-wāǧib dayman
Ali be.PFV.3SGM NEG 3SGM-write.IMPV DEF-homework always
Ali did not always used to write the homework. (PAST HABITUAL)

Unlike *kān*, in the case of the future particle *rāħ*, which always precedes a lexical verb in the imperfective form, *mā* must always be adjacent and preceding *rāħ*, rather than the lexical imperfective verb which is required by *rāħ* (as discussed in the previous chapter), as is shown in the contrast between (4a) and (4b).

(4) a. huda **mā** rāħ t-sāfar bukra
Huda NEG FUT 3SGF-travel.IMPV tomorrow
Huda will not travel tomorrow. (SIMPLE FUTURE)

b. *huda rāħ **mā** t-sāfar bukra
Huda FUT NEG 3SGF-travel.IMPV tomorrow
Huda will not travel tomorrow. (SIMPLE FUTURE)

Apart from negating perfective and imperfective verb-forms and auxiliaries, *mā* also negates what the literature refers to as pseudo-verbs. When it comes to the expression of negation, pseudo-verbs often behave like any other verb, as illustrated in (5).

(5) a. huda **mā** ʕind-aha/maʕ-aha sayyāra
Huda NEG have-3SGF.GEN/have-3SGF.GEN car.SGF
Huda doesn't have a car.

b. **mā** fī iǧtimāʕ bukra
NEG there meeting tomorrow
There is no meeting tomorrow.

When it comes to the existential pseudo-verb *fī*, an additional negative possibility exists, however. *fī* can often occur in a structure where the indefinite NP whose existence is asserted is the antecedent of a bare relative clause which contains a second verb or pseudo-verb which constitutes a second clausal predicate in the sentence whose be followed by another of the clause. In this case negation need not be with *fī*. In sentences such as (6) the pseudo-verb obligatorily comes first, followed by an indefinite subject and then the second predicate. The NEG marker either precedes the pseudo-verb *fī* or the predicate *ʔəbban*, but the meaning differs. When *mā* immediately precedes *fī*, the negation scopes over the existential predicate, yielding the reading: 'There do not exist ... which...'/ 'There are no .... that ...' When *mā* follows *fī* and immediately precedes the second predicate, then the negation scopes over the

second predicate, with the resulting reading being 'There exist ... which do not....'/ 'Some...do not....'.

(6) a. **mā** fī ban-āt i-ħəbb-an l-ryaẓa
NEG there girl-PLF 3-like.IMPV-PLF DEF-sport.SGF
There are no girls who like sport/No girls like sport.

b. fī ban-āt **mā** iħəbb-an l-ryaẓa
there girl-PLF NEG 3-like.IMPV-PLF DEF-sport.SGF
There are some girls who do not like sport.

Another pseudo-verb which *mā* negates is *li*. In its simple use (without a time adverb or other predicate in the clause, as discussed in chapter 2), *li* conveys the possessive meaning 'have' without contributing special aspectual meaning. It is simply negated by *mā* immediately before it, as in (7).

(7) ṭ-ṭullāb **mā** l-hum χaṣam
student.PLM NEG have-3PLM.GEN discount
The students do not have a discount.

Up to this point I have considered only present (including PRESENT PERFECT) examples of pseudo-verbs. In past sentences with *kān*, and future sentences with *ra*ħ, other possibilities become available with respect to the NEG marker's placement.

With the presence of *kān*, *mā* precedes either the pseudo-verb or the auxiliary, with no difference in meaning (8), just as we saw with normal non-imperative verbs.

(8) a. huda **(mā)** kān/kān-at **(mā)** ʕind-aha
Huda NEG be.PFV.3SGM/be.PFV-3SGF NEG have-3SGF.GEN
sayyāra
car.SGF

Huda did not have a car.

b. **(mā)** kān **(mā)** fī ban-āt (mā) iħə-an
NEG be.PFV.3SGM NEG there girl.PLF NEG 3-like.IMPV-PLF
l-ryaẓa
DEF-sport.SGF
There were no girls who like sport.

When, however, the pseudo-verb *li* occurs as an auxiliary, accompanied by a time-durational adverb and a main predicate in a verbal sentence, it contributes a perfect aspectual meaning. The main predicate may be an active participle/passive participle or an imperfective, but not a perfective verb. Distinct semantic interpretations arise depending on the placement of negation, as illustrated in (9). In the first case, the negative scopes over the time duration, while in the second, over the activity described by the main predicate.

(9) a. **mā** l-i yom-īn a-ḏaker fī-l-maktiba
NEG have-1SG.GEN day-DU 1SG-read.IMPV in-DEF.library-SGF
I have been studying in the library for less than two days.

b. l-i yom-īn **mā** a-ḏaker fī-l-maktiba
have-1SG.GEN day-DU NEG 1SG-read.IMPV in-DEF-library.SGF
I have not studied in the library for two days.

Although *li* does not normally occur with a verb in the perfective form (section (2.3.5)), this becomes possible when the perfective form is NEG marked. This may seem like a surprising finding, since in sentences without this pseudo-verb, *mā* negates both perfective and imperfective verb-forms. When this is the case, however, the NEG marker must always occur with the perfective verb not with the pseudo-verb, as shown through the contrast in (10).

(10) a. manṣūr l-ah sana **mā** sāfar barra
Mansour have-3SG.GEN year NEG travel.PFV.3SGM abroad
Mansour has not travelled abroad for a year.

b. *manṣūr **mā** l-ah sana sāfar barra
Mansour NEG have-3SG.GEN year travel.PFV.3SGM abroad
Intended: Mansour has not travelled abroad for a year.

Another case where the NEG cannot be inserted before *li*, is when *ṣār* optionally precedes *li*. In this case the NEG marker must be inserted either before *ṣār*, which is always default 3SGM regardless of the SUBJ's PERSON, NUMBER and GENDER, just as in affirmative contexts, or before the main verbal predicate, but not immediately before *li*.

(11) a. **mā** ṣār l-i sāʕt-īn a-ḏaker
NEG become.PFV.3SGM have-1SG.GEN hour-DU 1SG-read.IMPV
I have not been studying for two hours.

b. *ṣār **mā** l-i sāʕtīn a-ḏaker
become.PFV.3SGM NEG have-1SG.GEN hour.DU 1SG-read.IMPV
Intended: I have not been studying for two hours.

3.2.2 *lā*

lā is the second negative particle to be considered here. *lā* takes on a prohibitive function when used to negate the verb in an imperative meaning. (12a) includes a (positive) imperative verb-form as described in table (2.2). The negation of the imperative verb is however realised by using the negative particle *lā* and the 2SG and 2PL imperfective forms. As can be seen through the ungrammaticality of (12c), *lā* cannot simply negate the positive imperative form. Similar to *mā*, *lā* must precede and be adjacent to the verb. Separating *lā* from the verb will result in ungrammaticality, as in (12d).

(12) a. iktib l-wāǧib
write.IMP.2SGM DEF-homework
Write the homework.

	Positive imperatives	Negative Imperatives
2SGM	i-ktib 'write'	lā ta-ktib 'do not write'
2SGF	i-ktib-i 'write'	lā ta-ktib-in 'do not write'
2PLM	i-ktib-u 'write'	lā ta-ktib-un 'do not write'
2PLF	i-ktib-an 'write'	lā ta-ktib-an 'do not write'

Table 3.1: Paradigm of negative and positive imperative verb forms in TA

b. **lā** ta-ktib l-wāǧib
NEG 2SGM-write.IMPV DEF-homework
Don't write the homework.

c. ***lā** iktib l-wāǧib
NEG write.IMP.2SGM DEF-homework
Do not write the homework.

d. *ta-ktib **lā** l-wāǧib
2SGM-write.IMPV NEG DEF-homework
Don't write the homework.

Table (3.1) provides the paradigm of the positive imperative forms and their negative counterparts.

On the occasions that *yikūn* and the equivalent *yiṣīr* function as a copula, as in (13), when these verbal copulas are required to be imperative, they get negated with *lā*, along with a change to 2SG or 2PL imperfective form, as in (14).

(13) a. huda ta-kūn/ta-ṣīr aχt ʕali
Huda 3SGF-be.IMPV/3SGF-be.IMPV sister ali
Huda is Ali's sister. (equational sentence)

b. huda ta-kūn/ta-ṣīr l-mudīra
Huda 3SGF-be.IMPV/3SGF-be.IMPV DEF-director
Huda is the director. (equational sentence)

(14) a. **lā** ti-kūn ġabi
NEG 2SGM-be.IMPV stupid.SGM
Do not be stupid.

b. **lā** ti-ṣīr ġabi
NEG 2SGM-be.IMPV stupid.SGM
Do not be stupid.

To conclude this section, in addition to the use of *lā* as a sentential negation of imperative sentences, it itself is the default negative answer to a *yes/no* question, as indicated through (15b), where it simply means 'no'.

(15) a. ǧā ʕali?
come.PFV.3SGM ali
Did ali come?

b. **lā**
NEG
No.

3.2.3 Negation across Arabic dialects

Having explored negation in verbal sentences in TA, it is worth mentioning briefly the variation in the negative particles employed across other vernaculars. In some dialects negation is expressed by using only a single preverbal negative particle when negating finite verbal predicates, as is the case in TA, and Syrian Arabic (Cowell, 1964; Murphy, 2014; Brustad, 2000), Kuwaiti (Brustad, 2000; Alsalem, 2012), Iraqi (Erwin, 1963; Ridha, 2014), and some Yemeni dialects, such as the Hadhrami dialect (Mansoor, 2012). The same also is the case among Saudi dialects other than TA, including Najdi (Ingham, 1994; Binturki, 2015), and Hassawi (Alabdullah et al., 2017). The negation of finite verbs and pseudo-verbs is through the use of the negative marker *mā/ma*. Examples from Syrian and Iraqi are given in (16). Such dialects negate in the

same way as Classical Arabic and MSA, where only single particles express NEG.

(16) a. mā bə-ṭlaʕ ʕal-ħāra bəl-biǧāma
NEG 1SG-go.IMPV on-DEF.street.SGM with.DEF-pjamas
I would not go out on the street in pajamas. Syrian Arabic: Cowell (1964, p.383)

b. ʔali ma yi-ħši wīyā-hum
Ali NEG 3SGM-talk.IMPV with-them
Ali does not speak to them. Iraqi Arabic: Erwin (1963, p.330)

In these dialects *lā/la* is also used to express the PROHIBITIVE imperative, and displays the same selection requirement as just described for TA in the previous section. As shown in (17), in negative imperative contexts, expressed with *lā*, the form of the verb is imperfective, not the positive imperative form.

(17) a. lā tə-tʔaχχar
NEG 2SGM-be.late.IMPV
Do not be late. Syrian Arabic: Cowell (1964, p.389)

b. la trūħ
NEG 2SGM-go.IMPV
Do not go. Iraqi Arabic: Erwin (1963, p.330)

In other dialects, negation is not as straightforward or simple. Many other Arabic dialects use two negative particles/markers, together: one preverbal and another postverbal. This is known in the literature as bi-partite or discontinuous negation, which is composed of the preverbal/prefix element *mā* and the postverbal/affix element *šī/šay* (depending on the dialect) (18). The

second element is historically a grammaticalised and reduced form of *šay* meaning 'thing' in Classical Arabic, which also survives with its original meaning in some dialects as remarked by Lucas (2009).

Bi-partite negation is found in many Arabic vernacular dialects, primarily in many North African dialects, some Levantine dialects, parts of the Southern Arabian Peninsula and in Maltese. As mentioned by Lucas (2009) in detail, this negation is found in Moroccan Arabic (Harrell, 1962; Adila, 1996; Lucas, 2009), Tunisian (Chaâbane, 1996), Algerian (Elhalimi, 1996a), Egyptian (Brustad, 2000)/Cairene Arabic (Woidich and Heinen-Nasr, 2004), Libyan (Owens, 1984; Krer, 2013; Ghadgoud, 2017), Palestinian (Obler, 1990), Jordan Arabic (Al-Momani, 2011; Alrashdan, 2015), Yemeni Taizi, Adeni (Mansoor, 2012), and ṣanʕāni (Watson, 1993), and Omani (Reinhardt, 1894; Lucas, 2009; Al-Balushi, 2016), in addition to Maltese (Borg and Azzopardi-Alexander, 1997; Camilleri and Sadler, 2017).

(18) a. ma-ǧa-š
NEG-come.IMPV.3SGM-NEG
He did not come/He has not come. Moroccan Arabic: Harrell (1962, p.152)

b. ana (mā) ba-šrab-š il-ʔahwa
I NEG 1SG-drink.IMPV-NEG DEF-coffee.SGM
I do not drink coffee. Palestinian Arabic: Lucas (2009, p.26)

In negative imperative sentences, the varieties that employ bi-partite negation display the usual selection requirement by the negative marker for an imperfective 2SG or 2PL verb form (20). The nature of the negative marker can vary, however. For example in Magrabi dialects (Tunisian, Algerian, Moroccan), and Libyan and Cairene varieties, *mā ... š* is used rather than *lā*

. . . š.[1]

In Jordanian and Palestinian it can be either *mā . . . š* (or indeed *lā* or *š* alone, see further below). Finally Maltese uses *lā . . . š* (although the *lā* can optionally be omitted, see below).

(20) a. ma-te-mši-š
NEG-2SGM-go.IMPV-NEG
Don't go. Moroccan Arabic: (Harrell (1962, p.152)

Among the dialects which use bi-partite forms of negation, the preverbal negative particle *mā* can be optionally dropped and the postverbal affix *-š* can be used alone in certain contexts, as stated in Lucas (2010) 'thus *-š* alone can be said to have completed its journey from independent lexical item to fully-fledged, unmarked negator'.[2] This is what is found to be the case in some Palestinian dialects (Lucas, 2010), Cairene Egyptian (Woidich, 2006) in (Lucas, 2010), and Northwestern Jordanian Arabic (Al-Rashdan and Jones, 2017).

In Palestinian and Jordanian, for example, the negative affix *-š* can be used alone without *mā* in some contexts with imperfective verb-forms (e.g. ones with a *b*-imperfect prefix) and with some pseudo-verbs such as *fi/maʕ/bidd*, but not with perfective verb-forms or with the pseudo-verb *ʕind*. The *-š* in such dialects can also be used to convey the prohibitive negative imperative, without the presence of *lā*, and once again in association with 2SG or 2PL

[1] Harrell (1962, p.153) however notes that in the negation of imperative verbs, the negative particle *ma* plus *š* can be substituted by *la*. However this substitution 'has a more general advisory or morally admonishing implication', as shown in the translation of (19).

(19) la-te-mši-š
NEG2SGM-go.IMPV-NEG
You should not go/ I advise you not to go. Moroccan Arabic: Harrell (1962, p.153)

[2] In some of these dialects one can find cases where the post-verbal negative particle *-š* is omitted obligatorily, when in the context of NPIs or N-words. More on this will follow in Chapter five.

imperfective verb forms (21).

(21) a. t-χaf-i-š
2SG-fear.IMPV-F-NEG
Don't be afraid. Palestinian Arabic: Lucas (2010, p.175)

b. b-i-rūḥ-iš
INDIC-3SGM-go.IMPV-NEG
He doesn't go. Jordanian Arabic:Al-Rashdan and Jones (2017, p.3)

The affix *-š̆* occurs alone as a NEG marker to a more limited extent in Cairene. There it is restricted to occur only in non-declarative non-imperative sentences, such as conditional and interrogative sentences. In (22) in the embedded interrogative, the *-š̆* on *kān* both implies negation, and doubt about the answer to the question, by including a negative alternative.

(22) mā ʕ-raf-š kān mawgūd walla
NEG 1SG-know.IMPV-NEG be.PFV.3SGM present or
kān-š
be.PFV.3SGM-NEG
I don't know if he was present or not. Cairene Arabic: Willmore (1901, p.298) in Lucas (2010, p.169)

3.3 Negation of verbless sentences

I now move on to discuss negation in verbless sentences in TA. It is essentially the NEG marker *mū*, and/or the inflected counterparts that are used to negate PRESENT TENSE verbless sentences of all the types distinguished in Chapter 2. As discussed in that chapter, and repeated here, in positive affirmative copular predicational sentences (23a), no copula is available. In equational sentences, however, a pronominal copula is available, as shown in (23b) below.

(23) a. ʕali mudīr
Ali director.SGM
Ali is a director. (predicational sentence)

b. ʕali hū l-mudīr
Ali he DEF-director.SGM
Ali is the director. (equational sentence)

3.3.1 *mū* and its variant forms in predicational sentences

mū can be used to negate predicational sentences involving a wide range of non-verbal predicates, which can be nouns (24a), adjectives (24b), and prepositional phrases (24c).

(24) a. ʕali **mū** imdarris
ali NEG teacher.SGM
Ali is not a teacher. (nominal phrase)

b. l-bint **mū** ħelw-a
DEF-girl.SGF NEG beautiful-SGF
The girl is not beautiful. (adjective phrase)

c. l-ktāb **mū** ʕala ṭ-ṭawl-a
DEF-book.SGM NEG on DEF-table-SGF
The book is not on the table. (prepositional phrase)

d. manṣūr **mū** ǧa-i l-ħīn
Mansour NEG come.ACT.PTCP.SGM DEF-now
Mansour is not coming now. (active participle)

e. r-risāl-a **mū** ma-ktub-a bil-ʕarabi
DEF-letter NEG PASS.PTCP-write-SGF with-DEF-Arabic
The letter is not/has not been written in Arabic (passive participle)

Apart from the default invariable form *mū*, negation of sentences such as (24), can be equally expressed by a range of forms that inflect for PERSON,

NEG.1SG	*mani*	I am not
NEG.1PL	*maħna*	we are not
NEG.2SGM	*mant*	you are not
NEG.2SGF	*manti*	you are not
NEG 2PLM	*mantum*	you are not
NEG.2PLF	*mantan*	you are not
NEG.3SGM	*mahu/mū*	he is not
NEG.3SGF	*mahi/mī*	she is not not
NEG.3PLM	*mahum*	they are not
NEG.3PLF	*mahan*	they are not

Table 3.2: Negative inflected forms

NUMBER and, GENDER which essentially involve the negative particle *mā* combined with subject personal pronoun forms. The list of forms is provided in table (3.2), with examples following in (25). Although the stem of the inflected forms resembles *mā* rather than *mū*, these forms are treated as inflected counterparts of *mū*, since they occur in the same context as *mū*, and not those of *mā*. Additionally, from the list in table (3.2), it can be seen that in the NEG.3SGM and NEG.3SGF cells, there are short forms: *mū* and *mī*, respectively. It is important to keep in mind, however, that the short form *mī* in the 3SGF cell has not generalised into a default form used in all contexts, as opposed to *mū*, as illustrated in (24).

The examples in (24) possess alternative negative forms as in (25), where apart from the default 3SGM *mū*, the appropriate inflected forms, agreeing with the subject in NUMBER, GENDER and PERSON, can also be used.

(25) a. ʕali **mū/mahu** imdarris
ali NEG/NEG.3SGM teacher.SGM
Ali is not a teacher (nominal phrase)

b. l-bint **mahi/mī** ħelw-a
DEF-girl.SGF NEG.3SGF/NEG.3SGF beautiful-SGF
The girl is not beautiful (adjective phrase)

c. l-ktāb **mahu** ʕala ṭ-ṭawl-a
DEF-book.SGM NEG.3SGM on DEF-table-SGF
The book is not on the table (prepositional phrase)

d. manṣūr **mahu** ǧa-y l-ħīn
Mansour NEG come.ACT.PTCP.SGM DEF-now
Mansour is not coming now. (active participle)

e. r-risāl-a **mahi/mī** ma-ktub-a
DEF-letter NEG.3SGF/NEG.3SGF PASS.PTCP-write-SGF
bil-ʕarabi
with-DEF-Arabic
The letter is not/has not been written in Arabic. (passive participle)

As discussed in Chapter 2 in relation to verbless constructions, an overt subject is required in affirmative verbless sentences (but not in verbal sentences). These fact holds true when verbless sentences are negated with the invariant form *mū*, as shown through the data in (26), where a subject, whether a pronoun or a NP, is obligatory. Verbless sentences negated with inflected forms, on the other hand, follow the pattern of verbal sentences, in the sense that a subject pronoun or NP can be absent, as shown in (27).

(26) a. huda **mū** mudīr-a
Huda NEG director-SGF
Huda is not a director.

b. ana **mū** mudīr
I NEG director.SGM
I am not a director.

(27) a. (huda) **mī/mahi** mudīr-a
Huda NEG.3SGF/NEG.3SGF director-SGF
Huda is not a director.

b. (ʔana) **mani** mudīr

I NEG.1SG director.SGM

I am not a director.

mū and the rest of the corresponding inflected forms are only available in negative PRESENT TENSE tense verbless equational and predicational sentences.

When such sentences are in the PAST or FUTURE TENSES, as already seen for affirmative sentences in Chapter 2, a verbal copula must be present. Once again, the copula is a perfective form of *kān* (fully inflected for subject agreement) (29a,29b,29c), or *rāħ* (invariant) + the imperfective form form of *kān/ṣār* (inflected for subject agreement) in a future context (29d) and (29e). In both instances, the negative form used is *mā* given that the nature of both these auxiliaries is that of a perfective verb-form. Hence, (29) displays the usual pattern of sentential negation which are found in verbal sentences.[3]

(29) a. huda **mā** kān-at imdarris-a
Huda NEG be.PFV-3SGF teacher-SGF
Huda was not a teacher.

b. manṣūr **mā** kān ǧā-y l-ħīn
Mansour NEG be.PFV.3SGM come.ACT.PTCP.SGM DEF-now

[3]when the auxiliary verb *kān* appear with the aspectual progressive auxiliary *gāʕid* the NEG must be always expressed before *kān*, but not before *gāʕad* or the main lexical verbal predicate.

(28) a. l-walad **mā** kān gāʕid ya-rkiẓ
DEF-boy.SGM NEG be.PFV.3SGM sit.ACT.PTCP.SGM 3SGM-run.IMPV
The boy was not running in the street. (PAST PROGRESSIVE)

b. *l-walad kān **mū** gāʕid ya-rkiẓ
DEF-boy.SGM be.PFV.3SGM neg sit.ACT.PTCP.SGM 3SGM-run.IMPV
The boy was not running in the street. (PAST PROGRESSIVE)

c. *l-walad kān gāʕid **mā** ya-rkiẓ
DEF-boy.SGM be.PFV.3SGM sit.ACT.PTCP.SGM NEG 3SGM-run.IMPV
The boy was not running in the street. (PAST PROGRESSIVE)

Mansour was not coming now.

c. r-risāla **mā** kān-at ma-ktub-a
DEF-letter.SFG NEG be.PFV-3SGF PASS.PTCP-write-SGF
bil-ʕarabi
with-DEF-Arabic
The letter was not written in Arabic.

d. huda **mā** raħ ta-kūn imdarris-a
Huda NEG FUT 3SGF-be.IMPV teacher-SGF
Huda will not be a teacher.

e. huda **mā** rāħ ta-ṣīr imdarrs-a
Huda NEG FUT 3SGF-be.IMPV teacher-SGF
Huda will not be a teacher.

f. manṣūr **mā** rāħ ya-kūn ǧa-y bukra
Mansour NEG be.PFV.3SGM come.ACT.PTCP.SGM tomorrow
Mansour will not be coming tomorrow.

g. r-risāla mā rāħ ta-kūn ma-ktub-a
DEF-letter.SGF NEG FUT be.PFV-3SGF PASS.PTCP-write-SGF
bil-ʕarabi
with-DEF-Arabic
The letter will not be written in Arabic.

3.3.2 *mū* and variant forms in equational sentences

mū and the rest of the inflected forms are not limited to the negative predicational verbless sentences, unlike the non-negated counterparts. They also negate equational verbless sentences, as shown in (30).

(30) a. ʕali **mū/mahu** l-mudīr
Ali NEG/NEG.3SGM DEF-director.SGM
Ali is not the director. (equational-predicational)

b. l-mudīr **mū/mahu** ʕali
DEF-director.SGM NEG/NEG.3SGM Ali
The director is not Ali. (equative identificational)

c. almutanabbi **mū/mahu** ʔaħmad ğaʕfar
almutanabbi NEG/NEG.3SGM Ahmad Jaffar
almutanabbi is not Ahmad Jaffar. (equative-identity)

d. haḏa **mū/mahu** ʕali
this.SGM NEG/NEG.3SGM Ali
This is not Ali. (equative-identificational)

Furthermore in such equational verbless sentences, *mū* or the inflected negative forms can appear in a context where the pronominal copula is also present, as in (31). Given an example such as (31), the question then arises as to whether there really are two copulas involved, i.e the NEG *mū/mahu* as well as the *hū*. I however leave such questions for future research.

(31) ʕali **mū/mahu** hu l-mudīr
Ali NEG/NEG.3SGM he.COP.S3SGM DEF-director.SGM
Ali, he is not the director.

3.3.3 *mū*+(invariant forms) and *kān* vs the pronominal copula

Overall it has been seen that *mū* and the negative inflected forms negate both predicational (non-referential) and equational (referential) non-verbal sentences. In this section, I summarise the notable differences between *mū* and the negative inflected forms, in comparison with affirmative *kān* and the pronominal copula, on the basis of the data shown above. The comparison is summarised in Table (3.3).

As demonstrated in (3.3), the inflected negative forms, *mū*, and PAST TENSE copular *kān* have a wider distribution than what is referred to in the literature as the pronominal copula, since the former can occur and be used in both predicational and equational sentences. The pronominal copula, on the

Distribution	pron copula	*kān*	*mū*	negated infl.forms
predicational sentence	*	√	√	√
equational sentence	√	√	√	√
Full agreement	GEN and NUM agr.	√	invariant (3SGM)/ default	√
License null subject	*	√	*	√

Table 3.3: *mū*+ (variant negative forms), *kān* vs. the pronominal copula

other hand, is more restricted and can only appear in equational sentences, and not in predicational ones. Secondly, the different copulas show differences in terms of agreement. The inflected negative forms and *kān* agree with the SUBJ in PERSON, NUMBER and GENDER, while the pronominal copula agrees only in NUMBER and GENDER, but not in PERSON. *mū* on the other hand is an invariant default 3SGM form, and co-occurs with subjects of any PERSON, NUMBER and GENDER. The interaction that exists with respect to the presence/absence of full agreement with the subject, as expressed on the copula, yields a situation where in the context of negative inflected forms and *kān*, an overt subject is only optionally present. However, in the context of the default negative expression *mū* and the pronominal copula, an overt subject is obligatory.

3.3.4 Negation across Arabic dialects

Just as was done in section (3.2.3) with respect to verbal negation, after exploring the negative particles available in TA, I here consider what occurs with respect the negation of verbless sentences in other Arabic dialects.

Arabic dialects which do not make use of bi-partite or discontinuous negation, such as in Syrian, Kuwaiti (Brustad, 2000; Alsalem, 2012), Saudi dialects, including Najdi (Ingham, 1994) and Hassawai (Alabdullah et al., 2017) are sim-

ilar to TA, in that they either use the default negative marker *mu/mū*, and in some dialects *mub* (as an alternative of *mū* in TA), as in Najdi (Ingham, 1994; Binturki, 2015) and some areas in Gulf (Qafisheh, 1977; Holes, 1990) or the invariant negative particle *mū/mu/mub* attached to the non-verbal predicates, in addition to inflecting counterparts of *mā+* subject personal pronoun.

(32) a. huwa mub zēn
he NEG good.SGM
He is not good. Gulf Arabic: Holes (1990, p.73)

b. il-kitāb mū ʕala l-mayz
DEF-book NEG on DEF-table
The book isn't on the table. Gulf Arabic:Holes (1984, p.143)

c. is-sayyāra haḏ-i mi zēn-a
DEF-car.SGF this-SGF NEG.3SGF good-SGF
This car is not good. Gulf Arabic :Holes (1990, p.73)

What is more interesting is that in the Hassawi dialect in Saudi Arabia, in addition to using *mū* or its inflecting counterparts, *muš* is also used for negating non-verbal predicate, as in (33).

(33) mū/muš/ manī lāʕb-ah maʕ-kum
NEG/ NEG/ NEG.1SG play.ACT.PTCP-1SG with-2SG.GEN
I am not playing with you. Hassawi: Alabdullah et al. (2017, p.67)

Dialects which use bi-partite negation, such as Moroccan (Adila, 1996; Harrell, 1962), Tunisian (Chaâbane, 1996), Algerian (Elhalimi, 1996a), Libyan (Owens, 1984) and Egyptian (Brustad, 2000), in fact typically make use of different particles in verbless sentences. In Moroccan Arabic for example, *maši* is used as one word, as in (34).

(34) ma-ši mezyan
NEG-NEG good.SGM
Not good. Harrell (1962, p.155)

In addition, they can use inflected forms along with an attached-*š̌*, as in (35).

(35) ma-huwa-š qbiħ
NEG-3SGM-NEG bad.SGM
He is not bad. Harrell (1962, p.156)

On the other hand, *ma* ...-*š̌* can attach around the non-verbal predicate, as in (36).

(36) r-rağel ma-kbir-ši
DEF-man.SGM NEG-big.SGM-NEG
The man is not big. Harrell (1962, p.155)

Other dialects such as Egyptian use either default *muš*/*miš* or an inflecting *ma* along with an attached -*s*, as in (37).

(37) fahmi miš ustāz
Fahmi NEG professor.SGM
Fahmi is not a professor. Abdel-Massih et al. (1981, p.137)

The same is the case for Maltese Arabic which can use either *muš*/ *miš* or *ma* +pronoun+ *š̌*, as in (38).

(38) huma m-humie-š minn Malta
they.3PLM NEG-3PLM-NEG from Malta
They are not from Malta. Obler (1990, p.144)

Omani dialects express non-verbal negation in quite a different way as mentioned in Lucas (2009), citing Reinhardt (1894), and also recently Al-Balushi (2016). He reports that one northern mountain dialect has just *-š̌*, attached to negated predicates, as in (39).

(39) ahmad mariẓ-š̌
Ahmad sick.NEG
Ahmad is not sick. Al-Balushi (2016, p.114)

Finally, Al-Balushi (2016) mentions that the Dhofāri dialects in Oman, can make use of both *mū* and *mūš̌* as illustrated in (40).

(40) a. Ahmad mū mrīḏ
Ahmad NEG sick.SGM
Ahmad is not sick. Al-Balushi (2016, p.112)

b. Ahmad mūš̌ mrīḏ
Ahmad NEG sick.SGM
Ahmad is not sick. Al-Balushi (2016, p.112)

3.4 Constituent negation

In the previous sections, I have been concerned with sentential negation (SN) in both verbal and verbless sentences. The second major type of negation is constituent negation (CN), where the negative marker only takes scope over one specific constituent within a clause, rather than over the whole clause.

The form used to express CN is the default invariant negative form *mū* or its 3SGM full form counterpart *mahu* regardless of the GENDER, NUMBER and PERSON of the wider constituent. Since these forms are also used as sentential or clausal negative markers, as was already seen in section (3.3), it becomes difficult, at times, to decide whether a particular instance of negation

is SN or CN. It will be seen below that in TA, the fact that the negator occurs after the verb, the choice of negative particles, the lack of agreement with the constituent it is in, and further contrastiveness in meaning, are all properties that may help identify CN from SN. I start with the last mentioned property.

As noted in chapter one, constituent negation has often been seen as conveying some form of contrastive meaning, and indeed, McCawley (1991) regards it as a defining characteristic. This is not however the view of Borschev et al. (2006). I here show that the latter is indeed true also in TA.

When CN is used to convey contrastiveness, it is interpreted as implying, if not stating, *not x but y*, so (McCawley, 1991) claims. In TA, CN is very often contrastive, as shown in (42a), at least when compared with (41a), which is affirmative, and (41b) which involves sentential negation. In (42), the contrasted correction is made explicit in the final PP. The evidence that what is seen in (42) is CN, comes from a number of factors. First is the fact that the position of the negative word is after the verb in (42), as opposed to *mā* in (41b). Additionally, *kulīa* 'college' is SGF, yet the use of the NEG.3SGF form *mī/mahi*, is not possible, as shown in (42b), as also illustrated through the contrast between (42a) and (42b). The subject of the sentence in (42c) and (42d) is feminine plural, i.e. *l-ħarīm* 'ladies', yet because it is CN that is involved, we only get the form *mū*, which does not show agreement, and it is always 3SGM regardless, of the morphology of the subject or the head of the negated constituent. Therefore, negating the PLF adjective constituent (AP) with the 3SGF negative form *maħan* in (42d), results in ungrammaticality.

(41) a. manṣūr ya-dris b-ǧamʕa
Mansour 3SGM-study.IMPV with-university.SGF
Mansour is studying in a university.

b. manṣūr **mā** ya-dris b-ǧamʕa
Mansour NEG 3SGM-study.IMPV with-university.SGF
Mansour does not study in a university. (SN)

(42) a. manṣūr ya-dris **mū** b-kulīa, b-ǧamʕa
Mansour 3SGM-study.IMPV NEG in-college.SGF, in-university.SGF
Mansour studies not in college, but in a university.

b. *manṣūr ya-dris **mī** b-kulīa,
Mansour 3SGM-study.IMPV NEG.3SGF in-college.SGF,
b-ǧamʕa
in-university.SGF
The intended meaning 'Mansour studies not in college, but in a university.

c. l-ħarīm ǧ-an **mū** laħāl-han
DEF-lady.PLF come.PFV-3PLF NEG.3SGM alone-3PLF.GEN
The ladies came not alone.

d. *l-ħarīm ǧ-an **mahan** laħāl-han
DEF-lady.PLF come.PFV-3PLF NEG.3PLF alone-PLF.GEN
The ladies came not alone.

Borschev et al. (2006) further demonstrate that CN is not always contrastive, by making use of the Russian example in (43) where the negator *ne*, due to its position, negates the PP.

The negator in (43) comes after the copula (which may be overt or not) and is associated with the PP 'in his proper place', and functions as a CN. If the NEG marker *ne* preceded the copula, sentential negation would result. The key point for Borschev et al. (2006) is to show that although (43) must be seen as an instance of CN, there is no meaning contrastiveness involved, especially since the speaker very likely has no idea where the person is, and so cannot be stating a contrast with that place.

(43) Dežurnyj ∅be (byl) ne na meste
person on duty (was) NEG at place-3SGM.GEN
The person on duty (was) not at his/her proper place. Russian:
Borschev et al. (2006, p.3)

The same point can be made about the Arabic parallel example in (44a), which involves *mū* following the PAST TENSE copula *kān*. SN requires the form *mā* to precede the copula *kān*, as is the case in (44b), which has a barely distinguishable meaning.

(44) a. al-ħāris kān **mū** ib-makān-a
DEF-watchman.SGM be.PFV.3SGM NEG in-place-3SGM.GEN
The watchman was not at his place.

b. al-ħāris **mā** kān ib-makān-a
DEF-watchman.SGM NEG be.PFV.3SGM in-place-3SGM.GEN
The watchman wasn't at his place.

A further argument which undermines the view that CN is co-extensive with contrastiveness comes from the fact that, in (45a), it is the sentential negator itself that is being used with a contrastive force, parallel in meaning to (45b) where CN is used.

(45) a. huda **mā** ʔalləf-at gaṣīda, ktāb
Huda NEG write.PFV-3SGF poem.SGF, book.SGM
Huda did not write a poem, but a book.

b. huda ʔalləf-at **mū** gaṣīda, ktāb
Huda write.PFV-3SGF NEG poem.SGF, book.SGM
Huda wrote not a poem, but a book.

Data such as (46) below, on the other hand, consisting of verbless sentences with no overt copula, show that it is not always easy to tell whether negation

is before the absent copula, in which case it is SN, or after it in which case it is CN. What can be used as a test, however, is that in (46) we find the use of *mī*/*mahi* (apart from the use of the default *mū*). Therefore, the agreement with the 3SGF subject *Huda* suggests that this is an instance of SN, and not CN.

(46) huda **mū/mahi/mī** fī l-bēt,
Huda NEG.3SGM/NEG.3SGF/NEG.3SGF in DEF-house.SGM/
bil-ǧāmʕa
in.DEF-university.SGF
Huda is not at home, but at the university.

Yet another way in which to distinguish between SN and CN, in some languages, has to do with the interpretations which may arise when the subject is quantified, more specifically when the subject NP contains the universal quantifier. Benmamoun (1999b) discusses the syntactic properties of the Arabic universal quantifier expressed by *kull* in MSA, although he does not go into any discussion with respect to scope relations between quantifier and negation. When the universal quantifier appears left adjacent before the NP, its form is invariant *kull* in MSA, but the NP displays the usual nominal properties, taking the required case. On the other hand, when the quantifier *kull* is floated away from its NP, *kull* is attached to a pronominal GEN clitic which agrees with the noun in gender, number and person.

The scope relationship of quantifiers with respect to negation in Arabic has been discussed by Elsaadany and Shams (2012) for MSA and by Alghamdi (2012) for southwestern Saudi dialects. Elsaadany and Shams (2012) discuss the scope relationship with the non-floated quantifier *kull* and with the floated quantifier *kull* when the NP appears in the subject position. They show how, in both cases, the quantifier takes scope over sentential negation as illustrated

in (47) which, unlike in English, in both versions yields the meaning: 'all . . . not . . . '. The constituent negator in MSA was however not discussed.

(47) a. kull ʔa-ṭulāb **lam** yi-njaħ-ū
all DEF-student.PLM NEG 3-succ.IMPV.PLM
All the students did not succeed. MSA: Elsaadany and Shams (2012, p.27)

b. ʔa-ṭulāb **lam** yi-njaħ-ū kullu-hum
DEF-student.PLM NEG 3-succ.IMPV.SPM all-3PLM.GEN
The students did not all succeed. MSA: Elsaadany and Shams (2012, p.27)

In the same vein Alghamdi (2012) shows that the un-floated quantifier has a wide scope over negation in southwestern Saudi dialects. However, this is again only true when SN is involved (48a). If on the other hand CN negation expressed by *mū* is included with the initial subject NP and it comes before *kull*, then negation takes scope over the quantifier, as in (48b) 'not all . . . '.

(48) a. kul al-mutasābaqīn **mā** faz-ū
all DEF-consestant.PL NEG win.IMPV-3PLM
All the contestant didn't win. Saudi dialects:Alghamdi (2012, p.24), p. 24
$\forall > \neg, *\neg > \forall$

b. **mū** kul al-mutasābaqīn faz-ū
NEG.3SGM all DEF-contestant.PL win.IMPV-3PLM
Not all the contestant won. Saudi dialects: Alghamdi (2012, p.24)

$\neg > \forall, * \forall > \neg$

A full treatment of quantification in TA is outside the scope of this study, however for the present purposes we simply need to be aware that subject quantifiers in TA such as *kil* 'all' can appear in different parts of the sentence and the interplay of the position of the quantifier with the placement of the negative marker, whether CN or SN, affects the scope of negation over all or a part of the sentence, and hence the meaning.

The quantifier's position may vary both because of its host noun, which can itself appear in different positions, depending on its NP function, as well as because of the fact that in TA, as in English, there exists the possibility for the quantifier to 'float' away from its noun, to another place in the sentence. Clearly, it can be seen from the Saudi examples in (48) that the difference between CN and SN also affects the scope interaction. As Borschev et al. (2006) point out, in Russian (49a), SN results in an ambiguous meaning between 'all the ballerinas will be somewhere other than in London/ none of the ballerinas will be in London' and 'not all/ some of the ballerinas will be in London'. (49b), involving CN, on the other hand, can only have the first meaning. In the absence of a copula, as in (49c), they then argue that *ne* can only be analysed as a CN, given that it takes the same reading as (49b) rather than (49a). For Russian, therefore, they argue that such scopal ambiguity can help distinguish between SN and CN.

(49) a. Vse baleriny ne budut v Londone.
All ballerinas-NOM NEG will.be in London.
None of the ballerinas will be in London.

- AMBIG (i) $\forall >$ NEG : all of the ballerinas will not be in (will be out of) London; i.e. None of the ballerinas will be in London; or.

- AMBIG (ii) NEG >∀: not all will be in London.

b. Vse baleriny budut ne v Londone.
All ballerinas-NOM will.BE NEG in London.
All of the ballerinas will be not in London.

- UNAMBIG only (i): ∀ > NEG: All of the ballerinas will be not in (will be out of) London, i.e. None of the ballerinas will be in London.

c. Vse baleriny ne v Londone.
All ballerinas-NOM NEG in London.
All of the ballerinas are not in London.

- UNAMBIG only (i): ∀ > NEG All of the ballerinas are not in (are out of) London, i.e. None are in London.

In TA, however, parallel sentences, as in (50), where negation precedes or follows the future copula, do not differ in meaning. Both can only have the first meaning.

(50) a. kil ṭ-ṭullāb **mā** rāħ yi-kūn-ūn b-landan
every DEF-student.PLM NEG FUT 3-be.IMPV-PLM at-london
All students will not be in London. (SN)

- None of the students will be in London.

b. kil ṭ-ṭullāb rāħ yi-kūn-ūn **mū** b-landan
every DEF-student.PLM FUT 3-be.IMPV-PLM NEG.3SGM at-london
All students will be not in London. (CN)

- None of the students will be in London.

It is only if CN *mū* is expressed before the quantifier as in (51) that the negation will take scope over the quantifier, in parallel to the behaviour for Saudi dialects in Alghamdi (2012) and many languages.

(51) **mū** kil ṭ-ṭullāb rāħ yi-kūn-ūn b-landan
NEG.3SGM every DEF-student.PLM FUT 3-be.IMPV-PLM at-london
Not all students will be in London. (CN)

If however the quantifier *kil* 'all' is floated to the position after the verb (52), then the ambiguity described above for Russian arises, such that when SN is involved, both scopal readings are possible (52a). When CN is involved, only the 'all not' reading is possible (52b).

(52) a. ṭ-ṭullāb **mā** rāħ yi-kūn-ūn kil-hum b-landan
DEF-student.PLM NEG FUT 3-be.IMPV-PLM all-them at-london
The students will not be in London, all of them.

- None of the students will be in London.

- Not all/ some of the students will be in London, e.g some will go to London.

b. ṭ-ṭullāb rāħ yi-kūn-ūn kil-hum **mū** b-landan
DEF-student.PLM FUT 3-be.IMPV-PLM all-them NEG at-london
The students all of them will be not in London.

- None of the students will be in London.

Furthermore, if one considers the VSO versions of the SVO examples in (50) then the the ambiguities described above for Russian can be observed.

(53) a. **mā** rāħ yi-kun kil ṭ-ṭullāb b-landan
NEG FUT 3SGM-be.IMPV all DEF-student.PLM at-London
All of the students will not be in London.

- None of the students will be in London.

- Not all/some of the students will be in London.

b. rāħ yi-kun kil ṭ-ṭullāb **mū** b-landan
FUT 3SGM-be.IMPV all DEF-student.PLM NEG at-London
All of the students will be not in London.

- None of the students will be in London.

From the above contrasts in the TA data, although they do not exactly follow the Russian pattern, we see that TA does evidence SN-CN related differences in terms of how negation is interpreted in the presence of subject universal quantifiers. These contrasts are not solely dependent upon the relative order of occurrence of the quantifier and the negative marker in the sentence, although that too plays a crucial role in the resulting interpretation.

In conclusion, then, I concur with Borschev et al. (2006) in observing that contrastiveness of meaning is not a reliable indicator of the presence of CN rather than SN. Rather, in TA, it is the position of the negator relative to that of the verb, which is usually the clearest indicator. This is together with the use of the invariant *mū/mahu*, which lacks agreement with any other constituent in the sentence. Additionally, I here add another diagnostic, claiming

that in certain very specific circumstances, the possible interpretations of subject quantifiers can also distinguish CN and SN.

3.5 Neg-Raising

Neg raising was introduced in (1.2.4). In this section I present a preliminary description of NR predicates in TA and I will argue that they have the characteristics exhibited by NR predicates in many other languages crosslinguistically, as shown for instance in the synonymy of (54a) and (54b). As in English, it can only force a different meaning for (54a) if a contrastive forcing context is added, as in (54c), such that the interpretations now is: *I do not think that Musalim Ilbarak will retract his opinion, I am certain he will.*

(54) a. **mā** ʔa-ẓan inn-a msalləm l-barāk rāħ
NEG 1SG-think.IMPV COMP-3SGM.ACC Musalim lbarak FUT
yi-traǧaʕ ʕin raʔi-a
3SGM-retract.IMPV about opinion-3SGM.GEN

I do not think that Musalim Ilbarak will retract his opinion.

b. ʔa-ẓan inn-a msalləm l-barāk **mā** rāħ
1SG-think.IMPV COMP-3SGM.ACC Musalim Lbarak NEG FUT
yi-traǧaʕ ʕin raʔi-a
3SGM-retract.IMPV about opinion-3SGM.GEN

I think that Musalim Ilbarak will not retract his opinion.

c. **mā** ʔa-ẓan inn-a msalləm l-barāk rāħ
NEG 1SG-think.IMPV COMP-3SGM.ACC Musalim lbarak FUT
yi-traǧaʕ ʕin raʔi-a, ana mitʔakkida
3SGM-retract.IMPV about opinion-3SGM.GEN I certain.SGF
inn-a raħ yi-traǧaʕ
COMP-3SGM.ACC FUT 3SGM-retract.IMPV

I do not think that Musalim Ilbarak will retract his opinion, I am certain he will retract.

In order to provide a preliminary description of TA NR predicates, I will use Horn's list as a starting point and provide translation equivalents for predicates in Horn's classes (1987) . To my knowledge, such a through analysis of predicates with respect to whether they are NR or non-NR has not previously been provided for any variety of Arabic.

In (55), I present the classes of NR-predicates in TA, organised into Horn's categories.

(55) a. [PERCEPTION]: *bayan* 'seem', *l-ẓahər* 'appear'

b. [OPINION]: ʔ*aʕtaged* 'believe', ʔ*afakkar* 'think', ,ʔ*taχəyyal* 'imagine', ʔ*a-ẓan* 'think', ʔ*aqtəriħr* 'propose', and ʔ*aħes* 'feel'

c. [PROBABILITY]: *iħtimāl* 'probable'

d. [OBLIGATION/ DEONTIC]: ʔ*abġa*/ 'want', *nafs-i/wudd-i* 'wish' ʔ*anwi* 'intend'

e. [INTENTION/ VOLITION]: *l-mafrūẓ* 'ought', *l-wāǧib* 'be supposed'

All the above mentioned predicates are NR predicates, in contrast to other predicates, such as ʔ*adri* 'know', *gelt* 'say' and *mitʔakkid* 'certain', which do not show the same behaviour and do not exhibit the inference schema.

At this point I should however mention two examples which semantically seem to be equivalent to non-NR English predicates, but are NR in TA. To date I have not found any examples of the reverse phenomena (i.e. NR in English but not in TA). These predicates are ʔ*afaẓẓal* 'prefer' and ħ*araṣt* 'take care'. In (56) and (57), ʔ*afaẓẓal*, is NR while *prefer* does not seem to behave

as an NR verb in English.

(56) a. **mā** ʔafaẓẓal inn-ik ta-χəḏ u
NEG 1SG-prefer.IMPV COMP-2SG.ACC 2SGM-take.IMPV and
ta-ʕṭī maʕa-hum
2SGM-give.IMPV with-3PLM
I do not prefer that you interact with them.

b. ʔafaẓẓ al inn-ik **mā** ta-χəḏ
1SG-prefer.IMPV COMP-2SG.ACC NEG 2SGM-take.IMPV and
u ta-ʕṭī maʕa-hum
2SGM-give.IMPV with-3PLM
I prefer that you do not interact with them.

(57) a. **mā** ħaraṣ-t inn-i ʔ-ağ-y ʕala l-mawʕed
NEG care.PFV-1SG COMP-1SG.ACC 1SG-come.IMPV on DEF-time
I did not take care to come on time.

b. ħaraṣ-t inn-i **mā** ʔa-ğ-y ʕala l-mawʕed
care.PFV-1SG COMP-1SG.ACC NEG 1SG-come.IMPV on DEF-time
I took care to not come on time.

In my discussion of NPIs in chapter 5, I will be using the NR predicates listed in (55) as a diagnostic to determine/identify/classify the different types of NPIs in terms of strength. This is the reverse of how NPIs are usually used in the literature, where researchers employ them to help distinguish between NR vs. non-NR predicates.

3.6 Negation of forms expressing modality

The reader is reminded that in this thesis we regard modal predicates in TA as being a purely semantically defined class (2.5). Hence there is no single way of negating them that is distinct from how other sentential predicates can be negated.

In this section I will investigate negation in the context of modal predicates of the various types introduced in Chapter 2, which may optionally take a CP complement of either a verbal or non-verbal type. First I present the way negation is expressed with a number of variant and invariant modal expressions, including verbal, and nonverbal ones, with attention as to whether the semantic reading is similar when the negation is expressed with the modal element, or with its complement. Then I will further briefly discuss a general issue which has to do with the interaction between the scope of negation and the modal.

3.6.1 Negation of variable modals

As discussed in section (2.5.1) in Chapter 2, modal expressions which display the usual inflected forms in TA include the verbal element *yegdar* 'be able'/'be permitted', *yebaġa* 'want', the inflecting participle *nāwi* 'intended', and the inflecting pseudo-verbs *nafs-i* and *wudd-i* 'wish'. I begin with an example of a full lexical verb with modality meaning. In such cases the negation is expressed with *mā*, as expected from the account above. However, because full verbs with modal meaning take verbal complements, there are two places where *mā* can be placed. Negation can be expressed either before the verb expressing modality, in the higher matrix clause, or immediately before the lexical verb in the lower embedded clause. What results involves no difference in meaning, with certain types of modal verb, such as those with volitional meaning, as in example (58), since these modal verbs happen to also be neg-raising predicates.

(58) a. **mā** nafs-i (inn-a) il-hilal
NEG wish-1SG.GEN COMP-3SGM.ACC DEF-Hilal.SGM
i-fūz b-il-kass hās-sana
3SGM-win.IMPV with-DED-cup.SGM this.SGF-DEF-year.SGF
I do not wish that L-Hilal would win the cup this year.

b. nafs-i (inn-a) il-hilal **mā**
wish-1SG.GEN COMP-3SGM.ACC DEF-Hilal.SGM NEG
i-fūz b-il-kass hās-sana
3SGM-win.with-IMPV with-DEF-cup.SGM this.SGF-DEF-year.SGF
I wish that L-Hilal would not win the cup this year.

Non-NR modal predicates such as verbs of ability, deontic, or epistemic meaning, such as *yegdar*, result in a different scopal reading, depending on the interaction with the NEG placement, as shown in the contrast in (59).

(59) a. **mā** te-gdar (inn-ik) t-sāfar l-χalīğ
NEG 2SGM-able.IMPV COMP-2SG.ACC 2SGM-travel.IMPV DEF-Gulf
bil-hawiyya l-waṭṭania
with-identity.SGM DEF-national.SGM
You cannot (are not allowed) travel to the Gulf countries with a national ID.

b. te-gdar (inn-ik) mā t-sāfar l-χaliğ
2SGM-able.IMPV COMP-2SG.ACC NEG 2SGM-travel.IMPV DEF-Gulf
bil-hawiyya l-waṭṭania
with-identity.SGM DEF-national.SGM
You can/are allowed not to travel to the Gulf countries with a national ID.

The data pairs in (60) illustrate modality expressed by an inflected participle. Again the negative expression can occur in two positions, and yields the same meaning, due to the fact that once again, this modal with a volitional meaning, expressed by *nāwi*, is a NR verb. What differs, however, is the form of negation. When negation is expressed with the participle, it takes the form *mū* or its negative inflected variant forms, which we saw in section (60), as is normal for participle forms.

(60) a. huda **mahi/mū** nāwi-a inn-aha
Huda NEG.3SGF/NEG intend.ACT.PTCP-SGF COMP-3SGF.ACC
t-sāfar hās-sana
3SGF-travel.IMPV this.SGF-DEF-year.SGF
Huda does not intend to travel this year.

b. huda nāwi-a inn-aha **mā**
Huda intend.ACT.PTCP-SGF COMP.3SGF.ACC NEG
t-sāfar hās-sana
3SGF-travel.IMPV this.SGF-DEF-year.SGF
Huda intends not to travel this year.

3.6.2 Negation of invariant forms expressing modality

As was seen in section (2.5.2) in chapter two, the invariant modals include both verbs with invariant 3SGM inflected forms such as *yimkin* 'maybe/be possible', and other non-inflected invariant expressions like participial *l-mafrūẓ* 'the supposed', and *lāzim* 'must'.

Once again, when it comes to negation, similar to the variable inflected forms, the negation can be expressed either before the modal expression, or with the dependent lexical verb or participle, yielding either different or the same readings. This largely depends on the meaning of the modal expression. Negation-realisation follows the usual behaviour, in that participles negate with *mū* or its alternatives, as is the case with *lāzim* in (61).

(61) a. **mū** lāzim (inn-ik) t-sāfar l-yom
NEG must COMP-2SG.ACC 2SGM-travel.IMPV.SGM DEF-today
You do not have to travel today.

b. lāzim (inn-ik) **mā** t-sāfar l-yom
must COMP-2SG.ACC NEG 2SGM-travel.IMPV.SGM DEF-today
You must not travel today.

With one invariant participial modal form, the negation can be exceptionally either with *mā* or *mū*.

(62) a. **mā/mū** ẓ-ẓāhar (inn-i) rāħ
NEG/NEG.3SGM DEF-seem.ACT.PTCP.SGM COMP-1SG.ACC FUT
ʔa-sāfar bukra
1SG-travel.IMPV tomorrow
It does not seem that I will travel tomorrow.

b. ẓ-ẓāhar (inn-i) **mā** rāħ
DEF-seem.ACT.PTCP.SGM COMP-1SG.ACC NEG FUT
ʔa-sāfar bukra
1SG-travel.IMPV tomorrow
It seems that I will not travel tomorrow

A final unusual case is *yimkin*. As an invariable 3SGM verb, *yimkin* would be expected to behave just like *yaṣlaħ* with respect to negation in the matrix clause, i.e. use *mā*. When *yimkin* is used as a modal, however, while negation can appear normally in the dependent clause (*mā* with a lexical verb or *mū* with a participle), negation with *mā* cannot precede *yimkin*, as in the ungrammatical (63b). Rather, in some instances, it is *lā* that occurs, but the occasions of use seem to be limited to instances where *yimkin* means 'possible' (64). In (63b) where it means 'likely', *lā* would not occur in the higher clause. In effect, *yimkin* is polysemous, as modality predicates often are in English too, and negation is not the same in each meaning.

(63) a. huda yi-mkin (inn-aha) **mā** rāħ
Huda 3SGM-may.IMPV COMP-3SGF.ACC NEG FUT
t-sāfar bukra
3SGF-travel.IMPV tomorrow
Maybe Huda will not travel tomorrow.

b. *huda **mā** yi-mkin (inn-aha) rāħ
Huda NEG 3SGM-may.IMPV COMP-3SGF.ACC FUT
t-sāfar bukra
3SGF-travel.IMPV tomorrow
Maybe Huda will not travel tomorrow.

(64) **lā** yi-mkin ʔa-nsa yom taχroǧ-i
NEG 3SGM-may.IMPV 1SG-forget.IMPV day graduation-1SG.GEN
It is not possible to forget my graduation day.

Table (3.4) summarises the behaviour with respect to the expression of negation with the different modals in TA. Verbal expressions are negated by *mā*, except for *yimkin*, while non-verbal predicates, which include active and passive participles are negated by *mū* or suitable negated inflected forms. There is an exception for one of the active participle modals: *il-ẓāhar* 'seem', 'appear' which can be either negated by *mā* or by *mū*.

Negative particle	**Modal element**
lā	*yimkin* 'be possible'
mā	*yegdar*'be able/be permitted', *yebaġa*'want', *nafs-i/wudd-i* 'wish', *ya-ṣla*ħ 'can/be possible', *ẓ-ẓāhar* 'seem/appear'
mū/variants negative forms	*nāwi* 'intended', *ɦtimāl* 'possible', *l-mafrūẓ* 'the supposed', *momkin* 'possibility', *ẓarūri* 'necessity'*ẓ-ẓāhar* 'seem/appear'

Table 3.4: Negation of modal expressions

The modal expressions which do not show any change in meaning, no matter where negation is expressed, i.e. whether on the modals in the matrix clause, or on the lexical predicate in the embedded subordinate clause, include: *yebaġa* 'want', *nafsi, wūddi* 'wish', *ẓ-ẓāhar* 'seem, appear', *nāwi* 'intended' and *il-mafrūẓ* 'the supposed'. These modal expressions are in contrast with other expressions where a variation on the placement of negation does result in a different meaning. These include: *yimkin* 'possible', *yaṣla*ħ 'can/be possible',

ẓarūri 'necessity'.

3.6.3 The scope relation between negation and modals

Having presented the set of modal expressions in TA, I here discuss the scope relationship between the modal expression and negation, as was done for the universal quantifier for the quantifier and negation in section (3.4). As we have seen, modal expressions in TA typically allow for two positions where the negator may be placed, since they take clausal arguments. Negation can be either with the modal expression or with the lexical predicate in the lower clause. In some instances (e.g. where the modal meaning is volitional), the meaning remains the same, regardless of where the negator is placed, due to their function as neg-raising predicates. In such cases it may be said that the scope of negation is always over what is expressed in the complement (narrow), not including what is expressed by the modal expression itself (wide). In many instances, however, modal expressions are not the neg raising type. For instance, a change of deontic or epistemic meaning often occurs dependent on the placement of the negator. It is these cases that concern us here.

In languages of the world, a distinction exists between two types of negation systems for handling such scope phenomena with respect to modality. The first has been termed the 'modal suppletion strategy' (De Haan, 2006 and Alsharif, (2014). In this system, the scope of negation is determined by the lexical choice of the modal expression. This is seen within the grammaticalised class of modal verbs in English. For instance, in (65a)-(65b), the same modal meaning of deontic necessity is expressed, and the negator is in the same position in the sentence. However, in the first case, the scope of negation is narrow, i.e. over the complement, while in the second it is wide, scoping over the modal as well as its complement. This wide scoping cannot be achieved in

English simply by negating the higher verb as in (65c).

(65) a. He must not go.
'It is necessary that he doesn't go'. = □ ¬

b. He need not go
'It is not necessary that he goes'. = ¬ □

c. *He not/ doesn't must go.

The scope difference is thus achieved by the lexical choice of the modal verb. *Must* and *need* may be said to be in complementary distribution with respect to the scope of negation and hence supplete each other in conveying the modal meaning of deontic necessity in English (66).

(66) a. John must be a bachelor. = □ *p*

b. John must not be a bachelor. = □ ¬

c. John need not be a bachelor. = ¬ □ De Haan (2006, p.53)

The second system, termed the 'negation placement strategy', simply involves changing the position of the negator to indicate the scope of negation. This is the case in Russian, as in (67), as is apparent from the English glosses with modal verbs like *must, should, need, can* etc.

(67) a. Ivan ne možet raboatat
Ivan NEG can.3SG work.INF
Ivan is not allowed/ able to work. ¬ ◊ *p* De Haan (2006, p.56)

b. Ivan možet ne raboatat
Ivan can.3SG NEG work.INF
Ivan is allowed/ able not to work. ◊ ¬ *p* De Haan (2006, p.56)

A system that parallels the Russian modal interaction with negation is clearly the case also in TA. Internal to TA, we can find no lexical pairs similar to the deontic English *must/need* or epistemic *may/can* which follow the suppletive negative scope pattern. Rather, in TA, it is the position of the negator which straightforwardly determines what falls within the scope of negation (outside of neg-raising instances), or outside of it, as in (68). MSA shows the same pattern, as mentioned by Alsharif, Ahmad (2014) and Althawab (2014), who claim that the scope of negation with respect to modals is in Arabic always restricted by the position of the negation markers.

(68) a. **mā** te-gdar (inn-ik) t-sāfar l-χaliğ
NEG 2SGM-able.IMPV COMP-2SG.ACC 2SGM-travel.IMPV DEF-Gulf
bil-hawiya l-waṭṭania
with.DEF-identity.SGM DEF-national.SGM
You cannot (are not allowed to) travel to the Gulf countries with national ID. = ¬ ◊

b. te-gdar (inn-ik) **mā** t-sāfar l-χaliğ
2SGM-able.IMPV COMP-2SG.ACC NEG 2SGM-travel.IMPV DEF-Gulf
bil-hawiya l-waṭṭania
with.DEF-identity.SGM DEF-national.SGM
You are allowed not to travel / can not travel with national ID. =◊ ¬

(69) a. **lā** yağib-u ʔan ta-ktub-a
NEG 3SGM-must.IMPV.INDIC COMP 2SGM-write.IMPV-SUBJ
ar-salat-a al-yawm-a
DEF-letter.SGF-ACC DEF-day-ACC
It is not the case that you need to write the letter today. MSA:Alsharif, Ahmad (2014, p.208) = ¬ □

b. yağib-u ʔan **lā** ta-ktub-a
3SGM-must.IMPV.INDIC COMP NEG 2SGM-write.IMP-SUBJ
ar-siala-ta al-yawm-a
DEF-letter.SGF-ACC DEF-day-ACC

It is the case that you must not write the letter today. MSA: Alsharif, Ahmad (2014, p.208) = □ ¬

3.7 LFG analysis

In sections (3.2)-(3.3) a description was provided of the main syntactic properties of the negative elements in TA. Recall from our discussion that *mā/lā* are used for negation in verbal sentences, while *mū* and its inflected counterparts occur in verbless sentences. The negative elements *mā* and *lā* must be always adjacent to and preceding the verb. *lā* imposes a selectional requirement that the verb form must be imperfective, even through the MOOD is imperative. *mū* and the negative inflected forms only appear in a PRESENT TENSE context in verbless sentences. The LFG analysis presented below in terms of lexical entries, f-structures and c-structures, will capture this, and essentially builds on the analysis of affirmative sentences in the previous chapter.

3.7.1 Sentential verbal negation

Our c-structure analysis for the two negative particles *mā* and *lā* will be based on the LFG account of negation that was proposed by Al Sharif and Sadler (2009) for the TENSE-expressing negative particles *lā/lan/lam* in MSA, discussed in Chapter 1. They treat these three negative particles as non-projecting words attached as $\hat{\text{I}}$ or $\hat{\text{V}}$ either to I or V-zero, depending on where the finite verb is attached, i.e. either in V or I. In the presence of an auxiliary, the verb appears in V position rather than in I. For this reason, depending on which node the verb-forms are attached to, the negative particles are adjoined, accordingly, in either I or V. The main reason for adopting their account of negation is that it accounts for the obligatory adjacency between the negative particles and the lexical verb. Furthermore, *mā* and *lā* exhibit the same syntactic properties mentioned in Toivonen (2003) and Al Sharif and Sadler

(2009), in that apart from requiring to be always adjacent to the verb, they additionally cannot be modified or take a complement. Adopting the hat-adjoined I/V analysis will account for these characteristics of *mā* and *lā* when negating lexical verbs.

What differs from Al Sharif and Sadler (2009)'s analysis in the c-structure is that I refer to the node as $\widehat{Neg}$, a more general category than their $\hat{\text{I}}$ or $\hat{\text{V}}$, which then combines with either an I- or a V-node. The relevant phrase structure rules are presented in (70). The main reason for adopting the $\widehat{Neg}$ rather the the I/V-hat is that these negative particles in TA do not express TENSE, unlike in MSA. *mū* will have a distinct treatment, which will be described later.

Another difference of my analysis from the previous account is present in the f-structure. Here I adopt a feature analysis rather than the ADJ(unct) analysis, and following Przepiórkowski et al. (2015), I will make use of two different negation features, namely: ENEG + for sentential negation, and CNEG + for constituent negation. This replaces the feature POL which Al Sharif and Sadler (2009) use in their f-structure analysis.

Given that I have now established the main ingredients of our analysis, (70) and the next subsection present the analysis of verbal sentential negators, starting with *mā* and then *lā*.

3.7.2 Sentential Verbal Negation

The phrase structure rule:

(70) a. IP $\longrightarrow$ (NP) I′
$\uparrow(\text{SUBJ}) = \downarrow$ $\uparrow = \downarrow$

b. I′ $\longrightarrow$ $\widehat{Neg}$ I S | VP
$\uparrow = \downarrow$ $\uparrow = \downarrow$ $\uparrow = \downarrow$ $\uparrow = \downarrow$

c. S $\longrightarrow$ (NP) VP
$\uparrow(\text{SUBJ}) = \downarrow$ $\uparrow = \downarrow$

d. VP $\longrightarrow$ V′ XP
$\uparrow = \downarrow$ $\downarrow \in (\uparrow \text{ADJ})$

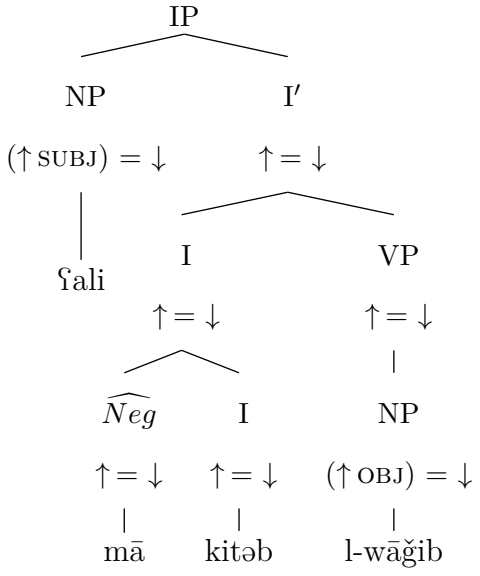
e. V′ $\longrightarrow$ $\widehat{Neg}$ V NP | VP
$\uparrow = \downarrow$ $\uparrow = \downarrow$ $\uparrow(\text{OBJ}) = \downarrow$ $\uparrow = \downarrow$

3.7.2.1 *mā*

(71) a. ʕali mā kitəb l-wāǧib
Ali NEG write.PFV.3SGM DEF-homework

Ali did not write the homework.

b. **c-structure:**



c. **f-structure:**

$$\begin{bmatrix} \text{PRED} & \text{`WRITE} < \text{SUBJ, OBJ} > \text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`ALI'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`HOMEWORK'} \\ \text{DEF} & + \end{bmatrix} \\ \text{ENEG} & + \end{bmatrix}$$

In (71b), the negative particle *mā* occupies the $\widehat{Neg}$ node in the c-structure where it always precedes the finite verb, which in the above appears under I, after the subject, which itself occupies the specifier position of the IP. In the f-structure (71c) *mā* is represented by the feature ENEG with value +. The f-structure does not change, when instead of a SV order as in (71a) we have a VS order, as in (72). The difference lies in the c-structure, where the subject is now under the exocentric non-projecting category S, which as was seen in chapter 1 is usually applied in LFG to account for psotverbal structures.

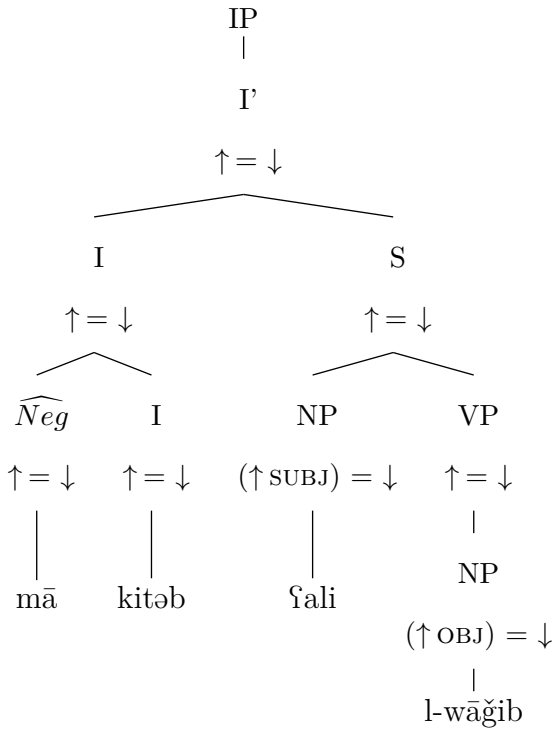
(72) mā kitəb ʕali l-wāǧib
NEG write.PFV.3SGF Ali DEF-homework

Ali did not write the homework.

(73) a. **f-structure:**

$$\begin{bmatrix} \text{PRED} & \text{`WRITE} < \text{SUBJ, OBJ} > \text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`ALI'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`HOMEWORK'} \\ \text{DEF} & + \end{bmatrix} \\ \text{ENEG} & + \end{bmatrix}$$

b. **c-structure:**

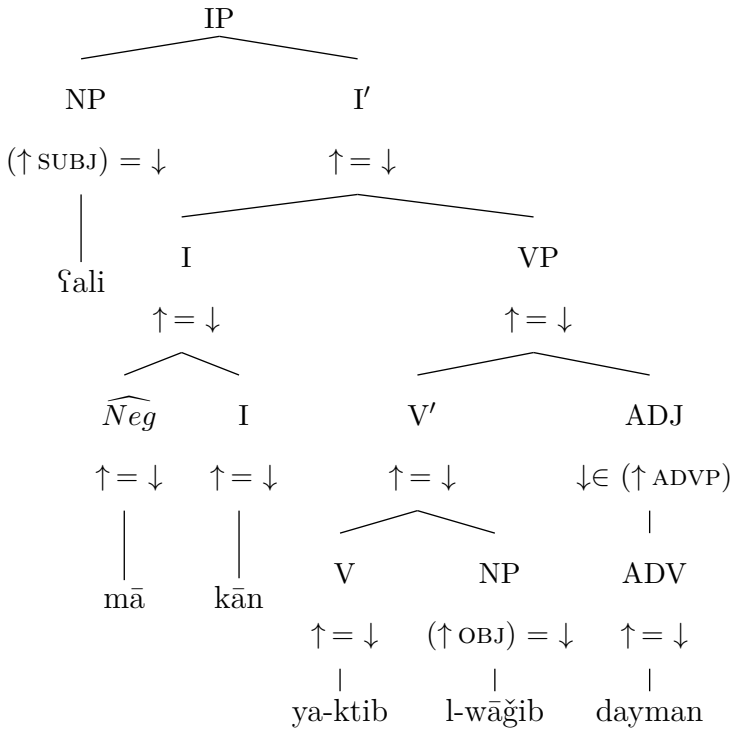


Considering NEG in relation to a complex TENSE and ASPECT structure, for (74a), the analysis below in (74b) and (74c) is obtained. The lexical entry for *kān* remains unchanged from chapter two and is repeated here in (74d).

(74) a. ʕali mā kān ya-ktib l-wāǧib dayman
Ali NEG be.PFV.3SGM 3SGM-write.IMPV DEF-homework always

Ali did not always write the homework. (PAST HABITUAL)

b. **c-structure:**



c. $\begin{bmatrix} \text{PRED} & \text{`WRITE} < \text{SUBJ, OBJ} > \text{'} \\ \text{SUBJ} & \left[ \text{PRED} \quad \text{`ALI'} \right] \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`HOMEWORK'} \\ \text{DEF} & + \end{bmatrix} \\ \text{ENEG} & + \\ \text{TENSE} & \text{PAST} \\ \text{ASPECT} & \text{HABITUAL} \\ \text{ADJ} & \left\{ \left[ \text{PRED} \quad \text{`ALWAYS'} \right] \right\} \end{bmatrix}$

d. *kān*

$(\uparrow \text{TENSE}) = \text{PAST}$

$(\uparrow \text{SUBJ NUM}) = \text{SG}$

$(\uparrow \text{SUBJ GEND}) = \text{M}$

$(\uparrow \text{SUBJ PERS}) = 3$

I now address the co-occurrence of the negative particle *mā* with the future or prospective aspectual particle *rāħ* 'will', which is assumed to be a non-projecting hat particle in I or V, depending on where the verb that is being marked is, in the c-structure. In this case there are two non-projecting

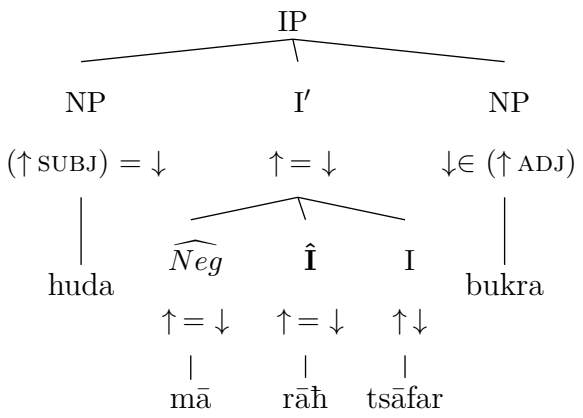
elements in the structure: the $\widehat{Neg}$ preceding the $\hat{\text{I}}$ or $\hat{\text{V}}$ *rāħ*, since in terms of ordering, negation must always precede *rāħ*, and not the imperfective verb. In order to account for this, therefore, the I and V phrase structure nodes must here be further expanded as in (75), involving more than one non-projecting node. An analysis drawing upon this appears in (76).

(75)

I	$\longrightarrow$	$\widehat{Neg}$	$\hat{\text{I}}$	I
		$\uparrow = \downarrow$	$\uparrow = \downarrow$	$\uparrow = \downarrow$
V	$\longrightarrow$	$\widehat{Neg}$	$\hat{\text{V}}$	V
		$\uparrow = \downarrow$	$\uparrow = \downarrow$	$\uparrow = \downarrow$

(76) a. huda mā rāħ t-sāfar bukra
Huda NEG FUT 3SGF-travel.IMPV tomorrow
Huda will not travel tomorrow.

b.



c.
$$\begin{bmatrix} \text{PRED} & \text{`TRAVEL} < \text{SUBJ} > \text{'} \\ \text{TENSE} & \text{FUTURE} \\ \text{SUBJ} & \left[ \text{PRED} \quad \text{`HUDA'} \right] \\ \text{ADJ} & \left\{ \left[\text{PRED} \quad \text{`TOMORROW'} \right] \right\} \end{bmatrix}$$

As discussed in Chapter two, *rāħ* is associated with two lexical entries: $\hat{\text{I}}$ or $\hat{\text{V}}$. When in $\hat{\text{I}}$, in the absence of any auxiliary, it expresses FUTURE TENSE. When in $\hat{\text{V}}$ it expresses PROSPECTIVE ASPECT (77).

(77) a. *ra*ħ $\hat{V}$

$(\uparrow \text{ASPECT}) = \text{PROSPECTIVE}$

$(\uparrow \mu \text{ PRED VFORM }) =_c \text{IMPV}$

$(\uparrow \mu \text{ PRED VFORM POL}) =_c \text{POS}$

b. *ra*ħ $\hat{I}$

$(\uparrow \text{TENSE}) = \text{FUTURE}$

$(\uparrow \mu \text{ PRED VFORM }) =_c \text{IMPV}$

$(\uparrow \mu \text{ PRED VFORM POL}) =_c \text{POS}$

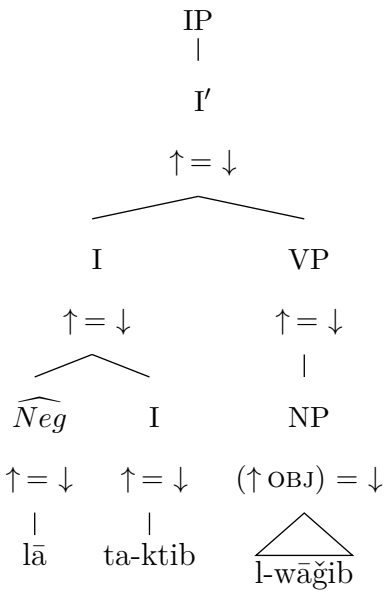
3.7.2.2 *lā*

A parallel analysis will essentially follow for *lā*, which is also analysed as a non-projecting hat word (78).

(78) a. lā ta-ktib l-wāǧib
NEG 2SGM-write.IMPV DEF-homework

Don't write the homework.

b.



c. **f-structure:**

$$\begin{bmatrix} \text{PRED} & \text{`WRITE} < \text{SUBJ, OBJ} > \text{'} \\ \text{ENEG} & + \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`ALI'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`HOMEWORK'} \\ \text{DEF} & + \end{bmatrix} \end{bmatrix}$$

The two lexical entries for the two main NEG-expressing markers in TA, within verbal sentences, are presented in (79). They do not differ much, except in terms of constraints that have to do with the nature of the verb-forms they combine with.

(79) a. $m\bar{a}$ $\widehat{Neg}$

$(\uparrow \text{ENEG}) = +$

$(\uparrow \text{MOOD}) =_c \text{INDICATIVE}$

b. $l\bar{a}$ $\widehat{Neg}$

$(\uparrow \text{ENEG}) = +$

$(\uparrow \mu \text{ PRED VFORM}) =_c \text{IMPV}$

$(\uparrow \text{MOOD}) =_c \text{IMPERATIVE}$

3.7.3 Sentential Verbless Negation

In section 3.3, I have described the use of the invariant *mū* (and its inflected counterparts) in the contexts of predicational and equational verbless sentences in the PRESENT TENSE. I analyse these forms in LFG just like the copula *kān* (and *laysa*, in MSA) i.e in terms of them being in I. Very much like *laysa*, *mū* and inflecting counterparts not only contribute an ENEG feature, but also contribute PRESENT TENSE, in the f-structure. As negative copulas they will be glossed as NEG.COP for *mū* and NEG.COP.3SGM for *mahu* etc ... and can combine with AP, PP and NP predicates. *kān* takes verbal complements as well, when not used within verbless sentences. Crucially, *mū* and inflected forms are in complementary distribution with the copula *kān* or *yikūn*, and they cannot appear together. This justifies the analysis of *mū* (or

the inflected negative forms) as being in the the c-structure in I, and expressing PRESENT TENSE. As discussed in section (3.3.1), the presence of inflection on the *mū* counterparts, in parallel with the copula *kān*, allows a pro-dropped subject. This is not the case with *mū*, since it is a default unspecified form and the subject cannot be dropped. In (80) I provide modified phrase structure rules which are able to account for verbless sentences, with or without copulas.

(80) a. IP $\longrightarrow$ NP I′
$\uparrow(\text{SUBJ}) = \downarrow$ $\uparrow = \downarrow$

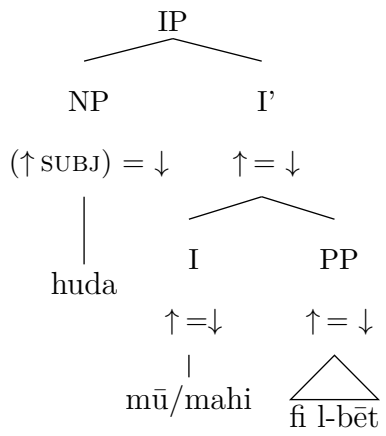
b. I′ $\longrightarrow$ ε | I XP
$\uparrow(\text{TENSE}) = \text{PRESENT}$ $\uparrow = \downarrow$ $\uparrow = \downarrow$

c. S $\longrightarrow$ NP XP
$\uparrow(\text{SUBJ}) = \downarrow$ $\uparrow = \downarrow$

In (81) is the analysis of a predicational negated sentence involving a PP predicate.

(81) a. huda mū/mahi fi l-bēt
Huda NEG.COP/NEG.COP.3SGF in DEF-house
Huda is not in the house.

b.



c. **f-structure:**

$$\begin{bmatrix} \text{PRED} & \text{`IN} < \text{SUBJ, OBJ} > \text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`HUDA'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`HOUSE'} \\ \text{DEF} & + \end{bmatrix} \\ \text{ENEG} & + \\ \text{TENSE} & \text{PRESENT} \end{bmatrix}$$

(82) shows the lexical entries for default *mū* and *mahi*. Crucially, what constrains this use of the negative particles *mū* and *mahi* is the fact that they cannot appear in contexts where a verbal particle is available. Hence, the notation (VP $\notin$ CAT) (↑) which implies that a verbal category cannot be a PRED.

(82) a. mahi I (↑ ENEG) = +
(VP $\notin$ CAT) (↑)
(↑ TENSE) = PRESENT
(↑ SUBJ PRED) = PRO
(↑ SUBJ PERS) = 3
(↑ SUBJ NUM) = SG
(↑ SUBJ GEND) = F

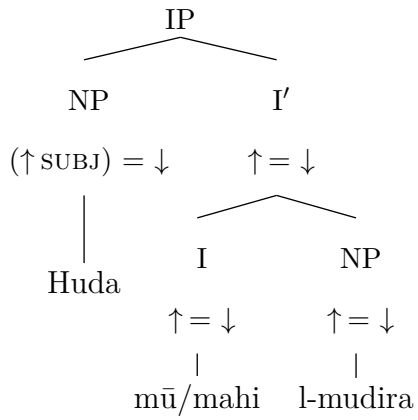
b. mū I (↑ ENEG) = +
VP $\notin$ CAT) (↑)
(↑ TENSE) = PRESENT

A parallel analysis applies to other verbless predicational sentences involving an adjective, adverb, or a nominal predicate. In what follows I next consider the copular function of *mū*/*mahu* in equational verbless sentences, such as (83). I here assume that the copula in this context takes a PRED value, since a definite nominal, for example, cannot itself function as PRED. I consider the negative copula in this context as a transitive predicate taking a

SUBJ and OBJ.

(83) a. huda mahi l-mudir-a
Huda NEG.COP.3SGF DEF-director-SGF
Huda is not the director.

b.



c. **f-structure:**

$$\begin{bmatrix} \text{PRED} & \text{'BE} < \text{SUBJ,OBJ} > \text{'} \\ \text{ENEG} & + \\ \text{TENSE} & \text{PRESENT} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'HUDA'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'MUDIRA'} \\ \text{DEF} & + \end{bmatrix} \end{bmatrix}$$

(84) mahi I (↑ PRED) = 'MAHI < SUBJ,OBJ >'
(↑ ENEG) = +
(↑ TENSE) = PRESENT
VP ∉ CAT) (↑)
(↑ OBJ DEF)= $_c$+
(↑ SUBJ PERS)= 3
(↑ SUBJ NUM)= SG
(↑ SUBJ GEND)= F

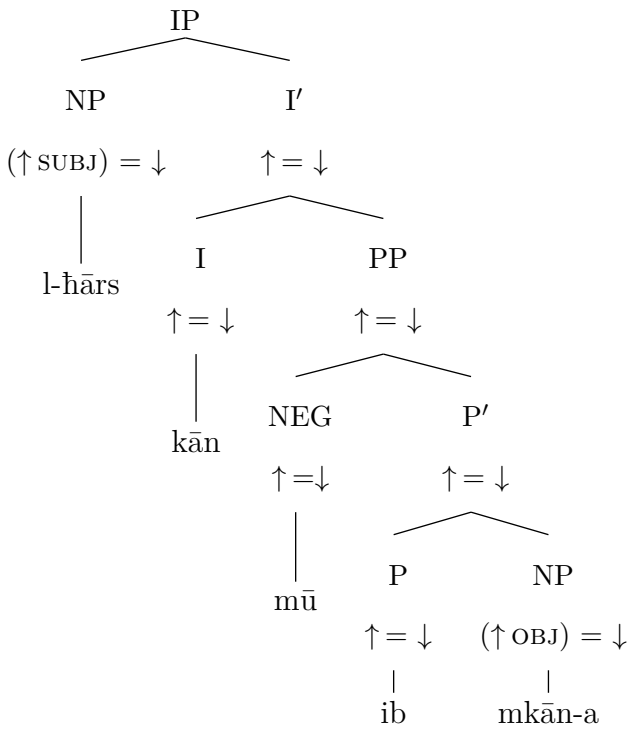
3.7.4 Constituent negation

From the discussion in section (3.4) it was shown that invariant *mū* in TA is also used to express constituent negation. In its function as a CN marker, I analyse *mū* as a CNEG in f-structure providing a NEG category in the c-structure. In this way I account for the fact that *mū*, as a CN marker, is different from its SN (ENEG) counterpart in verbless sentences. Hence it is not

a $\widehat{Neg}$, like *mā/lā*. One of the main arguments for this analysis is the fact that *mū* bears stress, and can focus the whole constituent.

(85) a. l-ħāris kān mū ib-mkān-a
DEF-watchman.SGM be.PFV.3SGM NEG in place-3SGM.GEN
The watchman was not at his (proper) place.

b.



c. **f-structure:**

$$\begin{bmatrix} \text{PRED} & \text{'IN} < \text{SUBJ, OBJ} > \text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'THE WATCHMAN'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'HIS PLACE'} \\ \text{CNEG} & + \end{bmatrix} \\ \text{TENSE} & \text{PAST} \end{bmatrix}$$

d. mū NEG (↑ CNEG) = +
(VP ∉ CAT) (↑)

3.8 Conclusion

In this chapter I have presented sentential negation in both verbal and non-verbal sentences, introducing a number of negative particles in TA, where

I observed that *mā* and *lā* are only ever used in verbal contexts, including finite verbs, and pseudo-verbs. *lā* only ever negates imperative forms which must be always morphologically imperfective 2SG/2PL. *mū* and the inflected counterpart forms are used to negate non-verbal predicates, including participle forms. I analysed *mū* and its inflected counterparts, as a negative copula that expresses both TENSE PRESENT, as well as ENEG values, and for this reason we put this copula in I, in complementary distribution with *kān*. The negative copula was shown to have a wider distribution than the pronominal copula as it is present in both predicational and equational sentences. In discussion of constituent negation I observed that it is only *mū* that is used, negating only the constituent it is inside.

Chapter 4

Emphatic negative coordination in TA

4.1 Introduction

This chapter is concerned with the nature and distribution of emphatic negative coordination (ENC) in TA, and is based on Alruwaili and Sadler (2018). Crosslinguistically, such constructions are often transparently related to non-negative conjunctive words meaning 'and' or 'or' and to other forms of negation, as is *neither . . . nor* in English. Additionally such constructions can include a focus or scalar focus particle (SFP) and a coordination marker, combined as one word, such as *ni* in Serbian, which can be analysed as combining a coordination marker and a focus particle (1.2.2).

In TA, it is the combination of the two elements *lā . . . wala* that is used to express (focused) emphatic negative coordination. *lā* always appears initially with the first conjunct, and *wala* with the non-initial conjunct. Beyond this particular construction the two elements have different uses, however. *lā* as was seen in the previous chapter is used as a negative particle marker in prohibitive

or negative imperative contexts, as will be seen in the next chapter that *wala* is a negative determiner or SFP with a meaning such as 'not even one' which alternates between two related but close uses, based on its position with respect to the verb, and always precedes indefinite nouns. When preceding the verb, it functions as a negative quantifier, expressing negation by itself, and consequently results in double negation when sentential negation is co-present. When occurring after the verb, however, sentential negation is obligatory for *wala* + NP to be licensed. This behaviour is consistent with the non-strict negative concord status of TA, which will be considered in more detail in the next chapter. As pointed out in Chapter one, negative scalar focus particles (NSFPs) such as 'not.even' are commonly used in the languages of the world as a means to express ENC for both predicative and non-predicative elements. This is the case with Polish *ni . . . ni*, Hungarian *sem . . . sem*, Modern Greek *úte . . . úte*, Albanian *as . . . as*, Romanian *nici . . . nici*, etc. Haspelmath (2004). In TA, however, unlike these languages, the SFP *wala* is not used twice, but only for the second conjunct. Since morphologically *wala* appears to be constructed from the coordinator *wa* 'and' + *lā*, this shows additionally that ENC in TA draws rather on conjunction rather than disjunction (as in English).

I will be considering ENC both in the context of main predicates (i.e. sentence predicates, whether verbal/non-verbal, as well as in argument dependent positions). I will see how ENC coordinated dependents show a parallel behaviour with the (SFP) determiner use of *wala*, where, in preverbal position, the coordinate structure expresses negation in itself, whereas postverbally, sentential negation becomes obligatory, resulting in a negative concordial interpretation.

As I have been doing in the other chapters, I will first describe and illustrate

the relevant phenomena in TA by looking in turn at negative coordination of verbal main predicates in section (4.3.1), non-verbal main predicates in section (4.3.2), and arguments in section (4.3.3). Then I will attempt to show how LFG can capture all the possibilities, and account for their interpretation. In doing so, I will try to answer the two main questions: (a) Does coordination *wala* contribute negation in these constructions or is it simply restricted to a negative environment?; (b) What are the constraints on the constructions in question, and how can they be captured in LFG ?. The analysis will as usual be represented through phrase structure rules, lexical entries for *lā* and *wala*, and f- and c-structures. The analysis further raises interesting issues as to how LFG can account for the variation in the behaviour observed, as accurately and intuitively as possible. The analysis will be discussed in section (4.5). (4.6) concludes this chapter.

4.2 Coordination in TA

I start by considering verb agreement when coordinated structures are present, illustrated from positive coordinated structures in TA. The same rules however apply to ENC. In Arabic the coordinator *w* is the positive syndetic conjunctive form which corresponds to English 'and'. In TA, it takes the form *w* before a word beginning with a vowel and *u* before a word beginning with a consonant. In contrast, *ya* is the positive disjunctive coordinator.

As we have seen in Chapter two, in TA, the verb shows full agreement in person, number and gender with its subject in both SVO and VSO word orders. The agreement pattern in coordinated structures differs from that in the non-coordinated counterparts, however. First, the coordination of subjects in an SV order requires full agreement in gender, number and person taking

account of both coordinated elements, resulting in resolved agreement (RA) of the coordinated elements, as illustrated in (1). Note that when coordinated elements differ in gender (1c), the overall resolved gender is M as default.

(1) a. ʕali u manṣūr ǧ-aw
Ali CONJ manṣūr come.PFV-3PLM
Ali and Mansour came.

b. huda u muna ǧ-an
Huda CONJ Mona come.PFV-3PLF
Huda and Mona came.

c. ʕali u huda ǧ-aw
Ali CONJ Huda come.PFV-3PLM
Ali and Huda came.

When the coordinated subject follows the verb, however, a different agreement behaviour pattern emerges. Resolved agreement of the verb is no longer obligatory when coordinated subjects are post-verbal. The verb can optionally either inflect to show full resolved agreement with all the coordinated subjects (2), or agree only with the first of the coordinated subjects, i.e. the left hand member of the coordination, which is the closest conjunct to the verb, as shown in (3). This phenomenon is known as 'first conjunct agreement' FCA or 'closest conjunct agreement' CCA, where the verb agrees only with the first conjunct rather than agreeing with the combination, i.e. displaying resolved agreement.

(2) a. ǧ-aw huda u ʕali
come.PFV-3PLM Huda CONJ Ali
Huda and Ali came.

b. ǧ-an huda u muna
come.PFV-3PLF Huda CONJ Mona
Huda and Mona came.

(3) a. ğa ʕali u huda
come.PFV.3SGM Ali CONJ Huda

Ali and Huda came.

b. ğ-āt huda u ʕali
come.PFV-3SGF Huda CONJ Ali

Huda and Ali came.

While the above pattern holds for coordination with 'and', the agreement pattern in disjunction structures, rather than coordinated ones, differs. There CCA is preferred regardless of whether the subject precedes or follows the verb. Hence the predicate usually agrees with the closest subject, as in (4).

(4) a. yā abō-i yā ʔumm-i rāħ ti-ğ-i
either father-1SG.GEN or mother-1SG.GEN FUT 3SGF-come.IMPV
bukra
tomorrow

Either my father or my mother will come tomorrow.

b. yā ʔumm-i yā abō-i rāħ ya-ğ-i
either mother-1SG.GEN or father-1SG.GEN FUT 3SGM-come.IMPV
bukra
tomorrow

Either my mother or my father will come tomorrow.

With that brief discussion of the agreement pattern for subjects with verbal predicates in coordinated and disjunctive structures, I now turn attention to discussing the construction of emphatic negative coordination when dealing with structures involving sentential verbal and non-verbal predicates, and different arguments.

4.3 Emphatic Negative Coordination structures in TA (ENC)

As was said in (4.1) above, in TA, ENC is expressed by *lā* and *wala*, and both those coordinators have other uses. In particular I now take up here the other function of *wala* as an SFP negative determiner, since that is closely connected with the behaviour of ENC in TA. When *wala* occurs in post-verbal position with a subject or fronted object, the presence of the sentential negative marker is obligatory, and the combination yields an overall semantic reading of negation (6a). Conversely, if *wala* occurs in preverbal position, it behaves as an inherently negative quantifier which expresses negation by itself without any need for a sentential negative marker (5a). Indeed, if sentential negation is expressed, double negation will be obtained instead of a concordant reading (5b).[1] As was mentioned in Chapter one, these phenomena are what is to be expected in the case of non-strict negative concord languages, such as Portuguese, Spanish and Italian.

(5) a. **wala** **ṭālib** ğa l-yom
not.even student.SGM come.PFV.3SGM DEF-today
Not even a (single) student came today.

b. **wala** **ṭālib** **mā** ğa l-yom
not.even student.SGM NEG come.PFV.3SGM DEF-today
Every student came today. (= Not even a single student didn't come today).

(6) a. **mā** ğa **wala** **ṭālib** l-yom
NEG come.PFV-3SGM not.even student.SGM DEF-today
Not even a (single) student came today.

[1] In the present account I will treat determiner *wala* and coordinator *wala* as separate homophonous lexical items, even though they share a number of characteristics, such as emphaticness and involvement with negation. I note, however, that a case can be made for maintaining that they constitute a single lexical item (Lucas, 2009).

b. *ğa **wala ṭālib** l-yom
come.PFV.3SGM not.even student.SGM DEF-today
Intended: Not even a (single) student came today.

In some Arabic dialects including Najdi (Ingham, 1994), and Yemini (Mansoor, 2012), *wala* is additionally used to express sentential negation in non-coordinated structures, with an emphatic interpretation, and Ingham calls it an emphatic negative marker that is associated with a focal stress, as shown in (7b) and (8): '*la* may also occur in statements with *wa* 'and' either as an emphatic negative (where *wala* substitutes for *ma* as in (7b) - (7a)) or in the *neither . . . nor* construction (as in (7c))' (1994, p. 44).

(7) a. ma ğā-na muṭar
NEG come-PFV.3SGM-1PL.ACC rain.SGM
No rain came to us.

(verbal plain statement, Najdi Arabic: Ingham (1994, p.44))

b. wala ğā-na muṭar
and-NEG come-PFV.3SGM-1PL.ACC rain.SGM
No rain came to us.

(emphatic verbal statement), Najdi Arabic: Ingham (1994, p.44))

c. la taġaddē-na wa-la taʕššē-na
NEG lunch.PFV-1PL and-NEG dined.PFV-1PL
We had neither lunch nor dinner.

(neither nor construction), Najdi Arabic: Ingham (1994, p.44))

Somewhat similar behaviour of emphatic NEG *wala* is observed for Yemeni (as in (8)). Here again *wala* appears to be a sentence negator, although the fact that it co-occurs with OBJ expressions such as *lugmah* 'morsel' and *ʔiy ħagah* 'anything' meaning 'anything' allows for an alternative analysis. *wala* here might be argued to be the same NSFP determiner as is found in TA, but with the additional capability to float away from its NP. This behaviour is not

found in TA.

(8) a. wala akal-t-ū lugmah
and.not eat.PFV-1SG morsel
I have not eaten a morsel. Yemeni:Mansoor (2012, p.63)

b. wala b-a-ʕmal la-kum ʔiy ħagah
and.not FUT-1SG-do.IMPV for-you any thing
I will not do anything for you. Yemeni:Mansoor (2012, p.60)

It should be noted that our main concern in this chapter is with the combination of *lā* ... *wala* used to mark bisyndetic, emphatic, negative coordination for both verbal and non-verbal sentences. This bisyndetic combination provides more focus and emphasis than other means of coordinating two negative elements, such as by using the standard negative particle *mā* (with verbal predicates), or *mū* (and its variants) (with non-verbal predicates) to express sentential negation, along with the use of the standard syndetic coordinator *w/u* 'and'. Furthermore, while *wala* appears only in non-initial position, it does not require the negative expression with the initial coordinated term to be *lā*: *wala* can also occur with the standard negative particles *mā* and *mū* or other negative forms in the initial conjuncts. I shall provide some examples below to illustrate these other forms of negative coordination. I am not, however, primarily interested in those constructions since they do not constitute emphatic negation. What follows is an in-depth description of negative coordinated sentences with different types of predicates, in TA.

4.3.1 Negative coordination structures with verbal sentential predicates

Verbs with the same SUBJ

I here start by considering the expression of coordination of negated verbal main sentential predicates (Vs) which have the same subject. Three different strategies can be used. The first strategy (non-emphatic) uses the normal sentential negative marker *mā* in both conjuncts with the syndetic coordinator *w* between the coordinated verbal elements. *mā* here shows parallel behaviour to that when it appears in uncoordinated structure. For instance, when negating perfective, imperfective and pseudo-verbs, as described in chapter three, it must always be adjacent to, and preceding, the verb, as is illustrated by (9a). The same meaning can alternatively be expressed by using the sentential negative marker *mā* with the first verb and *wala* with the second element as exemplified in (9b). The last strategy, which is widely chosen, is the ENC usage of *lā....wala* as illustrated in (9c).

(9) a. huda **mā** naẓẓaff-at **w** **mā** rattib-at
Huda NEG clean.PFV-3SGF CONJ NEG tidy.PFV-3SGF
l-bēt
DEF-house.SGM
Huda did not clean and did not tidy the house.

b. huda **mā** naẓẓaff-at **wala** rattib-at
Huda NEG clean.PFV-3SGF CONJ.NEG tidy.PFV-3SGF
l-bēt
DEF-house.SGM
Huda neither cleaned nor tidied the house.

c. huda **lā** naẓẓaff-at **wala** rattib-at
Huda NEG clean.PFV-3SGF CONJ.NEG tidy.PFV-3SGF
l-bēt
DEF-house.SGM
Huda neither cleaned nor tidied the house.

The same pattern as above occurs where the two coordinated clauses share only the same subject, and not also the same object, as in (10).

(10) a. manṣūr **mā** akel l-ħala **w** **mā** šarab
Mansour NEG eat.PFV.3SGM DEF-sweet CONJ NEG drink.PFV.3SGM
l-gahwa
DEF-coffee
Mansour did not eat the sweets and did not drink the coffee.

b. manṣūr **mā** akel l-ħala **wala** šarab
Mansour NEG eat.PFV.3SGM DEF-sweet CONJ.NEG drink.PFV.3SGM
l-gahwa
DEF-coffee
Mansour neither ate the sweets nor drank the coffee.

c. manṣūr **lā** akel l-ħala **wala** šarab
Mansour NEG eat.PFV.3SGM DEF-sweet CONJ.NEG drink.PFV.3SGM
l-gahwa
DEF-coffee
Mansour neither ate the sweets nor drank the coffee.

With respect to the two versions of negative coordination, i.e ENC and non-ENC, Holes (2013) mentions that in Gulf Arabic *mā* ... *wala* is more likely to be used when negating verbs with the same subjects. However *lā wala* is used with verbs 'where statements are being strongly contradicted', p. (239), which is the same case in TA.

kān +VPs with same SUBJ

I now consider the three strategies of coordination in other verbal sentential structures, e.g. with auxiliaries. Once again, the same pattern also follows follows when there are two negative coordinated verbal phrases, each combined with the auxiliary perfective verb *kān* 'be', which is only omissible in the pattern of (11b).

(11) a. huda **mā** kān-at ta-lʕab riyāẓa **w** **mā**
Huda NEG be.PFV-3SGF 3SGF-play.IMPV sport.3SGF CONJ NEG
(kān-at) t-rūħ n-nādi
be.PFV-3SGF 3SGF-go.IMPV DEF-gym
Huda didn't either play any sport or go to the gym.

b. huda **mā** kān-at ta-lʕab riyāḍa **wala**
Huda NEG be.PFV-3SGF 3SGF-play.IMPV sport.SGF CONJ.NEG
(kān-at) t-rūḥ n-nādi
be.PFV-3SGF 3SGF-go.IMPV DEF-gym
Huda didn't either play any sport or go to the gym.

c. huda **lā** kān-at ta-lʕab riyāḍa **wala**
Huda NEG be.PFV-3SGF 3SGF-play.IMPV sport.SGF CONJ.NEG
(kān-at) t-rūḥ n-nādi
be.PFV-3SGF 3SGF-go.IMPV DEF-gym
Huda didn't either play any sport or go to the gym.

Distinct NP subjects in each conjunct with verbal predicates

When it comes to negatively coordinating two complete sentences, each with a different subject of a full verb, only two strategies are used. The first is the usual non-emphatic one which employs the ordinary negative marker, next to the verbs in the two sentences separated by the conjunction *w* (12).

(12) a. manṣūr **mā** gaʕad min n-nōm, **w** ʕali **mā**
Mansour NEG wake.PFV.3SGM from DEF-sleep, CONJ Ali NEG
ǧa min d-dawām
come.PFV.3SGM from DEF-work
Mansour did not wake up and Ali did not come (back) from work.

b. ana **ma** ʕind-i flūs **u** hu **ma** ʕind-ah ḥaẓẓ
I NEG have-1SG.GEN money CONJ he NEG have-3SGM.GEN luck
I haven't any money and he hasn't any luck. (Gulf Arabic: Holes (2013, p.63)

The next expected strategy that makes use of *mā* in the first conjunct and *wala* in the second conjunct, is not possible, as shown through the ungrammatical example in (13).

(13) *manṣūr **mā** gaʕad min n-nōm, **wala** ʕali
Mansour NEG wake.PFV.3SGM from DEF-sleep, CONJ.NEG Ali
ǧa min d-dawām
come.PFV.3SGM from DEF-work
Neither did Mansour wake up nor did Ali come (back) from work.

Coordinated negative sentences can however be emphatically combined using *lā ... wala*. It is however crucial that *lā* is placed in a special position, i.e one that is initially before the whole sentence, i.e. usually before the subject.[2] Similarly *wala* has to precede the entire clause that it negates, and not just the verb. This is illustrated by (14b) and by the ungrammatical example in (14a), where *lā* is located before the verb, but not in an initial position at the beginning of the sentence.

(14) a. *manṣūr **lā** gaʕad min n-nōm, **wala** ʕali
Mansour NEG wake.PFV.3SGM from DEF-sleep, CONJ.NEG Ali
ǧa min d-dawām
come.PFV.3SGM from DEF-work
Neither did Mansour wake up nor did Ali come (back) from work.

b. **lā** manṣūr gaʕad min n-nōm, **wala** ʕali
NEG Mansour wake.PFV.3SGM from DEF-sleep, CONJ.NEG Ali
ǧa min d-dawām
come.PFV.3SGM from DEF-work
Neither did Mansour wake up nor did Ali come from work.

4.3.2 Negative coordination structures with non-verbal sentential predicates

Following the discussion of negative coordination for verbal predicates or sentences containing them, I now turn attention to consider the negative coordination of non-verbal predicates, such as APs and PPs.

Essentially it is the same strategies discussed and used above that are also used when negatively coordinating non-verbal sentential predicates. However, instead of using *mā*, *mū* or the negative inflected counterparts are used, since, as has been seen elsewhere, these are the forms used with non-verbal sentential predicates. As in the previous sub-section, I will be considering different non-verbal predicates separately.

[2]It is notable that fronting of the negative coordinator is also required in English, where *neither* must precede the whole sentence. In English this is associated with inversion of the verb and subject.

PPs with the same SUBJ

(15) a. huda **mī** fī l-bēt **w** **mī** fī d-dawām
Huda NEG.3SGF in DEF-house CONJ NEG.3SGF in DEF-work
Huda is not at home and not at work.

b. huda **mī** fī l-bēt **wala** fi d-dawām
Huda NEG.3SGF in DEF-house CONJ.NEG in DEF-work
Huda is neither at home nor at work.

c. huda **lā** fī l-bēt **wala** fī d-dawām
Huda NEG in DEF-house CONJ.NEG in DEF-work
Huda is neither at home nor at work.

APs

(16) a. huda **īi** ṭwīl-a **w** **mī** gəṣīr-a
Huda NEG.3SGF tall-SGF CONJ NEG short-SGF
Huda is neither tall nor short.

b. huda **mī** ṭwīl-a **wala** gəṣīr-a
Huda NEG.3SGF tall-SGF CONJ.NEG short-SGF
Huda is not tall and not short.

c. huda **la** ṭwīl-a **wala** gəṣīr-a
Huda NEG tall-SGF CONJ.NEG short-SGF
Huda is neither tall nor short.

Distinct sentences with non-verbal predicates, different SUBJ

Similarly, when it comes to the coordination of non-verbal sentences with different subjects, we either use the non-verbal negative marker *mū* (and its inflected counterparts) in both sentences, separated by the coordinator *w* (17a), but not *wala* as in (17b), or we once again make use of the combination of *lā wala*. Once again, *lā* and *wala* must each appear before the subject of their clauses (17c).

(17) a. huda **mū** fī l-bēt **w** ʕali **mū** fi d-dawām
Huda NEG.3SGF in DEF-house CONJ Ali NEG.3SGF in DEF-work
Huda is not at home and Ali is not at work.

b. *huda **mū** fī l-bēt **wala** ʕali fi d-dawām
Huda NEG in DEF-house CONJ.NEG in DEF-work
Neither is Huda at home nor Ali at work.

c. **lā** huda fī l-bēt **wala** ʕali fi d-dawām
Huda NEG in DEF-house CONJ.NEG NEG.3SGF in DEF-work
Neither is Huda at home nor Ali at work.

Interim Summary

	verbal predicate	verbal sentence	non-verbal predicate	non-verbal sentences
non-ENC	*mā...w ...mā* *mā...wala*	*mā...w...mā* **mā...wala*	*mū...w...mū* *mū*/var*...wala*	*mū...w...mū* **mū*/var*...wala*
ENC	*lā* V*...wala* V	*lā* cl*...w*ala cl	*lā... wala*	*lā* cl*...wala* cl

Table 4.1: Patterns of negative coordination of both verbal and non-verbal predication sentences

4.3.3 Negative coordination of arguments/dependents

I conclude this review of the realisation of negative coordination in TA by considering the negative coordination of arguments and other dependent items. Negative coordination of such items may be expressed non-emphatically by using *w* to link the coordinated terms, with the main verb negated by *mā*. In a verbless sentence, again the arguments are coordinated with *w*, but the main predicate is negated with *mū* and the rest of the inflected forms. Once again, ENC is also possible, i.e *lā* ... *wala*, with *lā* preceding the first coordinated term, and *wala* with the second or any other later ones (18).

(18) a. ʕali **w** huda **mā** ğ-aw
Ali CONJ Huda NEG come.PFV-3PLM
Ali and Huda did not come.

b. **lā** ʕali **wala** huda ğ-aw
NEG Ali CONJ.NEG Huda come.PFV-3PLM
Neither Ali nor Huda came.

Something which is important to observe is that negative coordination using the ENC strategy (i.e with *lā....wala)* can alternate between two related uses depending on its position in the sentence with respect to the verb. When the coordinated items precede the verb, resulting in an SV order, as in (19a), an emphatic negative meaning is conveyed. If the main predicate is additionally negated with *mā/mū* etc., a double negative results, conveying a positive meaning, as in (19b). As discussed more fully in Chapter five, this is the result of TA being a non-strict concord language.

(19) a. **lā** ʔaħmad **wala** huda ǧ-aw
NEG Ahmad CONJ.NEG Huda come.PFV-3PLM
Neither Ahmad nor Huda came.

b. **lā** ʔaħmad **wala** huda **mā** ǧ-aw
NEG Ahmad CONJ.NEG Huda NEG come.PFV-3PLM
Both Ahmad and Huda came.

Conversely, when the verbal predicate appears before the coordinated nouns in a VS order, as in (20a), the presence of sentential negation with *mā* before the verb is obligatory, yielding an instance of negative concord, and the reading remains overall negative. It will be apparent later (Chapter five) that *wala* in its use as a SFP determiner behaves very like *wala* in the above data, except that its occurrence is restricted to indefinite nouns, and coordination is not involved.

(20) a. **mā** ǧ-aw **lā** huda **wala** ʕali
NEG come.PFV-3PLM NEG Huda CONJ.NEG Ali
Neither Huda nor Ali came.

b. *ǧ-aw **lā** huda **wala** ʕali
come.PFV-3PLM NEG Huda CONJ.NEG Ali
Neither Huda nor Ali came.

The same parallel alternation results when objects are coordinated. In (21a), the OV word order puts the coordinated objects before the verb. Consequently, *mā* is

not required with the verb, and its presence would yield a double negative reading. In (21b), however, the VO order means that the verb must be negated with *mā* for negative concord reasons, and for the overall meaning to be negative.

(21) a. **lā** gahwa **wala** šāy šarab ʕali
NEG DEF-coffee-SGF CONJ.NEG DEF-tea.SGM drink.PFV.3SGM Ali
l-yōm
DEF-today
Ali has drunk neither coffee nor tea today.

b. ʕali **mā** šarab (**lā**) gahwa **wala** šāy l-yōm
ali NEG drink.PFV.3SGM NEG coffee CONJ.NEG tea DEF-day
Ali has drunk neither coffee nor tea today.

In the case of negative coordinated arguments following the negated verb-form, in VSO order, it is very common for the *lā* to be omitted, as could not occur in (21a). The meaning however reverts to non-emphatic when *lā* is omitted. However, where subjects (rather than objects etc.) are negatively coordinated, and occur after the verb, this is conditional on the kind of agreement holding between the verb and the coordinated subjects. In cases of negative coordination of subjects in VSO word order, where the pattern of agreement displayed, as discussed in section (4.2) is one that involves either CCA or fully resolved agreement, there is essentially a choice that affects whether it is possible to drop *lā* or not. Where the agreement displayed is that of CCA, *lā* can be omitted, as in (22a). Where agreement is fully resolved *lā* cannot be omitted, as shown in the contrast between (22b) (22c).

(22) a. **mā** ǧ-at **(lā)** huda **wala** ʕali
NEG come.PFV-3SGF NEG Huda CONJ.NEG Ali
Neither Huda nor Ali came.

b. **mā** ǧ-aw **lā** ʔaħmad **wala** ʕali
NEG come.PFV-3PLM NEG CONJ.NEG Ali
Neither Ahmad nor Ali came.

c. *__mā__ ǧ-aw ʔaħmad **wala** ʕali
NEG come.PFV-3PLM Ahmad CONJ.NEG Ali

Neither Ahmad nor Ali came.

The same phenomena with respect to omission of *lā* are observed where the main predicate is a pseudo-verb (23). This example further illustrates that *wala* can co-occur with indefinite nouns in the normal process of argument ENC. This is however quite distinct from its occurrence as a NSFP determiner with indefinite nouns (see chapter 5).

(23) a. **mā** ʕind-i **(lā)** rraχṣa **wala** sayyār-a
NEG have-1SGF.GEN NEG license.SGF CONJ.NEG car-SGF
I do have neither a license nor a car.

b. **lā** rraχṣa **wala** sayyār-a ʕind-i
NEG license.SGF CONJ.NEG car-SGF have-1SGF.GEN
I have neither a license nor a car.

4.4 Negative coordination in other varieties of Arabic

In this section, I provide an overview of the expression of negative coordination in other varieties including: Iraqi (Erwin, 1963); Syrian Arabic (Cowell, 1964); North Jordanian (Alrashdan, 2015); Egyptian (Brustad, 2000); Gulf Arabic (Holes, 1990, 2013) and (Feghali, 2004); Najdi (Ingham, 1994); Arabic and Sanʕani Arabic (Watson, 1993). Some of these sources cover ENC of both predicational and non-predicational elements (24, 25), just as was described for TA.

(24) a. **ma** yu-ʕruf **la** yi-gra **wala** yi-ktib
NEG 3SGM-know.IMPV NEG 3SGM-read.IMPV CONJ.NEG 3SGM-write.IMPV
He doesn't know how either to read or write.

b. **ma** a-rīd **lā** flūs **wala** musāʕada
NEG 1SG-want.IMPV NEG money CONJ.NEG help
I don't want either money or help. Iraqi: Erwin (1963, p.333)

(25) a. **lā** ba-ʕrf-o **w-lā** byaʕrəfni
NEG 1SG-know.IMPV-3SGM.ACC CONJ.NEG 3SGM-know.IMPV-1SG-ACC
I do not know him and he doesn't know me.

b. **lā** ʔana **w-lā** huwwe laħa-nkūn hnīk
NEG I CONJ.NEG he FUT-PL-be.IMPV there
Neither he nor I will be there. Syrian Arabic: Cowell (1964, p.390)

In North African varieties, however, including Libyan, Moroccan, Algerian, Tunisian, and Maltese, there are a number of variants. In Libyan Arabic, the negative coordination of verbal predicates is formed through the combination of *ma . . . ula* as in (26a, 26b), while in Moroccan Arabic *ma . . . ma* is used (26d, 26e) (except in Hassaniya, where such negation is through the obligatory use of *ma...u...ma* as in (26f)). Tunisian uses *ma...u ma* or *la...ula* (26g, 26h), West Algerian, like Moroccan uses *ma....ma*, or *la...la* (26i, 26j, 26k). In the context of negative coordination where the bipartite negation strategy exists, the *š/sh* is dropped obligatorily except in the case of Libyan Arabic, where the *-š* can optionally be dropped. Owens (1984) states that 'with a number of words the final *-š* is optional' where one of these is the *la/ma...ula* construction. He also however asserts that 'The forms without the final *-š* can be more emphatically negative than those with' (p. 161). In (26c) there is a Libyan example where *s* is retained.

(26) a. **ma** ti-kallam **ula** i-smiʕ
NEG 3SGM-talk.IMPV CONJ.NEG 3SGM-hear.IMPV
He never spoke nor heard. Libyan Arabic: Owens (1984, p.162)

b. **ma** n-šrāb-**š** **ula** nākil
NEG 1SG-eat.IMPV CONJ.NEG 1SG-drink.IMPV
I am neither drinking nor eating Libyan Arabic:Owens (1984, p.168)

c. **ma** šurēt-**sh** **la** s-sufra **ula** t-tānğrā
NEG buy.PFV-1SG-NEG NEG DEF-plate.SGM CONJ.NEG DEF-pot.SGM
I bought neither the plate nor the pot. Libyan Arabic: Owens (1984, p.163)

d. **ma** kla **ma** šrəb
NEG eat.PFV.3SGM NEG drink.PFV.3SGM

He neither ate nor drank Moroccan Arabic: Adila (1996, p.108)

e. **ma** bq-āw la ʕyalāt **u** **la** rğāl
NEG remain.PFV-3SGM NEG girls CONJ NEG boys
There were no men or women remaining. Moroccan: Adila (1996, p.108)

f. **ma** ğe **u** **la** lgey-t-u
NEG come.PFV.3SGM CONJ NEG find.PFV-1SG-3SGM.ACC
He neither came nor did I meet him. Hassaniyya: Caubet (1996, p.89)

g. **la** kla **u** **la** χalla škūn ya-kul
NEG eat.PFV.3SGM CONJ NEG let.PFV.3SGM someone 3SGM-eat.IMPV
He neither ate nor did he let anyone eat. Tunisian Arabic: Caubet (1996, p.89)

h. **ma** kla **u** **ma** χalla škūn yakūl
NEG eat.PFV.3SGM CONJ NEG let.PFV.3SGM someone 3SGM-eat.IMPV
He didn't eat and he didn't let anyone eat. Tunisian Arabic: Chaâbane (1996, p.121)

i. **mā** klā **mā** šrab
NEG eat.PFV.3SGM NEG drink.PFV.3SGM
He neither ate nor drank. West Algerian: Elhalimi (1996b, p.148)

j. **mā** bġā lā yə-gra **lā** yə-χdəm
NEG want.PFV.3SGM NEG 3SGM-study.IMPV NEG 3SGM-work.IMPV
He neither wanted to study nor to read. West Algerian: Elhalimi (1996b, p.148)

k. **ma** ğa **la** l-bārəħ **la** l-yūm
NEG come.PFV.3SGM NEG DEF-yesterday NEG DEF-today
He didn't come neither yesterday nor today West Algerian: Caubet (1996, p.89)

One notable finding from this review is that some dialects have done away with any form that could be constructed as a coordinator, at least for certain types of negatively coordinated elements. In other words, they exhibit asyndetic negative coordination just through two negative particles such as *ma . . . ma* or *la . . . la* (e.g. West Algerian). Another observation is that, regardless of whether *u/wa* is present,

there seems to be a restriction on the sequential combination of *la* and *wa*. While in various dialects we can find *la . . . la*, *ma . . . ma* and *ma . . . la*, there seems to be no dialect which allows *la . . . ma*.

Finally it is necessary to mention Maltese which is the one dialect which has been found to go beyond the familiar *la ma wa* repertoire of forms. It makes use additionally of a form *lanqas* which seems to be a loan translation based on Sicilan *mancu* (27) as mentioned by Čéplö and Lucas (2017).

(27) a. **la** semgħatn-i **u** **lanqas** (ma) ratn-i
NEG hear.PFV.3SGF-1SG.ACC CONJ NEG NEG see.PFV.3SGF-1SG.ASS
She neither heard nor saw me Maltese: Borg and Azzopardi-Alexander (1997, p.91)

b. **la** t-tifel **u** **lanqas** it-tifla m' għandhom, qattusa
NEG girlCONJ NEG boy have-3PLM.ACC cat
Neither the boy nor the girl have a cat Maltese: Borg and Azzopardi-Alexander (1997, p.91)

Another twist which is found in other dialects but not in TA, is that Maltese and SanʕAni can use the second ENC marker to express NEG on the first conjunct. Thus not only negation but also coordination is marked twice.

(28) a. **u** **la** ji-ppretendi-ha **u** **lanqas** xejn
CONJ NEG 3SGM-pretend.IMPV-3SGF.ACC CONJ NEG nothing
He don't pretend it, or anything Maltese: Caubet (1996, p.90)

b. anā **wa-lā** bayn aχruğ **wa-lā** ašk-i
I CONJ-NEG seem 1SG-go.IMPV CONJ NEG 1SG-complain.IMPV
I neither go out nor complain SanʕAni Arabic: Watson (1993, p.275)

4.5 An LFG analysis

4.5.1 Negative coordination of predicates

4.5.1.1 Status of *w*

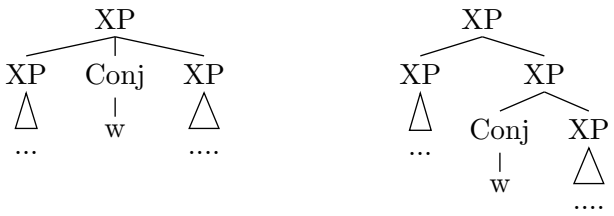
First I begin by considering the LFG analysis of the simple pattern of syndetic negative coordination which is not emphatic. This is the structure involving NEG CONJ NEG, where there are two predicational (verbal- or non-verbal) elements linked by a conjunctive *w* 'and' and each element or predicate is negated by the standard ordinary negative marker, which for TA is either *mā* or *mū* and its variants, depending on whether the predicate type is verbal or non-verbal. Starting from this type of structure, I then move on to consider the syntax of conjunction along with negative particles.

The example in (29) is an instance of a predicational coordination which includes two VPs, sharing the same subject and linked through CONJ *w* 'and', and where each element is negated by *mā*.

(29) manṣūr **mā** akel l-ħala **wa** **mā** šrab
Mansour NEG drink.PFV.3SGM DEF-sweet.SGM CONJ NEG drink.PFV.3SGM
l-gahwa
DEF-coffee.SGF
Mansour did not eat the sweets and did not drink the coffee

There are two possible analyses in LFG for how a coordinate structure with *w* can be analysed: a flat vs. a hierarchical structure, as represented in (30).

(30)



Of these, the flat version is the more standard choice, which I therefore adopt. The coordinator *w* is considered as an ordinary conjunct marker. The associated

phrase structure rule is provided in (31).

(31) XP $\longrightarrow$ XP+ Conj XP

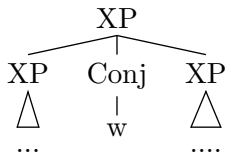
$\downarrow \in \uparrow$ $\uparrow = \downarrow$ $\downarrow \in \uparrow$

($\uparrow$ CONJFORM)=W

The phrase structure rule in (31) allows for the coordination of XPs, where X is a variable over a range of categories such as V,A, N and P, and as was discussed in Chapter (1), this was defined to stand for a disjunction of these categories. The individual conjuncts in such a coordinated structures are represented as member of a set. Note that the use of the Kleene plus operator (+) further shows that there may be a number of coordinated XPs preceding the conjunction. This rule then specifies a flat c-structure as in (32a), with the coordinator *w* functioning as an ordinary conjunct marker occurring between the two coordinated elements. *mā* will be treated as a negative particle or marker, here too, showing parallel behaviours, irrespective of whether it occurs in coordinate or non-coordinate structures. In both contexts *mā* negates perfectives, imperfectives and pseudo verbal forms, and always precedes, and is adjacent to the verb. As argued for in Chapter 3, it is treated as a non-projecting word occurring under the $\widehat{Neg}$ category in the c-structure.

The f-structure for (29) would now look like that in (32b), where the two small f-structures correspond to the coordinated elements and the conjunction only contributes a feature specifying that the type of coordination is conjunctive and is hence non-distributive, since it is applies to the whole f-structure rather than to a particular element of the coordinate structure. On the other hand, sentential negation is marked independently in each conjunct. The SUBJ, within the coordinate structure is here distributed, since the 'unsaturated predicates' share the same subject argument, and for the completeness and coherence conditions requirements, the subject in the first conjunct must be distributed in the second.

(32) a.



b.

$$\begin{bmatrix} \text{CONJTYPE} & \text{AND} \\ \text{CONJFORM} & \text{W/WA} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{`EAT<SUBJ, OBJ>'} \\ \text{ENEG} & + \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`MANṢŪR'} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`SWEETS'} \end{bmatrix} \end{bmatrix}, \begin{bmatrix} \text{PRED} & \text{`DRINK<SUBJ, OBJ>'} \\ \text{ENEG} & + \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`COFFEE'} \end{bmatrix} \\ \text{SUBJ} & \end{bmatrix} \right\} \end{bmatrix}$$

4.5.1.2 Status of *wala*

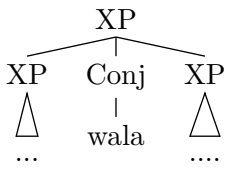
I move now to the bisyndetic second pattern of negative coordination, formed by *mā* ... *wala*, where *mā* occurs in the first conjunct and *wala* occurs in the second conjunct. Here the focus is on the treatment of *wala* since the same analysis for *mā*, holds throughout.

(33) manṣūr **mā** akel l-ħala **wala** šrab
Mansour NEG drink.PFV.3SGM DEF-sweet.SGM CONJ.NEG drink.PFV.3SGM
l-gahwa
DEF-coffee.SGF
Mansour did not eat the sweets and did not drink the coffee.

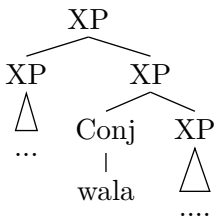
In a bisyndetic coordinate structure such as (33), the negative marker *mā* occurs with the first coordinated predicate, with *wala* in the second conjunct. *wala* however differs from a negative form such as *mā*, as in (29), since it cannot occur as a negator on its own: it must always be preceded by another negative form, e.g. *mā* or *lā*. Therefore it seems best to treat *wala* as a negative coordinator or CONJFORM. However, at the same time it does not behave like an archetypal CONJFORM such as *w* either, as we will be seen below. As illustrated through the c-structures (34), once again there is a choice as to the structural pattern: flat or with subordination. Although the flat solution would parallel that chosen for *w* in (32a), there is a sense that *wala* directly contributes ENEG information internal to its own conjunct, and for

that reason, it is odd to introduce this information in a constructionally neutral way.

(34) a.



b.



Choosing a flat c-structure locates *wala* at the level of the coordinate structure as a whole, rather than as belonging in the second clause. While the higher location is intutively correct for *w* 'and', it does not feel right for *wala*, since *wala* is clearly associated more with the second clause than the first: it negates only the second clause and requires an additional negator (i.e. *mā*), for example, to negate the first. The flat structure analysis would also be strange since the contribution of negation by *wala* to the second conjunct would have to be stated in a way whereby *wala* itself is not specified as contributing ENEG, but rather provides the second conjunct to its right, with ENEG.

Arguments in favour of the non-flat structure thus include the fact that although, primarily, coordinate structures involve a flat coordination structure, *wala* here is felt as behaving distinctly. Additionally, the non-flat hierarchical structure allows for *wala* to be located in the second conjunct, contributing negation to that same clause directly. Its lexical specification, seen in (37), captures the fact that it provides a coordination specification as well as ENEG +. It however requires a special statement to capture its requirement to be preceded by a negated first conjunct. This is captured by the phrase structure rule in (35), which specifies that CONJ-FORM *wala* in a clause must be preceded by some conjunct that itself is ENEG +, which can be expressed either by *mā*, *mū* and its variants, as well as *lā* (see below). This analysis would entail that the presence of *wala* results in a special negative coordination schema, represented in (35), where all non-initial conjuncts are specified as marked by *wala*, while the first conjunct cannot be marked by *wala*, but must

contain a marker of ENEG. The resultant interpretation is one of 'neither ... nor ...'.

(35) *Negative Coordination Schema*

XP	⟶	XP	XP^{+}
		$\downarrow \in \uparrow$	$\downarrow \in \uparrow$
		$(\downarrow$ ENEG$) =_c +$	$(\downarrow$ CONJFORM$) =_c$ WALA
		$(\downarrow$ CONJFORM$) \neq$ WALA	

(36)

XP	⟶	Neg	XP
		$\uparrow = \downarrow$	$\uparrow = \downarrow$
		$(\in \uparrow)$	

The lexical entry for *wala* (37) then shows that it introduces a CONJ FORM and additionally expresses and contributes negation inside the second conjunct. A particle such as *mā*, on the other hand, only introduces negation in the first conjunct in this structure. Additionally, unlike *mā*, *wala* is not analysed as a non-projecting word, and sits under NEG in the c-structure.

(37) *wala* Neg $(\uparrow$ CONJFORM$) =$ WALA
$(\uparrow$ ENEG$) = +$
$((\in \uparrow)$ CONJTYPE$) =$ AND

4.5.1.3 The status of *lā*

I turn now to discuss the status of *lā*, as part of the ENC structure, which was described above. *lā* in an ENC is used to mark negation in the initial conjunct of a negative construction, where its position does not resemble that of *lā* as a sentential negative marker. That *lā*, as was seen in Chapter 3 for TA, is used to mark prohibitive or imperative negation, where it requires to be immediately adjacent to an imperfective form of the verb. Rather, *lā* internal to the ENC provides an additional emphatic and focusing flavour and can precede perfective verbs (9c) and non-verbal elements. Furthermore, *lā* will be treated differently from *mā* preceding *wala* in

an ENC. *lā* within the coordination structure is not required to be adjacent to the verb. This is most obvious in dependent coordination, as will be seen below, where there can be a full sentence coordination and *lā* occurs in an initial position in the conjunct, irrespective of the position of the verb.

A separate lexical entry for *lā* that is specific to its use inside ENC is provided in (38) below. It parallels the lexical entry for *wala*, and similarly is not regarded as a non-projecting node.

(38) *lā* Neg

$(\uparrow \text{CONJFORM}) = \text{LĀ}$

$(\uparrow \text{ENEG}) = +$

$((\in \uparrow) \text{ CONJTYPE}) = \text{AND}$

Having here considered the analysis of *lā... wala* when marking negative coordination of sentential predicates, I turn now to consider how one can account in LFG for *lā... wala* when coordinating dependents or arguments.

4.5.2 Negative coordination of dependents

Analogous to (35), the c-structure schema that is appropriate for ENC of dependents is (39). The essential difference in the phrase structure rule (39) compared with (35) is that the CONJFORM in the first conjunct is now constrained to be *lā*. As we saw earlier, it cannot be *mā*. Furthermore, an ENEG feature is no longer specified, since constituent negation is present.

(39) *Negative Coordination Schema: Dependents*

$$\begin{array}{lccc} \text{XP} \longrightarrow & \text{XP} & & \text{XP} \\ & \downarrow \in \uparrow & & \downarrow \in \uparrow \\ & (\downarrow \text{CONJFORM}) =_c \text{LĀ} & & (\downarrow \text{CONJFORM}) =_c \text{WALA} \end{array}$$

As seen previously, however, *lā ... wala* expresses negative coordination of arguments when appearing preverbally, without any need for the presence of sentential negation with the main predicate. Indeed if sentential negation is expressed on the verb, a double negative reading results. This is in contrast to the negative concord interpretation that results when *lā ... wala* occur after the verb. The presence of sentential negation with the main verb is obligatory in this context, and it is that which licenses them, yielding only one negative reading with negative concord. This alternation between the two different interpretations parallels that observed with the SFP determiner function of *wala* (non-strict negative concord). Since however this issue is one of negative sensitive items and concord, rather than of coordination, I will present its LFG analysis in the next chapter.

4.6 Conclusion

In this chapter I have considered negative coordination in general, as well as ENC, in TA. Particularly, this involved a consideration of an LFG analysis of bisyndetic negation structures. I have argued that both the negative conjunction forms *lā* and *wala* in ENC in TA negate their individual conjuncts and contribute CONJTYPE information to the coordinate structure as a whole.

In the case of coordination of dependents (rather than sentential predicates) however, *lā* and *wala* admits of either a negative concord or a negative interpretation. It was shown that this depends on its position with respect to the verb and the conditions under which these interpretations arise are parallel to those for the SFP determiner, which shows the same alternation between a negative concord and a negative interpretation, based on its position in the sentence with respect to the verb. The behaviour displayed by ENC in TA is in fact the same behaviour found in many other languages which are also non-strict negative concord languages, such as Spanish, Portuguese, and Italian, as opposed to Serbian or Greek, which are strict negative concord ones. The LFG analysis of this phenomenon is pursued in the next

chapter.

Chapter 5

Negative Sensitive Items in TA

5.1 Introduction

I have now discussed two core areas of negation: sentential negation and emphatic negative coordination (ENC). The focus of the current chapter is to discuss the syntactic behaviour and distribution of the different groups of Negative Sensitive Items (NSIs) in TA. As described in (Chapter one section 1.2.3.2), these are elements which, whether themselves inherently negative or not, exhibit some type of sensitivity to the presence of negation in their context. They fall into two subcategories: Negative Concord Items (NCIs)/n-words, and Negative Polarity Items (NPIs). Although the two sets of items might seem to belong to one single class, they do however show distributional differences and behaviours, hence their separation in two distinct classes.

As mentioned in Chapter one, the phenomenon of NC involves one or more n-words/NCIs co-occurring with an element expressing sentential NEG, yet where the yielded output is a single negative semantic reading. Such n-words are distinguished from NPIs in that they can be used with a negative interpretation in fragment answers. Also, they are more restricted in their distribution than some NPIs since they appear only in negative or anti-veridical contexts (as reviewed in Chapter 1).

The other type of NSIs, i.e. NPIs are distinguished from n-words/NCIs in a number of ways. They can be licensed by a wider set of environments and contexts, not only by a negative element or anti-veridical environment, but also by other non-veridical contexts (e.g. polar interrogative structures, in contexts where they function as antecedents of a conditional, etc). Unlike n-words they are themselves not inherently negative, and they cannot be used to provide a negative fragment answer alone by themselves without the presence of the sentential NEG.

In section 5.2 I will discuss determiner and adverbial expressions which seem to function as NCIs/n-words. Section 5.2.2.2 discusses the long distance licensing of n-words. Section 5.3 discusses NPIs of distinct categories, e.g determiner, nominal, adverbial and idiomatic. These expressions vary in their distribution, some are strict/strong, i.e. where they are restricted to appear only in anti-veridical contexts, whereas others are non-strict, and can appear non-veridical contexts. Apart from distinguishing the different NPIs based on their distribution, I identify a diagnostic for TA that includes the distinct behaviour of negative and non-negative raising predicates and how they interact with strong and weak NPIs, i.e NPIs that must appear in the context of sentential negation, and others that do not. In 5.4 we then offer an LFG analysis of the key types of NCI. Section 5.5 concludes the chapter.

5.2 N-words in TA

NCIs/n-words have attracted some attention in studies on Arabic including Lucas (2009) and Hoyt (2010) who consider the same data sets but with distinct aims in mind. A crucial debate in the literature on Arabic is whether any present-day spoken variety of Arabic actually exhibits negative concord or not.

Hoyt (2010) discusses such elements in Levantine varieties of Arabic, including the different vernaculars spoken in Syria, Palestine, Jordan and Lebanon. He iden-

tifies Levantine n-word items as displaying strict or non-strict behaviour based on their negative licensing requirements. Alsarayreh (2012) argues for something along the same lines for Jordanian Arabic.

Lucas (2009) by contrast is concerned with the development of negation across a largely different range of varieties including: Classical Arabic/MSA and spoken Arabic vernaculars such as Palestinian, Egyptian, Moroccan and Maltese. On the basis of his analysis, he claims that Maltese is the only Arabic variety that may accurately and straightforwardly be described as a negative concord language, Lucas (2009, p. 222).[1] For other Arabic varieties he argues that 'the varieties that exhibit true negative concord are fewer than has been claimed in the literature' (Lucas, 2009, p. 187), although he does point out that 'some individual items in some dialects could reasonably be seen as undergoing negative concord' (2009, p. 187).

In what follows I will examine the behaviour of a range of items in TA which potentially could be seen as NCIs, in order to be in a position to assess whether TA can be considered as a NC language or not. I will first consider the determiner n-words, and then the adverbial n-word elements.

5.2.1 Nominal n-words: Negative determiner *wala*

The first item that will be considered here is the negative scalar focus particle (SFP) *wala*, 'not even, no', which functions as a determiner with indefinite nouns. *wala* in TA is a homophonous item, since as was seen in the previous chapter, it also functions as an emphatic negative coordinator. Recall that diachronically it is grammaticalised from the combination of the coordinator *w* 'and' and the negative particle *lā*. Such a diachronic development of SFPs, where compounding a conjunction with a negative marker is involved, is attested in a number of languages, such as Serbian (Gajić, 2016), Spanish (Herburger, 2003) and Latin (Gianollo, 2017).

[1] However Camilleri and Sadler (2017) show that this is not necessarily an accurate characterisation of Maltese.

As a negative SFP, *wala* always precedes an indefinite noun. It is an inherently negative determiner restricted to occur only in negative or anti-veridical contexts, apart from another use in one upward-entailing environment, which involves the comparative. When it functions as a SFP it alternates between two closely related uses which I label NC (negative concord) and NQ (negative quantifier), depending on its position with respect to the verb, irrespective of its GFs, very much as I discussed in the previous chapter in its use in ENC.

When *wala* plus an indefinite noun occurs post-verbally, a sentential NEG must be expressed, yielding only one negative reading. This is seen in (1) where the subject is post-verbal in a VS sentence pattern. Here, therefore, *wala* is an NCI. The absence of sentential negation would result in an ungrammatical sentence, as in (1b). *wala* in this position i.e following the negative items, at least, does seem to be functioning as a concordial item.

(1) a. **mā** ğa **wala** ṭālib l-yom
NEG come.PFV.3SGM not.even student.SGM DEF-today
Not even a student came today.

b. *ğa **wala** ṭālib l-yom
come.PFV.3SGM not.even student.SGM DEF-today
Not even a student came today.

The same can be said when *wala* appears post-verbally with an object.

(2) a. **mā** garē-t **wala** ktāb
NEG read.PFV-1SG not.even book
I did not read even one book.

b. *garē-t **wala** ktāb
read.PFV-1SG not.even book
I did not read even one book.

The same cannot be said, however, when *wala* appears in front of the subject, which precedes the verb, as in (3a), or a fronted object (that precedes the verb) (3b). In this context, sentential NEG does not need to be expressed any more, and yet the sentence still carries negative meaning. Therefore, *wala* in this context contributes negation to the sentence without any other NEG marker present, and is regarded as an NQ rather than NC.

(3) a. **wala** ṭālib ğa l-yom
not.even student.SGM come.PFV.3SGM DEF-today
Not even a student came today.

b. **wala** ktāb garē-t-(ah) l-yom
not.even book.SGM read.PFV-1SG-3SGM.ACC DEF-today
Not even one book did I read today.

If *wala* occurs with a noun pre-verbally, but where a sentence negator such as *mā* is present, then double or true negation is involved. The inherently negative meanings of NQ *wala* and NEG *mā* cancel each other out yielding an affirmative reading, as in (4).

(4) a. **wala** ṭālib **mā** ğa l-yom
not.even student.SGM NEG come.PFV.3SGM DEF-today
Not even one student did not come today. ≡ Every student came today.

b. **wala** ktāb **mā** garē-t-(aha) l-yom
not.even book.SGM NEG read.PFV-1SG-3SGM.ACC DEF-today
Not even one book did I not read today. ≡ I read every book today.

Consistent with the above, the negative indefinite *wala* can occur in a negative fragment answer to a yes-no question, as in (5). Here again it follows the pre-verbal NQ pattern.

(5) a. min ğa l-yom?
who come.PFV.3SGM DEF-today
Who came today?

b. **wala** ṭālib
not.even student.SGM
Not even a student.

The behaviour of the indefinite determiner *wala* as an NQ in preverbal position is similar to the behaviour of the lexicalised NQ indefinite pronoun *mā*ħ*ad* 'nobody'. This is transparently derived from the combination of the negative particle *mā* plus the indefinite pronoun *a*ħ*ad* 'anyone'. (More on the indefinite pronoun *a*ħ*ad* will follow in section 2, since it functions as a weak NPI).

The indefinite NQ pronoun is restricted in its distribution as it must always appear before the verb occupying the subject position (6a) (and not a fronted object (6d)). This is different from *wala* which can occupy either a subject or a fronted object position. As shown in (6a), *mā*ħ*ad* does not require sentential negation, as it is inherently negative. If it is accompanied by sentential negation pre-verbally, as in (6b), an a?rmative reading is obtained just as with pre-verbal *wala . . . mā* above. *mā*ħ*ad* as a SUBJ occurring in a post-verbal position, results in ungrammaticality (6c). Descriptively, *mā*ħ*ad* must always be a preverbal subject.

(6) a. **mā**ħ**ad** ğa l-yom
no.one come.PFV.3SGM DEF-today
No one came today.

b. **mā**ħ**ad mā** ğa l-yom
no.one NEG come.PFV.3SGM DEF-today
No one did not come today/Every one came today.

c. *ğa **mā**ħ**ad** l-yom
come.PFV.3SGM no.one DEF-today
No one came today.

d. ***mā**ħ**ad** šif-t-ha
no.one see.PFV-1SG-3SGM
I did not see (anyone)[2]

[2]Occurrence of (6d) is possible in a question, however. E.G.

Furthermore, as was the case with *wala*, *māħad* in a fragment answer provides us with an inherently negative interpretation, as in (8). When *māħad* occurs alone in a fragment answer, it can have other functions other than subject, such as object in (9b).

(8) a. min ğa l-yom?
who come.PFV.3SGM DEF-today
Who came today?

b. **māħad**
not.one
No one

(9) a. min šif-t l-yom?
who see.PFV-1SG DEF-today
Who did you see today?

b. **māħad/wala aħad**
not.one/not.even one
No one/Not even one

Based on the behaviour of the data above, it can be noted that occurrence in a negative fragment answer is not a sufficient diagnostic test to rely on as evidence for classifying a word with inherently negative meaning as an n-word/NCI in TA or not. Clearly, there are words such as *māħad* which have a negative meaning but only ever function as NQs rather than NCs, which also pass this test.

To sum up it may be said that in the TA data discussed so far, only the post-verbal indefinite determiner *wala* can be a NC item, since when it co-occurs with sentential negation only a single logical negation results. By contrast, preverbal *wala* (4a), (4b) and *māħad* (6b) are NQs rather than NC items, when they co-occur with sentential negation due to the fact that double negation will be the outcome.

Other Arabic dialects differ considerably in this area. In MSA, *wala* only exists as a negative conjunction and does not have any negative indefinite determiner uses.

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(7) māħad šif-t-ha?
no.one see.PFV-2SG-3SGM
Did you see anyone?

.

Instead *lā* is used as a negative determiner with indefinite nouns, but always functions as a NQ rather than a NC, so if it co-occurs with sentence negation a positive reading comes about, and it must occur in pre-verbal subject position. As a negative indefinite pronoun MSA has *lā ʔaħada* instead of *māħad*, but which displays the same behaviour. As a consequence, MSA has no NC phenomena. Some other dialects like Palestinian, and Jordanian are similar to TA in using *wala* as a determiner with the same alternation between NC and NQ, and *maħaddiš/maħadāš/māħad* as a NQ (Lucas, 2009; Hoyt, 2010; Alsarayreh, 2012).

5.2.2 Adverbial n-words

The negative adverbial elements to be considered in this section are the 'never' words *(abadan, nihāʔiyyan)* and the 'not-yet' words *(lissa, laħadlān)* which seem to behave like n-words with inherently negative meaning.

abadan and *nihāiyyan*, when they mean 'never', must occur in the context of sentential negation, e.g *mā*, irrespective of the position they occupy with respect to the verb. They are strict NCIs and never generate a positive meaning when co-occurring with sentence negation (10a)[3]. Furthermore, they can be used alone to provide a negative fragment answer to a question (as in (11b)).

(10) a. **(abadan) mā** rāħ ʔa-nsa ha̱da l-yom **(abadan)**
ever NEG FUT 1SG-forget.IMPV this.SGM DEF-day ever
I will never forget this day.

b. ***(abadan)** rāħ ʔa-nsa ha̱da l-yom
ever FUT 1SG-forget.IMPV this.SGM DEF-day ever
I will never forget this day.

[3]In the following section I will show how NCIs such as *abadan* and the others can be licensed via an NQ, and not necessarily only by sentential negation. This behaviour is referred to as spreading.

(11) a. ta-ħib s-samak?
2SGM-like.IMPV DEF-fish
Do you like fish?

b. **abadan**
ever
Never.

The other two TA negative adverbs to consider are *lissa/laħadlān*. These seem to behave as NCIs just like *abadan* and *nihāiyyan*, occurring in the context of sentential negation and providing a negative interpretation in fragment answers to questions.

(12) a. **lissa/laħdlān mā** ğa ʔali
not-yet/not-yet NEG come.PFV.3SGM Ali
Ali did not come yet.

b. **mā** ğa ʔali **lissa**
NEG come.PFV.3SGM Ali not-yet
Ali did not come yet.

(13) a. ğa ʔali?
come.PFV.3SGM Ali
Did Ali come?

b. **lissa/laħadlān**
still
Not yet.

The fact that these two 'not yet' adverbial elements are NCIs leads us to expect that they occur only in the context of sentential negation (and the set of anti-veridical contexts). It is certainly true that these expressions tend to appear predominately in such contexts, however this is not always the case.

The two adverbs *lissa/laħadlān* seem to have a distinctive distribution. The TA data in particular demonstrates that these adverbs can also mean 'still', in positive contexts, as in (14), where it is clear that in both the yes-no questions, as well as in declaratives, *lissa* is present without the sentential negation marker *mā*.

(14) a. **lissa** ğālis ta-gra?
still sit.ACT.PTCP.SGM 2SGM-read.IMPV
Are you still reading?

b. lissa ğālis a-gra
still sit.ACT.PTCP.SGM 1SG-read.IMPV
I am still reading.

It can be concluded by saying that the negative adverbials elements including the 'never words' and the 'not yet words' function as n-words with inherently negative meaning. However, the data on (14) demonstrates that, a part from the additional function of the two adverbs as n-words, they can occur in non-negative contexts where they mean 'still' in positive contexts.

5.2.2.1 Spreading and NC

From what has been said above, it can be seen that TA is, with respect to *wala*, a non-strict NC language. As defined in Chp 1 section (1.2.3.2), that means that (unlike in Russian, for example) n-words can occur in full sentences alone, before the verb, without the accompaniment of sentential NEG expressed through *mā*, for example, where they still give rise to a NEG meaning. Following the verb, however, they need to be in the scope of a pre-verbal sentential NEG (such as *mā*, or in non-verbal sentences, *mū* etc.). In that case, negative concord is found and the multiple negatives do not cancel each other out.

In addition to TA being a non-strict NC language, it also (like Spanish) allows 'spreading', where there is the presence of more than one NCI without a NEG marker. In this case the first NCI may be thought of as licensing the others in place of *mā*. This is seen in (15), where the negative determiner *wala* with the pre-verbal subject of the verb licenses the strict NCI *lissa* postverbally without *mā* being present. All this follows from the fact that as discussed earlier, *wala* + NP functions as a NQ.

(15) a. **wala** ṭālib ğa **lissa/laħadlān**
not.even student.SGM come.PFV.3SGM yet/yet
Not even a student came yet.

b. **māħad** ğa **lissa/laħadlān**
NEG come.PFV.3SGM yet/yet
No one came yet.

In (16) the same effect is produced where NQ *māħad* licenses the pre-verbal negative adverb *abadan*, via spreading, and where negative concord arises, rather than double negation that results in a positive reading.

(16) a. **abadan māħad** sʔal ʕan-i
ever no.one ask.PFV.3SGM about-1SG.GEN
Nobody asked about me ever.

However spreading is not available when *wala* is post-verbal, as shown by the ungrammatical examples in (17), unless with the NQ *māħad* as in (17c).

(17) a. ***lissa/laħadlān** ğa **wala** ṭālib
yet/yet come.PFV.3SGM not.even students.SGM
Not even a student came yet.

b. ***abadan** kalam **wala** wāħad
ever call.PFV.3SGM not.even one
Not even one called ever.

c. **māħad** ğāb **wala** **šey**
no.one bring.PFV.3SGM not.even thing
No one brought anything.

5.2.2.2 Locality and NC

One of the most important syntactic issues concerning negative concord which is discussed in the literature is that of 'locality'. It is often assumed cross-linguistically that the concord relationship between an inherently negative word, such as a sentence negator, and an NCI/n-word, operates only within the same clause, i.e. is strictly local. In other words, it is subject to a strict local licensing constraint. This means that NC is always clause-bound and must arise in the same clause, not for example between an element in a matrix clause and an element in a complement

clause, whether finite or non-finite.

Haegeman and Zanuttini (1996); Giannakidou (1997a); Przepiórkowski and Kupść (1997); Brown (1999); Giannakidou (2000); Herburger (2001); Zeijlstra (2004); Watanabe (2004); Progovac (2005); and Giannakidou (2006) argue that subordinate clauses are in general boundaries for n-word licensing. If we take Polish, which is considered as a strict NC language, in (18a) we see that the n-word *nikogo* requires a sentence negator *nie* in the same clause to license it. In (18b) the sentence negator appears in the matrix clause and hence fails to license *nikogo* in the lower clause, even though the verb in the matrix clause is the negative raising (NR) verb 'believe'.

(18) a. Jan ądzi, że Marysia **nikogo** ***(nie)** lubi
John believes that.ind Mary nobody not like
John believes that Mary doesn't like anybody.

b. *Jan **(nie)** ądzi, że Marysia **nikogo** lubi
John NEG believes that.subj Mary nobody like
John believes that Mary doesn't like anybody. Polish: Przepiórkowski and Kupść (1997, p.132)

Giannakidou (2006) shows that locality is very strict in languages such as Polish and Russian, since the n-word is not only not accepted in indicative complements, but also not in subjunctive domains.

Long distance licensing of NCIs has however been found in a few cases mentioned in the literature, such as in Spanish (Aranovich, 1993), Greek (Giannakidou, 2000), Hungarian (Tóth, 1999) and Italian (Zeijlstra, 2004). This arises particularly when the verb is a NR predicate in a matrix clause, so the negation in that clause can be interpreted as licensing the n-word in the indicative complement. Nevertheless, Giannakidou notes for Greek that 'Emphatic licensing in the complements of epistemic neg-raising verbs is generally very weak, and subject to performativity constraints: person (the embedding predicate must be 1st person singular), and tense constraints

(only present tense is acceptable).' In (19a) we can see that in Greek, where the matrix verb is not NR, in past tense, and has a 3rd person subject, an n-word in the dependent clause is not licensed. In (19b), however, where the matrix verb is NR, in present tense, and has a first person subject, an NCI in the dependent clause is licensed.

(19) a. *O Pavlos **dhen** ipe [oti idhe **kanenan**]
DEF Paul NEG say.PFV.3SG that see.PFV.3SG n-person
Paul did not say he saw anybody.

b. **Dhen** pistevo [oti idhes **kanenan**]
NEG believe.IMPV.1SG that see.PFV-2SG n-person
I don't believe you saw anybody. Greek: Giannakidou (2000, p. 492-493)

Furthermore, in some languages such as Greek, Serbian/Croatian, and Italian, long distance licensing is more possible for an NCI in a subjunctive or infinitival clause, as in (20), than it would be in an indicative complement. Here the n-word is in the subjunctive complement of a negated matrix NR verb.

(20) O Pavlos dhen theli [na dhi **kanenan**]
dhen NEG want.IMPV.3SG SUBJ see.IMPV.3SG n-person
Her glossing: the Paul not want.3SG SUBJ see.3SG n-person
Paul does not want to see anybody. Greek: Giannakidou (2000, p.492)

In Spanish we also find some acceptable long distance NC examples where the matrix verb is also 1st person present NR and the verb in the dependent clause is subjunctive (21), rather than an indicative.

(21) **No** quiero [que visites a **ninguno** de sus
NEG want.1SG.PRES,INDIC COMP visit.2SG.SUBJ ACC no.one of their
amigos
friends
I do not want you to visit any of their friends. Spanish: Aranovich (1993, p. 204)

Previous studies on Arabic have not given much attention to this issue. However, Hoyt (2005, 2014) considers possible instances of long distance NC licensing for Palestinian Arabic. He observes that it only occurs where the higher verbs are of a certain type, including many with the same meanings as those considered above. Not all are NR verbs. They include verbs such as *bidd* 'want'; *χalla* 'let'; *ħāwal* 'try'; *fakkar* 'think'; *ṣār* 'become', and modal auxiliaries such as *mumkin* 'can; might be; be possible' and *lāzim* 'must; have to; necessary'. Examples of such structures are seen in (22), where sentential NEG marking via *mā/miš/-š* on the higher verb licenses NCI *wala* in an apparent dependent clause, even in the absence of any overt complementiser, although a complementiser provides us with clearer evidence of the existence of a clause boundary.

(22) a. ʔana **miš** ʔārif [a-fham **wala** kilmi
I NEG know.ACT.PTCP.SGM 1SG-understand.IMPV not.even word
min kalām-ak]
from speech-2SGM.ACC
I can't understand even one word of your speech. Hoyt (2014, p.2)

b. **mā** b-a-fakkir [inn-ha bi-t-ħibb **wala**
NEG IND-1SG-think.IMPV COMP-3SGF.ACC IND-3SGF-like.IMPV not.even
wāħad min-hum]
one from-3PL.GEN
I don't think that she likes even one of them. Hoyt (2014, p. 2)

c. b-yi-smaħ-il-nā-**š** in-šūf [**wala** ʔiši]
IND-3SGM-let-DAT-1PL-NEG 1SG-see.IMPV not.even thing
He doesn't let us see even one thing. Palestinian: Hoyt (2014, p. 28)

However, rather than recognising such instances as cases of long distance NC licensing, Hoyt regards them as a sign that the higher verbs in these cases trigger 'restructuring'. This he defines as follows: 'Restructuring involves the 'stretching' of the domain of locality for certain kinds of bounded dependencies from the complement of a trigger verb to include the clause that it heads' (2006). This comes close to saying that effectively these verbs turn two clauses into one, in which case of course the NC licensing is within one extended clause rather than between two

clauses, so is simply of the expected local type. He also says that the: 'Long-distance negative is identified as a restructuring phenomena'. He further however adds that: 'At present no other phenomena have been identified in PA which independently indicate restructuring', which of course weakens the credibility of this interpretation. Nevertheless he also points out that 'long-distance negative concord is identified as a restructuring phenomenon in several languages such as West Flemish (Haegeman and Zanuttini, 1996); Polish (Dziwirek, 1998); and Serbian (Progovac, 2000)'.

Turning now to TA, our task here is to consider if all this is relevant at all, for TA. Indeed the facts do not hold in the same way as in Palestinian Arabic. In particular it is easy to find examples of long distance NC with overt complementisers separating the clauses, as was found in Greek and Polish earlier. Such instances must be analysed as involving two clauses and cannot be treated as 'restructuring' (23), although one does find instances of the presence of complementiser in control and raising structures, and so the presence of the complementiser may not be as key. In (23) it is apparent that sentential NEG *mā* in the matrix clause with an NR verb can license *abadan* and post-verbal *wala* long-distance, in the embedded clause. The higher verbs are not of the restructuring type, and can take distinct verb-forms, including perfective forms, in their complement clauses.

(23) a. **mā** atwaqqaʕ [anna-kum gābal-tu baʕẓ
NEG 1SG-think.IMPV COMP-2PLM.ACC meet.PFV-2PL each.other
abadan]
ever

I think that you have never met each other before.

b. **mā** fakkar-t [inn-i a-rred ʕalē-ha
NEG think.PFV-1SG COMP-1SG.ACC 1SG-answer.IMPV to-3SGF.GEN
wala (ħatta) ib-risāla]
not.even even with-message

I do not think even to reply to her with a message.

c. **mā** atwaqqaʕ [inna ħaẓar **wala**
NEG 1SG-think.IMPV COMP-3SGM.ACC attend.PFV.3SGM not.even

wāħad menə-hum]
one from-3PL.GEN
I do not think that even one of them attended.

d. **mā** atwaqqaʕ [**inn-hum** wṣal-aw al-ryāḍ
NEG 1SG-think.IMPV COMP-3PLM.ACC arrive.PFV-3PL DEF-riyadh
laħadlān]
yet
I do not think that they have arrived in Riyadh yet.

On an assumption that one can think of ħ*awal* 'try' and *kallaf* 'cost' as control verbs, then here too it is observed that long distance licensing is allowed.

(24) a. **mā** ħawal inn-a iraḍi-ha **wala**
NEG try.PFV.3SGM COMP-3SGM.ACC 3SGM-satisfy-3SGF.ACC not.even
ba-kilma
with-word
He didn't try to satisfy her not even with one word.

b. **mā** kallaf nafs-a inn-a yaʕtiḏər
NEG cost.PFV.3SGM self-3SGM COMP-3SGM.ACC 3SGM-aplogise.IMPV
wala ib-risāla
even with-message
He didn't try to apologise not even with a message.

Finally, an investigation of the behaviour of n-words and locality was also conducted for n-words in Maltese in Camilleri and Sadler (2017). There they observe that Maltese n-words are not restricted to local NEG-licensing contexts, as shown through (25).

(25) a. **Ma** sab-et [li donn-u [kien-u
NEG find.PFV-3SGF COMP appear-3SGM.GEN be.PFV.3-PL
itaqgħ-u **qatt imkien**]]
meet.RECEP.PFV.3-PL
She didn't find that they seemed to have ever met anywhere.

b. **Ma** j-i-dhr-u [li kien-u ppruva-w
NEG 3-FRMVWL-appear.IMPV-PL COMP be.PFV.3-PL try.IMPV.3-PL
[j-weġġgħ-u 'I **ħadd** bi kliem-hom]
3-hurt.IMPV-PL ACC no.one with word.PL-3PL.GEN

> They don't seem that they had tried to hurt anyone with their words.
> Maltese: Camilleri and Sadler (2017, pp. 152-153)

With this the conclusion is reached that indeed in TA, as shown in Maltese, n-words can be licensed long-distance.

5.3 Negative Polarity Items

In this section I now move on to consider the other type of NSIs: NPIs. The term NPI refers to certain expressions, which, subject to semantic and/or syntactic constraints, need to be licensed appropriately in contexts which are either negative (anti-veridical) or non-veridical, where sentential negation is not involved.

Just like the n-words discussed in the previous section, NPIs can be of different syntactic categories. Unlike n-words/NCIs, however, these expressions are not inherently negative, and so they cannot occur in fragment answer contexts. The NPIs to be discussed for TA vary in their distribution, with some of them being identified as strict, meaning that they have a restricted distribution and can occur only in negative context (the same environments/contexts that license n-words), while others are termed non-strict as they occur in certain non-negative contexts including interrogative, conditional, comparative, and modal constructions, which are all non-veridical contexts Zwarts (1998), but not in simple affirmative contexts. In addition, some NPIs occur in affirmative contexts but may be simply more frequent in their occurrence in negative contexts. Recall that, as mentioned in Chapter 1, Hoeksema (1994) calls these 'semi-NPIs'. In this section I introduce such different NPIs in TA and account for their distribution.

5.3.1 NP NPIs

The indefinite pronouns *aħad* 'one, anyone' and *šey* 'thing, anything' are the most common nominal NPIs in TA.

NPI *aħad* is used to refer to singular animate beings (regardless of gender and number), and can appear in subject and object positions. It must however always come after the verb, with sentential NEG *mā* obligatorily present.

(26) a. **mā** ğa **aħad**
NEG come.PFV.3SGM one
No one came.

b. ***aħad mā** ğa
one NEG come.PFV.3SGM
No one came.

c. *ğa **aħad**
come.PFV.3SGM one
Someone came.

In contrast to the NQ *māħad*, *aħad* can appear in object position, as shown by (27a) vs. (6d), where the NQ *māħad* only appears in subject position preceding the verb, and without the presence of *mā*, unless a double negative is intended, as described earlier.

(27) a. **mā** šif-t **aħad**
NEG see.PFV-1SG one
I did not see anyone.

b. *šif-t **aħad**
see.PFV-1SG one
I saw someone.

māħad as a NQ can in fact license NPI *aħad* in OBJ position in the absence of sentential NEG, as in (28a), illustrating an instance of spreading, where NPI *aħad* is licensed by *māħad*. Adding sentential NEG, as in (28b) results in negative doubling.

(28) a. **māħad** šāf **aħad**
no.one see.PFV.3SGM one
No one saw anyone.

b. **māħad mā** šāf **aħad**
no.one NEG see.PFV.3SGM one
No one did not see anyone.

The general behaviour of *aħad* cannot be explained, for example, by arguing that it cannot appear in pre-verbal position because it is indefinite, since *māħad* is

also indefinite but does appear pre-verbally. Nor can one associate its behaviour with GF roles, since although *mā*ħ*ad* must be subject, *a*ħ*ad* is not restricted to the role of object but can be either subject or object. Hence it must be argued that the key principle underlying the observed behaviour is not semantic but syntactic, and essentially a matter of word order. Put technically, *a*ħ*ad* is constrained by a syntactic condition where it must be c-commanded by the negative marker *mā* (or an equivalent form with inherent negative meaning). Only then is it properly licensed and in the scope of negation.[4]

Nominal *šey* is the second prominent nominal NPI in TA, and denotes inanimates. It displays the same basic behaviours as *a*ħ*ad*, seen above. It can be subject or object, but must occur post-verbally preceded/licensed by sentence NEG *mā* or some other inherently negative form (*mū*, a NQ etc.).

(29) a. **mā** ṣār **šey**
NEG become.PFV.3SGM thing
Nothing happened.

b. **mā** šarē-t **šey**
NEG buy.PFV-1SG thing
I did not buy anything.

Evidence that *a*ħ*ad* and *šey* are not restricted only to contexts involving sentential negation, unlike n-words, is shown by the fact that these are available in non-veridical contexts such as polar interrogative constructions, as in (30).

(30) a. ǧā **a**ħ**ad**?
come.PFV.3SGM one
Did anyone come?

b. šarē-t **šey**?
buy.PFV-2SGM thing
Did you buy anything?

In reply to such questions, however, NPIs *a*ħ*ad* and *šey* cannot be used to give a negative response. Only the NQ/NCI forms *wala a*ħ*ad*/*mā*ħ*ad* 'nobody' and *wala*

[4]The literature refers to this as 'direct scope'. An expression has direct scope over an expression *b* if and only if *b* is in the semantic scope of *a* and *a* c-commands *b* at the semantic-structure level.

šey 'nothing' can be used to achieve this.

In addition to their frequent occurrence in non-veridical contexts, the nominal *šey*, but not *aħad*, can appear in affirmative veridical contexts as illustrated in (31c). In general, in affirmative veridical contexts there exists a positive form *wāħad* 'somebody' which is used in place of *aħad*. *šey* however can be used unaltered in the sense of 'something' as well as 'anything' (31d) in the presence of negation or other anti-veridical contexts.

(31) a. šif-t **wāħad** ʕind
see.PFV-1SG one at
l-bāb
DEF-door
I saw someone at the door.

b. ***mā** šif-t **wāħad** ʕind
NEG see.PFV-1SG one at
l-bāb
DEF-door
I did not see anyone at the door.

c. šarē-t **šey** ġāli
buy.PFV-1SG thing expensive.SGM
I bought something expensive

d. **mā** šarē-t **šey**
NEG buy.PFV-1SG thing
ġālī
expensive.SGM
I didn't buy anything expensive

The literature refers to forms which behave like *šey* as semi-NPIs, as mentioned in Chapter 1. Hoeksema (1994) shows that since these types of expressions can occur in affirmative declarative sentences, beside their frequent occurrence in negative or interrogative environments, then these are to be considered as semi-NPIs, as opposed to strict or non-strict NPIs. It is possible therefore to conclude by saying that *šey* is a semi-NPI by virtue of occurring in positive contexts in addition to non-veridical contexts. By contrast, *aħad* is a full NPI which does not appear in positive contexts, since *wāħad* is used there instead.

Forms related to *aħad* and *šey* are used in many other Arabic varieties, but not always displaying the same behaviour as in TA. In some Arabic dialects both *aħad* and *šey* function as non-strict/non-strong NPIs as in TA: Palestinian *ħada*, *iši*;

Egyptian ħ*add*, ħ*āga* (equivalent to *šey*); Levantine Arabic ħ*ada*, *iši* (Hoyt, 2010) and (Lucas, 2009).

In some other varieties such as Libyan and Maltese these function in part like n-words. In (32a)-(32b) and (33a)- (33b), *a*ħ*ad* and *šey* are inherently negative items which can function as fragment answers to questions, unlike in TA. Therefore, the presence of a sentential NEG marker in the a versions below, is obligatory, irrespective of the word order, and always prompts an NC reading, not a double negative reading.

(32) a. *(**ma**) šuf-t **šay**
NEG see.PFV-1SG thing
I saw nothing. Libyan Arabic: Krer (2013, 83)

b. šini diri-t?
what do.PFV-2SGM
What did you do?

c. **šay**
nothing
Nothing. Libyan Arabic: Krer (2013, 82)

(33) a. ħ**add** ***(m'hu)** **xejn**
no.one NEG.3SGM nothing
No one is anything. Maltese: Lucas (2009, p.150)

b. X'ra-t?
what.see.PFV-3SGF
What did you see?

c. **xejn**
nothing
Nothing. Maltese: Lucas (2009, pp. 223-224)

At the same time, however, Libyan and Maltese allow these items in some non-negative contexts such as questions, which suggest a non-strict NPI status (34).

(34) a. šuf-t **šay**?
see.PFV-2SGM anything
Did you see anything? Libyan Arabic: Ghadgoud (2017, p.147)

b. kil-t **xein** ċikkulata?
eat.PFV-2SG nothing chocolate
Did you eat any chocolate? Maltese: Camilleri and Sadler (2017, p.154)

Based on the data, *šay* in Libyan and *xejn* in Maltese are taken to be n-words that engage in NC when they combine with sentential negation. Also, they provide a negative fragment answer on their own without being combined with negation. This lead us to expect that they can occur only in a negative contexts, in addition to fragment answers. However, this is not always the case. At the same time, Libyan and Maltese allow these items in some non-negative contexts, such as in polar interrogative and therefore they are not restricted only to negative contexts, which suggests a non-strict NPI status (34).. This suggests that it is possible for Maltese *xejn* and Libyan *šay* to be both an NCI and NPI.

5.3.2 Determiner NPIs

Determiners in TA include ʔ*ayy* 'any, which', *walaw* 'not even', and ħ*atta* 'even, not even'. These items will be presented separately.

ʔ***ayy***

The determiner ʔ*ayy* in the sense of 'any' combines with indefinite nouns which may be subjects or objects. It occurs however only post-verbally, and is found in the direct scope of a sentential NEG (35a), or a NQ (35c).

(35) a. **mā** ğa **ʔayy** ṭālib ʕala l-mawʕad
NEG come.PFV.3SGM any student on DEF-appointment
No student came on time.

b. *?**ayy** ṭālib **mā** ğa ʕala l-mawʕad
any student NEG come.PFV.3SGM on DEF-appointment
No student came on time.

c. **māħad/wala aħad** šāf ʔ**ayy** šey
no.one/not.even one see.PFV.3SGM any thing
Nobody saw anything/ No one saw anything.

ʔ*ayy* can also occur in polar questions (36). However, it cannot form part of a negative fragment answer/a negative response to (36). This would require the use of *wala ktāb*, not ʔ*ayy ktāb*. Hence, ʔ*ayy* is considered as non-strict NPI by virtue of not being restricted to appear only in negative environments, but also licensed by non-veridical contexts, such as interrogative contexts. Hence, it can be said that ʔ*ayy* is just like *aħad* and *šey* in that it is constrained by a syntactic condition which is that it must occur after the verb that is itself marked for negation or interrogative but is not itself inherently negative.

(36) garē-t ʔ**ayy** ktāb?
read.PFV-2SGM any book
Did you read any book?

Notably ʔ*ayy* also has another separate determiner function, in wh-questions, which is outside our scope. There it is has the meaning of 'which' (37) and can occur pre-verbally and without any involvement with negation.

(37) ʔ**ayy** ktāb garē-t?
any book read.PFV-2SGM
Which book did you read?

walaw

The determiner *walaw* 'even a/one, not even' also combines with indefinite nouns but must always be accompanied by sentential negation (or an inherently negative NQ) (38).

(38) a. **mā** ğa **walaw** ṭālib ʕala l-mawʕad
NEG come.PFV.3SGM not.even student on DEF-appointment
Not even one student came on time.

b. **maħad** sʔal ʕin-i **walaw** ib-risāla
no.one ask.PFV.3SGM about-1SG.GEN not.even with-message
Nobody asked me even in a message.

walaw however can appear not only post-verbally but also pre-verbally provided that the context is overtly negative (39). Evidence that it is an NPI rather than a NQ is shown by the fact that a double negative reading does not arise, unlike what was seen to be the case with *wala* as a determiner, which in such instances gives a double negative interpretation.

(39) a. **walaw** ṭālib **mā** ǧa ʕala l-mawʕad
not.even student NEG come.PFV.3SGM on DEF-appointment
Even one student did not come on time.

b. **walaw** b-rysāla **maħad** sʔal ʕin-i
not.even with-message no.one ask.PFV.3SGM about-1SG.GEN
Nobody asked me even in a message.

c. **wala** ṭālib **mā** ǧa ʕala l-mawʕad
not.even student NEG come.PFV.3SGM on DEF-appointment
Not even one student did not come on time. ≡ Every student came on time.

The strict NPI status of *walaw* is confirmed by the fact that it cannot appear in questions (unless they are negative questions), and cannot appear as a negative fragment response to a question, as illustrated through the ungrammaticality of (41b). Thus *walaw* is not inherently negative and it functions as a NPI rather than NCI.

(40) *ǧa **walaw** ṭālib ʕala l-mawʕad?
come.PFV.3SGM not.even student on DEF-appointment
Did even one student come on time?

(41) a. min ǧa l-yom?
who come.PFV.3SGM DEF-today
Who came today?

b. ***walaw** ṭālib
not.even student
Not even a student.

ħ***atta***

ħ*atta* is a SFP which functions as a determiner NPI which must always occur in the context of negation. It may attach either to an indefinite or definite noun,

with some difference in behaviour. It indicates a minimiser meaning with respect to the noun it specifies. With indefinite nouns it patterns like *walaw*, i.e. where irrespective of its position before or after the verb, sentential negation (42a) or some inherently negative form (42b) is present.

(42) a. **mā** šara-t-li **ħatta** bakla
NEG buy.PFV-3SGF-1SG even hairband
She did not buy me even a hairband.

b. **ħatta** bakla **mā** šara-t-li
even hairband NEG buy.PFV-3SGF-1SG
She did not buy me even a hairband.

c. ***ħatta** bakla šara-t-li
even hairband buy.PFV-3SGF-1SG
Even a hairband she did not buy me. / Not even a hairband she bought me.

Furthermore, ħ*atta* with an indefinite noun cannot appear in questions or fragment answers to questions. On the basis of its behaviour, therefore, ħ*atta* with an indefinite noun functions as a strict NPI.

When ħ*atta* is not licensed by sentential negation, it may however be licensed by *wala* as shown in (43), which, as discussed above, functions preverbally as an NQ in TA.

(43) **wala ħatta** ṭālib ğa l-yom
not.even even student come.PFV.3SGM DEF-today
Not even one student came today.

It is important also to point out that the determiner ħ*atta* can mean also 'even' when it precedes a definite noun as shown in (44), as opposed to the minimiser ħ*atta*, which precedes an indefinite as above. With definites, ħ*atta* is not limited to negative contexts, and can occur in both negative and affirmative sentences, as

shown below in (44).

(44) a. **mā** ğa **ħatta** l-mušrif l-yom
NEG come.PFV.3SGM even DEF-supervisor.SGM DEF-today
Even the supervisor did not come today.

b. **ħatta** l-mušrif **mā** ğa l-yom
even DEF-supervisor.SGM NEG come.PFV.3SGM DEF-today
Even the the supervisor did not come today.

c. **ħatta** l-mušrif ğa l-yom
even DEF-supervisor.SGM come.PFV.3SGM DEF-today
Even the the supervisor came today.

ħ*atta* is found in other Arabic vernaculars, such as Palestinian and Moroccan, however the distribution is different.

As Lucas (2009) points out, the determiner ħ*atta* in Moroccan functions as an n-word meaning 'not even'. Hence it can be used to provide a negative fragment answer to a question, and in the presence of sentential negation, which is obligatory, only one negative reading is yielded.

(45) a. **ma** kayswa **ħatta** bəṣla
NEG be.worth.IMPV.3SGM even onion
It's not worth a penny. Moroccan Arabic: Adila (1996, p.111-112)

However, it can also mean 'even', in Moroccan too, in parallel to TA, in an affirmative sentence with a definite noun (46). Lucas states that ħ*atta* in Moroccan Arabic occurs in affirmative contexts in a common way where it preserves the original meaning of Classical Arabic ħ*atta* 'even'.

(46) **ħatta** š-šibāni kayħəbb lə-bnāt
even DEF-old.man like.IMPV.3SGM DEF-girl.PLF
Even an old man (still) like girls. Moroccan Arabic: Harrell (1962, p.62)
cited in Lucas (2009, p.217)

(47) a. škun kayskən
who live.IMPV.3SGM
mʕ-ak?
with-2SG.GEN
Who lives with you?

b. ħ**atta** wāħəd
even one
No one. Moroccan Arabic: Ouali (2008, p.9)

5.3.3 Adverbial NPIs

The adverbial NPIs in TA include the aspectual and temporal adverbs ʕ*ād* 'any more', *ba*ʕ*ad* 'yet', and ʕ*umur* 'ever, never'.

ʕ***umur***

The first adverbial element to be considered here is ʕ*umur*. ʕ*umur* functions as an adverbial NPI that has the meaning 'never, ever', but inflects like a noun, in that it obligatorily has an attached pronoun, varying for person, number and gender. Its literal meaning is 'life, age', as used in (48a), where ʕ*umur* functions as a predicative nominal in a verbless sentence. Negating ʕ*umur* as a predicate is through *mū* or the inflected negative particles, but not *mā* or *wal*a, as in (48b).

(48) a. ʕ**umur-i** χams sanw-āt
age-1SG.GEN five year-PLF
I am five years of age.

b. haḏa **mū** ʕ**umur-i** l-ħagigi
this.SGM NEG age-1SG.GEN DEF-real.SGM
This is not my real age.

The adverb ʕ*umur* predominately occurs in negative contexts, typically before, rather than after the verb. It co-occurs with the sentence NEG marker *mā*, but it does not do so exclusively. The negation marker *mā* either occurs in its usual position immediately before the verb, as in (49a), or immediately before ʕ*umur* itself (49b). In either case it gives the adverbial a negative meaning 'never'. If however *mā* appears in both positions, as in (49c), then a double negative ≡ positive effect is observed. This shows that the combination *mā* ʕ*umur* (rather like *mā*ħ*ad*) is

inherently negative, so an n-word, while ʕ*umur* alone is an NPI.

(49) a. huda ʕ**umur-aha** **mā** sāfar-t maṣar
Huda life-3SGF.GEN NEG travel.PFV-3SGF Egypt
Huda has not travelled to Egypt ever.

b. huda **mā** ʕ**umur-aha** sāfar-t maṣar
Huda NEG life-3SGF.GEN travel.PFV-3SGF Egypt
Huda never travelled to Egypt.

c. **mā** ʕ**umur** **mā** ʔaʕli zār fahad
NEG ever NEG visit.PFV.3SGM Fahad
Ali has not never visited Fahad Saudi Northern Arabic: AlShammiry (2016, p.136)

The observed behaviour in TA is the opposite to that in Moroccan Arabic, where when the NEG marker appears in both ʕ*umur* (which functions as a pseudo-verb as well) and the verb, only one negative reading results. Lucas (2009) describes this specific item as the 'clearest example of negative concord in Moroccan Arabic' (p, 221).

(50) **ma** ʕamr-ə **ma** šəft-u
NEG life-1SG.GEN NEG see.PFV-1SG-3SGM.ACC
I have never seen him. Moroccan Arabic: Caubet (1996, p.91); Adila (1996, p.105); Durand (2004, p.198) in Lucas (2009, p.221)

If the sentential negation marker *mā* is not present either with ʕ*umur* or the lexical verb, and no other NQ such as *māhad* is present, then ʕ*umur* in TA cannot be licensed, as shown through the ungrammaticality of (51a). While (51a) is ungrammatical, as it involves a positive declarative context, ʕ*umur* is still available in non-veridical contexts such as (51b), which involves an interrogative. This shows that it is a non-strict NPI.

(51) a. *huda ʕ**umur-aha** sāfar-t maṣar
Huda life-3SGF.GEN travel.PFV-3SGF Egypt
Huda ever travelled to Egypt.

b. huda ʕ**umur-aha** sāfar-t maṣar?
Huda life-3SGF.GEN travel.PFV-3SGF Egypt
Did Huda ever travel to Egypt?

AlShammiry (2016) assumes that *mā* is fused onto ʕ*umur* since sentential negation *mā* can appear both on the verb, as well as with ʕ*umur*, as in (49c). He further suggests that this must be true because ʕ*umur* should be always adjacent to *mā*, and he provides an example where ʕ*umur* is not adjacent to *mā* and this is ungrammatical (52).

(52) ***mā** ʕali ʕ**umur-ih** zār fahad
NEG Ali life-3SGM.GEN visit.PFV.3SGM Fahad
Ali never visited Fahad. Saudi Northern Arabic: AlShammiry (2016, p.136)

However, I would argue that example (52) is ungrammatical not because negation is not expressed on ʕ*umur*, but because *mā* cannot be used to negate the noun *Ali*. It certainly cannot claim that *mā* always occurs immediately before, or is fused with ʕ*umur*, since ʕ*umur* can be licensed by a following *mā* on the verb as in (49a), and other non-veridical environments, as in (51b).

Furthermore, in negative imperatives *lā* can come before the adverb ʕ*umur*, or before the verb, (in parallel to *mā*), as shown in (53). What is crucial is that the adverb can only mean 'ever', without *mā* or *lā*, and cannot mean 'never'.

(53) a. **lā** ʕ**umur-k** ta-kḏib ʕali
NEG life.2SGM-GEN 2SGM-lie.IMPV on-1SG.GEN
Do not lie to me ever.

b. ʕ**umur-k** **lā** ta-kḏib ʕali
life.2SGM.GEN NEG 2SGM-lie.IMPV on-1SG.GEN
Do not lie to me ever.

ʕād

The second adverbial NPI element to consider is ʕ*ād* 'any more'. This is derived from the perfective 3SGM form of the verb ʕ*ād*, which broadly literally means 'return' or 'repeat'. In TA it is never used as a lexical verb with the meaning 'return', but it is used with the meaning 'repeat', as in (54), either in its perfective or imperfective form.

(54) a. l-madras-a ʕād-at l-xtibār lil-ṭālib-at
DEF-teacher-SGF repeat.PFV-3SGF DEF-exam to.DEF-student-PLF
The teacher repeated the exam for the students.

b. l-madras-a ta-ʕīd l-xtibār kil sana
DEF-teacher.SGF 3SGF-repeat.IMPV DEF-exam every year
lil-ṭālib-at
to.DEF-student-PLF
The teacher repeats the exams for the students each year.

When it functions as an adverb, it is invariant, and always pre-verbal and must come in front of either perfective or imperfective verbs (55). It always occurs in the scope of negation, and means 'anymore' and 'again'. It has a restricted distribution where it must always appear with *mā* (or in negative imperatives *lā*), with the verb following it.

(55) a. ʕali **mā ʕād** i-ṣalli fī l-masǧid
Ali NEG return.PFV.3SGM 3SGM-pray.IMPV in DEF-mosque
Ali does not pray in the mosque any more.

b. ʕali **mā ʕād** ǧa l-masǧid
Ali NEG return.PFV.3SGM come.PFV.3SGM DEF-mosque
Ali did not come to the mosque anymore/again.

c. *ʕali **ʕād** ǧa l-masǧid
Ali return.PFV.3SGM come.PFV.3SGM DEF-mosque
Ali did not come to the mosque anymore/again.

Furthermore, ʕ*ād* can only be licensed by a preceding *mā* and not by any other inherently negative item (e.g. *mū*, *mā*ħ*ad*). As seen in (56), if another inherently

negative expression occurs pre-verbally it does not remove the need for *mā* in the context of ʕ*ād*. Rather, it is negative concord that results.

(56) a. **mā ʕād wala** wāḥad ğa l-masğid
NEG return.PFV.3SGM even one come.PFV.3SGM not.even
DEF-mosque
Nobody went to the mosque any more.

This lexical item is mentioned in many studies on the Arabic dialects including Ingham (1994); AlShammiry (2016); Hoyt (2010); Lucas (2009). An example from Najdi Arabic is in (57).

(57) mā ʕād šif-ti-h
NEG return.PFV.3SGM see.PFV-1SG-3SGM.ACC
I have not seen him anymore. Najdi Arabic: Ingham (1994, p. 108)

In Yemeni Arabic (58) the non-verbal negator *miš* is required. This is the equivalent of *mū* in TA.

(58) miš ʕād gāt-na
NEG return.PFV.3SGM come.PFV-3SGF-1PL
She has not come anymore. Yemini Arabic: Mansoor (2012, p.36)

In TA, in addition to *mā*, ʕ*ād* can be also preceded by *lā* in negative imperative sentences, with the same restrictions (59).

(59) a. **lā ʕād** ta–kd̲ib ʔal-i
NEG return.PFV.3SGM 2SGM-lie.IMPV on-1SG.GEN
Do not lie to me anymore.

b. *ʕ**ād** ta–kd̲ib ʔal-i
return.PFV.3SGM 2SGM-lie.IMPV on-1SG.GEN
Do not lie to me anymore.

The same pattern is possible in Syrian Arabic, where ʕ*ād* 'anymore' can be negated either by *mā* or *lā*. However it differs from TA and other mentioned dialects, in that it inflects as a fully-fledged verb, even if Cowell (1964) argues that it

functions 'syntactically as a sort of intrusive adverb' (p. 389).

(60) a. **mā** ʕəd-na n-zūr-o
NEG return.PFV-1PL 1SG-visit.IMPV-3SGM.ACC
We don't visit him anymore. Syrian Arabic: Cowell (1964, p.389)

b. **lā** ʕəd-tu dz-ūr-ū
NEG return.PFV-2PL 2PL-visit.IMPV-3SGM.ACC
Don't visit him anymore. Syrian Arabic: Cowell (1964, p.389)

baʕd

The final adverbial element to consider is *baʕd* 'yet'. This adverb resembles *ʕumur* more than *ʕād*, in that it can only occur pre-verbally in negative contexts, yet can either follow or precede *mā*, as shown in (61). No other NQ can license *baʕd*[5].

(61) a. **mā** **baʕd** wṣal-na
NEG yet arrive.PFV-1PL
We have not arrived yet.

b. **baʕd** **mā** wṣal-na
yet NEG arrive.PFV-1PL
We have not arrived yet.

c. *__baʕd__ wṣal-na
yet arrive.PFV-1PL
We have not arrived yet.

When used as an answer to a question *baʕd* only occurs in such a response fragment with *mā*. Furthermore, if it occurs pre-verbally (along with *mā*), as well as with an inherently negative expression, a double negative reading results, as in (62).

(62) a. **māḥad/wala** **wāḥad** **mā** **baʕd** ğa
no.one/not.even one NEG yet come.PFV.3SGM
Nobody did not arrive/come yet/ No one did not arrive/come yet.

[5]While *baʕd* must be licensed by NEG in TA, in Levantine dialects it can occur in certain affirmative declarative sentences where it means 'still', and where it does not need to be licensed by negation. For more discussion see Lucas (2009) and Hoyt (2010).

5.3.4 Idiomatic NPIs

Idiomatic NPIs in TA include minimiser expressions, each of which combines in the form of an object NP only with one or a very small set of verbs in the negative, and denotes a minimal scalar degree. They are parallel to English: *budge/move an inch; lift/raise a finger; cost a red cent* and (US) *crack a book*. Idiomatic NPIs in TA similarly can take the form of an indefinite object NP with a verb in a negative context, such as *teswa fils aħmar* 'be worth a red cent', *teswa riyāl/halālah* 'be worth a pound/penny', *ħarak sākin/šiber wahad* 'budge an inch/one step', *fitaħ ktāb* 'open a book', *gara kilma* 'read a word', and *titnaffis ba-kilma* 'breathe a word', *tandiq ibħaraf* 'say a letter'. These must all be present in the context of sentential negation or a NQ.

(63) a. **mā** ʕind-i **fils aħmar**
NEG have-1SG.GEN red cent
I do not have anything.

b. **fils aħmar mā** ʕind-i
red cent NEG have-1SG.GEN
I do not have anything.

c. *__fils aħmar__ ʕind-i
red cent have-1SG.GEN
I do not have anything.

d. **wala fils aħmar** ʕind-i
not.even red cent have-1SG.GEN
Not even a red cent I have.

The table below (5.1) summarises the NPI behaviours discussed for the different NPI types, classifying them as (i) strong (i.e. obligatorily in sentential negation contexts) or constituent negation in their phrase, e.g. *ʕād + baʕd*, (ii) weak (i.e sentential negation contexts as well as non-veridical contexts) and (iii) semi-NPIs, as is the case with *šey*, which can appear in positive contexts.

NPI category	Strong-NPI	Weak-NPI	Semi-NPI
Nominal			
aħad		√	
šey			√
Determiner			
ʔayy		√	
walaw	√		
ħ*atta* + indefinite	√		
ħ*atta* + definite			√
Adverbial			
ʕumur		√	
ʕād/ baʕd	√		
Idiomatic			
fils aħmar/ riyal	√		
ħ*arak šibar waħad/ fitaħ ktāb*	√		

Table 5.1: The distribution of NPIs in TA according to their strength

Evidence that strong NPIs are still not n-words, comes from the fact that these items are not inherently negative and consequently do not provide a negative elliptical answer, and so cannot be used in fragment answer contexts.

5.3.5 Neg raising and NPI

Neg raising (NR) has already been described in chapter one where it was established that there is a difference with respect to negation between certain types of verb which take clausal complements such as *think* and *want* (NR verbs), and others such as *hope* and *say* (non-NR). With the former, sentential negation in the matrix clause yields the same meaning as sentential negation in the dependent clause. With the latter it does not.

If now the behaviour of NPIs in the dependent clause is examined, it is found that strong NPIs can be licensed by a negated NR verb in the higher clause (64), but not by a negated non-NR verb in the higher, matrix clause (65).

(64) a. **mā** a-twaqqaʕ inn-hum **baʕd** wṣal-aw
NEG 1SG-think.IMPV COMP-3PL.ACC yet arrive.PFV-3PLM
I do not think that they have arrived yet.

b. **mā** ʔa-ẓann inn-aha **ftaħ-t ktāb**
NEG 1SG-think.IMPV COMP-3SGF.ACC open.PFV-3SGF book
I do not think that she reads a word.

c. **mā** a-twaqqaʕ inn-ah maʕa-hu **fils aħmar**
NEG 1SG-think.IMPV COMP-3SGM.ACC with-3SGM.GEN red cent
I do not think that he has anything. (Strong NPI with NR-predicates)

(65) a. ***mā** samʕa-t inn-hum maʕa-hum **fils aħmar**
NEG hear.PFV-1SG COMP.3PLM.ACC with-3PLM.GEN red cent
I did not hear that they have anything.

b. ***mā** gil-t inn-hum **baʕd** wṣal-aw
NEG say.PFV-1SG COMP-3PLM.ACC yet arrive.PFV-3PLM
I did not say that they arrived yet.

c. ***mā** gil-t inn-aha **ftaħ-t ktāb**
NEG say.PFV-1SG COMP-3SGF.ACC open.PFV-3SGF book
I did not say that she reads a word.(Strong NPI with non NR-predicates)

By contrast, a weak NPI such as ʕ*umur* is licensed by a negated higher clause regardless of whether the matrix verb is NR or not (66).

(66) a. **mā** ʔa-ẓann inn-ah inn-ah ʕali
NEG 1SG-think.IMPV-1SG COMP-3SGM.ACC Ali life-3SGM.GEN
ʕ**umr-ah** sāfar barr-a
travel.PFV-3SGM abroad
I do not think that Ali has ever travelled abroad.

b. **mā** samʕa-t inn-a ʕali ʕ**umr-a**h kaḏib
NEG hear.PFV-1SG COMP-3SGM.ACC Ali life-3SGM.GEN lie.PFV.3SGM
ʕala aħad
on one
I have not heard that Ali has ever lied on anyone.

5.4 LFG analysis

Quite little work has been done in LFG on the handling of syntax of any of the NSI phenomena of the types described above. The one area which has, however, received some attention, which will be exploited here for our data, is that of the handling of NCIs at the syntactic level. For example, accounts of these have been proposed by Sells (2000) for Italian, by Laczkó et al. (2015) for Hungarian, by Przepiórkowski et al. (2015) for Polish, and by Camilleri and Sadler (2017) for Maltese. I draw on these for the account proposed here.

The task is of course complicated by the fact that, as seen above, NC in TA runs contrary to the way in which NC is commonly described for the languages of the world, in that it is not possible to say that TA is a strict NC language or a non-strict NC language. Rather it contains some n-words such as *abadan* which engage in strict NC, requiring the concordial presence of sentential *mā* or the like, regardless of whether they occur before or after the verb. Alongside that, TA possesses other n-words which engage in non-strict NC, requiring the concordial presence of sentential *mā* or the like only when they occur postverbally. The latter n-words include primarily determiner *wala* and the emphatic negative coordinators *lā* . . . *wala*

... (as seen in the previous chapter). This therefore requires any syntactic theory to provide a mechanism for handling NC in TA which is lexical item specific. It is fortunate therefore that indeed it is largely through information provided in lexical entries that LFG would in any case deal with such phenomena.

Broadly the solution chosen is to build on the use of the f-structure feature attributes ENEG and CNEG described in chapter 3. Essentially the use of CNEG is allowed to apply to negatively quantified words and expressions such as those for 'nothing' or 'never' or 'neither' in languages, when these are not functioning as NCIs, such that the feature CNEG is not only used in instances of constituent negation such as 'not Peter' or 'not in the morning'. In addition a separate feature attribute NC is posited, to label those negative words and expressions which do display negative concord behaviour, marking the fact that their negative quality does not cancel out other negative elements in a sentence. In other words, multiple CNEG + items, or a CNEG in the context of a cooccurring ENEG in a sentence, will each retain their own negative status and cancel each other out, so it will result in an overall positive reading. By contrast, an NC + item however requires co-occurrence of ENEG, which reinforces rather than cancels the negation.

Following this pattern, in order to account for strict NCIs in TA and their requirement to display NC, regardless of the position relative to the verb, the lexical item would simply have to include the information in (67).

(67) *abadan* ADV: $((\text{GF}^{+} \uparrow)\ \text{ENEG}) =_{c} +$
$(\uparrow \text{NC}) = +$

This states a general constraint that *abadan* requires a sentence negative (ENEG) to be present in the context. The NC feature further captures explicitly the fact that the effect of this co-occurrence is to yield a syntactically (and semantically) negative sentence, and that the two negatives do not in this case make a positive [6].

[6] At present, the lexical entry cannot deal with the fact that in fragment sentences *abadan*

By contrast, non-strict NCIs would require more complicated information in the lexical entry in order to capture the fact that they engage in NC only when they follow the verb. When positioned before the verb they are marked with the feature CNEG and, if ENEG is present, then the two negatives make a positive, not NC. Thus following the lexical information for the *wala* which marks the second conjunct in emphatic negative coordination, which is non-strict NCI in TA, might look like (68). Similar formulations would be needed for *lā* as the marker of the ENC first conjunct, and for the negative quantifier/determiner *wala* 'no/not even one'.

(68) wala Neg

$$(\uparrow \textsc{conjform}) = \textsc{wala}$$
$$((\in \uparrow)\ \textsc{conjtype}) = \textsc{and}$$
$$\{\ (\uparrow \textsc{cneg}) = + \wedge ((\textsc{gf}^{+} \in \uparrow)\ \textsc{eneg})\ {}_{f} \not\prec \uparrow \wedge ((\textsc{gf}^{+} \in \uparrow)\ \textsc{tense})\ {}_{f}\not\prec \uparrow \mid$$
$$(\uparrow \textsc{nc}) = + \wedge ((\textsc{gf}^{+} \in \uparrow)\ \textsc{eneg}) =_{c} + \wedge ((\textsc{gf}^{+} \in \uparrow)\ \textsc{eneg})\ {}_{f}\prec \uparrow\ \}$$

The complex condition in this lexical entry essentially states that the negative coordinator *wala* is either CNEG + or NC +. Note that it cannot be both at once. It is CNEG + when neither ENEG nor TENSE precede it in the higher structure in which it is a GF. By contrast, it is NC + when the higher structure to which it belongs, has the feature ENEG + and the item bearing this feature ENEG + precedes it. Note that lexical entries refer primarily to f-structure entities in LFG. Hence the ordering is specified in terms of f-precedence (signalled by the subscript f in (68)). Since f-structures are however inherently unordered, this requires the c-structure order to be somehow accessed. f-precedence is therefore defined in LFG as 'a relation between f-structures based on the c-structure relation of precedence between the (2 sets of) c-structure nodes in the inverse mapping' Alruwaili and Sadler (2018).

This formulation in (68) is consistent with the two types of f-structures which need to be allowed. An example such as (69a) has ENEG and TENSE with the main

can occur with negative meaning without ENEG in the context.

verb preceding the negative coordination in c-structure. Therefore *lā* and *wala* are NC + and negative concord occurs. By contrast, if ENEG is in fact present following the coordination as in (70), the result of a CNEG + and ENEG + co-occurrence is a double negative, which makes a positive. Interestingly the specification in (68) of the conditions for the CNEG + analysis also apply correctly where a negative coordination (or *wala* as a determiner) occur in fragments. In that case neither ENEG nor TENSE are present at all, so the CNEG analysis is again supported.

(69) a. **mā** ğ-aw **lā** ʔaħmad **wala** ʕali
NEG come.PFV-3PLM NEG Ahmad CONJ.NEG Ali
Neither Ahmad nor Ali came.

b.
$$\begin{bmatrix} \text{PRED} & \text{`COME< SUBJ >'} \\ \text{ENEG} & + \\ \text{SUBJ} & \begin{bmatrix} \text{CONJTYPE} & \text{AND} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{`AHMAD'} \\ \text{NC} & + \\ \text{CONJFORM} & \text{LĀ} \end{bmatrix}, \begin{bmatrix} \text{PRED} & \text{`MOHAMMAD'} \\ \text{NC} & + \\ \text{CONJFORM} & \text{WALA} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$

(70) a. **lā** ʔaħmad **wala** mħammad **mā** ğ-aw
NEG Ahmad NEG.CONJ Mohammad NEG come.PFV-3PLM
Both Ahmad and Mohammad came.

b.
$$\begin{bmatrix} \text{PRED} & \text{`COME< SUBJ >'} \\ \text{ENEG} & + \\ \text{SUBJ} & \begin{bmatrix} \text{CONJTYPE} & \text{AND} \\ \left\{ \begin{bmatrix} \text{PRED} & \text{`AHMAD'} \\ \text{CNEG} & + \\ \text{CONJFORM} & \text{LĀ} \end{bmatrix}, \begin{bmatrix} \text{PRED} & \text{`MOHAMMAD'} \\ \text{CNEG} & + \\ \text{CONJFORM} & \text{WALA} \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$

A further aspect of NCIs in TA, which was noted in 5.2.2.2 was that, as recorded in varying degrees for other languages, NC can operate long distance across clause

boundaries (72). Since dependent clauses usually proliferate to the right of the main clause in natural languages, both the strict (e.g. *abadan*) and non-strict (e.g. determiner *wala* and ENC *lā ... wala ...*). NCIs of TA are equally affected. It was seen that NCIs in TA can be licensed near the end of a sentence, several clause levels down, by ENEG *mā* or the like, occurring with the matrix predicate, even if that predicate is not NR.

Przepiórkowski et al. (2015) noted the same phenomenon in the strict NC language Polish, and offered ideas for the LFG treatment of such phenomena. I have essentially imitated that in the lexical entries above through the path that is specified for ENEG. The GF information in brackets before ENEG can be adjusted to detail the ways in which the negative expression described in the lexical entry may be linked to ENEG *mā* etc. in the same clause or a higher clause. Thus it specifies details and possible limitations on the kind of connection that is required, beyond what the up arrow alone implies. In (67), (68) and (72) I just indicated that the link was through some GF, of a list not specified. In the examples above such as (70) the GF was SUBJ, but of course it could be any of a range of other GFs, as illustrated in 5.2.2.2 and in (72) where it is an adjunct. In order to indicate clearly what GFs the NCI may be in, and by what means it may be linked to ENEG, a line could be added to the lexical entries of the type illustrated in (71).

(71) GF ≡ {SUBJ| OBJ| OBL| ADJ∈ }
((XCOMP*GF^{+}↑) ENEG) $=_{c}$ +

(72) a. **mā** ħawal inn-a iraẓi-ha **wala**
NEG try.PFV.3SGM COMP-3SGM.ACC 3SGM-satisfy-3SGF.ACC not.even
ib-kilma
with-word
He didn't try to satisfy her not even with one word.

b. **mā** kallaf nafs-a inn-a yaʕtiḏər
NEG cost.PFV.3SGM self-3SGM COMP-3SGM.ACC 3SGM-aplogise.IMPV
wala ib-risāla
even with-message

He didn't try to apologise even with a message.

5.5 Conclusion

In this chapter I have looked at the syntactic behaviour of a set of negative expressions which fall into two main different groups: NPIs on the one hand, and on the other n-words which can be used to provide a fragment answer since they are inherently negative expressions. With n-words I have shown that they exhibit a heterogeneous behaviour, as some can occur in both veridical and non-veridical contexts, such as *lissa, laħadlān*, and therefore are closer to weak NPIs or even semi-NPIs since they can appear in veridical contexts. I have also demonstrated that the pre-verbal *wala* functions as a negative quantifier, as also does *māħad*. The clearest examples of n-words are the post-verbal *wala*; the adverbial elements *abadan* and *nihāiyyan*. As for the others, treating these as NCIs or n-words does not capture their distribution precisely. The same follows with NPIs, where was observed how their distribution differs, such that some are strong, weak, and semi-NPIs. This distinct categorisation is further enhanced through the behaviour observed with NR vs. non-NR predicates.

Chapter 6

Conclusion

In this study I have provided a description of a range of different syntactic aspects of negation in TA, and have developed analyses for many of these aspects within the LFG framework. This study has tackled afresh many important syntactic issues related to negation, some of which have received a good deal of attention already in the literature, while others have received little attention. Yet others have been ignored or are currently the subject of on-going study in the literature. The findings of the study therefore make a contribution both to the description of negation in the languages of the world, and to LFG, through the analyses of TA undertaken especially in chapters 2-5.

This chapter first summarises the main findings about TA and the key contributions made through the description of negation and its LFG analysis. I will then move to suggest some areas that are still in need of further investigation and discuss directions for further research.

6.1 Summary and notable Findings

In chapter 2, as an essential background to the study of negation in TA in later chapters, I investigated some key general features of affirmative verbal and verb-

less sentences in TA. These included primarily: word order, subject verb agreement, morphological verbal forms, the main auxiliaries which combine with indicative verb forms to form periphrastic and compound constructions, pseudo-verbs, and modals. In particular I distinguished two distinct types of copular sentence: predicational, which includes an NP and an indefinite non-verbal predicate with no copula expressed, and equational, which includes two definite NPs separated by a pronominal copula which has a restricted distribution (only in equational sentences in the PRESENT TENSE, 3rd person). In terms of LFG analysis, I discussed some important syntactic issues. For instance, with respect to basic word order in the clause, I presented an LFG account of the two possible word orders, without the use of any notion of movement which is relied upon by some rival theories. Following Bresnan (2001a), I argue that the SUBJ can occur either as a specifier in the IP, producing the SVO order, or as a constituent within an S within the IP, yielding the VSO word order.

I have further assumed that the lexical verb always occurs in I position in the absence of any overt auxiliary expressing tense, such as *kān*. I proposed however that if an auxiliary expressing tense (but not aspect) is present, then that occupies the I position, and the lexical verb then occurs in V position. An analysis of the main auxiliaries in TA was offered, as summarised in Table (6.1). In contrast with Camilleri (2016) analysis of a similar auxiliary in Maltese Arabic with the same distribution, however, I regard *rāħ* as having two lexical entries, one as an aspect auxiliary, so a $\hat{\mathbf{V}}$, and the other as a tense auxiliary, so an $\hat{\mathbf{I}}$.

AUX	**c-structure node**	**f-structure**	**value**
kān	**I**	AUX-FEATURE	PAST TENSE
rāħ	$\hat{\mathbf{I}}/\hat{\mathbf{V}}$		FUTURE TENSE
			PROSPECTIVE ASPECT
gāʕad	**V**		PRESENT PROGRESSIVE

Table 6.1: A summary of the LFG analysis of the main auxiliaries in verbal sentences in TA

For verbless copular affirmative constructions, similar to Dalrymple et al. (2004) and Nordlinger and Sadler (2007), I provide a single tier analysis for both types (predicational and equational). For predicational sentences, where no copula is present in the PRESENT TENSE, the non-verbal predicates are treated as the main predicates and the present tense is shown by the absence of a category in the relevant c-structure position, which associates the presence of a PRESENT TENSE value in the f-structure, with the lack of a copula in the c-structure. For equational sentences, I analyse the pronominal copula as a fully projecting copula occurring under an I node expressing the PRESENT TENSE with a PRED value. I therefore do not endorse the XCOMP or PREDLINK analyses of present tense copular sentences in Arabic, as proposed recently by Camilleri and Sadler (2018).

The final important issue that was tackled in this chapter was the analysis of the participle (active and passive). As far as I am aware there is no previous analysis for Arabic participles within LFG except in Camilleri (2016) who treated participles as verbs (not in I), stating that they 'can only ever be in V position, since these are non-finite elements morphologically and syntactically'. In our study, however, participles were analysed as adjectives rather than verbs. I showed that this make sense due to the fact that their agreement pattern resembles that of adjectives (number and gender) rather than verbs (number, gender, person). Furthermore, they are marked for definiteness like adjectives (with or without *al*), unlike verbs. Finally, they negate with *mū*/inflected counterparts rather than *mā*, the verbal negative marker.

In chapter three I discussed mainly negation at two different levels in the syntactic structure, namely: sentential negation (both in verbal and verbless sentences), and constituent negation. I shed light on many important sub-issues. Primarily I provide a description for the negative particles that are used to express sentential negation in TA, namely *mā*, *lā*, *mū* and its inflected forms. First of all, with respect to the f-structure analysis I followed Przepiórkowski et al. (2015) in adopting a fea-

ture analysis, which they apply for Polish, rather than an undifferentiated ADJ(unct) analysis of all these negative forms, based on the reasoning that this allowed us to account for the two main different types of negation in the f-structure, through the two features ENEG (for sentential/clausal negation) and CNEG (for constituent negation): See Table (6.2). In the LFG analysis of sentential negation (ENEG) I accounted for the adjacency between the invariant negative particles *mā* and *lā* and the verb or auxiliary by regarding them as non-projecting words (forming a 'small construction'), occurring under the $\widehat{Neg}$ category as sisters of I/V, where the NEG and the verb do not constitute a single morphological word. This differs from Al Sharif and Sadler (2009) who propose that *mā* and *lā* in MSA each exist as both $\hat{I}$ and $\hat{V}$: to us this seemed to be an unnecessary separation where essentially each particle is a unitary item, whether occurring with an I or a V. Furthermore, I did not regard negative markers as having much in common with other constituents (conveying tense) that would require of them to occur under $\hat{I}$. In contrast, the negative copula *mū*/inflected negative forms in copular sentences was however analysed (as typically it is also in many other studies of Arabic in general) not as a particle, but as a negative copular verb and so in LFG, as a fully projecting node occurring in I.

sentential negative particle	**c-structure node**	**f-structure**
mā	$\widehat{Neg}$	ENEG +
lā	$\widehat{Neg}$	ENEG +
mū/(inflected counterparts)		
	I	ENEG +
		TENSE PRESENT
sentential negative particle	**c-structure node**	**f-structure**
mū/mahu	NEG	CNEG +

Table 6.2: Main grammatical markers of negation in TA

I also contributed to another as yet limited discussion found in (Alsharif, Ahmad (2014) for MSA,Al-Zahrani (2013) for Hijazi and Althawab (2014) for MSA) of the interaction between modality and negation by presenting the way in which negation is expressed with various variant and invariant modal expressions. In TA these include both verbal and non-verbal predicates and the placement of the NEG

marker is critical for the scope of negation and the semantic reading.

An area I have not found mentioned anywhere in previous accounts of Arabic is that of neg-raising (NR) predicates. This chapter includes a comprehensive description of NR predicates in TA involving both verbal and participial forms, such as *ʔabġa* 'want', *atwaqqaʕ* 'think', and *nāwīa* 'intending' respectively. This topic proved valuable in chapter 5 later, where it was possible to differentiate between strong and weak NPIs on the basis that the former occurred in dependent clauses only with a negated NR verb in the matrix clause, while the latter occurred in dependent clauses regardless of what kind of verb was negated in the matrix clause.

Later in this chapter I addressed constituent negation, expressed by invariant *mū*, or its 3SGM inflected form *mahu*, regardless of the gender, number and person of the negated constituent. This again appears to be a neglected topic in studies of Arabic where I explored the readings associated with negation of constituents containing the universal quantifier, in comparison with sentence negation of sentences containing the universal quantifier in various positions before or after the NEG marker. In some cases, similar differences in meanings and scoping were found to exist just as has been documented for other languages, based on whether the NEG marker precedes the quantifier (typically 'not... all' = 'some') or follows it (usually '.... all....not' = 'none'). This was also documented, albeit very briefly, by Alghamdi (2012) for the Ghamdi Saudi dialect. However, I did uncover some differences, for example between my dialect and what Elsaadany and Shams (2012) claim about this phenomenon in MSA. Where the universally quantified subject precedes the sentence negator (1a), the reading is unambiguously 'none' in both TA and MSA. Where the quantifier is 'floated' to the end of the sentence, such that this occurs after the sentence negator (1b), the MSA reading is claimed by Elsaadany and Shams (2012) to remain the same 'none', while in TA my intuition is that it is ambiguous between 'none' and 'some' (ch 3).

(1) a. kull ʔa-ṭulāb lam yi-njaħ-ū
all DEF-student.PLM NEG 3- succeed.IMPV-PLM
All students did not succeed. MSA: Elsaadany and Shams (2012, p.27)

b. ʔa-ṭulāb lam yi-njaħ-ū kullu-hum
DEF-student.PLM NEG 3-succeed.IMPV-PLM all-3PLM.GEN
The students did not succeed all. MSA: Elsaadany and Shams (2012, p.27)

In chapter four I provided a description and analysis for negative coordination in TA, especially the type called emphatic negative coordination (ENC), using *lā....wala*, alongside other types such as *mā....w....mā*, *mū...w...mū* or *mā/mū....wala*'. This is based on Alruwaili and Sadler (2018). The precise range of forms used varies considerably between the different Arabic dialects. Our account, both descriptively and analytically, covers coordination of predicates and clauses (ENEG) as well as of arguments/dependents (CNEG). This chapter I consider to be a particularly novel contribution since although there has been some description of this phenomenon in Arabic, no previous study seems to have provided an LFG analysis of this either in Arabic or any other language.

For the LFG analysis, a 'flat' c-structure seemed the most appropriate for the non-ENC case, where two negative statements are coordinated with *w* 'and'. That is to say that neither of the conjoined elements is regarded as higher than the other in the c-structure hierarchy. Structures containing *wala* with the second coordinated element were however deemed best analysed as having two levels of c-structure, where the higher constituent contains *lā* or *mā/mū* and what it negates, while the lower one within it contains *wala* and whatever it negates. This accords with the intuition that, unlike *w*, *wala* is not neutral in its contribution to the overall coordinated structure, but primarily contributes negation to the conjunct that follows it, not to that which precedes it, which requires its own negator.

Special further measures are then required within LFG to ensure that, for example, a c-structure cannot be generated with *wala* as a negator of the first element or

with *lā* for the second. Furthermore, there was a need to capture the fact that where two constituents are negatively coordinated, and they follow the verb (e.g. two objects), the verb must additionally be accompanied by a sentence negator, although the overall meaning remains negative. Negative concord thus comes into play here. The tentative mechanism proposed to deal with all that was put forward for the first time in Alruwaili and Sadler (2018). It partly involves enhanced c-structure rules termed schemata, which specify for instance that where a first coordinated element contains a negative coordinator, it cannot be *wala*, but requires the second element to contain the coordinator *wala*.

Chapter five is concerned exclusively with negative sensitive items (NSIs), which I regarded as falling into two subcategories, N-word/NCI and NPIs. I have shown that such words form a heterogeneous system, where some occur in both veridical and non-veridical contexts, such as *lissa* 'yet, still, not yet' and *laħadlān* 'not yet'. Given this behaviour, I argue that they should be treated as weak NPIs or even semi-NPI. I have also shown that preverbal *wala* 'not even' functions as NQ whereas the post-verbal *wala* 'not even' is a NC. The most obvious instances of n-words are the post-verbal *wala* 'not even', *abadan* 'never' and *niha?iyan* never'. One key finding is that regarding and labelling these as NCI or N-words does not capture their distribution accurately and adequately, given differences depending on their position in the structure with respect to the verb.

I further broached the topic, hitherto largely neglected in Arabic, which is the long-distance licensing of n-words in TA. I observed an important syntactic behaviour that parallels with findings on Maltese in Camilleri and Sadler (2017), where in TA, too, n-words can be licensed long-distance, illustrating, therefore, how notwithstanding their status as n-words, they nevertheless display weak NPI behaviours.

TA NPIs also exhibit internal variation, which led us to identify three subclasses.

Strong NPIs such as *aħad* and *fils aħmar* must always be accompanied by a negator such as *mā* or *lā*, i.e. they only occur in anti-veridical contexts. Weak NPIs such as *aħad* 'someone' and *ʔayy* 'any' can additionally appear in non-veridical contexts such as questions. Semi NPIs such as *šey* 'thing' can additionally even occur in positive (veridical) contexts.

It was further found that many NSIs have the same form across the different Arabic varieties, yet a number of them show distinct behaviours from that described in this chapter for the TA data, e.g the different behaviours shown by *aħad* and *šey*. In TA they function as weak NPI, whereas in Libyan and Maltese these are n-words, yet also occur in non-veridical contexts, such as yes/no questions, or interrogative contexts. Similarly, *ʕumur* functions as a weak NPI in TA, yet with respect to Moroccan Arabic Lucas (2009) describes this particular item as the clearest example of a NCI in Moroccan Arabic.

In this chapter I further made use of the discussion on negative raising predicates which I discussed for the first time in the context of Arabic in Chapter 3 as a means with which to disambiguate between different types of NPIs, being able to classify them into strong and weak sub-sets depending on how they interact with such NR predicate types.

Finally, I accounted in LFG for central features of the behaviour of NCIs by making use of lexical entries which go beyond showing simply that *lā* and *wala* may be CNEG or ENEG, depending on what kind of element is coordinated, and that they are CONJTYPE = and, following Alruwaili and Sadler (2018). They also need to include conditional statements such as that *wala* is NC + (i.e. engages in negative concord) if it follows an ENEG item such as *mā*: hence a double negative yielding a positive reading does not result. While these formulations are at the moment provisional, I feel that they constitute a fascinating area of challenge for LFG to deal with. It is also an important one, since the negative coordination pattern displayed in TA

resemble those found in many other languages which exhibit negative concord, such as Spanish, Portuguese and Italian.

6.2 Further research

Plenty of areas remain in need of further investigation, given that they were not possible to pursue in any detail within the scope of the present dissertation. These include both aspects of negation where the descriptive facts are not yet fully explored in TA or indeed in Arabic more generally, and areas where the facts may be largely known but a clearly optimal and agreed upon analysis in LFG has not yet been established.

One area which I have barely touched on is that of lexical negation. Since our focus of interest was on syntax, where I paid considerable attention to negation at the level of sentences and clauses and constituents, I did not do so at level of negation within individual words. As Payne and Payne (1997) indicate, 'lexical negation describes a situation in which the concept of negation is part and parcel of the lexical semantics of a particular verb' (p.282). This type of negation has scope over a word rather than a constituent, and exists for words in all the major parts of speech, which can be either marked morphologically or purely lexically i.e semantically. This topic is explored in some detail for Syrian Arabic by Murphy (2014), where it is in some cases expressed purely lexically, as in words like ʔə*ftiqār* 'lack' or ħ*arām* 'taboo' and ʕ*ār* 'disgrace'. In other cases it involves a range of negative particles that can be selectively prefixed to words of a particular part of speech, such as *mū*, ʕ*adam* 'absence or 'lcak', *bidūn* and *bala* 'without'. I am not aware of a comprehensive listing of such negative words in TA, so this remains an area for further investigation. Notably it does connect with some of the topics I covered, such as the licensing of NPIs. Such lexical items may often create negative contexts which themselves license NPIs, just as much as contexts involve sentential negation such as *mā*.

Another area of negation in need of attention and which I have not touched on at all is that termed 'metalinguistic negation' (Horn, 1985). My study has been entirely of what is sometimes called descriptive negation, in contrast with metalinguistic negation. Metalinguistic negation is defined as negation where what is negated is not the straightforward content or proposition which an utterance conveys, which is what a normal reader/hearer expects to be the target of negation. Instead what is negated is some other less expected aspect of the utterance, such as its wording, style, or pronunciation, or the presupposition which it seems to have, or its conventional pragmatic implicature (Chapman, 1996). Thus for example, *Ahmed's house is not big, it is rather small* is an instance of descriptive negation. However, instances like the following are metalinguistic, since they target not the truth value of the negated clause but some other aspect of it: *Ahmed's house is not big, it is colossal*; *Ahmed's house is not big, in fact he lives in a flat not a house.* Again, this area has been given scant attention in Arabic except in Mughazy (2003) for Egyptian Arabic, and Ghadgoud (2017) for Libyan, though again it impinges on our area of interest in that it is widely claimed that metalinguistic sentence negation cannot license NPIs, as in this example (2) from Mughazy (2003) and Ghadgoud (2017).

(2) a. *suzān **meš** ʕand-ha saraṭān **abadan-** heiia ʕand-ha
Suzan NEG have-3SGF.ACC cancer at all she
el-maraḍ el-χabīs
have-3SGF.ACC DEF-disease DEF-evil
Suzan doesn't have cancer at all, she has the 'evil disease'. Egyptian Arabic: Mughazy (2003, p.1150)

b. ***miš** bū-y yišbə-l-i bukkul ʔane
NEG father 1SG.GEN-3SGM-resemble.IMPV-to-1SG at.all I
nišbə-l-əh-ə-h
1SG-resemble.IMPV-to-3SGM
My dad does not like me at all, I look like him. Libyan Arabic: Ghadgoud (2017, p.297)

In addition there were areas which were covered but not dealt with exhaustively.

Amongst these are the NSIs, where I only dealt with the most prominent items, and discussions that have to do with the interaction of negation with quantifiers will need to be further explored. Additionally, the contexts other than interrogatives, which can license NPIs, were also not fully explored. Such areas all need further exploration in TA, and indeed a richer description.

Notwithstanding the limitations and the scope that remains for further research, I hope that this dissertation has advanced further our knowledge on yet another system of negation, this time within Turaif Arabic. For sure it cannot be said any more that my dialect is totally neglected.

6.3 Envoi

In conclusion I must say that this dissertation has been a fascinating journey for the researcher, during which I found out much of personal interest and benefit both about TA and LFG. I sincerely hope that the experience of the reader has at least some of the same quality. However, like all journeys in the world of research, it is one where the person taking the journey proverbially travels hopefully, but can never be said to have truly arrived.

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