The Active Participle in Hijazi Arabic: An LFG Perspective

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Abstract

In Arabic syntax, the label *ʔism l-faaʕil* 'Active Participle' (henceforth ACT.PTCP) was employed by traditional Arab grammarians as a single categorial designation in terms of morphology. When it comes to functionality, the category of ACT.PTCPs falls into three major types which I designate as: *nominal*, *deverbal* and *adjectival*. Despite the fact that the three above-mentioned types are indistinguishable in terms of morphology and agreement properties, each one exhibits a number of syntactic and semantic features that help differentiate between them. Without taking into consideration such syntactic and semantic properties, it is also problematic to assign each type its appropriate categorial status: nominal, verbal or adjectival.

This thesis attempts to provide both a formal and a descriptive account of ACT.PTCPs by investigating the three distinct types of such participles in Hijazi Arabic via: (i) analyzing the syntactic contexts in which they are employed, and (ii) exploring their semantic properties. Different kinds of evidence and arguments are presented, and they weigh for treating *nominal* and *adjectival* ACT.PTCPs as NPs and APs, respectively. With respect to deverbal ACT.PTCPs, the types of evidence and arguments for analyzing such participles as non-finite inflectional forms of verbs are too strong to ignore. However, since deverbal ACT.PTCPs differ from regular VPs in that they do not mark TENSE and PERSON values, they should be syntactically represented as a constituent-structure category of VP_{ptc}.

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List of Abbreviations

1	first person
2	second person
3	third person
A, AP	adjective, adjective phrase
ACC	accusative case
ACT.PTCP	active participle
ADJ	closed adjunct
COMP	closed clausal complement
COMPAR	comparative
DEF	definite
F(EM)	feminine gender
GEN	genitive case
GEND	gender
GF	grammatical function
HA	Hijazi Arabic
IMPFV	imperfective
INDEF	indefinite
LFG	Lexical-Functional Grammar

M(ASC)	masculine gender
MSA	Modern Standard Arabic
NEG	negation
NOM	nominative case
N, NP	noun, noun phrase
NUM	number
OBJ	object
P, PP	preposition, prepositional phrase
PFV	perfective
PL	plural
PRED	predicate
PRO	pronoun
REL.COMP	relative complementizer
SG	singular
SUBJ	subject
V_{ptc}	verb in its participial form
XADJ	open adjunct
XCOMP	open clausal complement

Contents

Chapter 1

Introduction

The category of participles is present in a number of languages of varied typological natures, and the term 'participle' has received different definitions in the linguistic literature, due to its variable usages. Most traditional definitions share a common reference to participles as non-finite forms. A few of the most familiar definitions are listed in table (1) below.

(1)

Author	DEFINITION
Hartmann and Stork (1972)	A traditional term used to refer to a non-finite form of the verb
Haspelmath (1994, p. 152)	Verb forms that behave like adjectives with respect to morphology and external syntax
Crystal (2003, p. 337)	The non-finite forms of verbs other than the infinitive

In a systematic typological study of participles, Shagal (2017) points out that such definitions are problematic, since participles demonstrate a significant degree of variation across languages. This thesis could serve to put forward supportive evidence for this claim, as the 'active participle' category in Arabic is employed as a cover

term that groups three varied sub-categories. Only one of the distinct three types could be said to satisfy the above-mentioned traditional definitions, while the other two types deviate from such definitions.

1.1 Participles in Arabic

Arabic is one of the Semitic languages including Amharic, Hebrew, and Aramaic, that all belong to the Afroasiatic language family. Researchers usually divide Arabic into the following broad varieties: a) Classical Arabic (CA), which is the language of the Holy Qura'an, b) Modern Standard Arabic (MSA), which is used in formal settings (schools, media, etc), and c) the Arabic dialects, which are varieties of Arabic that are spoken natively in the Arab world, depending on the country or region, e.g. Hijazi Arabic, Egyptian Arabic, Moroccan Arabic and others.

In Arabic, 'participles' fall into two main types on the basis of the typically verbal feature of VOICE: *active participles* which are derived from their corresponding active verbs, and *passive participles* which are derived from their corresponding passive forms of the verb. This work is confined to active participle forms, while an investigation of syntactic and semantic properties of passive participles is left for future research.

The label 'active participle' (ACT.PTCP) has long been employed by traditional Arab grammarians as a single categorial designation that groups three distinct sub-categories: the *Nominal* ACT.PTCP that takes an agent nominal function, the *deverbal* ACT.PTCP that substitutes its corresponding verb, and what I designate as the *adjectival* ACT.PTCP whose function is that of a pure adjective. It should be noted that the sub-category of a given ACT.PTCP can not be determined out of context. In this regard, Beeston (1970, p. 34) points out that it is impossible to determine whether an active participle functions as a noun, a verb or an adjective, when quoted

or represented out of context, and its sub-category can only be defined by its use and function within a given syntactic context.

1.2 Significance of the study

To my knowledge, all studies dedicated to ACT.PTCPs in Arabic have concentrated only on the 'deverbal' type, whereas the other two types; i.e. nominal, and adjectival ones, remain neglected. There is no denying that nominal ACT.PTCPs and adjectival ACT.PTCPs should be treated as regular heads of NPs, and APs respectively. However, investigating the deverbal type on its own without taking into consideration syntactic and semantic properties of the other two types has sparked heated debates, and has resulted in a fair amount of disagreement as to how best to define the constituent-structure category (or the part of speech, in traditional terms) of the deverbal type. This is meant to say that despite the reasonably large literature on deverbal ACT.PTCPs in Arabic, there has been no consensus on its membership within one given category. The table in (2) below synthesizes the various analyses that have been attributed to the deverbal type of ACT.PTCPs during the last thirty years.

(2)

Category	Authors
Noun	Qafishah (1968), Wise (1975), Cuvalay-Haak (1997), Gadalla (2000), Jelinek (2002), Al-Aqarbeh (2011))
Adjective	a 'deverbal adjective' (Wright, 1974), a 'complex adjective' (Mughazy, 2004)
a mixed-category that displays both verbal and adjectival properties	Fassi Fehri (1993), Brustad (2000)

The aim of this thesis is to contribute to the debate by providing a deeper understanding of the category of Arabic ACT.PTCPs. This work also seeks to contribute to *Lexical Functional Grammar*, the grammatical framework assumed throughout this work, whose core assumptions have remained remarkably stable, although it has

evolved considerably as a theoretical framework for the modeling of grammar since its beginnings in the late 1970s, with increased explorations of data from a typologically rich array of languages. In addition, it is hoped that this work contributes to the linguistics literature of Arabic, more specifically, which has been developing in a steady manner for the last thirty years. I should stress here that while I may differ from earlier analytical proposals made in the literature, or it might be the case that other varied analyses might seem to work better, I should admit that I am a proponent of analytic diversity since it is my belief that different proposals and arguments in linguistics are healthy, provided that such theoretical proposals and arguments are clearly explained and justified.

1.3 Outline of the thesis

In this work, a detailed investigation of syntactic and semantic properties of the category of ACT.PTCPs in Arabic will be pursued. The data presented throughout this work are based on Hijazi Arabic (HA), a Western Saudi dialect. However, comparable examples from MSA and other Arabic varieties are utilized in some cases to show how they compare or contrast with the HA data. The thesis is structured as follows. Chapter 2 starts with displaying a range of major aspects of the grammar of HA that are of relevance to the syntax and semantics of the various types of ACT.PTCPs to be discussed in later chapters. Chapter 3 briefly introduces Lexical Functional Grammar, the syntactic theory that is employed throughout this work. In chapter 4, the core syntactic and semantic characteristics of nominal ACT.PTCPs are identified and discussed, after presenting the most important or significant approaches to nominalizations familiar in the theoretical linguistics literature. Chapter 5 is concerned with the most controversial type of ACT.PTCPs, which is the deverbal type. Chapter 6 explores adjectival ACT.PTCPs, while chapter 7 is devoted to summarize the main highlights discussed and argued for in this work.

Chapter 2

Hijazi Arabic

Hijazi Arabic is a dialect of Arabic spoken in the west region of Saudi Arabia. The Hijazi region in Saudi Arabia covers the main centers of: Jeddah, Makkah, Taif and Madinah, as well as other nearby towns. The population fall into two major groups: Urban and Bedouin (or rural). The data in this work is representative of urban HA as it is spoken by the researcher who lives in a town located in the south part of the city of Makkah. It is perhaps important to note that the assumptions advocated in this work could be easily extended to other urban parts of the Hijazi region.

2.1 Phonology

A cursory glance at HA phonology would be sufficient to help readers unfamiliar with Arabic to understand the transliteration system utilized throughout this work. The consonantal phoneme inventory of HA in (1a) resembles that of MSA in (1b), except for a few differences that will be clarified below. In the tables below, when voiced and voiceless pairs of the same place and manner of articulation are available, the voiced segments are in boldface to the right.

(1) a.

HA	Bilabial	Labiodental	Dental	Alveolar	Post-alveolar	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive: (Plain)	**b**			t **d**			k **g**			ʔ
(Emphatic)				ṭ						
Nasal	**m**			**n**						
Trill				**r**						
Fricative: (Plain)		f	θ **ð**	s **z**	š **ǧ**		x **ɤ**		ħ **ʕ**	h
(Emphatic)			**ẓ**	ṣ						
Semi-vowel	w					**y**				
Lateral-approximant				**l**						

b.

MSA	Bilabial	Labiodental	Dental	Alveolar	Post-alveolar	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive: (Plain)	**b**			t **d**			k	q		ʔ
(Emphatic)				ṭ **ḍ**						
Nasal	**m**			**n**						
Trill				**r**						
Fricative: (Plain)		f	θ **ð**	s **z**	š **ǧ**		x **ɤ**		ħ **ʕ**	h
(Emphatic)			**ẓ**	ṣ						
Semi-vowel	w					**y**				
Lateral-approximant				**l**						

One main phonological difference between the two systems is that the voiceless uvular plosive /q/ in MSA is not preserved in HA and has been replaced by the voiced velar plosive /g/. Moreover, the emphatic voiced alveolar plosive /ḍ/ in MSA surfaces in HA as the emphatic voiced dental fricative /ẓ/. Added to that, the phoneme /v/ is utilized in HA in loanwords such as *villa*, and *vanilla*. With respect to the vowel inventory, HA has the same vowel system as in MSA: three short vowels /i/, /a/, /u/, and their long counterparts /ii/, /aa/, /uu/. The segmental duration of both vowels and consonants is phonemic, in HA, as shown in the minimal pairs in (2) below.

(2)

Word	Meaning	Word	Meaning
ʕ**a**mm	'uncle'	ʕ**aa**mm	'general'
ʔa**k**al	'to eat'	ʔa**kk**al	'to feed'
ʕa**l**am	'flag'	ʕa**ll**am	'to teach'

HA allows for three basic syllable types which have no constraints with respect to their distribution, and two secondary types which are restricted to occur word-finally. The three basic types are the open syllables CV, and CVV, and the closed syllable CVC. The two secondary syllables are the closed CVVC and CVCC. Table (3) represents these syllable types in use within a set of word-forms.

(3)

Example	CV-Template	Meaning
ka.tab	**CV**.CVC	'write'
lii	**CVV**	'to me'
mal.ʕab	**CVC.CVC**	'playground'
mas.**ruug**	CVC.**CVVC**	'stolen'
ma.**ħall**	CV.**CVCC**	'shop / place'

It follows from the above set of syllable types available in HA that a word-form must start with a simple onset, i.e. a structure that involves only one consonant. A complex coda is only allowed word-finally.

2.2 Morphology

Semitic languages have long set themselves apart from other languages due to their non-concatenative morphological system. That is, a word is built on the basis of a ROOT-and-PATTERN system in the sense that a given word in Arabic is constructed from a base abstract consonantal root that usually involves three consonants along with the addition of a sequence of vowels that are infixed between those consonants to form the stem. The stem then fits a template that is itself a pattern onto which consonants and vowels map. Whereas the consonantal root is understood to provide the meaning of word, the vowel sequence is what supplies grammatical information such as TENSE, ASPECT, VOICE, as proposed by McCarthy (1979). Take as an example the Arabic verb-form *katab* 'write'. It consists of the consonantal root $\sqrt{ktb}$ which represents the lexeme, or lexical meaning associated with 'write' or 'writing', and the vowel sequence $[a...a]$, that signals the perfective forms of the verb in its active voice, and thus means 'wrote'. Adopting the assumptions of Autosegmental Phonology, McCarthy (1981) proposes his account of Prosodic Morphology in which he assumes that the segments of a verbal stem are arranged upon three separate tiers in the lexicon: the root/consonantal tier, the skeletal/CV tier, i.e. the template, and the vocalic melody tier, as shown below for the same form *katab*.[1]

[1]Autosegmental Phonology was proposed by Goldsmith (1976) as a non-linear theory of tone languages which assumes that a phonological representation is not only a linear sequence of segments, but also a string of other elements, referred to as 'autosegments', mapped onto each other through association lines. Although it was first introduced as a phonological framework, McCarthy (1981) developed it as a model that could account for the non-concatenative morphology displayed by Semitic languages.

(4) a. Root/Consonantal tier: k t b

b. Skeletal tier: C V C V C

c. Vocalic tier: a a

The three independent tiers in (4) are then linked via association lines to introduce the basic prosodic template that specifies which *binyan* or (templatic) 'Form' of the Arabic *binyanim*, a word belongs to. A representation of the ten templatic forms available for tri-consonantal verb roots in HA is provided in Table ((5)), taking the root $\sqrt{ktb}$ as an illustration.

(5)

Binyan/Form	verb	CV-template
I	*katab*	CVCVC
II	*kattab*	CVCCVC
III	*kaatab*	CVVCVC
IV	*ʔaktab*	CVCCVC
V	*takattab*	CVCVCCVC
VI	*takaatab*	CVCVVCVC
VII	*nkatab*	CCVCVC
VIII	*ktatab*	CCVCVC
IX	*ktabab*	CCVCVC
X	*staktab*	CCVCCVC

All of the ten prosodic templates available in HA can be applied to the same consonantal root $\sqrt{ktb}$ to yield words relevant to the concept of 'writing', as illustrated in the list in (5).[2] Beyond the verbal templates in (5), the same root can associate

[2]Notice that this is not always the case for all root types.

with other templates to form nominal forms such as: *kaatib* 'writer', *kitaabah* 'the act of writing', and so on. Arabic dictionaries tend to cluster all different words associated with 'writing', in our case here, under the verb in its citation form, which for Arabic is the active third person singular perfective form. While I have here only discussed non-concatinative morphology, concatinative morphology is also available. Such morphology type is used in the expression of GENDER on nouns and adjectives, and other PERSON and NUMBER marking on verbs. An instantiation of this are the following two NPs: *midarris* 'a male teacher', and *midarris*-**ah** 'a female teacher', where it is the concatenation of the suffix -*ah* which expresses the feminine GENDER.

2.2.1 The Nominal System

Arabic exhibits various nominal characteristics such as the features of NUMBER, GENDER, DEFINITENESS, HUMANNESS, and CASE. The latter is only present in CA and MSA, and is absent in the Arabic varieties. The rich CASE morphology in CA and MSA allows for a good indication of a noun's grammatical function, that is, whether a noun functions as a subject, object, prepositional object, etc. The CASE markers for the values: NOM, ACC, and GEN are suffixed onto nouns (and adjectives), and also interact with the MSA/CA INDEF marker -*n*. The forms additionally inflect for different NUMBER and GENDER values. Table (6) summarizes the CASE morphology and its interaction with INDEF marking on nominals in MSA, while HA and other Arabic varieties have no case morphology.[3]

[3]The two types of plural, '*broken*' and '*sound*', will be discussed shortly.

(6)

NUMBER	GENDER	DEFINITENESS	NOMINATIVE	ACCUSATIVE	GENITIVE
Singular	MASC/FEM	DEF	**-u**	**-a**	**-i**
Singular	MASC/FEM	INDEF	**-un**	**-an**	**-in**
Dual	MASC/FEM	DEF/INDEF	**-aan**	**-ayn**	**-ayn**
Plural (Sound)	MASC	DEF/INDEF	**-uun**	**-iin**	**-iin**
Plural (Sound)	FEM	DEF	**-u**	**-i**	**-i**
Plural (Sound)	FEM	INDEF	**-un**	**-in**	**-in**
Plural (Broken)	MASC/FEM	DEF	**-u**	**-a**	**-i**
Plural (Broken)	MASC/FEM	INDEF	**-un**	**-an**	**-in**

As shown in Table (6), MSA differentiates between two values for GENDER: masculine and feminine; a distinction that is mainly morphologically motivated, where a FEMININE suffix would usually mark a nominal form. In this regard, Ryding (2005, p. 120) states that "[a]s a very general rule, if an Arabic noun does not have a feminine suffix, it is masculine."[4] The data in (7) brings out this contrast, where it is the nature of the suffix, or the lack of it, which renders a GENDER value to a given form.[5]

(7) a. laaʕib
player.SG.M
a male player

b. laaʕib-**at(ah)**
player-SG.F
a female player

Before proceeding with a detailed consideration of the HA facts, it is instructive that we go through some concrete examples in order to start an initial comparison between MSA and HA with concerns that have to do with the NUMBER and CASE

[4]There are a few cases in which GENDER is however not overtly marked. For a detailed discussion on this matter in MSA, refer to Ryding (2005, pp. 119-125).

[5]The feminine suffix -*at* is usually pronounced as -*ah* or -*a* in a pause.

features. If we consider the data contrast in (8) and (9) below, representative of MSA and HA data, respectively, it becomes clear that while MSA distinguishes three kinds of NUMBER values: singular, dual, and plural, by virtue of the inflection upon the CASE and INDEF suffixes, HA solely distinguishes two NUMBER values: singular and plural. A value of dual/two in HA either patterns with that of MSA as in words such as *yawmayn* 'two days', or it is expressed by the plural form, and the addition of the numeral *ʔiθnayn* 'two' as in (9)b. When it comes to the expression of NUMBER, here we observe a concatenative way in which the plural suffix is being expressed, and hence what we have is a sound morphological plural form that attaches a suffix onto a singular stem. In (8)c, the suffix *-uun* expresses M.PL values in the NOM case. The form varies according to the CASE values expressed. HA employs only the sound suffix *-iin* to express M.PL, irrespective of the grammatical function that the NP is associated with. Feminine NPs take the same sound plural suffix *-aat* in both MSA and HA.

(8) a. ğaaʔ-a muʕallim-un ğadiid-un
come.PFV-3SG.M.INDIC teacher.SG.M-NOM.INDEF new.SG.M-NOM.INDEF
A new teacher came.

b. ğaaʔ-a muʕallim-aan
come.PFV-3SG.M.INDIC teacher-DUAL.M.NOM.INDEF
ğadiid-aan
new-DUAL.M.NOM.INDEF
Two new teachers came.

c. ğaaʔ-a muʕallim-uun ğudud-un
come.PFV-3SG.M.INDIC teacher-PL.M.NOM new.PL.M-NOM.INDEF
New teachers came.

(9) a. ğaa-na midarris ğadiid
come.PFV.3SG.M.SUBJ-1PL.OBJ teacher.SG.M new.SG.M
A new teacher came to us.

b. ğaw-na ʔiθnayn midarris-iin
come.PFV.3PL.M.SUBJ-1PL.OBJ two teacher-PL.M
Two teachers came to us.

c. ğaw-na midarris-iin ğudud
come.PFV.3PL.M.SUBJ-1PL.OBJ teacher-PL.M new.PL.M
New teachers came to us.

(10) reveals a contrast between the F.SG suffix *-ah*, and the F.PL marker *-aat* once they attach onto the stem *kaatib* to yield different NUMBER values.

(10) a. kaatib-ah
writer-SG.F
a female writer

b. kaatib-aat
writers-PL.F
female writers

While the suffixation discussed so far has been representative of a '*sound*' morphological system, plural morphology may also be expressed through a non-canonical morphological system referred to as a '*broken' plural*. What this usually involves is a change in the vocalic melody of the noun stem, as the examples below show.

(11) a. r**a**ğ**u**l → r**i**ğ**aa**l
'man' → 'men'

b. d**a**g**ii**g**a**h → d**a**g**aa**y**i**g
'a minute' → 'minutes'

Plurality and humanness are correlated in the sense that while NUMBER and GENDER agreement with plural human NPs follows usual expectations, non-human plural NPs only display feminine singular agreement, and that is regardless of the GENDER value of the singular NP from which the plural form is derived. The contrastive data sets below are illustrative.

(12) a. ʔal-midarris-iin mabsuuṭ-iin
DEF-teachers-PL.M happy-PL.M
The (male) teachers are happy.

b. ʔal-midarris-aat mabsuuṭ-aat
DEF-teachers-PL.F happy-PL.F
The (female) teachers are happy.

c. ʔal-abwaab naẓiif-ah (*naẓiif-aat/*naẓiif-iin)
DEF-doors.PL.INANIMATE clean-SG.F (*clean-PL.F/*clean-PL.M)
The doors are clean.

Note that the examples in (12)a-b involve plural human NPs, where full agreement follows as expected upon the adjective. This is not the case with the plural non-human NP *ʔal-abwaab* 'the doors' in (12)c that requires its predicate to be in the feminine singular form, although it is derived from the masculine singular *ʔal-baab* 'the door'.

In what follows, I provide an overview of key features and elements within the nominal system in HA.

2.2.1.1 Definiteness

The nominal feature of DEFINITENESS is of primary significance in this investigation as it is one of the crucial factors that can help distinguish the sub-types of nominal ACT.PTCPs, or agent nominals, as we will see in Chapter 4.

Arabic has only one definite article, and there are no indefinite articles. The definite article in Arabic is the prefix *ʔal-* 'the', reduced as *l-*, *al*, or assimilated, and is able to attach upon nouns, adjectives and numerals. The definite article does not inflect.[6] Moreover, the definite marker in Arabic should not be treated as a full-fledged word since it is a bound morph that can not stand on its own. In plain

[6]The definite article *l-* in Arabic assimilates to the coronal consonant that the following stem starts with. Such coronal sounds are the so-called *sun-letters* in Arabic. Such an assimilation does not occur with the remaining consonants, i.e. the *moon-letters*. For example, the indefinite noun *tiin* 'figs', becomes definite by prefixing the *l-* to it, yielding the form *ʔa***t-t***iin*, not *ʔa***l-t***iin*.

terms, the *l-* definite article attaches to its host in the lexicon, and is not subject to syntactic rules. On the basis of this conceptualization of the definite article, it follows that definite nouns in HA will be treated as NPs, and not as DPs headed by a functional category D. At a morphosyntactic level, a noun in Arabic is determined as being either DEFINITE or INDEFINITE on the basis of whether or not it is prefixed with the definite article *l-*, as shown in (13).

(13) a. walad
boy.INDEF
a boy

b. ʔal-walad
DEF-boy
the boy

Generic nouns in Arabic, unlike English, must be morphologically definite, i.e. prefixed with the *l-*.

(14) a. ʔat-tadxiin miẓirr li-ṣ-ṣiħħah
DEF-smoking.SG.M harmful.SG.M to-DEF-health
Smoking is harmful to health.

b. ʔal-ħubb ʔaʕmaa
DEF-love blind
Love is blind.

When an NP is morphologically marked as DEFINITE, it imposes a strict requirement of DEFINITENESS agreement on its modifying constituents, which can be either adjectives or numerals. Consider the examples in (15). The adjective in (15)a and the numerals in (15)b-c show definiteness agreement with the NPs they modify. The absence of such DEF marking results in ungrammaticality.

Throughout this work, note that the definite article will be transcribed as ʔal- when sentence-initial, and as *al-*, or *l-*, in addition to the assimilated form, in other positions. Such variations are subject to how the definite article is pronounced in connected speech.

(15) a. ʔal-walad al-mariiẓ / *mariiẓ)
DEF-boy.SG.M DEF-sick.SG.M / *sick.SG.M)
the sick boy

b. ʔal-banaat al-xams / *xams)
DEF-girls.PL.F DEF-five.PL.M / *five.PL.M)
the five girls

c. ʔal-bint al-xaamis-ah / *xaamis-ah)
DEF-girl.SG.F DEF-fifth-SG.F / *fifth-SG.F)
the fifth girl

Definiteness agreement does not, however, extend to demonstratives, since they do not license the attachment of the definite article.

(16) a. haaða l-walad / *l-haaða l-walad
this.SG.M DEF-boy.SG.M / *DEF-this.SG.M DEF-boy.SG.M
this boy

b. haaði l-bint / *l-haaði l-bint
this.SG.F DEF-girl.SG.F / *DEF-this.SG.F DEF-girl.SG.F
this girl

- Definiteness in Nominal Construct-State Constructions

Arabic nouns can express adnominal possessive relations by employing two types of structures: *construct-state* (CS) constructions (the so-called *iḍafah*), and *free-state* constructions. A nominal CS is a noun-noun construct whose phrase consists at least of two nominal elements. The first nominal element serves as the head noun that takes as its complement another noun.[7] Although the typical semantic relation that holds between the head noun and its nominal complement is that of possessed-possessor, other relations could also be possible. To start to investigate briefly peculiar characteristics of nominal CS, I will depart from the example in (17).

[7]Note that the head noun in the CS can take more than one complement NP as in *kitaab wald al-ǧiiraan* 'the book of the neighbors' boy'.

(17) kitaab al-walad
book DEF-boy
the boy's book

The above CS construction is composed of two nouns: the first nominal member *kitaab* 'book' acts as the head noun of the CS, while the second nominal member *l-walad* 'the boy' is the nominal complement of the head noun. It is noticeable that the head noun is morphologically indefinite, since it is not prefixed with the definite article *l-* 'the', while the nominal complement is so. DEFINITENESS in CS constructions is determined on the basis of whether or not the nominal complement is morphosyntactically DEFINITE, i.e. with a *l-* prefixed to it. This amounts to saying that when the nominal complement is definite, the whole CS construction is definite since DEFINITENESS is inherited from the nominal complement, hence an instantiation of 'definiteness by inheritance'. If, on the other hand, the nominal complement is morphosyntactically indefinite, the whole CS construction is indefinite. This characteristic is clarified when contrasting the definite CS in (18) item (a), with its indefinite counterpart in (18) item (b).

(18) a. šanṭat al-bint
bag DEF-girl
the girl's bag

b. šanṭat bint
bag girl
a girl's bag (as opposed to a boy's bag)

The other characteristic particular to CS constructions relates with the very strict adjacency constraint imposed on the two members of this construction. That is, the head nominal and its immediately following nominal head are inseparable. To help clarify this point, consider (19) below. The noun *kitaab* 'book' is post-modified by the adjective that follows it, which agrees with the modified NP in NUMBER, GENDER, and DEFINITENESS.

(19) kitaab ğadiid
book.SG.M new.SG.M
a new book

Returning to CS constructions, an adjective modifying the head nominal must appear after the whole of the CS, as illustrated below.

(20) a. kitaab al-bint
book.SG.M DEF.girl.SG.F
the girl's book

b. kitaab al-bint al-ğadiid
book.SG.M DEF-girl.SG.F DEF-new.SG.M
'the girl's new book'

Observe that the adjective *l-ğadiid* 'the new' in the modified CS in (20)b, modifies the head NP *kitaab* 'book', with which it agrees in NUMBER, GENDER and DEFINITENESS. It should be recalled that although the nominal head 'book' is not attached with the definite marker *l-* 'the', it inherits *definiteness* from its complement NP that is itself prefixed with a definite article. What (20),b also illustrates is the fact that the adjective *l-ğadiid* 'the new' does not immediately follow its modified head NP *kitaab* 'book', but has to appear after the whole CS due to the strict adjacency requirement which applies between the two items internal to the CS. If the adjective modifying the head NP tries to intervene between that head nominal and its nominal complement, ungrammaticality results, as indicated below.

(21) *kitaab al-ğadiid al-bint
book.SG.M DEF-new.SG.M. DEF-girl.SG.F
Intended: The girl's new book.

What we conclude from the behaviour of nominal CS constructions is that the head NP is not able to ever morphologically license the attachment of a definite article, even if the whole CS ends up inheriting definiteness from the nominal complement that is morphologically definite. Added to this, nothing intervenes between

the members that form a CS construction. However, this is not the case in *free-state* constructions. In this case, where the two nouns involved in the possessive construction are separated by a preposition expressing the possessive relation between the two members. This possessive preposition in HA is *ħagg*, which is equivalent to the use of the preposition *of* in *of*-phrases in English. An illustration of such a structure is (22). Here we also observe that the two different nominal items can be separately marked for DEFINITENESS.

(22) ʔal-kitaab ħagg al-bint
DEF-book.SG.M of.SG.M DEF-girl.SG.F
'the book of the girl'

- Definiteness Restrictions in Verbless Constructions

In Arabic, the syntactic context of verbless constructions (or non-verbal predication) imposes a *definiteness* restriction on non-verbal predicated NPs and APs. This is meant to say that there is an obvious association between *definiteness* and *predication* in verbless clauses, such that predicated NPs and APs have to be morphosyntactically indefinite, i.e. not attached with the definite article *l-*. The predicational verbless structures below demonstrate this effect. (23)a-d involve a nominal predicate, while (23)e involves a predicative adjective.

(23) a. ʔaħmad midarris
Ahmad teacher.SG.M.INDEF
Ahmad is a teacher.

b. haaða kitaab
this.SG.M book.SG.M.INDEF
This is a book.

c. haaði sayyaarah
this.SG.F car.SG.F.INDEF
This is a car.

d. ʔaħmad kaatib giṣṣah [CS: Construct-State]
Ahmad writer.SG.M story.SG.F.INDEF
Ahmad is a story writer.

e. faaṭimah mariiẓ-ah
Faatima sick-SG.F.INDEF
Faatima is sick.

If a predicated NP/AP is marked as DEFINITE, there has to be a pronoun that separates the predicated element from its subject, and the separating pronoun takes the 3SG form and must agree with the subject in NUMBER and GENDER. The data in (24) illustrates this behavior with the other type of verbless clauses that is '*equational clauses*'.

(24) a. ʔaħmad huw l-midarris
Ahmad PRON.3SG.M DEF-teacher.SG.M
Ahmad is the teacher.

b. haaða huw l-kitaab
this.SG.M PRON.3SG.M DEF-book.SG.M
This is the book.

c. haaði hiy l-ħagiigah
this.SG.F PRON.3SG.F DEF-truth.SG.F
This is the truth.

d. ʔaħmad huw kaatib al-giṣṣah [CS: Construct-State]
Ahmad PRON.3SG.M writer.SG.M DEF-story.SG.F
Ahmad is the story writer.

e. faaṭimah hiy l-mariiẓ-ah
Faatima PRON.3SG.F DEF-sick-SG.F
Faatima is the sick one.

- Semantic Definiteness

Definiteness has long been assumed to be a semantic or pragmatic feature of NPs, rather than a morphosyntactic feature, and the linguistic literature has debated this fact about DEFINITENESS in a number of different frameworks. The most oft-mentioned theories that have considered the meaning of DEFINITENESS are *Uniqueness* (Russel (1905)), *Familiarity* (Christophersen (1939); Heim (1982)), *Referentiality and Presupposition* (Strawson (1950)), *Salience Theory* (Lewis (1979)), and *Inclusiveness* (Hawkins (1978)). It is standardly assumed that the prototypical types of semantic *definites* are proper names, pronouns, personal pronouns, demonstratives, possessive constructions, and definite descriptions. In Arabic, syntactic definiteness does not always correlate with semantic definiteness. This is evidenced, for instance, by the fact that non-count generic NPs have to be morphosyntactically definite, in Arabic, when they are not so in English, as the translation of (25) below shows.

(25) ʔat-taʕliim muhimm
DEF-education important
Education is important.

In this work, I distinguish syntactically definite NPs from syntactically indefinite ones on the basis of a presence vs. absence of a morphological marker. Furthermore, I differentiate between *Generic* NPs and *Specific* NPs in a way whereby generic NPs are ones that do not admit demonstrative modifiers, while specific NPs do. Let us consider the examples in (26).

(26) a. ʔaħmad šara sayyaarah ǧadiid-ah
Ahmad buy.PFV.3SG.M car.SG.F new-SG.F
Ahmad bought a new car.

b. ʔas-sayyaarah l-ğadiid-ah ʔaryaħ min ʔas-sayyaarah
DEF-car.SG.F DEF-new-SG.F comfortable.COMPAR from DEF-car.SG.F
l-gadiim-ah
DEF-old-SG.F
A new car is more comfortable than an old one.

(27) ʔištaray-t haaði as-sayyaarah ʔams
buy.PFV-1SG this.SG.F DEF-car.SG.F yesterday
I bought this car yesterday.

The compatibility that arises between demonstratives and *specific* NPs will be taken as a reliable test for indicating the episodic nature or *specificity* of definite-marked NPs. In Arabic, demonstratives can only modify NPs that are both syntactically and semantically *definite*. As a result, it is safe to argue that demonstrative NPs in Arabic require the maintenance of a match between syntactic definiteness and semantic determination. In the following sub-section I will discuss demonstratives and their behavior in some more detail.

2.2.1.2 Demonstratives

Arabic has a range of demonstrative pronouns that indicate the proximity or distance from the speaker. Table (28) represents the proximity demonstrative pronouns in MSA and in HA, while Table (29) represents the distal set of demonstratives.

(28)

Number	Gender	MSA	HA
Singular	MASC	haaða	haaða
Singular	FEM	haaðihi	haaði
Dual	MASC	haaðaan (NOM) haaðayn (ACC & GEN)	(haa)ðawl
Dual	FEM	haataan (NOM) haatayn (ACC & GEN)	(haa)ðawl
Plural	MASC & FEM	haaʔulaaʔ	(haa)ðawl

(29)

Number	Gender	MSA	HA
Singular	MASC	ðaalik	haaðaak
Singular	FEM	tilk	haaðiik
Plural	MASC & FEM	ʔulaaʔik	haaðawk

In the above sentences (26) and (27), the NP *sayyaarah* 'car' functions as a generic NP, since the NP's referents in both contexts are not uniquely identifiable to the hearer. In (26) item (a) *sayyaarah* 'car' is syntactically indefinite, i.e. with no attached definite article, whereas *ʔas-sayyarah* 'the car' in (26),b is. In contrast, a specific NP in Arabic is always syntactically definite and is identifiable as a unique entity by the hearer. (27) represents this behavior through the definite *as-sayyaarah* 'the car', which is additionally modified with the demonstrative *haaðiˌ*.

Through the example in (27), we observed how in Arabic demonstrative pronouns modify NPs provided that such NPs are both syntactically and semantically definite. This correlation between demonstratives and syntactic and semantic definiteness in Arabic is of relatively great importance, as we will see in chapter 4. This observation is also important because demonstratives do not always exhibit this correlation even within Semitic languages. Take, for example, demonstratives in Hebrew. Consider the examples in (30), taken from Wintner (2000, p. 322), in which it is obvious that demonstratives can modify both syntactically definite and indefinite NPs without affecting the semantics of those NPs.

(30) a. sepr ze
book this
this book

b. ha-sepr ha-ze
the-book the-this
this book

c. *sepr ha-ze
book the-this

d. *ha-sepr ze
the-book this

In (30),a the demonstrative *ze* 'this' modifies the indefinite NP *sepr* 'book', while in (30)/b it appears as a modifier bearing the definite article *ha-* 'the', when the NP is also definite, as in *ha- sepr* 'the book'. This means that demonstratives in Hebrew can occur with both indefinite and definite NPs, and that they also have to show agreement in syntactic definiteness with their modified nouns. Any attempt for the demonstrative to not follow this strict requirement of definiteness agreement results in ungrammatical sentences, as demonstrated through (30)c-d. The question that normally arises in this regard is: Does this behavior of demonstratives in Hebrew have any impact on the semantics of demonstrative NPs? Danon (2001) argues that the behavior of demonstratives discussed above challenges the idea of matching syntactic definiteness with semantic definiteness, when bearing in mind that demonstrative NPs are considered to be the most prototypical instances of semantic *definites*. Danon (2001, p. 1076) provides the example in (31) as a piece of supporting evidence in favor of his argument.[8]

(31) a. karaʔti sefer ze
read.1SG book this
I read this book

b. karaʔti et ha-sefer ha-ze

According to Danon (2001), the two NPs *sefer* 'book' above are different in terms of syntactic definiteness, but are semantically identical. Now, let us return to Arabic. Demonstratives in Arabic can only modify NPs that are syntactically and

[8]The marker *et* in Hebrew, shown in (31)b, functions as the direct object accusative marker that is only present in the context of definite NPs (See Wintner (2000), and Danon (2001) for some detailed discussion).

semantically definite. If the NP is not syntactically definite, then the demonstrative pronoun can not be licensed, as shown in (32)b. Beyond a matching for syntactic and semantic definiteness, demonstratives in Arabic must also agree with the nominal it modifies in NUMBER and GENDER.

(32) a. haaða l-walad
this.SG.M DEF-boy.SG.M
this boy

b. *haaða walad[9]
this.SG.M boy.SG.M.INDEF
*this a boy

When it comes to semantic determination, demonstrative NPs are semantically definite and *specific* in the sense that the hearer can easily pick up the intended referent of such demonstrative NPs. I therefore argue that NPs that allow demonstrative modification are semantically *specific*, and not *generic*. Based on this reliable test of compatibility with demonstratives, I here make the distinction between generic NPs and specific NPs in general, and will extend this to the discussion of nominal ACT.PTCPs (or agent nominals) in Chapter 4.

A further point to mention with respect to demonstrative modification is their presence in the context of nominal CS constructions. Recall that I have earlier mentioned that definiteness in CS is determined as *definite* or *indefinite* on the basis of the definiteness status of the nominal complement, which is then what spreads definiteness to the head NP. I further argue that semantic definiteness and specificity of demonstrative NPs involved in CS spread their semantic properties to the head NPs. Consider the examples below.

[9]Note that this example is only ungrammatical as a NP modified by the demonstrative. It is however grammatical with the interpretation of a sentence: 'This is a boy.' in which the demonstrative serves as the subject, while the NP is the predicated element in a *predicational* verbless construction.

(33) a. baab al-ʕimaarah
door.SG.M DEF-building.SG.F

the building's door

b. baab al-ʕimaarah haaði
door.SG.M DEF-building.SG.F this.SG.F

this building's door

By virtue of the fact that demonstratives can only modify specifc NPs, then this also implies that demonstratives can only appear in contexts where the CS is definite. What this also entails is that in such structures, it is not only the nominal complement that is understood as specific, but also the head NP *baab* 'door', which inherits semantic specificity from its nominal complement. In plain terms, since the nominal complement *l-ʕimaarah* 'the building' is *specific* as it is compatible with the demonstrative modifier *haaði*, the nominal head *baab* 'door' is also *specific*.

2.2.1.3 Pronouns

Pronouns in Arabic fall into two sets: independent/strong pronouns, which can function as subjects, or dependent/weak pronouns that appear as suffixes attached to verbs, indicating direct and indirect objects, or to nouns to indicate the possessor argument, in addition to an attachment on prepositions, indicative of prepositional objects. While Table (34) shows the list of independent pronouns in HA, the dependent ones are listed in (35).

(34)

PERS.NUM.GEND	MSA	HA
1SG.M/F	ʔana	ʔana
1PL.M/F	naħnu	nuħun
2SG.M	ʔant-a	ʔint
2SG.F	ʔant-i	ʔinti
2DUAL.M/F	ʔant-um-aa	ʔintum
2PL.M	ʔant-um	ʔintum
2PL.F	ʔant-unna	ʔintum/ʔintun
3SG.M	huwa	huw
3SG.F	hiya	hiy
3DUAL.M/F	humaa	hum
3PL.M	hum	hum
3PL.F	hunna	hum/hun

(35)

PERS.NUM.GEND	HA
1PL.M/F	**-na**
2SG.M	**-ak**
2SG.F	**-ik**
2PL.M	**-kum**
2PL.F	**-kum/-kun**
3SG.M	**-uh**
3SG.F	**-ha**
3PL.M	**-hum**
3PL.F	**-hum/-hun**

It must be pointed out that the dependent pronouns shown above have the same

form regardless of whether they are suffixed to nouns or verbs, as the sentences below illustrate.

(36) a. kitaab-**uh** / kallam-t-**uh**
book-3SG.M.GEN / talk.PFV-1SG-3SG.M.ACC
his book / I talked to **him**

b. kitaab-**ik** / kallam-t-**ik**
book-2SG.F.GEN / talk.PFV-1SG-2SG.F.ACC
your book / I talked to **you**

However, when it comes to the **first person singular** (1SG) there is a notable morphological difference between the dependent pronoun that is suffixed on nouns, as opposed to the one that suffixes on verbs. While the former form appears as **-i**, the latter must show up as **-ni**. Table (37) shows the difference with illustrative examples.[10] It is on the basis of the small distinction in the pronominal form that pronouns attached on Ns and Ps are said to be GEN forms, while those on verbs, expressing OBJs, are understood as ACC. This is the remnant CASE system maintained in the Arabic dialects.

(37)

PERS.NUM.GEND	With Nouns	With Verbs
1SG.M/F	**-i**	**-ni**
Example	kitaab-**i** 'book of **mine**'	simiʕ-**ni** 'He heard **me**.'

2.2.1.4 Adjectives

In our first discussion of morphology at the outset of this section, it has been shown how a word in Arabic is formed on the basis of its corresponding verbal root. Adjectival forms are not exceptional in this regard. For a detailed discussion on derivational

[10] I use, among other types of evidence, this morphological property associated with the 1SG dependent pronoun as a well-founded argument for classifying *deverbal* ACT.PTCPs as verbs, rather than as nouns or adjectives, as claimed by some researchers. More on this will follow in Chapter 5 .

patterns of adjectives, see Ryding (2005, pp 239-275). Like English and other languages, adjectives in Arabic can be classified on the basis of their syntactic function, and can be either attributive, or predicative. Attributive adjectives in HA have to agree in NUMBER, GENDER and DEFINITENESS with the nouns they modify. In MSA, adjectives can display agreement for CASE. Such agreement behaviors are demonstrated through the HA data in (38).

(38) a. walad ṣaʕiir
boy.SG.M young.SG.M
a young boy

b. ʔal-walad aṣ-ṣaʕiir
DEF-boy.SG.M DEF-young.SG.M
the young boy

c. bint ṣaʕiir-ah
girl.SG.F young-SG.F
a young girl

d. ʔal-bint aṣ-ṣaʕiir-ah
DEF-girl.SG.F DEF-young-SG.F
the young girl

As mentioned in the beginning of § 2.2.1, modification of non-HUMAN plural NPs varies, such that these are modified by singular feminine adjectival forms, as shown in the HA data in (39).

(39) a. kutub gadiim-ah
books.PL old-SG.F
old books

b. ʔal-kutub al-gadiim-ah
DEF-book.PL DEF-old-SG.F
the old books

c. sayyaar-aat ğadiid-ah
car-PL.F new-SG.F
new cars

d. ʔas-sayyaar-aat al-ğadiid-ah
DEF-car-PL.F DEF-new-SG.F
the new cars

Predicative adjectives display similar behaviors as their attributive counterparts, except that they do not share in DEFINITENESS agreement. This is demonstrated through (40), which takes a non-HUMAN subject.

(40) ʔas-sayyaar-aat ğadiid-ah
DEF-car-PL.F new-SG.F
The cars are new.

DEF-marked predicative APs become however obligatory if the verbless predication happens to be equational in nature, where a pronominal form of the copula is necessary. This difference is illustrated through the contrastive HA data in (41).

(41) a. ʕali mariiḍ / *l-mariiḍ
Ali sick.SG.M / *DEF-sick.SG.M
Ali is sick (*the sick).

b. ʕali huw l-mariiḍ
Ali PRON.3SG.M DEF-sick.SG.M
Ali is the sick one (i.e. not somebody else).

Adjectives in Arabic can themselves be modified through degree modifiers, which should linearly follow the adjective. A display of this in both MSA and HA is provided in (42).

(42) a. baarid-un ğiddan (MSA)
cold.SG.M-NOM very
very cold

b. baarid marrah (HA)
cold.SG.M very
very cold

Adjectives can take comparative and superlative counterpart forms. Such forms, unlike their non-comparative and superlative counterparts, display no distinction for GENDER and NUMBER. While the comparative is expressed by the complementation of the preposition *min* 'from' equivalent to 'than' in English, as in (43), the superlative is expressed by the comparative form taking an indefinite nominal complement, as in (44).

(43) a. ʕali ʔaṭwal min ʔaħmad
Ali tall.COMPAR from Ahmad
Ali is taller than Ahmad.

b. faaṭimah ʔaṭwal min saara
Fatima tall.COMPAR from Sara
Fatima is taller than Sara.

(44) a. ʕali ʔaṭwal walad
Ali tall.COMPAR boy
Ali is the tallest boy.

b. faaṭimah ʔaṭwal bint
Fatima tall.COMPAR girl
Fatima is the tallest girl.

A salient characteristic of adjectives in Arabic is that they can form the so-called Adjectival-Construct, a phenomenon that has intrigued many researchers in different languages (Hazout (2000), Siloni (2002), Kim (2002), Heller (2002), Kremers (2005), Al-Sharifi and Sadler (2009), Mittendorf and Sadler (2008)). The examples for the MSA adjectival construct below are taken from Hazout (2000).

(45) a. ʔanta **ʕaẓiim-u l-ħaẓẓ-i**
you **great.**SG.M-NOM DEF-**fortune.**SG.M-GEN
You (M) are very lucky.

b. ʔimraʔ-at-un **ǧamiil-at-u l-waǧh-i**
woman-SG.F-NOM **beautiful-**SG.F-NOM DEF-**face.**SG.M-GEN
a woman with a beautiful face

c. šaxṣ **ṭayyib l-galb** (HA)
person kind DEF-heart
a kind-hearted person

The adjectival construct, as shown through the data in (45), is composed of an adjectival head *ʕaẓiim* 'great' that is immediately followed by a definite nominal complement *l-ħaẓẓ* 'the fortune'. Semantically, while the adjectival head denotes a property, the inner nominal is what restricts the interpretation, or diverts the interpretation of that adjective to a certain/specific dimension. In (45)a, the adjective modifies the inner noun, but the whole construct headed by the adjective then modifies the outer noun, either predicatively, as in (45)a, or attributively, as in (45)b, in its usual external syntactic behavior. What is crucial to pay attention to is that the adjectival construct closely resembles the nominal construct state in that both are subject to the same strict adjacency requirement which prohibits anything to separate its two elements, i.e. the adjectival head and its "inner" NP in adjectival constructs, and the head noun and its possessive "inner" NP complement in CS constructions. A difference between the adjectival construct and the nominal construct is that the inner nominal complement of an adjective in an adjectival construct must be always definite. To clarify the strict adjacency requirement in the adjectival construct, let us consider the following MSA examples taken from Al-Sharifi and Sadler (2009).

(46) a. ğamiil-un ğiddan
beautiful-NOM very
very beautiful

b. ʔimraʔ-at-un **ğamiil-at-u l-wağh-i** ğiddan
woman-SG.F-NOM **beautiful-**SG.F-NOM DEF**-face.**SG.M**-**GEN very
a woman with a very beautiful face

c. *ʔimraʔ-at-un **ğamiil-at-u** ğiddan **l-wağh-i**
woman-SG.F-NOM beautiful-SG.F-NOM very DEF-face.SG.M-GEN
a woman with a very beautiful face

In (46),a the adjective *ğamiil* 'beautiful' is modified by the following intensifier *ğiddan* 'very'. When that adjective is involved in an adjectival-construct construction, its modifying intensifier has to show up after the whole construction, as shown in (46),b. This displays the strict adjacency between the two members of the adjectival-construct, the adjective *ğamiil* 'beautiful' and its nominal complement *l-wağh* 'the face'. Any attempt to separate the adjectival head from its (genitive) nominal complement will result in ungrammaticality, as shown in (46)c. The adjectival construct is also attested in HA as provided in (45),c which is repeated in (47) below for convenience. The difference is that no CASE-marking in HA is present on the elements that constitute the adjectival construct. Moreover, as shown for the MSA data, the internal nominal complement *al-galb* 'the heart' is DEF-marked.

(47) **ṭayyib al-galb** (HA)
kind DEF-heart
kind-hearted

2.2.2 The Verbal System

As stated earlier, at the start of Section 2.2, a verbal root in Arabic functions as the base that is understood to generate its verbal, nominal, and adjectival derivatives.[11] A word's formation depends on the type of verbal root. This has to do with whether the number of radicals/consonants the root is made up of is three, i.e. 'triliteral', or four (or more) ('quadriliteral/augmented'). This root along with the vocalic melody produce the different templatic verbal forms, also known as *binyanim*. The nature of the verbal roots provides them with two main classifications, depending on whether or not one (or more) of the the root happens to be a /w/ or /y/ radical. Roots classified as *regular* involve consonants other than /w/, or /y/. In contrast, *weak* verbs (or roots) are ones where at least one of the radicals is /w/ or /y/. The table in (48) below summarizes the basic classification of the types of verbal roots one finds in Arabic (see Ryding (2005) for more details).

[11] In Arabic and other Semitic languages, two opposing theories have emerged as to whether it is the root or the word that should function as the base input to such morphological processes: The Root-based model (McCarthy (1981), Abd-El-Jawad and Abu-Salim (1987), Davis and Zawaydeh (1999), Prunet et al. (2000), among others), and the Word-based model (Ratcliffe (1997), Benmamoun (1999), just to name a few).

(48)

Verbal Root Type	Consonantal Root	Example
Regular/Triliteral *three different consonants*	$\sqrt{ktb}$	katab 'write'
Weak/Triliteral (Assimilated) *the first consonant is* /w/ *or* /y/	$\sqrt{wṣl}$	waṣal 'arrive'
Weak/Triliteral (Hollow) *the middle consonant is* /w/ *or* /y/	$\sqrt{byʕ}$	baaʕ 'sell'
Weak/Triliteral (Defective) *the last consonant is* /w/ *or* /y/	$\sqrt{nsy}$	nasiy 'forget'
Geminate *the 2nd and 3rd consonants are the same*	$\sqrt{ʕdd}$	ʕadd 'count'
Hamzated *one of the consonants is ʔ*	$\sqrt{ʔxð}$	ʔaxað 'take'
Augmented (Quadriliteral) *four different consonants*	$\sqrt{ṣyṭr}$	ṣayṭar 'control'

2.2.2.1 Tense and Aspect

Arabic draws a formal distinction between two main aspectual verbal paradigms: the *Perfective* (PFV), and the *Imperfective* (IMPFV). The two morphological verb-forms are broadly utilized to express a *Past/Non-Past* temporal distinction. The aspectual distinction of perfective vs. imperfective is one where while the perfective verb-form is interpreted to encode the *past* tense and *perfective*/completed aspect, the imperfective form encodes the non-past tenses (*present* and *future*) as well as *imperfective* aspect.[12] The perfective verb involves the suffixation of agreement

[12]It should be noted that Comrie (1976, pp. 78-81) favors the employment of the terms *Perfect* and *Imperfect* for the two Arabic paradigms mentioned above, and argues that while the former yields an interpretation to "relative past (anterior) time reference and perfective aspect", the latter is associated with "relative non-past (i.e. simultaneous or posterior) time reference or imperfective aspect". To avoid confusion, I will keep using the labels 'Perfective' and 'Imperfective' for the two

markers that encode the subject's values for PERSON, NUMBER, and GENDER.[13] As for the TENSE and ASPECT interpretations associated with this form, I follow Benmamoun (2000), Aoun et al. (2010), and others who argue that the suffixes attached to the perfective form are agreement markers only, while tense and aspect are abstract features carried on these verbs, by virtue of their morphological forms, but are otherwise not marked overtly. The table below illustrates the perfective paradigm of the basic verb *katab* 'write'.

(49)

Pers.Number.Gender	Suffix forms	MSA	HA
1SG.M/F	-tu	katab-tu	katab-t
1PL.M/F	-na	katab-naa	katab-naa
2SG.M	-ta	katab-ta	katab-t
2SG.F	-ti	katab-ti	katab-ti
2PL.M	-tum	katab-tum	katab-tum
2PL.F	-tunn	katab-tunn	katab-tum/katab-tun
2DUAL.M/F	-tumaa	katab-tumaa	katab-tum
3SG.M	-a	katab-a	katab
3SG.F	-ta	katab-at	katab-at
3DUAL.M	-aa	katab-aa	katab-u
3DUAL.F	-ataa	katab-ataa	katab-u
3PL.M	-uu	katab-uu	katab-u
3PL.F	-na	katab-na	katab-u/katab-n

When it comes to the imperfective forms of the verb, they carry the SUBJECT's agreement markers via both prefixes and suffixes. While the prefixes mainly indicate the SUBJECT's PERSON values, the suffixes mainly represent the NUMBER values.

Arabic verb forms, and they will be represented in glosses as PFV and IMPFV, respectively.

[13] Verbal affixes indexing the subject in MSA have received two opposing views: a) an Incorporation analysis (Fassi Fehri, 1993), and b) an Agreement analysis (Mohammad (1990), Benmamoun (2000), Soltan (2007), among others).

GENDER is usually carried by the same suffix marking NUMBER except for the 3SG.F form, as in *ta-lʕab* 'she plays', where the prefix *ta-* is what marks the form as 3rd PERSON and FEMININE in GENDER. Just as in the case of the perfective paradigm, there is no GENDER distinction in the first person forms. In the 1st PERSON forms: *ʔa-lʕab* 'I play' and *na-lʕab* 'we play,' it is the different prefix: *ʔa-* vs. *na-* that expresses the SG vs. PL number distinctions, respectively. Tense and aspect values are once again understood to not be overtly expressed upon the imperfective form of the verb. The imperfective paradigm for the basic verb *katab* 'write' is presented in Table (50) below.

(50)

Pers.Number.Gender	Prefix- -Suffix	MSA	HA
1SG.M/F	ʔa-	ʔa-ktub	ʔa-ktub
1PL.M/F	na-	na-ktub	ni-ktub
2SG.M	ta-	ta-ktub	ti-ktub
2SG.F	ta- -iin	ta-ktub-iin	ti-ktub-i
2PL.M	ta- -uun	ta-ktub-uun	ti-ktub-u
2PL.F	ta- -na	ta-ktub-na	ti-ktub-u/ti-ktub-n
2DUAL.M/F	ta- -aan	ta-ktub-aan	ti-ktub-u
3SG.M	ya-	ya-ktub	yi-ktub
3SG.F	ta-	ta-ktub	ti-ktub
3DUAL.M	ya- -aan	ya-ktub-aan	yi-ktub-u
3DUAL.F	ta- -aan	ta-ktub-aan	yi-ktub-u
3PL.M	ya- -uun	ya-ktub-uun	yi-ktub-u
3PL.F	ya- -na	ya-ktub-na	yi-ktub-u/yiktub-n

The verbal paradigm in HA, as in the other dialects, is somewhat more simplified than that for MSA. While verbs in the latter take three different MOOD distinctions: indicative, subjunctive, and jussive, there is no such MOOD distinction in the Arabic varieties including HA.

Having given the basic information associated with the morphology of verb-forms in HA, in what follows I turn to discuss Tense and Aspect in some detail.

- Tense and Aspect in the literature

Tallerman (2011, p 41) views TENSE and ASPECT as "the most common morphosyntactic categories associated with verbs". For Hurford (1994, p. 240) "[t]ense involves the basic location in time of an event or state of affairs, in relation to the time of speaking (or writing), while aspect relates more to the internal nature of events and states of affairs, such as whether they are (or were) finished, long-lasting, instantaneous, repetitive, the beginning of something, the end of something, and so on".

- Tense

The grammatical category of tense has received different definitions in the literature. Comrie (1985, p. 9) defines it as a "grammaticalised expression of location in time". However, linguists have felt the need to draw a distinction between tense as a morphological category, and tense as a propositional or semantic category. In this regard, Comrie (1985, p. 12) states that "[w]hile much traditional grammar regards tense as a category of verb on the basis of its morphological attachment to the verb, more recently it has been argued that tense should be regarded as a category of the whole sentence, or in logical terms of the whole proposition ...". Then he adds that "[e]ven more recently, however, there have been suggestions that the earlier analysis, assigning tense to the verb, may be correct ..." (ibid: p. 12). Crosslinguistically, it has been assumed that the verb is the most widely utilized tool that indicates tense (Binnick, 1991, p. 3). In a language like English, speakers differentiate between three times, or temporal references that associate with three TENSE values: PAST, PRESENT, and FUTURE. These temporal references are viewed as 'segments of an

indefinitely long line passing through the point of the present' (Binnick, 1991, p. 4). Moreover, TENSE has been classified as being either: *absolute* or *relative*. Comrie (1985, p. 64) distinguishes the two by saying that "... absolute time reference, [is] where a situation is located at, before, or after the present moment; and relative tenses, [is] where a situation is located at, before, or after a reference point given by the context".

- Aspect

Aspect, on the other hand, is concerned with the ways of "viewing the internal temporal constituency of a situation" (Comrie, 1976, p. 9), or "whether an action is ongoing or completed" (Tallerman, 2011, p 41). Many languages usually have a basic two-way distinction for ASPECT, e.g. perfective vs. imperfective. With respect to this distinction, Comrie (1976, p. 16) voices that "perfectivity indicates the view of a situation as a single whole, without distinction of the various separate phases that make up that situation; while the imperfective pays essential attention to the internal structure of the situation". Moreover, the two main types of ASPECTual values could then be further distinguished in terms of their functions, in the sense that while the perfective aspect expresses punctual, iterative, and resultative uses and readings, the imperfective is often used to indicate continual, habitual and generic uses (Binnick, 1991, p. 156). Linguists have drawn a further distinction between *lexical* aspect and *grammatical* aspect. The aspect I have been discussing up until now is, or concerns, grammatical aspect. As to lexical aspect, the philosopher Zeno Vendler (1967) proposed four aspectual classes (or *Aktionsarten*) in which verbs can be classified as: states, activities, accomplishments, and achievements, in addition to the fifth class of semelfactives proposed by Smith (1991). Such aspectual classes are distinguished in terms of three main characteristics: *dynamicity*, *telicity*, and time *duration*. The table below summarizes the main features of each aspectual

class, as described in the literature. For extensive discussions, see Vendler (1967), Kearns (2011), among others.

(51)

Aspectual Class	Verbs/Instantiations	Characteristics
States	*be hungry, know the answer*	stative (no movement) atelic (no natural endpoint) durative (can last)
Activities	*chat, walk in the garden*	dynamic, atelic, durative
Accomplishments	*eat an apple, build a house*	dynamic, telic, durative
Achievements	*realize, reach*	dynamic, telic, non-durative
Semelfactives	*blink, cough*	a brief event, repeatable

2.2.2.2 Reichenbach's Theory of Tense and Aspect

Reichenbach (1947) introduced his celebrated classical approach to temporality in which he proposed a three-interval structure of time: the speech time (**S**), the event time (**E**), and the point of reference (**R**). Moreover, two ordinary relations were assumed: *anteriority* represented by (-), and *sumaltaneity* represented as (,). Since then, TENSE was taken to relate the event time, i.e. the time at which the event occurs, to the speech or utterance time, i.e. the time at which the utterance is produced. Comrie (1985) points out that while speech-time and event-time are enough to account for absolute tense i.e. simple: past, present, and future time references, a reference-point is required when dealing with relative tense, as in the perfect tenses, for instance. Table (52) illustrates how the three intervals (S, E, and R) are positioned in the expression of English *tenses*.

(52)

Tense	Example	Positions of S, E, R
Simple Past	I ate.	E,R - S
Past (Anterior) / Perfect	I had eaten (before you came)	E - R - S
Past (Posterior)	I would eat	R - E - S
Present (Anterior) / Perfect	I have eaten	E - S,R
Simple Present	I eat	S,E,R
Posterior Present (Simple Future)	Now I will eat	S,R - E
Future (Simple)	I will eat later	S - R,E

Klein (1994) later replaced Reichenbach (1947)'s 'point of reference' with his new time span dubbed as '**Topic** or **Assertion Time**', i.e. the time about which something is claimed or asserted. For Klein, TENSE serves to relate the topic/assertion time to the utterance time, whereas ASPECT is treated as a relation between the TOPIC/ASSERTION-TIME and the EVENT-TIME. Klein (1994) assumes that the classical notion of TENSE is only obtained when the topic time is simultaneous to the event time. Since then, researchers have treated ASPECT in terms of the inclusion relation, where in the context of *perfective* aspect, the topic/assertion-time includes the eventuality-time, while in the *imperfective* aspect, the topic/assertion-time is included in the eventuality-time. This results in a widely-held assumption that the speaker views the event from outside in case of the perfective aspect, but from inside in case of the imperfective aspect. The tables below illustrate the types of relations expressed by TENSE and ASPECT. I will stick to represent the utteranace-time as (UT), the eventuality-time as (EV-T), and the assertion-time as (ASSERT-T).[14]

[14]Note that Klein (2009, p. 46) favors the label *situation-time* when it comes to the representation of 'the time at which the situation obtains or occurs', following Comrie (1976), who hires the label 'situation' as a cover term for all kinds of events, states, activities, etc. Also note that the UTTERANCE-TIME (UT) has received different terms such as the SPEECH-TIME (S), the time of utterance (TU), or the NOW. As I said above, I will use the term EVENTUALITY-TIME (EV-T) after Bach (1986), who utilizes the term 'eventuality' as an overarching term for events and states, and I utilize the term ASSERTION-TIME (ASSERT-T), following Klein (1994, 1995, 2009), Demirdache and Uribe-Etxebarria (2000), among others.

(53)

TENSE	Type of Relation
PAST	UT **after** ASSERT-T
PRESENT	UT **includes or is within** ASSERT-T
FUTURE	UT **before** ASSERT-T

(54)

ASPECT	Type of Relation
PERFECTIVE	EV-T $\subseteq$ ASSERT-T
IMPERFECTIVE	ASSERT-T $\subseteq$ EV-T

2.2.2.3 Tense/Aspect System in HA

Traditional Arab grammarians, including the Basra and Kufa Schools, have long viewed Arabic as a tensed language in which verbs encode both temporal and aspectual distinctions, expressed through the two main morphological patterns of verb: perfective and imperfective. As noted earlier, the morphological distinction between these verb-forms gives rise to two temporal distinctions: PAST/non-PAST, and two aspectual distinctions: perfective/imperfective. This Tense/Aspect system can be said to extend to HA. Table (55) summarizes, with examples from HA, various types of Tense and Aspect.

(55)

Verb-form	Example	Tempo-aspectual interpretation
PFV	ʔal-walad **katab** l-waağib The boy wrote the homework	simple past
IMPFV	ʔal-walad **yi-ktib** l-waağib The boy writes/is writing the homework	simple present or present PROG
FUT + IMPFV	ʔal-walad **raaħ yi-ktib** l-waağib The boy will write the homework	simple future
PFV + PFV	ʔal-walad **kaan (gad) katab** l-waağib The boy had written the homework	past perfect
PFV + IMPFV	ʔal-walad **kaan yiktib** l-waağib The boy was writing/used to write ...	past progressive
PFV+FUT+ IMPFV	ʔal-walad **kaan raayiħ yiktib** l-waağib The boy was going to write ...	past future
taww + PFV	ʔal-walad **taww-uh katab** l-waağib The boy has just written ...	present perfect
PFV + PFV	ʔal-walad **raaħ yi-kuun (gad) katab** l-waağib The boy will have written ...	future perfect

2.2.3 Morphology of ACT.PTCPs

As stated earlier, the three different types of ACT.PTCPs (nominal, deverbal, and adjectival) are indistinguishable in terms of morphology and agreement. In order to form such different types of ACT.PTCPs, what we should be taking into account is the type of consonantal root which the corresponding verb has. If a verb is based on a triliteral consonantal-root, its associated ACT.PTCP is derived from the perfective verb-form via the insertion of a long vowel *aa* after the first consonant, and the

positioning of a short vowel *i* after the second consonant. This formation is based on the CVVCVC template. The other formation is based upon the verb-forms that take an augmented consonantal-root, i.e. a root with more than three consonants. In this case, the corresponding ACT.PTCP is derived from the imperfective form, where the prefixation of *mu-* replaces the PERSON prefix, and the short vowel *i* is inserted before the last consonant. The template is: *mu*-CCVC. I therefore claim that such participles are regularly formed taking as input the two main tense-aspect paradigms: perfective and imperfective. The table below shows some illustrative examples from MSA and HA (see Ryding (2005) for detailed discussion on the morphological pattern of ACT.PTCPs).

(56)

consonantal-root	Meaning	Perfective form	Imperfective form	ACT.PTCP MSA	ACT.PTCP HA
√ktb (triliteral)	'write'	katab	NA	k**aa**t**i**b	k**aa**t**i**b
√drrs (augmented)	'teach'	darras	**yu**-darris	**mu**-darris	**mi**-darris
√ʔšrf (augmented)	'supervise'	ʔa-šraf	**yu**-šrif	**mu**-šr**i**f	**mi**-šr**i**f

As illustrated through the HA ACT.PTCP in the above table, while the same morphological pattern as that of MSA is obtained, some phonological variation is exhibited. For example, since in MSA the prefix in the imperfective verb-form *yu-darris* 'teach' is *yu-*, the prefix of the ACT.PTCP surfaces as *mu-*, hence leading to the ACT.PTCP formation: *mu-darris*. In HA, however, the prefix is *yi-*. On this basis, it is the form: *mi-darris* that obtains. A further phonological variation that HA exhibits is held to relate to the fact that the presence of a glottal stop /ʔ/ ends up as the semi-vowel *y*. A good example is the MSA ACT.PTCP *naaʔim* 'asleep', 'sleeping', which in HA takes the output form: *naayim*. However, such phonological and morphological variations have no further impact on their semantics in the sense that determining whether an ACT.PTCP is nominal or deverbal is solely dependent on their syntactic and semantic properties, and their morphological form provides

no additional information with respect to the category they express. This however is not the case in Egyptian Arabic, for example, where Radwan (1975) claims that the prefix plays a crucial role in distinguishing nominal ACT.PTCPs from deverbal ones, such that the prefix *mu-* in *mudarris* is interpreted as 'teacher', i.e. a nominal ACT.PTCP, while the prefix *mi-* in *mi-darris* is interpreted as 'teaching' or 'having taught', which leads to a deverbal use of the form. HA utilizes the ACT.PTCP form *midarris*, for instance, both for its nominal and deverbal functions, and it is then the syntactic and semantic properties of an ACT.PTCP that define its categorical status.

2.3 Clausal syntax

2.3.1 Word Order

HA displays two unmarked word orders: VSO and SVO.[15] This means that verbs and subjects tend to appear earlier in Arabic clauses, while objects occur later. It is important to note that the MSA subject-verb agreement asymmetry has intrigued many researchers for the last thirty years (Mohammad (1989, 2000), Fassi Fehri (1993), Benmamoun (2000), Soltan (2007), Aoun et al. (2010), among others). However, HA differs from the behavior observed in MSA, in some respects. As an example, the verb in MSA shows full agreement with the subject in PERSON, NUMBER and GENDER in SVO structures, while it shows partial agreement in VSO, where only GENDER values are shared between the subject and the verb. The examples below are illustrative of this asymmetry.

(57) a. ʔal-ʔawlaad-u ğaaʔ-uu
DEF-boy.PL.M-NOM come.PFV-3PL.M
The boys came.

b. *ʔal-ʔawlaad-u ğaaʔ-a
DEF-boy.PL.M-NOM come.PFV-3SG.M
The boys came.

c. *ğaaʔ-uu ʔal-ʔawlaad-u
come.PFV-3PL.M DEF-boy.PL.M-NOM
The boys came.

d. ğaaʔ-a ʔal-ʔawlaad-u
come.PFV-3SG.M DEF-boy.PL.M-NOM
The boys came.

[15]Note that Arabic also allows other orderings such as VOS, OVS, SOV, but such constituent orders are marked, and are available only if the right pragmatic factors are met.

This subject-verb agreement asymmetry does not extend to HA, such that irrespective of the order in which the subject appears, the verb exhibits full agreement, as shown below.

(58) a. ʔal-awlaad ğa-w
DEF-boy.PL.M come.PFV-3PL.M

b. *ʔal-awlaad ğaa
DEF-boy.PL.M come.PFV.3SG.M

c. ğa-w al-awlaad
come.PFV-3PL.M DEF-boy.PL.M

d. *ğaa l-awlaad
come.PFV.3SG.M DEF-boy.PL.M
The boys came.

In this regard, Aoun et al. (1994) demonstrate through data from Lebanese and Moroccan Arabic that indeed the behavior related to subject-verb agreement observed in MSA does not hold. The following data, from Moroccan Arabic, illustrate a behavior that patterns with that in the HA data in (58).

(59) a. le-wlaad nʕas-u
the-children slept-3PL

b. *le-wlaad nʕas
the-children slept.3SGM

c. nʕas-u le-wlaad
slept-3PL the-children

d. *nʕas le-wlaad
slept.3SG the-children
The boys slept. (Aoun et al., 1994, p.196)

Another discussion that has characterized the debates in the previous literature relates with the status of preverbal subjects, and has to do with whether the pre-verbal element in an SVO order should be treated as a genuine subject, or as a topic. While there is a fair amount of agreement that subjects in VSO can be definite or indefinite, in SVO the pre-verbal NP must be definite. Otherwise, indefinite subjects are only allowed if they are modified or interpreted as specific (Mohammad (1989), Fassi Fehri (1993), Benmamoun (1996), Aoun et al. (2010), and some others). This phenomenon holds not only in MSA, but also in other varieties such as Palestinian Arabic (Mohammad (2000)), Moroccan Arabic and Lebanese Arabic, with the data below taken from Aoun et al. (2010).

(60) a. ğaaʔa walad-un (MSA)
came.PAST.3MS boy-NOM.INDEF
A boy came.

b. *walad-un ğaaʔa (MSA)
boy-NOM.INDEF came.PAST.3MS

c. ʔadğa walad (Palestinian Arabic)
came.PAST.3MS boy

d. *walad ʔadğa (Palestinian Arabic)
boy came.PAST.3MS

e. ğa weld (Moroccan Arabic)
came.PAST.3MS boy.indef

f. *weld ğa (Moroccan Arabic)
boy came.PAST.3MS

g. ʔeğa walad (Lebanese Arabic)
came.PAST.3MS child

h. *walad ʔeğa (Lebanese Arabic)
child came.PAST.3MS

i. walad ṭawiil ʔadğa (Palestinian Arabic)
boy tall came.PAST.3MS
A tall boy came. (**Modified NP**)

The same observation carries over to HA, in which definite or indefinite subjects are licensed in VSO orders, while in a SVO order, the pre-verbal nominal is required to be definite, or if indefinite, it must be modified. Such data follows in (61).

(61) a. ğa l-walad
come.PFV.3SG.M DEF-boy.SG.M
The boy came.

b. ğa walad
come.PFV.3SG.M boy.SG.M
A boy came.

c. *walad ğa
boy.SG.M come.PFV.3SG.M

d. walad šaʕiir ğa
boy.SG.M young.SG.M come.PFV.3SG.M

As we discuss SVO and VSO structures, it is important to mention that Arabic is a null-subject language, and this extends to its various varieties, including HA. Consider the exchange in (62), where the NP *l-ʔawlaad* 'the boys' serves as the subject, or the referent of the 3PL.M agreement on the verb in the answer in B. It is because of this rich morphology that the subject NP can be phonologically dropped.

(62) A: wayn al-awlaad
where DEF-boys
Where are the boys?

B: raaħ-u
go.PFV-3PL.M
They left.

2.3.2 The Inventory of Phrasal Categories

As in many other languages, Arabic has the following major lexical categories: Verb (V), Noun (N), Preposition (P), Adjective (A), and Adverb (Adv), which head their own corresponding categorial phrases. An illustration of each of these phrases is provided below:

(63) a. VP: *katab al-waaǧib* 'do the homework'

b. NP: *l-waaǧib* 'the homework'

c. PP: *fi-l-bayt* 'at home'

d. AP: *walad ṣaʏiir* 'a young boy'

e. AdvP: *ðalħiin* 'now'

Besides the above-mentioned set of lexical categories and the phrases they head, Arabic employs the functional categories of IP, and CP. The **I** position in Arabic is filled by the finite verb of the sentence, and if there is more than one such verb, the I position is occupied by the first finite verb while other verb(s) which may follow are considered to be within the VP. As regards CP, it is assumed for Arabic for cases such as focus, topicalization (Left-dislocated NPs), and the like.

So far, I have introduced the major grammatical characteristics of HA which are useful for investigating syntactic and semantic features of ACT.PTCPs in Arabic. It remains to discuss two main notions that are of relevance and great importance

throughout this thesis. These two points concern: the construction of non-verbal predication/verbless constructions in Arabic, and the notion of '*argument structure*'.

2.4 Non-verbal Predication in the literature

Non-verbal predication in Arabic is of great importance in this work, and will be addressed for two reasons. The first reason is that I utilize this context to distinguish the different types of nominal ACT.PTCPs. It is argued that a certain predication relation is established between the syntactic and semantic properties of such nominals in such a way that whereas definite agent nominals are equational predicates, indefinite agentives are predicational ones. The examples below illustrate this established correlation between DEFINITENESS and the type of non-verbal predication.

(64) a. ʔaħmad midarris [**Predicational**]
Ahmad teacher.SG.M
Ahmad is a teacher.

b. ʔaħmad huw l-midarris [**Equational**]
Ahmad PRON.SG.M DEF-teacher.SG.M
Ahmad is the teacher.

The other reason behind the significance of the verbless clauses context is that it is the syntactic context where the most common use of deverbal ACT.PTCPs appears, as we will see in chapter 5. Before embarking on the investigation of the specifics of verbless clauses in Arabic, a representative, rather than exhaustive, overview on copular sentences in English is provided to serve as a backdrop to the discussion of the equivalent construction in Arabic, the so-called 'verbless clauses'.

2.4.1 An Overview

The rich body of literature on copular sentences (Halliday (1967), Bolinger (1972), Higgins (1976), Lyons (1977), Akmajian (1979), Declerck (1988), Keizer (1990), den Dikken (2001), Mikkelsen (2005), and others) has long resulted in a long-standing debate on how to reach a fine-grained typology of such sentences. However, the widely-held consensus among researchers is that a general distinction has to be drawn between two semantically basic types of copular sentences: a) predicational (or non-equational), and b) equational (or specificational).[16] It is worth saying that even with attempts at reducing the various types of such sentences to the above-mentioned simple two-way split, the terminology of the two basic types has rampantly proliferated to denote the contrast, as the outline represents below.

a- John is a teacher. [**Predicational / Non-equational**]

(65)

Predicational Type	Scholar Name
intensive	Halliday (1967)
non-equational	Bolinger (1972), Harries-Delisle (1978)
ascriptive	Kahn (1973, p. 469), Lyons (1977)
attributive	Lyons (1968, p. 389), Halliday (1970a), Gundel (1977)
predicational	Higgins (1976), Akmajian (1979), Declerck (1988)
property-assigning	Dik (1980b)
characterizational	Kuno and Wongkhomthong (1981), Quirk et al. (1985)
qualifying	Mathesius (1975)
classifying	Erades (1949)

[16]The two labels 'predicational' and 'specificational' were launched by Akmajian in his 1970 Ph.D thesis which was published later in 1979.

b- John is the bank robber. [**Equational**]

(66)

Equational Type	Scholar Name
extensive	Halliday (1967)
equational	Bolinger (1972), Harries-Delisle (1978)
equative	Halliday (1970b), Huddleston (1984), Kahn (1973), Lyons (1977)
identifying	Dik (1980b), Gundel (1977)
identificational	Kuno and Wongkhomthong (1981), Quirk et al. (1985)
specificational	Akmajian (1979)
specificational(ly identifying)	Declerck (1988)

The linguists referred in (65) and (66) agree that the two basic types of copular sentences differ with respect to the **referentiality** of the post-copular NP. That is, whereas the post-copular NP is non-referential in **predicational** copular sentences, it is referential in **equational** ones although referentiality is a contentious notion among those scholars. Based on these two types, Higgins (1976) employed syntactic and semantic grounds for enriching the above basic two-way split with two more types: identificational, and identity statement.

Moreover, Declerck (1988) proposed a five-way distinction, but it should be made clear that the two authors (Higgins and Declerck) utilized different criteria for differentiating between such types. The table (67) shows the various types of copular sentences proposed by Declerck (1988) and examples.

(67)

Declerck Typology	Example
predicational	John is a teacher
specificational(ly identifying)	the bank robber is John Thomas.
descriptionally identifying	that man is John's brother
identity statement	the Morning Star is the Evening Star
definitional	a pyramid is what the Egyptian built to bury their pharaohs in

What is important to pay attention to here is that Higgins (1976) and Declerck (1988) apply the referentiality criterion to the two NPs (the pre-copular and the post-copular).[17] When it comes to the syntactic properties of the two NPs involved, the two scholars employ the test of reversibility of the two NPs around the copula.

In addition, many researchers assume that the typology of copular sentences is dependent on a distinction to be made among the various types of the copula 'be' (Huddleston (1984), Bolinger (1972), Akmajian (1979), Seuren (1985), among others). This is meant to say that those scholars treat the copula 'be' as a lexical verb that can express a variety of meanings. See below the different types of 'be' identified in the literature.

(68)

Types of 'be'	Author
intensive, equative, identificational	Huddleston (1984)
equational, locational, non-equational	Bolinger (1972)
predicative, 'be' of identity, specifying 'be'	Seuren (1985)
predicational, identificational	Safir (1985)

However, that there is only one copular 'be' in copular sentences which is denied

[17]Note that Higgins (1976) adopts the referentiality notion of Strawson (1959) and Geach (1968) who look at it as 'what a proposition is about'. Declerck (1988) makes a distinction between referring and non-referring NPs on one hand, and a distinction between strongly and weakly referring NPs on the other hand.

any lexical meaning on its own is not a contentious argument in the generative literature (Stowell (1981), Heggie (1988), Moro (1997), Partee (1998), den Dikken (2001) and others). The commonplace view among those linguists is that the copula 'be' does not have any meaning, but it serves as a functional element that links the two major NPs around it. As a result, the typology of copular sentences should be made in terms of the syntax and semantics of the major constituents (pre-copular NP, and post-copular NP) involved in such clauses. It should be said that I restrict myself in this work to the only basic two categories: predicational (non-equational), and equational. In the following section, major semantic and syntactic properties of copular verbs will be addressed.

- Predicational/Non-equational Copular Sentences

A predicational copular sentence serves semantically to predicate or assign a property/characteristic to the referent of the subject NP. Thus, the sentence *John is a teacher* ascribes to *John* the property of being a teacher, and this property NP 'teacher' is understood among many linguists to express class-inclusion in the sense that it "expresses the relation of class membership" (Halliday, 1970b, p.154). As a result, we can paraphrase *John is a teacher* as 'John is one of the class of teachers' or 'John is a member of the class of people characterized as teachers'.[18] This has resulted in the uncontroversial assumption among linguists that the subject NP and the predicate NP in predicational copular sentences exhibit a different degree of specificity in such a way that the latter is more general than the former.[19] With respect to referentiality and definiteness, whereas the subject NP is definite and referential, the property NP is indefinite and has no referent in the universe of discourse (Kuno (1970), Higgins (1976), Akmajian (1979), Declerck (1988), among others).

[18] Jesperson (1962, p.176) points out that '*He is a rascal*' means 'he is one of the class of rascals'.

[19] Givón (1973, p. 119) claims it is a universal restriction that "a predicate may never be less general than its subject".

A summary of the most salient characteristics of such sentences as identified in the literature is provided below (largely taken from Declerck (1988)).

-**semantic function**: to predicate or assign a property (characteristic, class-membership) to the referent of the subject NP

-**discourse function**: the subject NP = old information/shared knowledge , the predicate property NP = new information

-**with it-clefts**: it does not alternate with it-cleft (*it is a teacher that John is)

-**referentiality**: the subject NP is referential and definite, the predicate NP is indefinite[20], non-referential, and more general than the subject NP

-**reversibility**: the two NPs are not reversible/permuted (John is a teacher), (*A teacher is John)

- Equational Copular Sentences

What underlies the use of the labels '*equative*' and '*equational*' in the linguistic literature is the widely-held view that such a sentence expresses "resembling the two terms of an equation, where the one serves to identify the other, as in x =2" (Halliday, 1970b, p. 155). That is, "what is referred to as NP1 is the same as what has been referred to as NP2" Kuno (1970, p. 351). Dik (1980a, p. 32) uses the term '*identifying*' in the sense that "a relation of identity is established between two entities", so, "it is expressed that the referents of two definite terms do, in fact, coincide in the same entity." Added to this, Halliday (1982, p. 68) points out that a specificational sentence expresses "a relationship of identity, a kind of 'equals' sign". A summary of the most salient characteristics of such sentences is provided below.

-**semantic function**: to specify a value for a variable, also to provide identifying information to make it possible for the speaker to pick out the referent from a set

[20]Quirk et al. (1985, p. 742) argue that "noun phrases used as characterizational attributes are normaly indefinite".

-**discourse function**: the variable = old information/shared knowledge (the variable is always presupposed = presupposition of existence), the value represents new information 'focus'

-**reversibility**: the two NPs are reversible/permuted without any semantic effect (John is the bank robber = the bank robber is John)

-**with it-clefts**: it alternates (it is John that is the bank robber)

-**referentiality**: both NP1 and NP2 are referential (there is a particular referent in current universe of discourse (Kuno (1970))

-**definiteness**: Both NP1 and NP2 are definite (Clark and Haviland (1977)), both have the same degree of specificity, hence, reversible (Halliday (1967), Halliday (1968))

Having given rich background on copular sentences, it is now time to return to verbless clauses in Arabic.

2.4.2 Non-verbal Predication in Arabic

A verbless or 'copula-less' clause in Arabic is the construction of non-verbal predication that takes the following general format:

- XP null be YP [where YP = NP, AP, PP]

(69) a. ʔali midarris
Ali teacher.SG.M.INDEF
Ali is a teacher.

b. faaṭimah taʕbaan-ah
Fatima tired.SG-F.INDEF
Fatima is tired.

c. ʔal-awlaad fi l-bayt
DEF-boys in DEF-house
The boys are (at) home.

As should be evident from (69), there is no overt verbal element to link the subject with its predicated element, and it is generally assumed that there is a null copula mediating the two constituents of this construction. Moreover, the verbless construction in Arabic exhibits a set of properties. The null copula always gives rise to the default present interpretation as indicated by the English translation. This property results in a constraint on the occurrence of time adverbials in such a way that past and future time adverbials are not licensed as shown below.

(70) a. ʕali midarris l-ʔaan / (*gabl sanatayn) / (*ʔas-sanah
Ali teacher.SG.M.INDEF now / (*before two.years) / (*DEF-year.F l-ǧaay-ah)
DEF-coming-SG.F
Ali is now a teacher / (*two years ago) / (*next year).

b. faaṭimah taʕbaan-ah l-yawm / (*ʔams) / (*bukra)
Fatima tired.SG-F.INDEF DEF-today / (*yesterday) / (*tomorrow)
Fatima is tired today / (*yesterday) / (*tomorrow).

c. ʔal-awlaad fi l-bayt ðalħiin / (*al-baariħ) / (*bukra)
DEF-boys in DEF-house now / (*DEF-last.night) / (*tomorrow)
The boys are at home now / (*last night) / (*tomorrow).

When it comes to the past and future tenses, the copula is required and the construction becomes copular rather than copula-less. Consider the following examples, (71) for the past, and (72) for the future reading.

(71) a. ʕali kaan midarris
Ali be.PFV.3SG.M teacher.SG.M.INDEF
Ali was a teacher.

b. faaṭimah kaan-at taʕbaan-ah
Fatima be.PFV.3SG-F tired.SG-F.INDEF
Fatima was tired.

c. ʔal-awlaad kaan-u fi l-bayt
DEF-boys be.PFV-3PL.M in DEF-house
The boys were at home.

(72) a. ʕali raaħ yi-kuun midarris
Ali ASPECTUAL 3M-be.IMPFV.SG teacher.SG.M.INDEF
Ali will be a teacher.

b. faaṭimah raaħ ti-kuun mabsuuṭ-ah bi-ða
Fatima ASPECTUAL 3F-be.IMPFV.SG happy-F.SG.INDEF with-this.SG.M
l-xabar
DEF-news.SG.M
Fatima will be happy with this news.

c. ʔal-awlaad raaħ yi-kuun-u fi l-bayt bukra
DEF-boys ASPECTUAL 3-be.IMPFV-PL.M in DEF-house tomorrow
The boys will be at home tomorrow.

In addition, the predicated element must show agreement in NUMBER and GENDER with its subject. Data in (73) is illustrative.

(73) a. ʕali midarris
Ali teacher.SG.M.INDEF
Ali is a teacher.

b. *ʕali midarris-ah
Ali teacher.SG.INDEF-F
*Ali is a teacher.

c. *ʕali midarris-iin
Ali teacher.M.INDEF-PL
*Ali is teachers.

As shown in (73),a the predicated NP *midarris* 'teacher' is singular and masculine to agree with its subject. (73), b is rules out when the feminine marker *-ah* is suffixed to the predicated masculine noun. The mismatch between the singular

NUMBER of the subject and the plural NUMBER of the predicated nominal yields to the ungrammaticality of (73),c.

A further interesting property is the correlation established by Arab traditional grammarians between predication and DEFINITENESS that requires the predicated NPs and APs to be indefinite in *predicational* verbless clauses.

(74) a. ʕali midarris (*l-midarris)
Ali teacher.SG.M.INDEF (*DEF-teacher.SG.M)
Ali is a teacher (*the teacher).

b. muna zaʕlaan-ah (*az-zaʕlaan-ah)
Mona angry.SG-F (*DEF-angry.SG-F)
Mona is angry (*the angry).

When it comes to the semantic of such clauses, they are of predicational clauses type since the non-verbal predicated element predicates something of the subject. This is meant to say that the non-verbal predicated element predicates or ascribes a property of the subject. So, the example in (74),a is understood to mean that 'Ali is ascribed the property of being a teacher', or 'Ali is characterized as a member of people classified as teachers' (class-membership). With respect to definiteness, it is obvious that the subject *ʕali* is definite, whereas the predicated NP *midarris* 'teacher' is indefinite since it is not prefixed with the definite article *l-*. Moreover, While the subject *ʕali* is referential by default, the predicated NP *midarris* is non-referential as it does not have a certain referent in the universe of discourse. The predicational sentence in (74)/a is non-equational and is not therefore reversible. That is, an attempt to change the order of the subject and the predicated NP will result in ungrammaticality as in (75).

(75) *midarris ʕali
teacher.SG.M.INDEF Ali
Intended: Ali is a teacher.

Now, let us investigate the specifics of the other main type of verbless clause in Arabic, the so-called 'equational'. An equational sentence takes the following general format: **NP** PRON **NP**

(76) a. haaða huw l-bayt / bayt-i
this.SG.M PRON.3SG.M DEF-house / house-my
This is the house / my house.

b. faaṭima hi l-midarris-ah, mu muna
faatima PRON.3SG.F DEF-teacher.SG-F, NEG Mona
Faatima is the teacher, not Mona.

c. magdi huwwa il-muhandis
Magdi PRON.3SG.M DEF-engineer
Magdi is the Engineer. (Egyptian Arabic (Edwards, 2006, p. 52))

Examples (76) (a and b) exhibit a set of interesting properties of equational sentences. As seen, the two NPs are definite and linked by a nominative or strong 3PERSON pronoun. Since according to traditional Arabic grammar a predicated NP/AP must be indefinite, a pronoun is required to separate the definite subject from its definite predicated NP/AP otherwise the latter is treated as an appositive, rather than a predicated element. Such pronouns have been designated by Arab grammarians as *ḍamaa?ir l-faṣl* 'Pronouns of Separations', while it has been labelled by many modern linguists as 'copular pronouns' or 'pronominal copular' (Cowell (1964), Brustad (2000), Benmamoun (2000), to mention a few). As can also be noticed in (76) (a and b), the pronoun separating the subject and its predicate always takes the form of the strong or nominative 3PERSON pronoun which must agree in NUMBER and GENDER with its subject. Equational sentences in both Arabic and Hebrew and the function of the pronoun separating the two NPs have been widely investigated (Eid (1983, 1991), Ouhalla (1999), Doron (1986), Falk (2004), Edwards

(2006), among others).[21] It should be noted that equational sentences in Arabic exhibit the expected properties we have noticed before. As illustrated in (77), the two NPs are definite in the sense that while *Ali* is a proper name, the predicated NP *l-midarris* is prefixed with the definite article.

(77) ʕali huw l-midarris, (mu ʔaħmad)
Ali PRON.3SG.M DEF-teacher, (NEG Ahmed)
Ali is the teacher (not Ahmed).

Moreover, the two NPs coincide to denote only one particular referent *'Ali'* that is presupposed to exist in the current universe of discourse. In addition, the two NPs have the same degree of specificity, and they satisfy the reliable test of reversibility as they can be permuted as in (78).

(78) ʔal-midarris huw ʕali
DEF-teacher PRON.3SG.M Ali
The teacher is Ali.

It is also obvious that this sentence semantically specifies the value 'Ali' for the variable *ʔal-midarris* 'the teacher', and provides identifying information to enable the speaker to pick out the correct referent from a set of potential candidates. With this background in mind, we will see in chapter 4 how the two basic types of verbless/copula-less clauses contribute to reach a fine-grained typology of nominal ACT-PTCPs. Now, § 2.5 below will be concerned with the notion of 'ARGUMENT STRUCTURE' that will be encountered extensively as we proceed.

[21] Whereas Eid (1991) proposes that the pronoun functions as an 'identity predicate' signalling identity of reference between the subject and its predicated element, Ouhalla (1999) claims that it serves as an emphatic or contrastive/focus element. Syntactically, the pronoun is taken as a copula with the default present interpretation.

2.5 Argument Structure

Argument structure as a term first appeared in the early 1980s to replace the concept of 'valence', which had long been used in linguistics. Since then, it has succeeded in attracting the serious and consistent attention of diverse researchers from different perspectives; syntax, semantics, morphology, typology and such. Modern linguists have viewed argument structure as a central organizing principle of language, which enables them to better understand meaning and grammar. Argument structure has been conventionally employed as a cover term for the information about the number of participants/arguments of a given predicate, and how they are expressed in the syntax (grammatical functions: subject, object,...) and in the semantics (thematic roles: agent, patient, ...). What is worth noting is that among Frege (1960)'s remarks on argument structure that have helped modern linguists better understand it was the hierarchy of arguments he proposed in which the subject predominates the object as the following passage shows:

The speaker usually intends the subject to be taken as the principle argument; the next in importance often appears as the object. Language has the liberty arbitrarily presenting one or another part of the proposition as the principal argument by a choice between inflexions and words, e.g. between active and passive, 'heavier' and 'lighter', 'give' and 'receive'; but this liberty is restricted by lack of words (Frege 1879 [1960]: 14-15).

Despite the fact that argument structure has been much discussed in the literature, there has been no consensus on what argument structure is and various conceptions of it have emerged even among linguists working within the same theory. Bresnan (2001) (2001: 304) has stated "[t]he reason for this is that argument structure has two faces, semantic and syntactic. On the semantic side, argument structure represents the core participants in events/states/processes designated by

a single predicator. From this point of view it appears as a type of representation of event structure. On the syntactic side, argument structure represents the minimal information needed to characterize the syntactic dependents of an argument-taking head. From this point of view it appears as a type of syntactic subcategorization or valence register. Thus argument structure is an interface between the semantics and syntax of predicators...".

The standard assumption reflected in most formal approaches to argument structure is that the number and the interpretation of arguments of a certain predicate can be derived from the meaning of the predicate itself. That is, argument structure is determined by the semantics of the predicate through the event structure associated with that predicate. In contrast, some other linguists (Borer (2005), Harley (2011)) have advocated an opposite proposal in which they have claimed that both argument structure and event structure are encoded by the structural position the argument occupies in the syntax. Levin and Rappaport (1995, 2005) have pointed out that while argument structure should be viewed as a lexical-syntactic construct that provides: a) the number of arguments subcategorized by a predicate, and b) the hierarchical organization established among these arguments, event structure is to be considered as a lexical-semantic construct that accounts for the semantic decomposition of lexical meaning. Moreover, Sadler and Spencer (2001) have established a distinction between two different levels of lexical representation. The first one is the level of the semantic event structure that accounts for 'morphosemantic operations' in which the semantics of the predicate (i.e. event structure) is altered. Take an example of the locative alternation, as shown below.

- John loaded hay onto the wagon.
- John loaded the wagon with hay.

The other level of lexical representation is the level of the syntactic argument struc-

ture that accounts for 'morphosyntactic operations' in which the semantics of the predicate is preserved, but the mapping onto grammatical functions between argument structure and syntax is altered, as it is the case with the passive demonstrated below.

- John broke the glass.
- The glass was broken.

2.5.1 Arguments of Nominals

It is widely held that whereas aspect, tense, mood, and person are inherently verbal properties on the one hand, case, number and definiteness are nominal characteristics on the other hand. In addition, a remarkable difference between verbs and nouns is that while verbs select their arguments obligatorily, nominals take them optionally. In this regard, Anderson (1983), Higgins (1976), Dowty (1989), and Kayne (2008) pointed out that since nouns differ from verbs in that they optionally select their arguments, they must lack argument structure altogether.

On the other side, other linguists (Zubizarreta (1987); Grimshaw (1990)) have called for reconsidering the above-mentioned observation. Grimshaw (1990), as we will see later, has claimed that process nominals must project their arguments whereas result nominals do not have to. There are some other fundamental differences between arguments of verbs and arguments of nominals. Let us consider the following famous pair (taken from Chomsky (1970)).

(79) a. The enemy destroyed the city.

b. The enemy's destruction of the city.

In (b), it is obvious that the noun *destruction* behaves like its corresponding

verb *destroy* in that it subcategorizes for two arguments: *the enemy* and *the city*. In both sentences, *the enemy* is assigned the semantic agent role of the act of destroying, and *the city* is felt to have the semantic patient/theme. Moreover, the noun *destruction* is morphologically related to the verb *destroy*. It should also be noticed that in (a) the verb *destroy* subcategorizes for its object argument and assigns it the accusative case, while in (b) the noun *destruction* takes its complement and assigns it the genitive case marked with the of-phrase. Such differences between verbs and nominals in terms of how they select their arguments, and what thematic roles they are assigned have long led researchers to take transitivity (the ability to take direct object arguments) as a crucial criterion for the categorizations of word classes (nouns and verbs, in this case). Jackendoff (1977, pp. 31-33) has asserted that nouns and adjectives are inherently non-transitive. Moreover, for defining the feature [+objective], Bresnan and Kanerva (1989, p. 25) have argued that objects are not selected by nouns and adjectives. In addition, Bresnan and Moshi (1990, pp. 166-167) have stated that "objects are hypothesized to have the primitive property of complementing transitive predicators such as verbs and adpositions, and not complementing intransitive predicators such as basic nouns and adjectives."

2.6 Conclusion

In this chapter, I have been concerned with presenting various grammatical aspects in HA, which will be referred to from time to time as we proceed in this work. I have looked at different morphological, syntactic and semantic properties of nouns, verbs and adjectives. I have shown that three crucial properties of nouns will be of significance in this thesis: DEFINITENESS, the ability to form CS constructions, and compatibility with demonstratives. With respect to DEFINITENESS, I have

shown the association between definiteness and predication in non-verbal/verbless constructions which requires predicated NPs (and also APs) to be morphologically INDEFINITE in *predicational* clauses, but DEFINITE in *equational* ones. As regards CS constructions, I have shown that the ability to form such constructions is a characterizing property of nouns, and I have discussed in detail the adjacency requirement of members of CS phrases. Moreover, I have argued that NPs can be classified either as *specific* or *generic* on the basis of the criterion of compatibility with demonstratives. I have argued that while specific NPs are able to be modified by demonstratives, generic NPs disallow this type of modification. When it comes to adjectives, I have considered adjectival properties of a) degree modification, b) the ability to form comparative and superlative forms, and c) the ability to form ADJECTIVAL-CONSTRUCT constructions. Regarding verbs, I have looked at: verbal properties of TENSE/ASPECT, Arabic verbal paradigm, and subcategorizing for argument structure. I have also pointed out that the three distinct types of ACT.PTCPs are indistinguishable in terms of morphology and agreement. The next chapter will provide a brief introduction to the syntactic framework of LFG.

Chapter 3

Lexical Functional Grammar

3.1 A brief introduction to LFG

Lexical Functional Grammar (LFG) was introduced as a grammatical theory by Joan Bresnan and Ronald Kaplan in the late 1970s, and was first spelled out in print in Bresnan (1982). Since then, many textbooks and papers have emerged as introductions to LFG including Bresnan (1982), Kaplan and Bresnan (1982), Bresnan (2001), Falk (2001), Dalrymple (2001), Asudeh and Toivonen (2010), Bresnan et al. (2016), Dalrymple et al. (2019), Borjars et al. (2019), among others. LFG is a non-transformational, constraint-based lexicalist theory of grammar that primarily makes use of two parallel levels of structure with which to account for the syntactic dimension of language. These are the c-structure (constituent structure) and f-structure (functional structure).[1] The c-structure models linear word order, hierarchical structure, i.e. the relations between words and constituents, and the syntactic categories of constituents in a clause. The whole phrasal structure in the c-structure is represented by means of the familiar phrase structure tree that adopts

[1]In the history of LFG, many other structures have been proposed, including the a-structure (argument structure), i-structure (information structure), m-structure (morphological structure), p-structure (phonological/prosodic structure), and the s-structure (semantic structure).

many assumptions of X′ theory. It should be said that given the non-derivational nature of LFG, what the c-structure models is the structure of a sentence in its surface/actual configuration without presuming any underlying movement of constituents. The f-structure then represents: a) the arguments subcategorized for by a predicate, b) the relations between the predicate and its argument(s) in terms of grammatical relations i.e. subject, object, etc., and c) a range of morphosyntactic information such as case, tense, agreement features, and the like. An f-structure is a finite set of functions represented as attribute-value matrices. Grammatical functions are considered to be key concepts in LFG, and are categorized into: governable grammatical functions (GFs) such as SUBJ, OBJ, OBJ_θ, OBL, COMP, XCOMP and POSS, and non-governable grammatical functions: ADJ, XADJ, as well as non-governable discourse functions (DFs): TOPIC, FOCUS. LFG assumes the following major lexical categories: Noun (N), Verb (V), Preposition (P), Adjective (A), and Adverb (Adv), while Complement (C), Inflection (I), and Determiner (D) constitute the major functional categories. Although there are camps within LFG such as Borjars et al. (1999) who argue for a restricted set of functional categories in LFG, some authors have proposed some other categories such as K for CASE clitics adopted by Butt and King (2004), Nemati (2010), in addition to Raza and Ahmed (2011), or the category Q for quantifiers, as present in the work of Guo et al. (2007), Wescoat (2007), and Spector (2009).

Both the c-structure and the f-structure are restricted by their own different set of principles and conditions. The c-structure follows the principle of Lexical Integrity, which states that:

- **Lexical Integrity Principle**: Morphologically complete words are leaves of the c-structure tree and each leaf corresponds to one and only one c-structure node (Bresnan et al., 2016, p. 92).

The f-structure, on the other hand, must satisfy three basic well-formedness conditions: Consistency (or Uniqueness), Completeness, and Coherence.

- **Uniqueness:** Every attribute must have exactly one value in a given f-structure (Borjars et al., 2019, p. 16).

- **Completeness:** All argument functions specified in the value of the PRED feature must be present in the local f-structure. All functions that receive a thematic role must have a PRED feature (Falk, 2001, p. 63).

- **Coherence:** All governable functions present in an f-structure must occur in the value of a local PRED feature. All functions that have a PRED value must have a θ-role (Borjars et al., 2019, p. 22).

When it comes to the structure and organization internal to the f-structure in LFG, this can be either: *mono-clausal* or *bi-clausal*. A mono-clausal f-structure involves a structure that contains a unique predicate with its subcategorization requirements, and other properties, such as agreement, temporal information and so on. On the other hand, a bi-clausal f-structure is made up of two f-structures, where one of these is an embedded f-structure within the higher/root/matrix f-structure. In such an f-structure there is a single unique predicate for each of the two f-structures, with the different predicates taking their own subcategorization requirements and attributes. It is important to note that in the bi-clausal structure, the two f-structures can involve GFs that are independent of the GFs in the other f-structure, e.g. by having distinct subjects, or it can be the case that certain GFs are shared between the different f-structures, and which are linked by control relations in LFG.

Bresnan (1982, p. 317) defines the control relation as "a relation of referential dependence between an un-expressed subject (the controlled element) and an expressed or unexpressed constituent (the controller); the referential properties of the

controlled element, including possibly the property of having no reference at all, are determined by those of the controller". In other words, a control relation expresses a relation of identity between two functions, and enables them to have the same f-structure as their value. There are two types of control relations in LFG: *functional* control and *anaphoric* control. Bresnan (1982) points out that whereas *functional* control implies a complete identity between the f-structures of both the controller and the controllee (i.e. the controlled element), *anaphoric* control exhibits the mere identity of reference between the two.

Sells (1985, p. 165) defines *functional* control as "the relation that holds between some antecedent and the 'missing subject' in an XCOMP and XADJUNCT". *Functional* control is typically exemplified in raising constructions, as is the case when infinitival complements to verbs such as *seem* and *appear* are involved. To better understand and illustrate how functional control works, I will make use of the raising verb 'seem', as used in (1).[2]

(1) John seems to come.

In (1), the verb *seem* is shown to take 'John' as its syntactic subject, and the infinitival phrase *to come* as a subordinate/complement clause. While *John* is a syntactic subject in the *seem* clause, the raising verb *seem* does not assign a thematic role to its subject, and hence *John* is not a semantic argument of the *seem* predicate. Rather, *John* is the thematic SUBJ of the predicate *come* in the embedded clause. The notation used in LFG is such that while thematic arguments of a predicate are placed between angle brackets < >, non-thematic ones are positioned outside these

[2]Raising verbs have been called so on the basis of Transformational Grammar assumptions where the subject of the lower/subordinate clause is understood/analyzed as having been raised from its original position, and where it is assigned its θ-role at its final position in the higher/matrix clause. The raising construction of 'seem' is traditionally called *Subject-to-Subject* raising, given that a relation between the subjects of both the matrix and the embedded clause is involved. On the other hand, the raising relation in the context of *expect* is a *Subject-to-Object* one, where in: '*I expected John to come' John* is the subject of the embedded clause that has been raised to the object position in the *expect* clause, as observed through the alternation with: *I expected that John would come.*

brackets. In the c-structure, given the surface-based representation which phrase structure trees express in LFG, there is no overtly expressed subject for the verb *come* within the subordinate clause. At the f-structure, the Completeness Condition (mentioned above), on the other hand rules out a sentence where the embedded clause does not involve a SUBJ, since the PRED *come* requires a SUBJ. *Functional* control is what ensures that a referent for the SUBJ of the infinitival complement becomes available, and is sought from outside that clausal complement. Since the SUBJ argument of the clausal complement is left open so that it can be predicated by an external element outside the infinitival clause, this clausal complement is referred to as OPEN, which is why this GF is referred to as XCOMP in LFG. Given the open nature, the SUBJ of *come* (in our case here) is understood to be John, which is also the SUBJ of the sentence's head, *seem*. The lexical entry of *seem* is provided in (2), where the first line is its subcategorization requirements, with an XCOMP inside the $< >$, but a SUBJ outside of the $< >$. The second line is the *functional control equation* stating that the SUBJ of *seem* is also the SUBJ of its subordinate XCOMP.

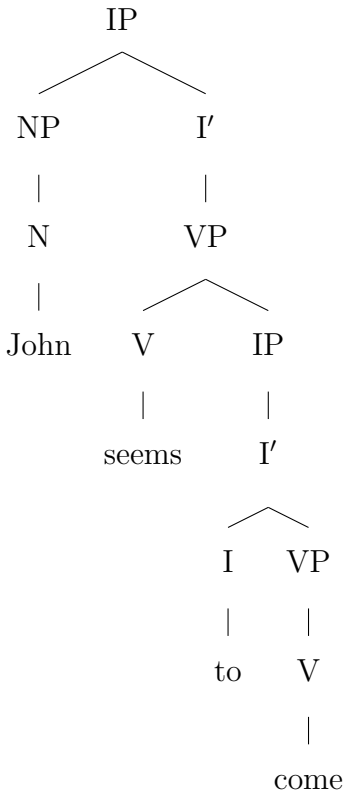
(2) *seem* V $(\uparrow \text{PRED}) = \text{`SEEM <XCOMP> SUBJ'}$

$(\uparrow \text{SUBJ}) = (\uparrow \text{XCOMP SUBJ})$

Since the SUBJ GF is outside of the $< >$, this shows that *seem* places no semantic constraints on the SUBJ. The functional control equation (in the second line) that is lexically-associated with the lexical entry of *seem* indicates how two attributes, specifically the SUBJ of the matrix verb 'seem' and the SUBJ of the XCOMP, which in (1) happens to be headed by *come*, share the same value, and in the case of (1), that value is the f-structure for 'John'. This relation then satisfies the requirement on well-formedness associated with the COHERENCE condition requiring that each predicate takes its full set of GFs. In our example above, the SUBJ requirement of *come* is well-met through the *functionl*-control relation expressed in the lexical entry of *seem*. The simple f-structure and c-structure tree associated with (1) are in (3)

below.[3]

(3)
$$\begin{bmatrix} \text{PRED} & \text{`SEEM} < \text{XCOMP} > \text{SUBJ'} \\ \text{SUBJ} & \left[ \text{PRED} \quad \text{`JOHN'} \right][1] \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{`come} < \text{SUBJ} > \text{'} \\ \text{SUBJ} & [1] \end{bmatrix} \\ \text{TENSE} & \text{PRESENT} \end{bmatrix}$$



Now I turn to Arabic to briefly demonstrate how the LFG formalism accounts for data such as (4).

(4) ʔaħmad ẓarab bint ṣaʏiir-ah
Ahmad hit.PFV.3SG.M girl.SG.F young-SG.F
Ahmad hit a young girl.

Before I do so, however, I will consider how LFG makes use of phrase structure rules to define possible c-structures, and how these are annotated in order to specify

[3]Note that in the c-structure I follow the position of Borjars et al. (2019), where the infinitival *to* appears in **I** as the head of **IP**, rather than as a **C** heading the **CP**, as assumed in Falk (2001).

correspondences between the f- and the c-structures. One of the factors to determine for Arabic is where in the c-structure do verbs appear? In principle, verbs can occupy the functional category of **I** as the head of **IP**, or it can appear in **V**, heading a **VP**. For example in English, Bresnan et al. (2016, p. 102) state that **I** "is the category of temporal/aspectual finite auxiliary and modal verbs". Dalrymple (2001, p. 61) takes a narrower view where "the tensed auxiliary verb appears in I, and the rest of the verb complex appears inside the VP". For Arabic, I build on the position taken by Alsharif and Sadler (2009, p. 20) that in the context of compound tenses "compound verbs may involve the combination of perfective form and imperfective form verbs. No feature clash results because the perfective/imperfective distinction is one of morphological form rather than f-structure feature content". It follows that the initial verb within a verbal sequence encodes TENSE and is therefore positioned in the **I**, while the following verb conveys distinctions associated with ASPECT, and occurs in **V**. In the context of (4), what we have is only one verb: *ẓarab* 'hit'. My take on this is that the PERFECTIVE form of *ẓarab* 'hit' encodes PAST TENSE, and as a tensed verb, it appears in I. As a result, it has the lexical entry in (5).

(5) ẓarab **I** $(\uparrow \text{PRED}) =$ 'hit <SUBJ, OBJ>'
$(\uparrow \text{TENSE}) = \text{PAST}$

The above lexical entry ensures that the f-structure associated with the head of the I node, i.e. the IP, as indicated by the $\uparrow$, has an attribute or feature PRED whose value is the semantic form 'hit <SUBJ, OBJ>', and which additionally takes an attribute TENSE whose value is PAST. To be able to analyze the sentence in (4), a set of phrase structure rules must be set up to generate licensed phrase structure configurations. Both the lexical entries and associated c-structure rules feed into the content within an f-structure. For the above Arabic example, I assume a simple set of annotated phrase structure rules, as in (6).[4] The annotations on the rules will

[4]I should make it clear that the above proposed c-structure rules are restricted to the Arabic

be discussed below.

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

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

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

d. NP $\longrightarrow$ N′ $\uparrow = \downarrow$ AP $\downarrow \in (\uparrow \text{ADJ})$

In Arabic, just like English and many other languages, the specifier of IP is filled by the subject as a syntacticized discourse function. This information about subjecthood appears on the relevant phrase structure rule via the presence of *annotations*. Let us explain how this works by taking the annotated c-structure rule in (6a), repeated below in (7).

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

The above c-structure rule states that there is an IP clausal node that dominates an NP node in its specifier position, and which also takes as its daughter an I′ node. The NP daughter in the Spec-IP is filled by the subject of the predicate. The annotation $(\uparrow \text{SUBJ}) = \downarrow$ under the NP is understood to mean that: the f-structure corresponding to the NP's mother node, represented by $\uparrow$ supplies the same value

example shown above. Such rules can be expanded to account for other Arabic constructions. Moreover, the Spec-IP is optional in VSO word order for which I follow Sadler (1997) in assuming the rule below, as in (i), as an alternative to the I′ rule in (6b).

i I′ $\longrightarrow$ I $\uparrow = \downarrow$ S $\uparrow = \downarrow$

of the SUBJ attribute of the f-structure corresponding to this NP node, i.e. itself, as represented via ↓. In addition, since in LFG c-structures' heads are f-structure heads, the f-structure associated with the I′ is the same f-structure associated with the IP because both I′ and IP are clausal heads. This is indicated by the annotation ↑ = ↓ appearing below the I′, and is inherited by the respective IP head, or VP head, as appropriate.

Another important point that calls for some clarification concerns the adjunct that forms part of the phrase structure rule in (6d). Since modifiers are non-governable grammatical functions, in the sense that they are not subcategorized for by a predicate, they are ADJUNCTs. Adjuncts, which may be adjectives, or adverbs, in terms of categories, differ from arguments such as SUBJ, OBJ, etc., in that they have the ability to occur recursively, i.e. more than once, as in the adjectival modification of the noun *walad* 'boy' in the following NP: *walad suʕuudi ṭawiil* 'a tall Saudi boy'. As a result, in LFG, ADJs are treated differently from arguments, such that the value of an ADJ is understood to be a *set* of f-structures, hence the annotation provided on the AP node in the phrase structure rule in (6d). However, that rule needs to be modified in order to account for the modification of *walad* by both *suʕuudi* 'Saudi' and *ṭawiil* 'tall', where two adjectives are involved. The rule is modified as in (8). The AP takes an asterisk (*) which is to say that we might have zero or more than one occurrence of an adjectival modifier, and that this adjective functions as an adjunct to the mother node's f-structure, i.e. the f-structure of the head N.

(8) NP ⟶ N′ AP*
↑ = ↓ ↓∈ (↑ ADJ)

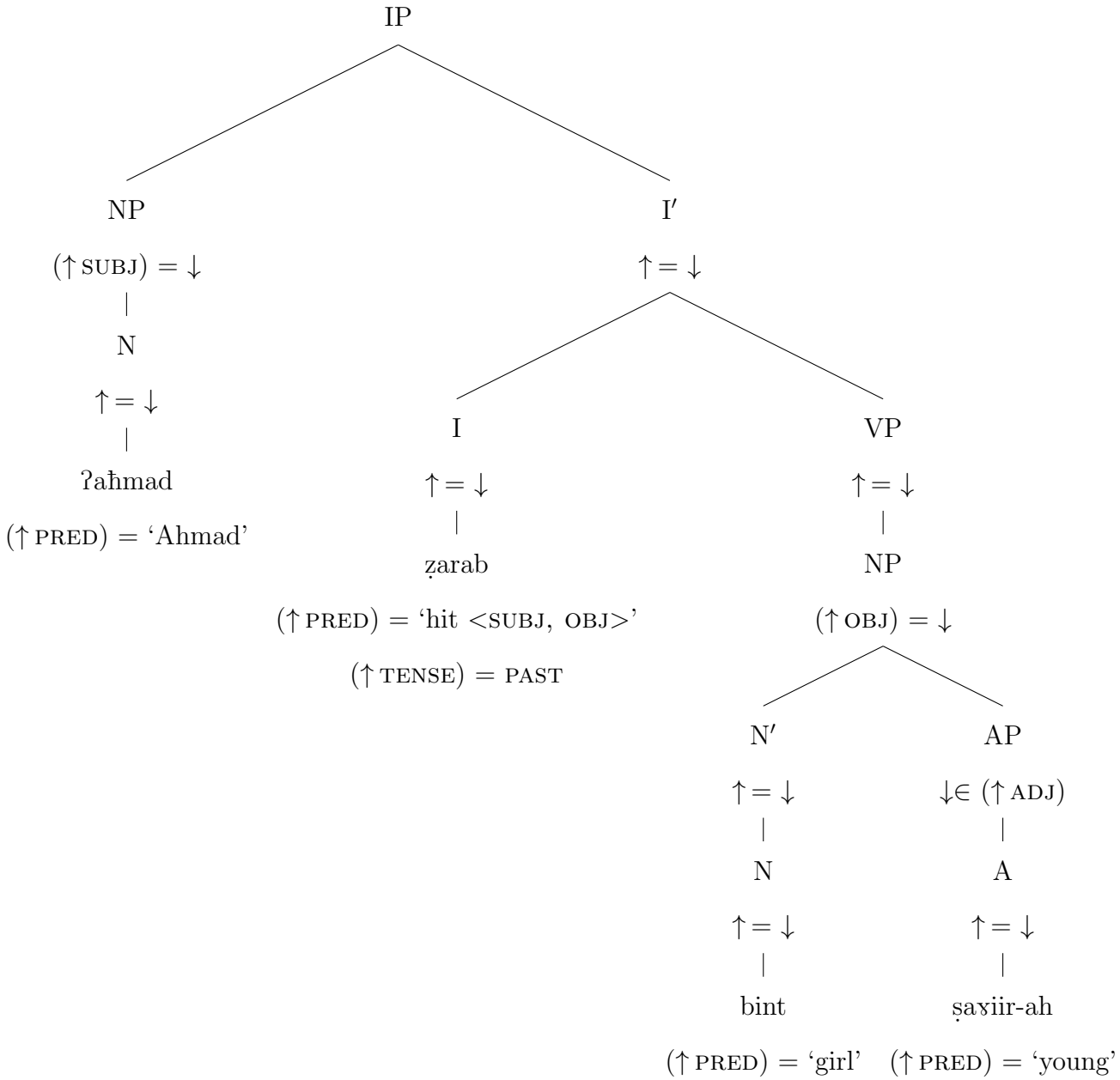
Another equally important assumption in LFG is that all constituent positions in the c-structure are optional (Kroeger (1993), King (1995), Bresnan (2001)). The optionality of the c-structure positions is due to the fact that "subcategorization

requirements are most appropriately specified at the level of f-structure, and there is no necessity for predicate valence to be reflected in c-structure representation" (Dalrymple, 2001, p. 59).

The above proposed phrase structure rules and lexical entries admit the following phrase-structure tree and f-structure for the sentence in (4) above, repeated in (9).

(9) ʔaħmad ẓarab bint ṣaɤiir-ah
Ahmad hit.PFV.SG.M girl.SG.M young-SG.F

Ahmad hit a young girl.



$$\begin{bmatrix} \text{PRED} & \text{`HIT} < \text{SUBJ , OBJ} > \text{'} \\ \text{TENSE} & \text{PAST} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`AHMAD'} \\ \text{GEND} & \text{MASC} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`GIRL'} \\ \text{GEND} & \text{FEM} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{ADJ} & \{ [\text{PRED} \quad \text{`YOUNG'}] \} \end{bmatrix} \end{bmatrix}$$

We should belabor the LFG assumption of the optionality of c-structure positions illustrated in the above c-structure in which the VP constituent appears headless since it does not project a V node. This is due to the proposal that the finite/tensed verb in Arabic, when it is the only verb in the structure as in (9), occupies the **I** position.

3.1.1 Copular and Verbless Clauses in LFG

In LFG, copular and verbless clauses have received different, but familiar, analyses to account for their various syntactic properties exhibited cross-linguistically. Proposals introduced by Dalrymple et al. (2004), Falk (2004), Nordlinger and Sadler (2007), Laczkó (2012), and Lowe (2013) assume that the different f-structural formalizations of such constructions can be valid across different languages since the construction of copular and verbless clauses reveals different crosslinguistic syntactic and/or morphological properties. Even within the same language, there is no motivation or need to call for a uniform approach as some other researchers argue for (Butt et al. (1999), Attia (2008), Sulger (2009), and Dione (2012)).[5] Within the flexible architecture of LFG, the two utilized analyses for copular and verbless clauses are the: a) 'single-tier' analysis, and b) the double-tier analysis.

[5]See also Rosén (1996).

3.1.1.1 Single-tier Analysis

Under this analysis, the predicated constituent which can be a NP, AP, or PP contributes the main predicate of the clausal f-structure, whereas the copula (even if it is absent) provides information typically associated with an I node, such as TENSE, ASPECT, MOOD, etc. Under this analysis, the sentence: '*John is sick*' is associated with the f-structure in (10).

(10) $\begin{bmatrix} \text{PRED} & \text{'sick <SUBJ>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'JOHN'} \end{bmatrix} \end{bmatrix}$

In this regard, it is worthwhile stressing that according to Nordlinger and Sadler (2007), unless there is a motivation for the double-tier analysis, the single tier analysis should be considered as the default analysis, crosslinguistically, since it is more economical, as it contains less structure. Nordlinger and Sadler (2007) point out that one of the motivations for this analysis is the languages in which non-verbal predicated elements in verbless clauses inflect for the typical verbal features. A good example of such languages is Bininj Gun-wok in which, according to Nordlinger and Sadler (2007), nominal predicates can themselves mark both TENSE and agreement morphology that is also found on verbs. The authors provide the example in (11) (taken from Evans (2003)), in which the predicated nominal *bininj* 'human' is inflected for the past imperfective *-ni*, yielding a PAST TENSE reading.

(11) Mayh na-mekke nakka bininj-ni.
bird MASC-DEM MASC-DEM human-PAST
Those birds, they were human then.

Nordlinger and Sadler (2007) propose that the single-tier analysis is appropriate in constructions such as (11) due to two facts. One is that there is no evidence for a verbal head. The other point stems from the fact that the predicated nominal in such constructions inflects for the propositional TENSE/MOOD marking which also

happens to be marked on verbs, but not on nominals which function as arguments or adjuncts of other (verbal) heads. As a result, the authors assign the single-tier f-structure in (12), to (11), and suggest that the TENSE-inflected nominal has the option to behave predicatively, and to select a subject, as required through its lexical specifications, such as in (13), for example.

(12)
$$\begin{bmatrix} \text{PRED} & \text{`HUMAN<SUBJ>'} \\ \text{TENSE} & \text{PAST} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`THOSE ONES'} \\ \text{SPEC} & \text{DEM} \\ \text{GEND} & \text{MASC} \end{bmatrix} \end{bmatrix}$$

(13) *bininj-ni*:

$(\uparrow \text{PRED}) = \text{`HUMAN <SUBJ>'}$

$(\uparrow \text{TENSE}) = \text{PAST}$

3.1.1.2 Double-tier Analysis

This analysis of copular and verbless clauses requires the copular element, which may be null, to contribute the main predicate of the clausal/root f-structure. The non-verbal predicate is then understood to be an argument of it. It follows that the f-structure of the non-verbal predicate is embedded within the higher clausal f-structure. Based on distinct properties displayed by this construction, and by the crosslinguistic differences that exist, even within the same language, two possible analyses are available. One possibility is that the non-verbal predicate is treated as an open complement XCOMP, just as we had in the raising construction in § 3.1, while the other possibility analyzes the non-verbal predicate as a closed complement PREDLINK. For simplicity, let us consider how these distinct analyses work for a sentence such as: '*John is sick*', with an XCOMP analysis in (14), and a PREDLINK analysis in (15).

(14)
$$\begin{bmatrix} \text{PRED} & \text{'be} < \text{XCOMP} > \text{SUBJ'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'JOHN'} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{MASC} \end{bmatrix} [1] \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{'SICK} < \text{SUBJ} > \text{'} \\ \text{SUBJ} & [1] \end{bmatrix} \end{bmatrix}$$

(15)
$$\begin{bmatrix} \text{PRED} & \text{'be} <\text{SUBJ, PREDLINK}>\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'JOHN'} \end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{'SICK'} \end{bmatrix} \end{bmatrix}$$

Nordlinger and Sadler (2007) argue that one of the motivations for the double-tier analysis is the phenomenon of 'tense stacking' found in some languages. For example, in Tariana, the language displays so-called 'dependent-nominals' that function as arguments or adjuncts in clauses headed by verbs. Such nominals can be inflected for a TENSE value which is independent of the propositional TENSE value. Nordlinger and Sadler (2007) point out that the two TENSE affixes, i.e. the independent nominal TENSE and the propositional TENSE can combine on one nominal, as shown in (16) below.

(16) Pi-ya-dapana-miki-ri-naka
2SG-POSS-house-PST-NF-PRES.VIS
This is what used to be your house (I can see it). (Aikhenvald (2003))

For this reason, Nordlinger and Sadler (2007) argue that since the single-tier analysis would fail to account for this phenomenon due to the clash that would result between the different TENSE values under a single-tier analysis as illustrated in (17), this verbless construction necessitates two levels of f-structure: one for the propositional TENSE with value PRESENT, and the other for the independent nominal TENSE, with value PAST, as in (18).[6]

[6]Note that Nordlinger and Sadler (2007) represent the attribute corresponding to the predicative element as GF, which may be any of: XCOMP, COMP, OBL or PREDLINK.

(17)
$$\begin{bmatrix} \text{PRED} & \text{`HOUSE <POSS>'} \\ \text{TENSE} & \text{*PRES/PAST} \\ \text{POSS} & \begin{bmatrix} \text{NUM} & \text{SG} \\ \text{PERS} & 2 \\ \text{PRED} & \text{`PRO'} \end{bmatrix} \end{bmatrix}$$

(18)
$$\begin{bmatrix} \text{TENSE} & \text{PRES} \\ \text{GF} & \begin{bmatrix} \text{PRED} & \text{`HOUSE <POSS>'} \\ \text{TENSE} & \text{PAST} \\ \text{POSS} & \begin{bmatrix} \text{NUM} & \text{SG} \\ \text{PERS} & 2 \\ \text{PRED} & \text{`PRO'} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

- Open or Closed Complements

Dalrymple et al. (2004) propose that the two phenomena, which are: a) the obligatory presence of the copula, and b) agreement, are determining factors in utilizing either an OPEN complement analysis (XCOMP), or a CLOSED complement analysis (PREDLINK). In copular sentences, there are languages in which the copular verb is required in some cases, but prohibited in others. Among the factors governing the occurrence of the copula are the category of the predicated elements, and the value for TENSE. In Japanese, while the copula is not required in contexts involving predicated adjectives, as in (19)a, the copula is overt in (19)b. On the other hand, the copula is always required in the context of predicated nominals, and cannot be omitted, as (19),c illustrates.

(19) a. hon wa akai
book red
'The book is red.' (Dalrymple et al., 2004, p. 190)

b. sono hon wa akai desu
this book red is
This book is red. (Dalrymple et al., 2004, p. 190)

c. sono hon wa syousetsu *(desu)
this book novel is
This book is a novel. [*sono hon wa syousetsu] (Dalrymple et al., 2004, p. 190)

The presence or absence of a copula in Russian (as well as Arabic, as we will see later), is governed by the factor of TENSE. The copula verb is forbidden, or at least must not be overt, in the present tense, but is required, and must be overt in the past and future tense. Let us consider the Russian examples below, taken from Dalrymple et al. (2004, p. 192).

(20) a. On student
he student
He is a student.

b. On byl student/studentom
he was student
He was a student.

c. On budet studentom
he will.be student
He will be a student.

Dalrymple et al. (2004) argue that when the presence of the copula is governed only by TENSE, with no additional impact on the syntax and semantics of such copular constructions, a unified analysis can be obtained. Moreover, Dalrymple et al. (2004) assume that this unified analysis can have two possibilities. One possibility is that the predicated constituent itself functions as the PRED of the clausal f-structure, where the copula in turn only provides a TENSE value. Under this analysis, Dalrymple et al. (2004) provide the following f-structure for (20a), which is essentially a single-tier analysis discussed above.

(21)
$$\begin{bmatrix} \text{PRED} & \text{`STUDENT <SUBJ>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`HE'} \end{bmatrix} \\ \text{TENSE} & \text{PRESENT} \end{bmatrix}$$

The other possibility is that the copula (even if it is null) serves as the main predicate of the clausal f-structure, while the predicated element appears as an argument of that copula. This results in a double-tier analysis. What remains to be determined is whether the predicated element is treated as an XCOMP, as in (22), or as a closed complement PREDLINK, as in (23).

(22)
$$\begin{bmatrix} \text{PRED} & \text{'null-BE} < \text{XCOMP} > \text{SUBJ'} \\ \text{SUBJ} & \left[\text{PRED} \quad \text{'HE'} \right][1] \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{'STUDENT} < \text{SUBJ} > \text{'} \\ \text{SUBJ} & [1] \end{bmatrix} \\ \text{TENSE} & \text{PRESENT} \end{bmatrix}$$

(23)
$$\begin{bmatrix} \text{PRED} & \text{'null-BE} <\text{SUBJ, PREDLINK}>\text{'} \\ \text{SUBJ} & \left[\text{PRED} \quad \text{'HE'} \right] \\ \text{PREDLINK} & \left[\text{PRED} \quad \text{'STUDENT'} \right] \\ \text{TENSE} & \text{PRESENT} \end{bmatrix}$$

Dalrymple et al. (2004) argue that the phenomenon of agreement plays a crucial role in assuming either an XCOMP analysis or a PREDLINK one. It is proposed that an XCOMP analysis is plausible for those languages in which the predicated elements agree with the syntactic features of their subjects. Consider the following data from French.

(24) a. Elle est petite.
she.F.SG is small.F.SG
She is small.

b. Il est petit.
he.M.SG is small.M.SG
He is small.

In (24), the predicative adjective 'small' agrees with its SUBJ in GENDER and NUMBER. As a result, Dalrymple et al. (2004) employ the XCOMP analysis, for such data, as shown in the f-structure in (25), which associates with the example in (24a).

(25)
$$\begin{bmatrix} \text{PRED} & \text{`BE< XCOMP > SUBJ'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`SHE'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{FEM} \end{bmatrix} [1] \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{`SMALL < SUBJ >'} \\ \text{SUBJ} & [1] \end{bmatrix} \end{bmatrix}$$

Under this double-tier analysis that employs an XCOMP, it is the control equation: $(\uparrow \text{SUBJ}) = (\uparrow \text{XCOMP SUBJ})$ that guarantees that the subject of the copular verb is the subject of the predicated, post-copular element. Utilizing the open complement analysis, however does not work when there is a clash of PRED values within the sentence. An example of such a clash of PRED values is when the subject of the predicated constituent is different from the matrix subject. Consider the sentence: '*The problem is that John came*'. In this case, an XCOMP analysis results in a conflict between the matrix subject *problem* and the XCOMP's subject *John*, as illustrated below.

(26)
$$\begin{bmatrix} \text{PRED} & \text{`BE < XCOMP > SUBJ'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`PROBLEM'} \end{bmatrix} \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{`COME < SUBJ >'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`*John/problem'} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

As a result, such a construction necessitates an analysis that makes use of a closed complement PREDLINK. This will avoid equating the subject of the copula with the subject of the predicated constituent, as shown in (27), where there is no sharing between any of the GFs in the matrix f-structure and in the embedded f-structure.

(27)
$$\begin{bmatrix} \text{PRED} & \text{`BE < SUBJ, PREDLINK >'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`PROBLEM'} \end{bmatrix} \\ \text{PREDLINK} & \begin{bmatrix} \text{PRED} & \text{`COME < SUBJ >'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`JOHN'} \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

It is worth noting that under a double-tier analysis, i.e. where the copula is treated as the main predicate of the sentence, the copula is required to appear in the f-structure, even if it is null. The presence of the copular predicate in the f-structure does not however mean that it has to correspond to an overt syntactic element in the c-structure, nor is it an empty category. Rather, the information of the main clausal predicate is contributed to the f-structure via the presence of an epsilon that bears feature information but no string in the c-structure, as part of the annotated phrase structure rules as in (28) proposed by Dalrymple et al. (2004, p.192), or via information that is lexically linked with another element in the clause, as proposed by Nordlinger and Sadler (2003) for the Tariana verbless clauses.

(28) S $\longrightarrow$ NP VCop $\vee$ ϵ NP $\vee$ AP $\vee$ PP

$(\uparrow \text{SUBJ}) = \downarrow$ $\uparrow = \downarrow$ $(\uparrow \text{PRED}) =$ 'be <SUBJ, PREDLINK>' $(\uparrow \text{PREDLINK}) = \downarrow$

$(\uparrow \text{TENSE}) = \text{PRESENT}$

- Copular/Verbless Clauses in Arabic

As shown before, the only factor that determines the occurrence of the copula in Arabic copular constructions is TENSE. Whereas the copula is forbidden and null in the PRESENT TENSE, it is required/overt in PAST and FUTURE contexts. The following examples are illustrative of this difference.

(29) a. Ahmad midarris
Ahmad teacher.SG.M
Ahmad is a teacher.

b. Ahmad kaan midarris
Ahmad be.PFV.3SG.M teacher.SG.M
Ahmad was a teacher.

c. Ahmad raaħ yi-kuun midarris
Ahmad ASP 3-be.IMPFV.SG.M teacher.SG.M
Ahmad will be a teacher.

Since the only difference in such constructions has to do with the temporal value expressed (they are functionally equivalent structures), I argue that a unified analysis can be maintained, which unifies the predication relations across the varied temporal interpretations, i.e. the different TENSE values: PRESENT, PAST, FUTURE. With this in mind, I adopt the position of Nordlinger and Sadler (2007) that "these cases of tense-related paradigmatic alternation are suggestive of a single-tier analysis" (p. 3). For such languages they also point out that even when the copula *is* overt, the single-tier analysis can still be maintained. In these contexts, the copula is analyzed as a tense-marking co-head of the predicated element which provides the main lexical PRED. All this taken together results in the following f-structure to associate with the example in (29a).

(30)
$$\begin{bmatrix} \text{PRED} & \text{'TEACHER <SUBJ>'} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \\ \text{GEND} & \text{MASC} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'AHMAD'} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \\ \text{GEND} & \text{MASC} \end{bmatrix} \\ \text{TENSE} & \text{present} \end{bmatrix}$$

As should be evident from (29) and (30), a predicated constituent in Arabic always shows agreement in NUMBER and GENDER with its subject. For this reason, and because of the temporal conditions that govern the presence of a copula, I will assume the single-tier analysis when analyzing various types of participle forms that function as predicated elements in verbless clauses of HA.

3.2 Conclusion

In this chapter, I have introduced the syntactic framework of LFG that is utilized in this work. I have also looked in detail at the familiar analyses proposed in LFG for treating *copular/verbless* constructions. I have argued that the single-tier analysis for Arabic non-verbal predication is plausible and there is no motivation for utilizing the double-tier analysis due to the fact that the presence or absence of the copula is governed by TENSE only. As a result, I will utilize the single-tier analysis when dealing with the three different types of ACT.PTCPs that serve as predicated constituents in Arabic verbless clauses/non-verbal predication.

Chapter 4

Nominal Active Participles in HA

4.1 Introduction

One of the most common uses of ACT.PTCPs in Hijazi Arabic (HA) is the nominal use for which I employ the label 'Nominal ACT.PTCP', and it serves as an agent nominal.[1] Agent nominals denote individuals or participants in an event. Such nominals correspond to *-er* agent nominals in English as shown below.

kaatib 'writer.SG.M', *midarris* 'teacher.SG.M', *laaʕib* 'player.SG.M'

kaatibah 'writer.SG.F', *midarrisah* 'teacher.SG.F', *laaʕibah* 'player.SG.F'

This chapter is concerned with investigating syntactic and some semantic properties of agent nominals in HA. It will be proposed that an agent nominal in HA should be given a purely nominal status based on factors that have to do with its internal syntax, external syntax, and other general morphosyntactic properties. Semantically, two major groups of agent nominals exist and are distinguished in terms of an *animacy* specification: a) animate agent nominals, and b) inanimate ones, which

[1] I will stick to call this nominal type of ACT.PTCPs as '*agent nominals*'.

are essentially instruments. Both types of animate and inanimate nominals in turn sub-divide into two sub-types based on their semantic interpretation: a) *specific* agent nominals, and b) *generic* ones. I further argue that there is no motivation to propose a verbal structure or a syntactic VP for deriving such nominals since there is no evidence that these nouns are accompanied by VP-dependents such as adverbial modification, the subcategorization for OBJs, and other verbal-like properties. The chapter is structured as follows. § 4.2 provides an overview on nominalization in the linguistic literature. § 4.4 presents a descriptive and formal account of agent nominals in HA.

4.2 Nominalization in the literature

Nominalization has long been at the heart of linguistic literature since Lees (1960), and it is still much of a puzzle.

4.2.1 Chomsky (1970)

Before 1970, the prevailing analysis on nominalizations was that of Lees (1960) who assumed that all nominalizations are both deverbal and desentential in the sense that they occur underlyingly in full sentences, and are derived transformationally from the corresponding verbs. Things began to change after Chomsky (1970)'s '*Remarks on Nominalization*' in which he proposed his Lexicalist Hypothesis. In that work, Chomsky has distinguished three types of nominalizations in English: the gerundive nominals as in (1a), the derived nominals such as (1b), and the mixed nominals as in (1c).

(1) a. John's refusing the offer

b. John's refusal of the offer

c. John's refusing of the offer

While gerundive nominals can be accounted for within transformational hypothesis, derived and mixed nominals can not, and hence the motivation for the lexical hypothesis. This is meant to say that gerundive nominals display all the hallmarks of full sentences with the expected verbal properties: they introduce bare objects, allow aspect, adverbial modification, negation, and no tolerance for determiners as in (2), respectively.

(2) a. John's refusing the offer

b. John's having refused the offer

c. John's refusing the offer stupidly

d. John's not refusing the offer

e. John's/ (*the) refusing the offer

By way of contrast, derived nominals exhibit nominal characteristics since they have the internal structure of a noun phrase. See (3),a for an example of a derived nominal which can be introduced by a determiner, and modified by an adjective, while it disallows negation in (3) item b.

(3) a. the stupid refusal of the offer

b. the (*not) refusal of the offer

As a result, Chomsky has argued that derived and mixed nominals, unlike gerunds, are derived lexically, where lexically is explained in the words of Chomsky (1970,

12) as follows "we can enter *refuse* in the lexicon as an item with certain fixed selectional and subcategorization features, which is free with respect to the categorial features [noun] and [verb]." So, the difference between the verb and the corresponding nominal shows up in the phonological information. Whereas the lexical entry specifies *refuse* as a verb, it specifies *refusal* for the item when it surfaces as a noun. In addition, derived nominals and the corresponding verbs can assign theta roles in the same way.

Chomsky has raised the following points as the motivation for his lexical position. The first argument has to do with the productivity of the process. While gerundive nominals are highly productive in the sense that a gerundive can be formed from any verb by adding *-ing*, this productivity is irregular with respect to derived nominals since not every derived nominal has an underlying verb: *motion (*mote), author (*auth), usher (*ush).*

Another point raised by Chomsky is that the regular productivity between the gerundive and its corresponding verb can be extended to the semantic relation between the two. This is to say that the meaning of a gerundive is always derived compositionally from that of the corresponding verb. On the contrary, the relation of meaning between a derived nominal and its verb is irregular and idiosyncratic. Consider the following:

(4) *ignore/ignoring*, as a verb or gerundive, means 'pay no attention to' vs. *ignorance*, with the different meaning 'lack of knowledge'.

Moreover, Chomsky has pointed out that whereas the internal structure of gerundive nominals retains its verbality (the bare object, aspect, adverbial modification, negation, *see examples above*), the internal structure of derived and mixed nominals

resembles that of a simple noun; i.e nominal properties. Consider (5) as an example of a derived nominal.

(5) a. the stupid refusal of the offer [determiners, adjectival modification]

b. the (*not) refusal of the offer [negation is prohibited]

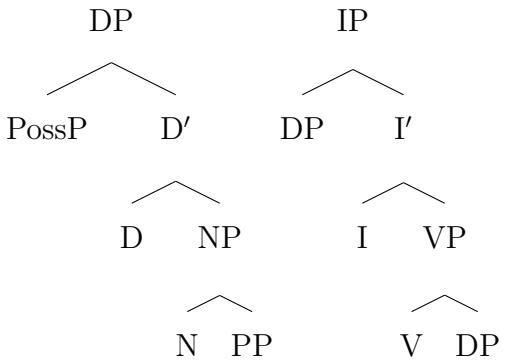
c. the (*have) refusal of the offer [Aspect is not licensed]

d. the refusal (*stupidly) of the offer [Adverbial modification is not tolerated]

Chomsky has concluded that gerundive nominals are built in the syntax and can be derived by a series of transformations applied to the associated sentence. However, derived nominals and mixed nominals are built in the lexicon, that is, they are not derived transformationally but listed as nouns in the lexicon and inserted as such in deep structure.

4.2.2 Abney (1987)

In his influential work, Abney (1987) has proposed his DP-hypothesis in which the determiner phrase (DP) represents the extended and maximal projection of the lexical head, the noun. Having assumed so, determiners of noun phrases are treated as heads of full phrases, just as IPs; i.e. DPs and IPs are structurally parallel as depicted below.



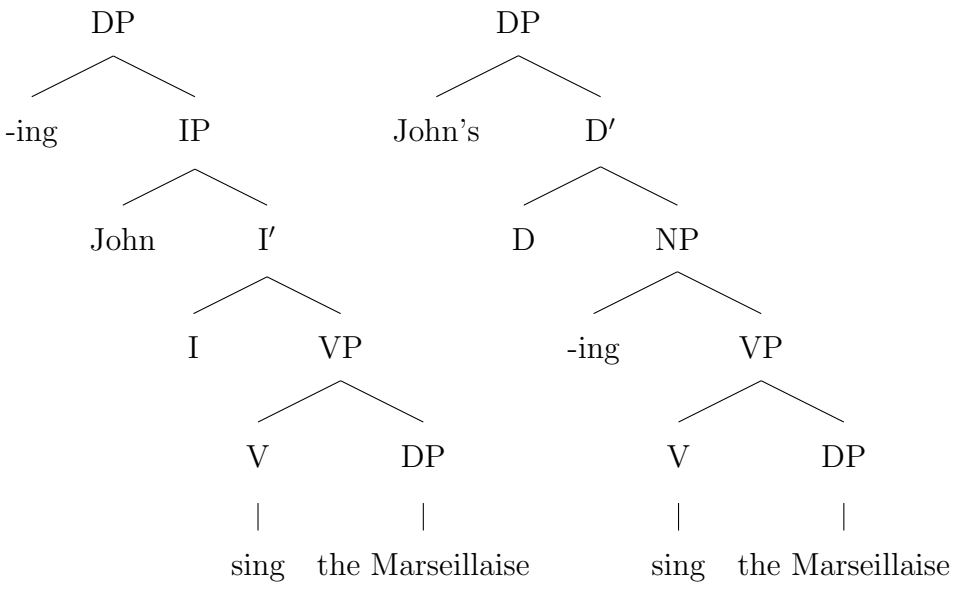
Building on this hypothesis, Abney has taken the nominalizer *-ing* of gerund in English as a functional element that takes a verbal projection and converts it into nominal category. He has argued that the differences in the structures of the various types of gerund in English reduce to differences in the scope of the nominalizer *-ing*. As a result, there are three types of gerunds: 'ACC-ing' such as (6),a, 'POSS-ing' as in item (b), and 'Ing-of' as in (c).

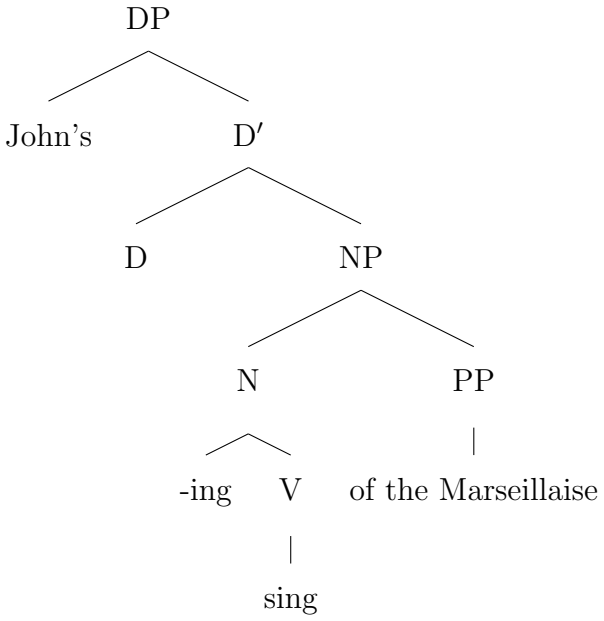
(6) a. John singing the Marseillaise

b. John's singing the Marseillaise

c. John's singing of the Marsellaise

Assuming that *-ing* can only adjoin to a maximal projection when it adjoins in the syntax (syntactic adjunction), *-ing* adjoins to IP in case of ACC-ing, whereas it adjoins to VP in POSS-ing. With respect to Ing-of, the nominalizing *-ing* adjoins directly to V that has not been syntactically projected yet, so Abney characterizes it as "adjunction in the morphology".





4.2.3 Grimshaw (1990)

Grimshaw (1990), adopting the Lexicalist Hypothesis, introduced a new focus in the research on nominalization in which she argued that derived nominals do not form a homogenous class. One of the most insights of Grimshaw's work is the firm correlation that has been established between the event structure inside such nominals and the obligatory realization of argument structure. Based on this correlation, derived nominals are classified into three main classes: a) Complex-event nominals, b) Simple-event nominals, and c) Result nominals as illustrated below respectively.

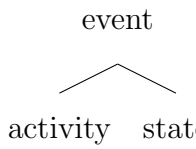
(7) a. *The examination of the student* took a long time.

b. *The examination* took a long time.

c. *The examination/exam* was on the table.

For Grimshaw, complex-event nominals (CENs) have the event structure and they obligatorily license their internal arguments, hence the term of Borer (2003) *Argument Supporting (AS)-nominals*. On the contrary, both simple-event nominals (SENs) that denote an event, and result nominals (RNs) that denote an entity lack the

event structure and hence there is no argument realization. The last two types have been grouped together by Borer (2003) under the term *Referential (R-)nominals*. What Grimshaw means by the event structure is a representation of the elements and structure of a linguistic event, not a representation of the world. She assumed that each verb associates with it an event structure that, when combined with other elements in the clause, provides an event structure for the whole sentence. The event structure breaks down events into aspectual subparts. For example, an accomplishment verb like *x constructs y* is analyzed as an activity in which *x* engages in construction plus a resulting state in which existence is predicated of *y* Grimshaw (1990, 26). This can be represented as below.



In other words, CENs retain the verbal/aspectual properties of their corresponding verbs, that is, they behave like verbs in taking argument structure, and licensing event-related PPs. By contrast, R-nominals fail to realize their arguments and to license event-related PPs since the event structure is absent. Grimshaw proposes the diagnostics shown in the table below to distinguish CENs from R-nominals.

CENs	R-nominals
Event reading	No event reading
obligatory arguments	arguments not obligatory
by-phrases are arguments	by-phrases are non-arguments
compatible with aspectual PPs modifiers (in/for two hours)	not compatible with aspectual PPs
frequent, constant with the singular	*frequent, constant* with the plural

Table 4.1: Diagnostics for CENs and R-nominals

Needless to say, a certain amount of criticism has been raised against Grimshaw's

distinction between CENs and R-nominals in terms of argument structure. Picallo (1991) in Catalan, pointed out that R-nominals may also select an internal argument as (8) below indicates.

(8) a. La discussió de les dades va durar tot el dia. 'The discussion of the data lasted the whole day.' [process nominals]

b. La discussió de les dades es va publicar a la revista. 'The discussion of the data was published in the journal.' [result nominals]

In addition, with respect to pluralization diagnostic van Hout (1991), for Dutch, found that process nominals can pluralize as in (9).

(9) Tijdens de martelingen van de politieke gevangenen door de zwarte brigades moesten alle journalisten het gebouw uit.
'During the tortures of the political prisoners by the black brigades all the reporters had to leave the building.'

This is also the case in Portuguese as found by Brito and Oliveira (1997, 61) as shown below.

(10) Os jornalistas estavam a assistir a várias destruicoes de pontes, quando chegaram as tropas.
'The journalists were watching several destructions of bridges, when the troops arrived.'

In conclusion, the Lexical approach to nominalizations (e.g. Chomsky (1970), Grimshaw (1990), among others) has a strong place in the literature and demonstrates substantial agreement on the assumption that word formation of nominalizations along with the event structure are encoded in the lexicon. It should also be made clear that although Grimshaw's distinction between CENs and R-nominals has received criticism among researchers on nominalization, her tight correlation

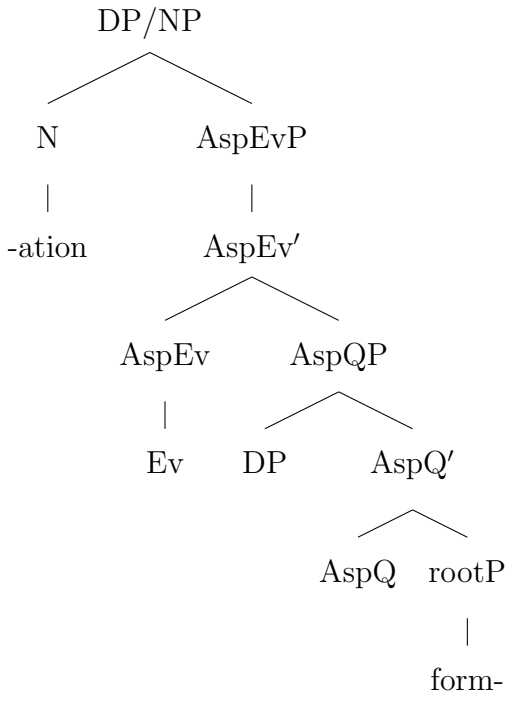
established between eventivity and argument structure has been utilized and taken as a property of the verbal layers involved to derive such nominals among several authors who have converged on the other opposite view that the word formation of nominalizations and the event structure are encoded in the syntax, rather than in the lexicon (Marantz (1997); van Hout and Roeper (1998); Borer (2003); Alexiadou (2001); among others). Proponents of syntactic approaches to deverbal nominals formation have argued that distinct types of nominalization have emerged in terms of whether or not these nominals, when derived, contain a verbal functional structure. Accordingly, an important consensus has emerged among those authors that it seems convenient to argue that the nominlizing affix in CENs is attached very high to a full structure of verbal/aspectual layers that take up the responsibility of signalling the event argument, and the projection of argument structure, and as a result CENs are able to inherit verbal properties from the parent verb. On the contrary, the nominlizing affix in R-nominals is attached very low simply to bare roots, since such nominals lack verbal/aspectual layers which facilitate both the event structure and argument structure. Both § 4.2.4 and § 4.2.5 below will shed some light on two of the most familiar syntactic approaches to nominalization in English, Borer (2003) and Alexiadou (2001), which have been extended to cover other types of nominalization, particularly -er agent nominals, as we will see later.

4.2.4 Borer (2003)

Borer argues that CENs are eventive and its eventivity is structurally built-in, that is, encoded in the syntax. Following the Aspectual Interface Hypothesis of Tenny (1992), Borer has introduced two different flavors of AspP as functional heads responsible for introducing the event argument and argument structure. While AspEv that stands for Aspect of Event and conceived as 'the measurer of the event' introduces the external argument and the event variable *Ev*, AspQ standing for Aspect

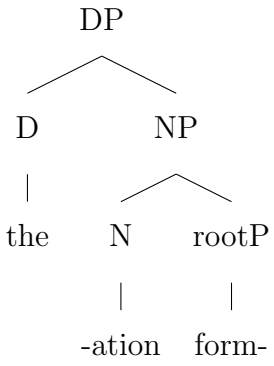
for Quantity introduces the internal argument severed from the root.

(11)



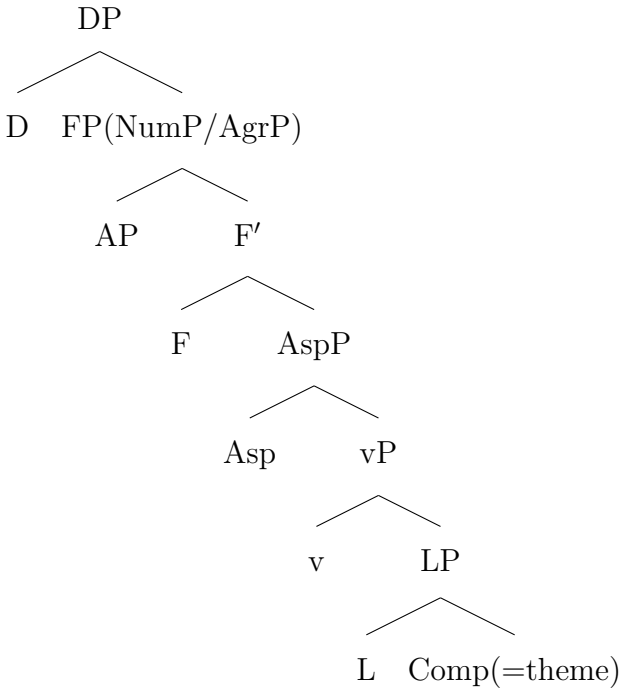
By contrast, R-nominals do not contain any verbal/aspectual structure, and they are therefore derived directly from the bare root as schematized below.

(12)

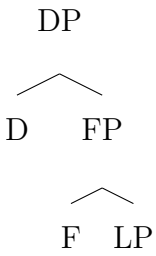


4.2.5 Alexiadou (2001)

In an alternative of implementation of syntactic approaches to nominalizations, Alexiadou (2001) employing the Minimalist Program and the model of Distributed Morphology (first introduced by Halle and Marantz (1993), and Marantz (1997)) has argued that both CENs and R-Ns are derived in the syntax and both can project their arguments since the two groups enter the syntax as category neutral roots. This proposal has challenged the association of Grimshaw (1990) between the event structure and argument structure. According to this view advocated here, the different interpretations between CENs and R-nominals are reflected by the difference in the functional projections that dominate the category neutral roots. As indicated below, in process nominals the Lexical root is dominated by the verbal functional layers vP and AspP and then the nominal projections NumP and DP. Alexiadou has pointed out that the functional head Asp denotes (im)perfectivity, whereas v denotes eventivity and agentivity.



With respect to R-nominals, the Lexical root is dominated by the nominal functional projections only, since the verbal functional categories are totally absent as shown below.



Alexiadou (2001) has built on Levin (1999)'s proposal in which each verb has two components: one is provided by its event information, and the other is provided by the core meaning which is given the label 'the constant'. Alexiadou has assumed that the Lexical root is the constant that licenses the internal argument projection, and she states that "presence of argument is guaranteed independently of the eventive character of the outcome of word-formation" (Alexiadou, 2001, p. 67). In CENs, the constant of the Lexical root enters into a relation with event projections, so the arguments project obligatorily. On the contrary, in R-nominals event projections vP and AspP are absent, so the projection of the arguments of the constant is optionally or not required. It should be pointed out that although Alexiadou's proposal can account for many phenomena that have challenged Grimshaw (1990)'s diagnostics: pluralization of CENs (van Hout (1991) for Dutch), the use of indefinite articles (Brito and Oliveira (1997) for Portugues), in addition to the possibility of R-nominals to project optional arguments (Picallo (1991) for Catalan), the strong correlation between event structure and argument structure still holds, since the obligatoriness of arguments in CENs is linked to the presence of the eventive functional head, while the optionality of arguments in R-nominals is held to relate to the absence of that eventive head. In Arabic, derived nominals or the so-called *maṣdars* have received a considerable body of attention (Fassi Fehri (1993), Hazout (1995), Borjars et al.

(2015), to mention a few). § 4.2.6 is dedicated to review the proposal advocated by Fassi Fehri (1993).

4.2.6 Fassi Fehri (1993)

Derived nominals or the so-called *maṣdars* are verbal nouns derived from triliteral or augmented verbal roots, and they have a wide range of forms (see Ryding (2005)). The maṣdar is related to the corresponding verb, and can be a CEN such as *kitaaba(h)* (the act of writing), or a result nominal (the structure of writing itself). Fassi Fehri (1993) has argued that the *maṣdar* in Arabic is a verb which is converted to a noun at different layers of the syntactic tree, depending on the categorial properties it entertains. He has assumed that there be an abstract nominalizing *maṣdar* affix that merges with a verbal root to form the *maṣdar*, and he labels this affix as E-af (E for event). Fehri has pointed out that the difference between various CENs on the one hand, and between CENs and result nominals on the other hand is determined on the basis of thematic and case properties of the nominalizing affix, in addition to where the affixation takes place in the tree. According to his proposal, Fehri claims that the lexical entry for the maṣdar affix in the CENs is composed of two parts as seen below, while it is restricted to the second part in result nominals since the affix lacks the ability of case marking and thematic structure.

E-af:

a. ⟨af. ⟨E⟩⟩

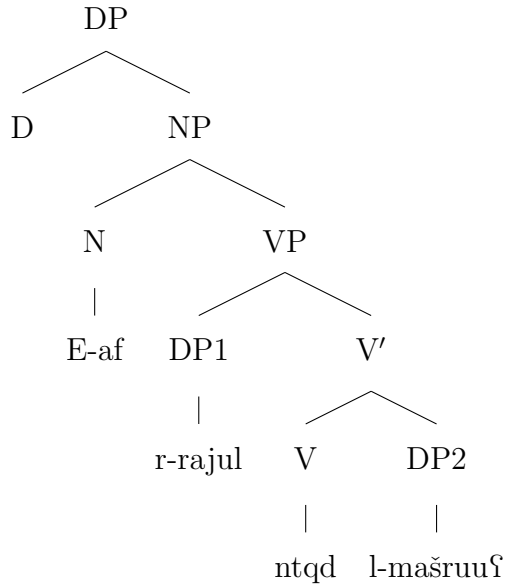
b. (V, N)

Whereas the first part (a) specifies the thematic structure of the affix, the second part (b) determines the categorial conversion property. Now let us consider the following example of a CEN.

(13) ʔaqlaqa-nii ntiqaad-u r-rağul-i l-mašruuʕ-a
annoyed-me criticizing-nom the-man-gen the-project-acc

The man's criticizing the project annoyed me.

In the above example the nominalizing affix of the CEN *ntiqaad* 'criticizing' has the thematic and Case properties that enable the nominal to retain its internal argument selected by the corresponding verb, and to assign it the accusative Case. As a result, Fehri has argued that the CEN is a mixed-categories construction manifesting a mixture of nominal and verbal properties at the same time. While the nominal distribution and the ability to take part in Construct State nominal Construction (CS) represent the nominal properties, the ability of taking an accusative-marked object and adverbial modification are the verbal properties that show up as if the *maṣdar* were a verb. To capture the relation between the morphological composition of the head of the CENs and the syntactic structure of this mixed construction, Fehri has utilized the approach of syntactic word-formation by head movement in which the CEN starts out as a verb heading the VP and it is moved to the position of a nominal functional projection. As seen below, the consonantal V moves to N to merge with the nominalizing affix, and it is at this stage the verb becomes nominalized. It is also noticed that the structure as a whole is nominal (NP/DP), but the presence of the embedded VP enables the *maṣdar* to combine with its verb-style constituents.



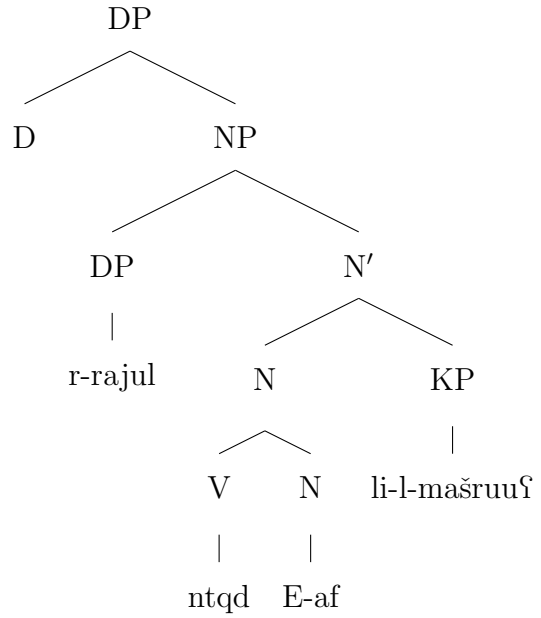
Fehri points out that this kind of CENs is the most verbal one: inheriting the argument structure of its parent verb, assigning accusative case to its internal argument, and also licensing adverbial modification as shown below in (14)

(14) ʔaqlaqa-nii ntiqaad-u r-raǧul-i bi-stimraar-in haaðaa
annoyed-me criticizing-nom the-man-gen with-persistence-gen this
l-mašruuʕ-a
the-project-acc
The man's criticizing of the project with persistence annoyed me.

Fassi Fehri (1993) has claimed that the same CEN discussed above can be less verbal and more nominal if its nominalizing affix lacks CASE properties, and in this case the preposition *li* is inserted for Case marking (to avoid a Case theory violation). Consider the following example that clarifies his point.

(15) ʔaqlaqa-nii ntiqaad-u r-raǧul-i li-l-mašruuʕ-i
annoyed-me criticizing-nom the-man-gen of-the-project-gen
The man's criticizing of the project annoyed me.

As a result, the affixation/category conversion takes place at a low level in the tree, not high as shown above, and therefore no VP is projected here, as illustrated below.



Fehri has taken the compatibility of adjectival modification, but not adverbial modification, in such constructions as strong evidence to argue for the nominality of the CENs *ntiqaad* 'criticizing'.

(16) ʔaqlaqa-nii ntiqaad-u r-raǧul-i l-mustamirr-u
annoyed-me criticizing-nom the-man-gen the-persistent-nom
li-l-mašruuʕ-i
of-the-project-gen
The man's persistent criticizing of the project annoyed me.

Fassi Fehri (1993) has proposed many diagnostic tests for distinguishing CENs from result nominals. Following Grimshaw (1990) and others, result nominals can pluralize as in (17),a, but CENs can not as shown in item (b).

(17) a. ʔiʕtiraaf-aat-u-hu ɣayr-u muqniʕat-in
confessing-f.pl-nom-him not-nom convincing-gen
His confessions are not convincing.

b. *tamm-at ʔiʕtiraaf-aat-u-hu bi-ð-ðanb-i
happened-f confessing-f.pl-nom-him with-the-crime-gen
His confessions of the crime have taken place.

While result nominals license demonstratives as in (18) item a, CENs do not tolerate them as illustrated in item (b).

(18) a. haaðaa l-iʕtiraaf-u ɣariib-un
this the-confession-nom strange-nom
This confession is strange.

b. ħaawala (*haaðaa) l-iʕtiraaf-a
tried this the-confessing-acc
He tried (*this) to confess.

CENs, but not result nominals, can function as complements in a structural of control as in (19a) and (19b), respectively.

(19) a. ħaawala r-rağul-u t-taʕbiir-a ʕan raʔy-i-hi
tried the-man-nom the-expressing-acc on view-gen-his
The man tried to express his view.

b. *ħaawala r-rağul-u t-taʕbiir-a
tried the-man-nom the-expression-acc
*The man tried the expressions.

According to Fassi Fehri (1993), despite the diversity of maṣdar constructions, the maṣdar has the external syntax of regular NPs, that is, it occupies all the syntactic positions that NPs occupy: subjects, objects, and prepositional objects. The internal syntax of result nominals is nominal. When it comes to CENs, as seen above, the internal syntax could be nominal, or could be a mixed-categories construction displaying verbal and nominal properties at the same time.

With this rich background on *nominalization* and syntactic approaches adopted to it, I move on to present familiar proposals for treating -er nominals, and also to show how such proposals have been influenced by the above-presented ones.

4.3 Previous approaches to -er nominals

-er nominals in English have been much discussed in the literature (Fabb (1984), Keyser and Roeper (1984), Rappaport and Levin (1992), van Hout and Roeper (1998), Alexiadou and Schäfer (2010), McIntyre (2014), Roy and Soare (2012)). In these proposals, it has been assumed that the derivation of -er nominals is governed by the *External Argument Generalization* (Fabb (1984), Keyser and Roeper (1984), Burzio (1986), and Rappaport and Levin (1992)). According to this generalization, such nominals are only derived from verbs that have external arguments, and the interpretation of an -er nominal simply corresponds to the interpretation of the external argument of the base verb from which it is derived. As a result, although the typical referents of such nominals are agents, other different thematic roles can be assigned by the corresponding verb to the external argument (causer, holder, experiencer, and instrument) as shown in the following examples (taken from Rappaport and Levin (1992)):

a- ... is a great defuser of pent-up emotions [causer]
b- ... a holder of a Visa or Master cart [holder]
c- ... as a dazzled admirer of Washington. [experiencer]
d- A protein that is a potent inducer of new blood vessel growth [instrument]

Most of the discussion on -er nominals in the literature has focused on two main proposals. The first proposal has classified -er nominals into two main groups in terms of the semantic property of event entailment inside such nominals: a) eventive -er nominals that entail the occurrence of an actual event, and b) non-eventive -er nominals that do not involve that event reading. This interpretational difference is brought out by the following:

- a saver of lives vs. a life-saver
- a mower of the lawn vs. a lawn-mower

A widely-held assumption was that while *a saver of lives* must have been engaged in saving lives, *a life-saver* has not necessarily saved any lives, but is trained or designated for the function of doing so (Rappaport and Levin (1992), van Hout and Roeper (1998), to mention a few). The second proposal on -er nominals has employed the long-acknowledged correlation of Grimshaw (1990) between the event interpretation inside nominals and the obligatory presence of their argument structure. Contra these views of eventuality, there have been proposals that adopt the opposite view that all -er nominals lack the grammatical event, and hence they are not eventive (Baker and Vinokurova (2009), Borer (2012)). The following part will be dedicated to survey the most popular works on -er nominals in the literature.

4.3.1 Rappaport and Levin (1992)

Rappaport and Levin (1992) have linked eventivity inside -er nominals to animacy; i.e. all eventive -er nominals are animate. In addition to the animacy specification, Rappaport and Levin have utilized Grimshaw (1990)'s correlation between event interpretation and the projection of argument structure that takes the form of argumental of-phrases. This is meant to say that -er nominals are treated on a par with AS-nominals. So, *a grinder of coffee* implies that there is an actual event of grinding coffee, and the referent can only denote a person. By contrast, the synthetic compound *a coffee-grinder* does not entail an actual occurrence of grinding coffee, and the referent denotes either a machine which is designated for that task, or a person who is trained to do that job without being engaged yet to do that function (dispositional interpretation for Alexiadou and Schäfer, functional reading for McIntyre (2014)). Moreover, inanimate instrumental -er nominals such as *mixer,*

blender, grinder lack both event reading and argument structure.

- saver of lives, grinder of coffee, wiper of windshields [eventive, event entailment]
- life-saver, coffee-grinder, (windshield) wiper [non-eventive, no event entailment]

Following Grimshaw (1990), Rappaport and Levin (1992) have taken the compatibility of -er nominals with event-related modifiers such as *frequent, constant* as evidence for the event reading that forces the realization of argument structure via of-phrases, whereas such modifiers are disallowed with synthetic compounds as shown below:

- *frequent [saver of lives, grinder of coffee]* vs. *(*frequent) [life-saver, coffee-grinder]*

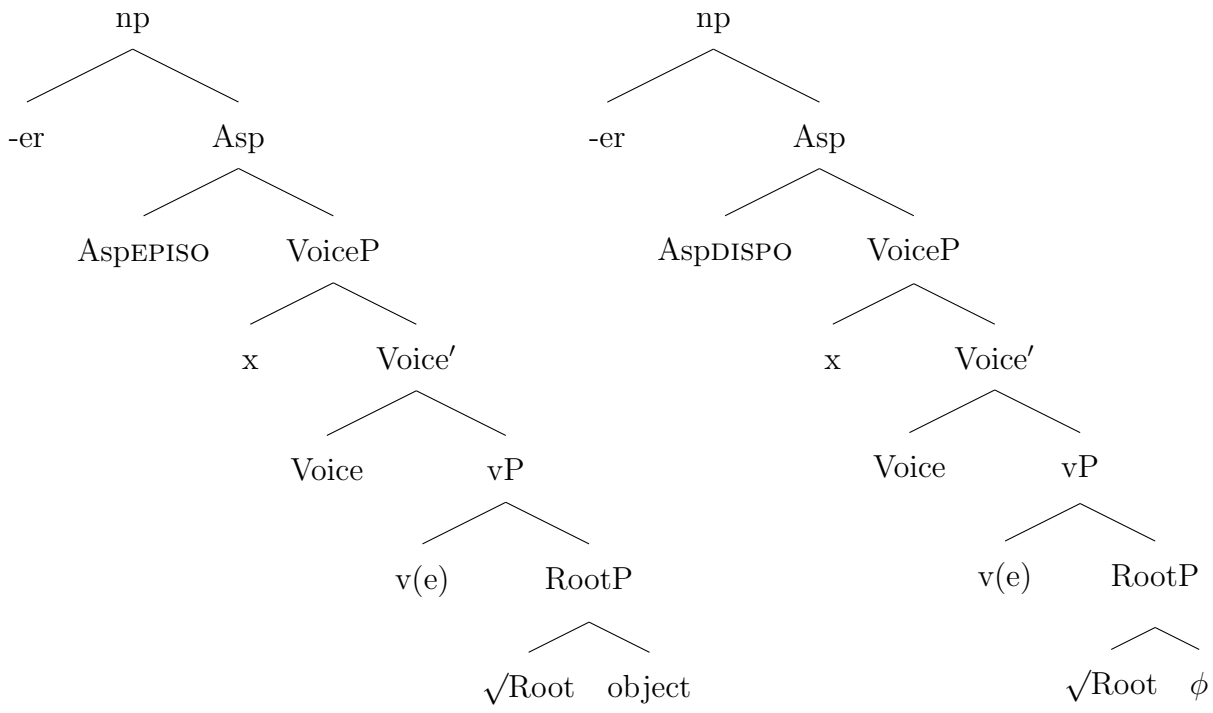
Having said that, such -er nominals behave like eventive AS-nominals in inheriting their arguments:

- *the constant defender *(of the government's policies)*
- *the constant/frequent defence *(of the government's policies)*

To sum up, for Rappaport and Levin (1992) , -er nominals are either: a) eventive (animate, and realize the argument structure), or b) noneventive, instruments, or people in professions, that lack the argument structure.

4.3.2 Alexiadou and Schäfer (2010)

Alexiadou and Schäfer (2010) have challenged the criteria of eventivity proposed by Rappaport and Levin (1992): animacy and the presence of argument structure. Alexiadou and Schäfer have argued that two main groups of -er nominals in English should be distinguished on the basis of the external argument generalization (discussed earlier). The first group of -er nominals obeys that generalization regardless of whether they entail an actual event or not, and regardless of whether they have complements or not. This group, in turn, subdivides into two subtypes: a) episodic -er nominals that always project their internal specific/quantized complements, and b) dispositional ones that may or may not express their generic/unquantized internal arguments. In their proposal, Alexiadou and Schäfer have put forth their arguments that come from morphology and interpretation. With respect to morphology, it is argued that both episodic and dispositional -er nominals are derived productively, and both have the overt verbal derivational morphology that signals the underlying verb in their structure. This is meant to say that this group of -er nominals is built on a verbal structure (vP). Since even dispositional -er nominals that may leave their arguments unexpressed involve the verbal layer/vP, the correlation between eventivity and complement structure realization is misleading. It has been assumed under the view advocated here that the interpretational differences between episodic and dispositional -er nominals reside in the two aspectual operators that bind the event introduced by v. While an episodic -er nominal involves an episodic aspect head that ensures the projection of specific internal arguments, a dispositional -er nominal involves a dispositional aspect head that captures the lack of the unexpressed arguments. As illustrated below, Alexiadou and Schäfer (2010) have developed a syntactic approach to -er nominals formation within the distributed morphology (DM) framework.



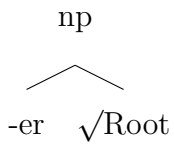
As noted above, the analysis advanced here has adopted the Voice Hypothesis of Kratzer (1996) in which the external argument is not introduced by the verb itself, but by a semi-functional head Voice on top of vP, whereas the head v introduces the event variable that is bound by an aspectual operator hosted by Asp. According to this analysis, the formation of -er nominals that satisfy the external argument generalization takes place by merging the root with many functional categories: vP, VoiceP, AspP, and nP. Following Harley (2009), Alexiadou and Schäfer (2010) have emphasized that verbalizing affixes are viewed as strong evidence for the verbal/eventive structure in such nominals.

ROOT	Root + v	Nominal
COLON	colon-ize	coloniz-er
MOBIL	mobil-ize	mobiliz-er
DICT	dict-ate	dictat-or
SATIS	satis-fy	satisfi-er

Instrumental -er nominals are subsumed under dispositional -er nominals since they also contain verbalizing morphology that signals the vP in their structure.

ROOT	Root + v	Nominal
FERTIL	fertil-ize	fertiliz-er
CALCUL	calcul-ate	calculat-or
AMPLE	ampli-fy	amplifi-er

The second group of English -er nominals is the non-subject -er ones that do not satisfy the external argument generalization such as *baker* (a baked potato), *broiler* (a broiled chicken), *diner* (a place to dine in). Such nominals differ from the first group in many respects: their formation is not fully productive, they have idiosyncratic interpretations (they are lexicalized in the sense they denote the internal argument/theme, not the external argument), and they do not contain any verbalizing morphology. As a result, such nominals involve a simpler structure in which the -er is merged directly with the root as shown below.



4.3.3 Roy and Soare (2012)

Based on French data, Roy and Soare (2012) have advocated a view that has much in common with Alexiadou and Schäfer (2010)'s proposal, but it differs in two crucial ways. The first crucial point is that the correlation between event interpretation and the presence of argument structure, which has been utilized by Rappaport and Levin (1992), but abandoned by Alexiadou and Schäfer (2010), should be re-

stated in such a way that while the presence of a specific internal argument gives rise to a particular/episodic event reading, the projection of a non-specific internal argument is associated with a generic/dispositional event reading of *-eur* nominals in French. The second crucial assumption is that, unlike Alexiadou and Schäfer (2010), instrument nominals lack eventivity and argument structure altogether. Having said that, this proposal presents a three-way typology of *-eur* in French: a) episodic nominals that involve a particular underlying event with a specific internal argument, b) dispositional nominals that involve a generic underlying event with a non-specific internal argument, and c) instrumental nominals in which both event reading and argument structure are excluded. Let us consider the following examples (taken from Roy and Soare 2012).

(20) a. Le constructeur de cette maison arrive dans un quart d'heure.
the builder of this house arrives in a quarter of.hour
'The builder of this house will arrive in 15 minutes.'

b. Le vendeur du caisson l'avait acheté 180 euros
the seller of.the box it'had bought 180 euros
'The seller of the box had bought it for 180 euros.'

c. Le dresseur des trois lions du cirque prendra sa retraite bientôt.
the trainer of.the three lions of.the circus will.take his retiring soon
'The trainer of the circus' three lions will retire soon.'

The above set of data illustrate episodic nominals that are related to a particular event of building / selling / training, respectively. The episodic reading here is obtained with specific internal arguments only (demonstratives, definite expressions, and so on).

(21) a. Le constructeur de maisons arrive dans un quart d'heure.
the builder of houses arrives in a quarter of.hour
'The house-builder will arrive in 15 minutes.'

b. Le vendeur de journaux se tient au coin de la rue.
the seller of newspapers is standing at.the corner of the street
'The newspaper seller is standing at the corner of the street.'

c. Le dresseur de lion(s) a changé Simba de cage.
the trainer of lion(s) has changed Simba of cage
'The lion trainer has changed Simba's cage,'

The examples above display dispositional nominals whose interpretation is related to a generic event that must be associated with non-specific internal arguments (bare singulars, indefinite plurals, etc.). According to this, the two types (episodic and dispositional) are treated on a par with eventive CENs or process nominals; i.e. they necessitate an underlying verbal structure.

It should be emphasized that Roy and Soare have distinguished two types of event-related adjectives to test eventuality inside such nominals: *frequent*-type and the nonintersective *big*-type (cf. Larson (1998)). While episodic *eur* nominals are compatible with the two types of adjectival modification as in (23a,b), dispositional ones allow only modification of *gros* type as in (24a,b).

(22) a. un consommateur fréquent de plusieurs drogues douces/ de LSD
a consumer frequent of several drugs soft/ of LSD
'a frequent user of several soft drugs/ of LSD'

b. un heureux/ gros consommateur de plusieurs drogues douces/ of LSD
a happy/ big user of several drugs soft/ of LSD
'a happy/ big user of several soft drugs/ of LSD'

(23) a. *un vendeur frequént de voitures /*les consommateurs frequents de drogue
a seller frequent of cars/ the consumers frequent of drug
intended: 'a frequent car-dealer' /'the frequent drug user'

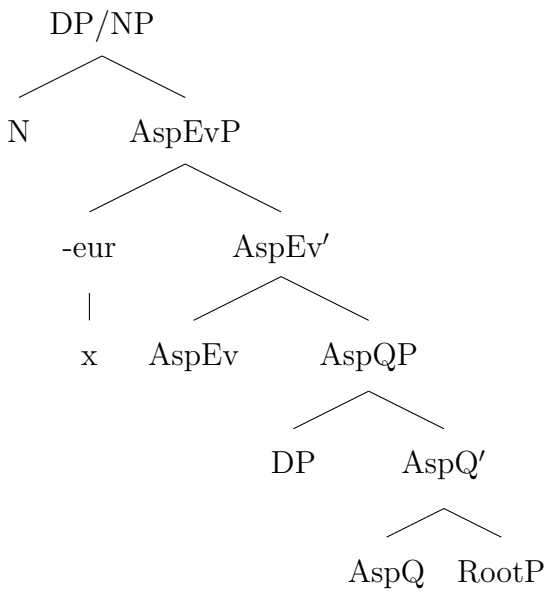
b. un petit vendeur de voitures / les gros consommateurs de drogue
a small seller of cars / the big consumers of drugs
'a small car-dealer' / 'the big drug users'

As for instrumental *-eur* nominals, they resist the two types of modification as in (25a,b), and this is the motivation for dissociating instrument nominals from dispositional ones which have been treated on a par with instruments in Alexiadou and Schäfer (2010).

(24) a. *un broyeur fréquent
a grinder frequent
intended: 'a frequent grinder'

b. *un gros broyeur
a big grinder
intended: 'a big grinder' (= that grinds much)

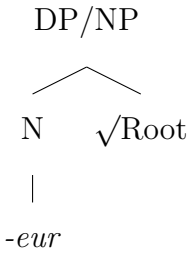
In the spirit of Borer's framework, Roy and Soare have treated *-eur* eventive nominals on a par with CENs. Under their view, both episodic and dispositional *-eur* involve a full aspectual structure as shown below.



As should be noted above, arguments are introduced as specifiers of aspectual heads: while the external argument is introduced by Asp-Ev, the internal argument is intriduced by Asp-Q. The event variable e that signals the event reading is intro-

duced by the Asp-Ev head itself.

With respect to instrumental *-eur* nominals, they are dealt with on a par with R-nominals: they simply involve a bare root merged directly with a nominalizing head as shown below.



4.3.4 Against eventuality inside agent nominals (Baker and Vinokurova (2009); Borer (2012))

Baker and Vinokurova (2009) have argued that agent nominalizations do not exhibit any signs of verbal structure beyond the fact that they contain a verb root and the internal theme argument of that verb. This is understood to mean that agent-denoting nominals can not be treated along the lines of the way CENs have been dealt with. Consider the following example (taken from Baker and Vinokurova (2009)).

(25) Finding the wallet (so quickly) was a big relief.

In the above example, the gerundive nominal *finding the wallet* displays the following verbal properties: a) to appear without a determiner, b) to have the bare accusative object, and c) to be modified by an adverb. By way of contrast, the agent nominal *the finder of the wallet* in the examples below can not entertain such characteristics, as it can not appear without a determiner when it is singular as in (26) item (a), can not have the bare accusative object as in item (b), and can not tolerate the adverbial modification as item (c) below illustrates.

(26) a. *finder of the wallet returned it to the front desk.

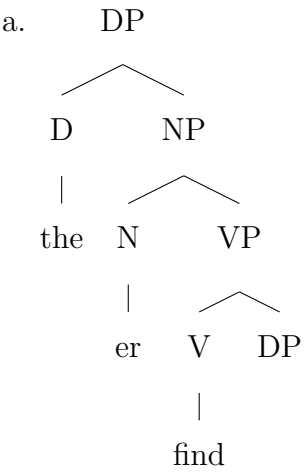
b. *The finder the wallet returned it to the front desk.

c. *The finder of the wallet quickly returned it to the front desk.

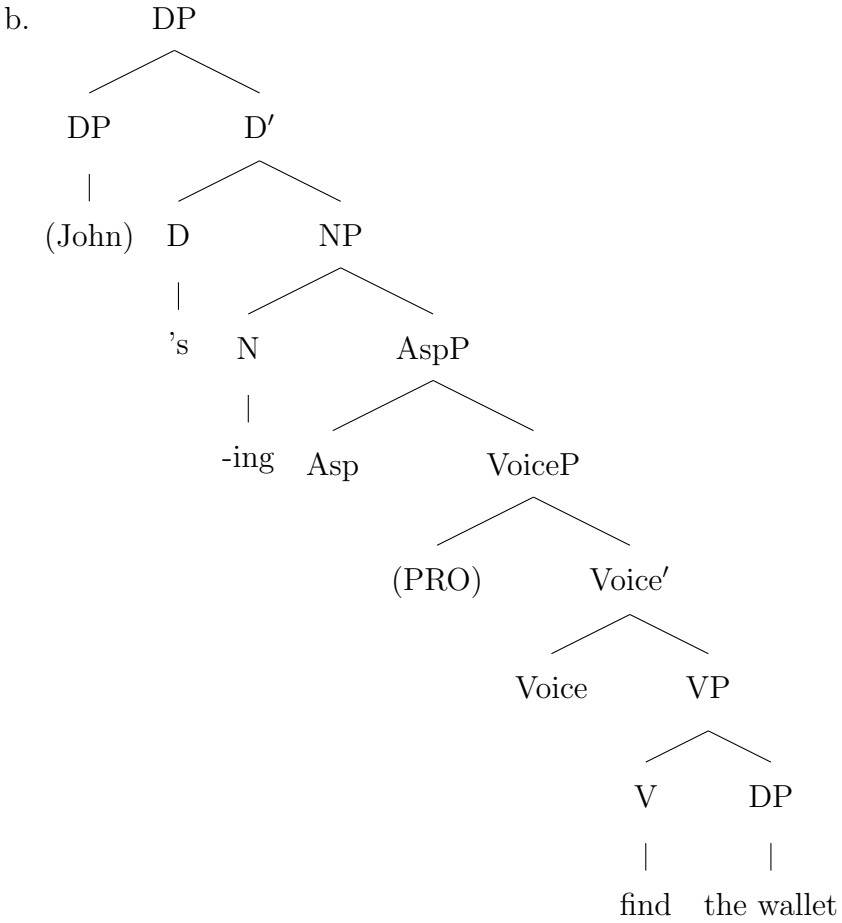
As a result, agentive nominalization is purely nominal, and should take the structure in (a) below, rather than the structure of verbal functional projections in (b)

(27)

a.


DP
D
NP
the
N
VP
er
V
DP
find

b.


DP
DP
D′
(John)
D
NP
's
N
AspP
-ing
Asp
VoiceP
(PRO)
Voice′
Voice
VP
V
DP
find
the wallet

Borer (2012) has utilized the the incompatibility of the aspectual in/for -PP with agent nominals as a diagnostic test for the lack of grammatical eventivity inside such nominals.

(28) a. The breaking of the door (by Mary) (in seven minutes) (in order to retrieve the luggage)

b. The breaker of the door (*in seven minutes) (*in order to retrieve the luggage)

Such arguments by Baker and Vinokurova (2009) and Borer (2012) are plausible since if the agent nominals heading pure NP constructions are syntactically derived in such a way that they necessitate a verbal/aspectual structure, why are the phrasal sources of a syntactic VP (accusative-marked object, adverbial modification) not visible? In the next subsection, we will see how an agent nominal can function as a truly mixed-categories construction revealing a mixture of nominal and verbal characteristics, and how this phenomenon is accounted for in LFG.

4.3.5 Agent nominals in Gĩkũyũ (Bresnan and Mugane (2006))

An agent nominal in Gĩkũyũ is a deverbal noun that consists of a verbal base which is nominalized by an agentive suffix and prefixed by a noun class marker. Bresnan and Mugane (2006) have pointed out that although such nominals are dubbed as Agentive nominals since the prototypical referents are agents such as *mũ-in-i*, 1-sing--NOM, 'singer', they can have other semantic roles as instrument *gĩ-thĩĩnj-i*, 7-slaughter--NOM, 'something to slaughter with'. Now let us turn to the syntactic properties of agent nominals heading purely nominal phrases in Gĩkũyũ. The example (29) below indicates how the agent nominal *mu-in-i* 'singer' takes an associative phrase [2] that expresses the semantic role of the object of the corresponding verb.

[2]An associative phrase is an adnominal phrase headed by a particle *-a* 'of' which bears a concordial prefix that agrees in noun class with the nominal it modifies, and the same associative

(29) mũ-in-i w-a i-tũũra
1-sing-NOM 1-ASSOC 5-settlement
'singer of the settlement'

The agent nominal heading an NP can be modified by demonstratives, possessive pronouns, adjectives and relative clauses as seen below respectively, (all examples of this part are taken from Bresnan and Mugane (2006)).

(30) a. mũ-in-i ũyũ / ũyũ mũ-in-i
1-singer-NOM 1-DEM / 1-DEM 1-singer-NOM
'this singer'

b. mũ-in-i w-itũ
1-singer-NOM 1-our
'our singer'

c. a-in-i a-nene
2-singer-NOM 2-big
'big singers'

d. a-in-i a-rĩa ũ-ĩ
2-singer-NOM 2-REL 2.SG.SUBJ-know
'the singers whom you know'

The external structure (distribution) of agent nominals in Gĩkũyũ is typical of NPs: they can be subjects, objects of verbs, prepositional objects, in addition to other properties of NPs (clefting, relativization).

The examples below illustrate how the same agent nominalizations in Gĩkũyũ can also appear in mixed NP/VP constructions.

---

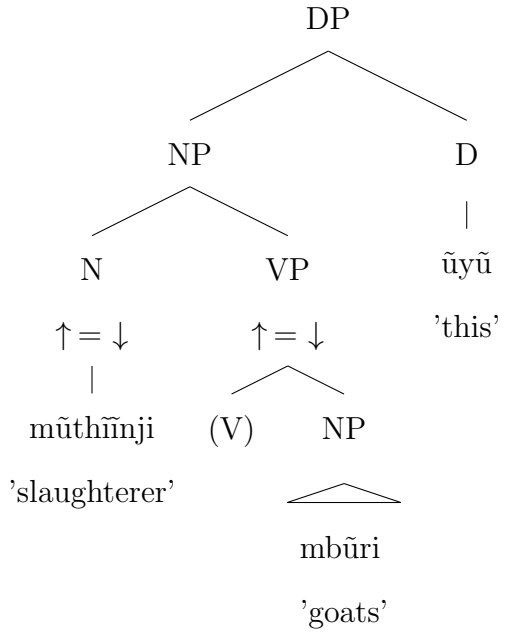
marker marks nominal complements and nominal adjuncts (Mugane (1996)). I should say that whether the associative phrase is interpreted as a complement or an adjunct does not affect the analysis.

(31) a. mũ-thĩĩnj-i mbũri wega w-a Nairobi
1-slaughter-NOM 10.goat 1.well 1-ASSOC Nairobi
'a good goat slaughterer from Nairobi ' (Literally: '(a) slaughterer goats well from Nairobi')

b. mũ-in-ĩr-i a-ndũ nyĩmbo ũyũ
1-sing-APPLIC-NOM 2-person 10-song 1.DEM
'this singer of songs for people' (Literally: 'this singer people songs')

c. mũ-in-i wega ũ-rĩa mũ-nene
1-sing-sc nom well 1-REL 1-big
'the one who sings well who is big' (Literally: '(the) singer well who is big')

The above examples indicate how an agent nominal in Gĩkũyũ heads a construction that displays a mixture of verbal dependents: a direct object and an adverb in (31),a, two NP objects in (31),b, and an adverb in (31),c. In addition to that, the agent nominal can be followed by nominal dependents: the associative ('of' phrase) adnominal modifier in (29), the demonstrative in (30),a, and a relative clause in (30),d. Bresnan and Mugane (2006) have also pointed out that these mixed categories constructions in Gĩkũyũ manifest both lexical coherence and phrasal coherence in such a way that the complements selected by the head are of uniform type in the sense that the VP-type constituents must precede all the NP-type constituents and prevent these NP-like constituents from interrupting them. With respect to the external syntax, Mugane (1996) has shown that such constructions also have the external syntax of regular NPs. As a result, Bresnan and Mugane (2006) have argued that this construction is a truly mixed-categories one which combines "the syntactic and morphological properties of two distinct categories, such as noun and verb, while being headed by a single word" (Bresnan and Mugane, 2006, 201). Bresnan and Mugane (2006) have proposed the head-sharing analysis that involves a VP that takes an NP as its extended head, as depicted below.



It should be made clear that in the actual analysis there is no X-bar categorial head of VP, that is, the V node does not appear. In LFG, it is legal for categories to appear without a head if there is another category called 'the *extended head*' that projects to the same f-structure. In § 4.4 below, I turn to discuss in details *Agent Nominals* in HA.

4.4 Agent Nominals in HA

I mentioned earlier that Nominal ACT.PTCPs in Arabic function as *agent nominals*. I argue that agent nominals in HA can be distinguished in terms of animacy, and specificity. As for animacy, agent nominals can either be animate or inanimate/instrumental. With respect to *specificity*, agent nominals are either specific or generic. The identification of an agent nominal as being one or the other depends on the interpretation of the agent nominal itself. This is to say that we should not be relying upon the roles of the internal arguments/complements of such nominals as argued by Roy and Soare (2012) and others, since agentives do not always take internal arguments. The specificity of such nominals is determined on the basis of the most widely recognized theories of definiteness: familiarity, uniqueness and identifiability. A specific agent nominal, whether animate or inanimate, denotes a uniquely referring NP, or a particular referent that can be easily picked out by the speaker and the hearer. A generic agentive, in contrast, does not denote a particular referent but denotes a class-membership NP, or a 'reference-to-kind NP' (the term used by Krifka et al. (1995)). Whereas specific agentives tolerate modification with a demonstrative, since they are referring-objects, generic ones do not. Syntactically, agent nominals in HA head pure NP constructions that select uniformly nominal dependents (nominal construct states, adjectival modification, demonstratives, and the like). I stress that if agent nominals were part of a syntactic VP, we would expect to find VP-dependents such as adverbial modification, the subcategorization for OBJs, and other such verbal-like features. It should also be pointed out that although the prototypical referents of these nominals are agents (e.g. *midarris* 'teacher.SGM'), they systematically refer to the external argument of the base active verb from which an agent nominal is derived. This is what the term 'subject nominal' used by Arab traditional grammarians is meant to suggest.

4.4.1 Specific agent nominals (Animate & Inanimate)

As said earlier, a *specific* agent nominal denotes a particular, or existential referent that is familiar, or identifiable by both the speaker and the hearer. Below I consider the internal and external syntactic characteristics of such nominals.

- Internal syntax

Specific agent nominals exhibit nominal characteristics typical of NPs. Consider the data below.

(32) a. gaabal-t al-kaatib al-mašhuur
meet.PFV-1SG DEF-writer.SG.M DEF-famous.SG.M
I met the famous writer.

b. gaabal-t kaatib al-giṣṣah l-mašhuur
meet.PFV-1SG writer.SG.M DEF-story.SG.F DEF-famous.SG.M
I met the famous story writer.

In (32),a, the NP *l-kaatib* 'the writer' is a specific agent nominal that appears without a complement, whereas it takes the nominal complement *l-giṣṣah* 'the story' in (32),b. The construction *kaatib l-giṣṣah* 'the story writer' is the so-called *construct-state nominal* (see chapter 2). The specific agent nominal *l-kaatib* 'the writer' is morphologically DEFINITE in item (a) above since it is prefixed with the definite article *l-* 'the', whereas it is definite in item (b) by *inheritence* in the sense that its nominal complement is morphologically DEFINITE. Both the ability to take DEF-marking via the prefixation of the definite article, as well as the ability to form a construct state nominal construction are striking nominal properties of Arabic NPs.

A further nominal property that can be noticed above is adjectival modification. In (32),a, the agent nominal *l-kaatib* 'the writer' is modified by the attributive adjective *l-mašhuur* 'the famous', which directly follows it and agrees with it in

DEFINITENESS, NUMBER and GENDER. In (32),b, the agent nominal *kaatib l-giṣṣah* 'the story writer' is modified by the same adjective *l-mašhuur* 'the famous', which in this case linearly follows the whole CS construction, i.e. *kaatib l-giṣṣah* 'the story writer', since it can not separate the two members of such construction. Once again here, we observe that the adjective *l-mašhuur* 'the famous' shows full agreement in DEFINITENESS, NUMBER and GENDER with its modified specific agent nominal *kaatib l-giṣṣah* 'the story writer' in which the NP *kaatib* 'writer' inherits definiteness from its definite nominal complement *l-giṣṣah* 'the story'.

Another nominal property that specific agent nominals manifest is the modification of relative clauses, as in (33).

(33) a. ʔal-ʕaamil illi ğaa
DEF-worker.SG.M REL.COMP come.PFV.3SG.M
the worker who came

b. kaatib al-giṣṣah illi faaz bi-l-ğaayiza
writer.SG.M DEF-story.SG.F REL.COMP win.PFV.3SG.M with-DEF-prize
the story writer who won the prize

In (33),a, the relative clause follows the antecedent it modifies, which is the specific agent nominal. In (33),b it does the same thing except that the antecedent forms a construct state construction with its complement, and as is the case of adjectival modification, the relative clause follows the whole construct-state.
Moreover, possessive pronouns are allowed to attach to such nominals.

(34) a. midarris-na
teacher.SG.M-our
'our teacher'

b. gaatil-ha
killer.SG.M-her
'her killer'

Next I turn to the nominal property of demonstrative modification which characterizes NPs that are morphosyntactically and semantically DEFINITE. I pointed out earlier that demonstrative pronouns in Arabic can only modify NPs that are syntactically and semantically definite, and I have argued that demonstrative NPs are semantically definite and *specific*, in the sense that the hearer can easily pick up the intended referent of such demonstrative NPs, and in this respect, specific agent nominals behave like specific regular NPs. The examples below clarify this point.

(35) a. (haaða) al-kaatib (haaða)
(this.SG.M) DEF-writer.SG.M (this.SG.M)
this writer

b. kaatib al-giṣṣah haaða
writer.SG.M DEF-story.SG.F this.SG.M
this story writer

When the specific agent nominal is not involved in a construct state construction (i.e. appears without its nominal complement), the demonstrative can occur prenominally or postnominally, as in (35),a. In (35),b, the demonstrative pronoun modifies a specific agent nominal that is involved in a construct state construction, hence the demonstrative must appear after the whole structure, and as always, it displays agreement in NUMBER and GENDER with its modified NP. When the nominal complement is itself modified by a demonstrative, then the semantic specificity of that nominal complement is spread to the nominal head of the construction, i.e. the agent nominal, as (36) illustrates.

(36) kaatib al-giṣṣah haaði
writer.SG.M DEF-story.SG.F this.SG.F
the writer of this story

- External syntax

The external distribution of specific agentive phrases at a clausal level is typical of NPs, as is their internal structure. Such phrases in general appear in the same structural positions, and fill the same grammatical functions as regular NPs; i.e. they function as subjects, objects, or prepositional objects, as illustrated in the following respective examples.

(37) a. ğaa kaatib al-giṣṣah
come.PFV.3SG.M writer.SG.M DEF-story.SG.F
The story writer came. - SUBJ

b. šif-t midarris-na
see.PFV-1SG teacher-our
I saw our teacher.

c. takallam-na maʕa l-miğrim
speak.PFV-1PL with DEF-criminal.SG.M
We spoke with the criminal. - OBL OBJ

In § 2.2.1, I have mentioned that the syntactic context of non-verbal predications (or verbless constructions) imposes a *definiteness restriction* on the predicated NPs and APs, such that these have to be syntactically indefinite in predicational constructions. When a predicated NP/AP is morphosyntactically DEFINITE (attached with the definite article), a pronoun in the 3rd PERSON form has to separate the predicated element from its subject, and must agree with the SUBJ in NUMBER and GENDER. This association between *definiteness* and predication in non-verbal constructions extends to specific agent nominals, as shown in (38).

(38) a. haaða huw l-laaʕib al-mašhuur
this.SG.M PRON.3SG.M DEF-player.SG.M DEF-famous.SG.M
This is the famous player.

b. faaṭima hiy midarrisat-na
Faatima PRON.3SG.F teacher.SG.F-our
Faatima is our teacher.

As noticed above, predicated specific agent nominals behave as regular definite predicated NPs in non-verbal equative constructions in the sense that they have to be separated from their subjects by 3.PERSON pronouns that agree with subjects in number and gender. This behavior is due to the fact that such agent nominals are always definite. This syntactic behavior is taken as another test to distinguish specific agent nominals from generic ones.

With respect to *inanimate/instrumental* agent nominals, HA has instrumental agentives that denote entities designated to perform specified tasks. Since these nominals are derived from verbs that have external arguments, they satisfy the External Argument Generalization (discussed earlier), and as a result they always refer to the external argument of their associated verb, not the internal one. As is the case with the morphology of animate agent nominals, the process of forming instrumental nominals is productive, as the following examples illustrate.

ħasab (to calculate) *ħaasibah* (calculator)
ṭabaʕ (to print) *ṭaabiʕah* (printer)
šaħan (to charge or load a battery with electricity) *šaaħin* (charger)

As the English translation indicates, instrumental nominals are transparent in their interpretation. It is thus safe to argue that instrumental nominals resemble animate agent nominals in several respects: their morphology is highly regular, their meaning is semantically transparent, and they denote external arguments, i.e. they can be expressed as the SUBJ of a verb, as we will see shortly below.

Specific instrumental agent nominals exhibit parallel nominal properties attributed to specific animate agent nominals, such as the modification with a demonstrative

as in (39)a, modification by a relative clause as in (39)b, and participation within a complex construct state shown in (39)c.

(39) a. ʔištaray-t haaði ṭ-ṭaabiʕ-ah l-ğadiid-ah
buy.PFV-1SG this.SG.F DEF-printer-SG.F DEF-new-SG.F
I bought this new printer.

b. ʔal-ħaasibah illi šif-naa-ha
DEF-calculator.SG.F REL.COMP see.PFV-1PL-it.F
the calculator we saw

c. šaaħin ğawwaal-ak
charger mobile-your
the charger of your mobile

When it comes to their external distribution, specific instrumental agentives can be SUBJs, or OBJs, as shown in (40).

(40) a. haaða aš-šaaħin yi-saxxin bi-surʕah
this.SG.M DEF-charger.SG.M 3M-get hot.IMPFV.SG with-speed
This charger gets hot quickly.

b. ʔaħmad ʔištaraa haaði ṭ-ṭaabiʕ-aat
Ahmad buy.PFV.3SG.M this.SG.F DEF-printers-PL.F
Ahmad bought these printers.

Since specific instrumental agent nominals denote uniquely referring NPs, they are syntactically and semantically DEFINITE. The correlation between syntactic definiteness and predication in non-verbal construction still holds, such that predicated specific agentives have to be separated from their subjects by a pronominal copula.

(41) haaða huw š-šaaħin illi ʔa-dawwir
this.SG.M PRON.3SG.M DEF-charger.SG.M REL.COMP 1SG-search.IMPFV
l-uh
for-it
This is the charger I am looking for.

The striking difference between an animate agentive and an inanimate one resides in the observation clarified in § 2.2.1 about the deflected agreement exhibited with non-human plural NPs. I illustrated earlier that while plural *human*-NPs agree with their associated adjectives (attributive or predicative) in number and gender, plural *non-human* NPs always exhibit feminine singular properties. This point is clarified when (42), a is contrasted with b.

(42) a. ʔal-midarris-iin ðawl ğayyid-iin
DEF-teacher-PL.M those.PL.M good-PL.M

These teachers are good.

b. ʔaš-šawaaħin haaði ğayyid-ah
DEF-chargers.PL.F this.SG.F good.SG-F

These chargers are good

It should be evident that the plural human NP *ʔal-midarris-iin* 'the teachers' in (42),a agrees in number and gender with both its predicative adjective *ğayyid-iin* 'good', and its modifier *ðawl* 'these'. On the contrary, it is clear that both the predicative adjective and the modifying demonstrative pronoun in (42), b, display feminine singular features to predicate and modify their associated plural non-human NP *ʔaš-šawaaħin* 'the chargers'. It should be said that this observation regarding animacy and plurality always holds regardless of whether the agent nominal is specific or generic.

The table below summarizes the properties of specific animate/inanimate agent nominals.

(43)

Property	Applicability
Morphosyntactic definiteness	YES
Semantic interpretation	specific, unique, identifiable, referring NPs
Ability to form a construct-state	YES
Compatibility with relative clause modification	YES
Compatibility with possessive pronouns	YES
Compatibility with demonstrative modification	YES
Predicates within non-verbal predication	In such a predicate position, the agent nominal has to be separated from the SUBJ by a pronominal copula

4.4.2 Generic agent nominals (Animate & Inanimate)

A generic agent nominal does not denote a uniquely identifiable referent, rather it denotes either a class-membership NP, or a reference-to-kind NP.

- Class-membership Agentives

Generic agent nominals of this type are syntactically and semantically indefinite. Take the examples below.

(44) a. ʕali midarris
Ali teacher.SG.M.INDEF
Ali is a teacher.

b. ğaw-na midarris-iin ğudud
come.PFV.3PL-1PL teacher-PL.M.INDEF new.PL.M
New teachers came to us.

As seen above, the generic agentive *midarris* 'teacher' in (44),a, classifies the subject *Ali* as a member belonging to the class of teachers, hence it is a non-referring NP. Morphosyntactically, it is INDEFINITE since it is not prefixed with the definite article *l-* 'the'.

With respect to internal structure, generic class-membership agentives display the nominal properties of: CS construction and adjectival modification as in (45).

(45) gaabal-t kaatib giṣṣah mašhuur
meet.PFV-1SG writer.SG.M story.SG.F famous.SG.M
I met a famous story writer.

Any attempt to modify such agent nominals with relative clauses or demonstratives will result in ungrammaticality.

(46) a. *šif-na midarris illi ğaa
see.PFV-1PL teacher.SG.M.INDEF REL.COMP come.PFV.3SG.M
*We saw a teacher who came.

b. *ʔaħmad yi-ħibb haaða kaatib
Ahmad 3M-like.IMPFV.SG this.SG.M writer.SG.M.INDEF
* Ahmad likes this a teacher.

- Reference-to-kind Agentives

A generic reference-to-kind NP in Arabic is syntactically DEFINITE in the sense that it licenses the definite article *l-* 'the', as in (47).

(47) ʔan-naas lissah ya-ħtarim-u l-midarris-iin
DEF-people still 3-respect.IMPFV-PL.M DEF-teacher-PL.M
People still respect teachers.

The generic agent nominal *l-midarrisiin* 'teachers' is prefixed with the definite article, and refers to the unique kind of TEACHERS. It is treated as a weak-referring NP since it does not denote a particular intended referent.

Regarding internal syntax, this type of agent nominals reveals nominal characteristics of: CS construction, and adjectival modification as in (48),a and b.

(48) a. midarris-aat al-ingliizi
teachers-PL.F DEF-English
'English (female) teachers'

b. ʔa-ħibb al-midarris-iin al-gudaama
1SG-like.IMPFV DEF-teachers-PL.M DEF-old.PL.M
I like old teachers.

Syntactic DEFINITENESS of reference-to-kind generic agent nominals qualifies them to admit relativization.

(49) ʔaṭ-ṭaalib illi yi-ği ʔawwal ...
DEF-student.SG.M REL.COMP 3M-come.IMPFV.SG first
'the student who comes first ...'

However, demonstrative modification is not tolerated with generic agentives of reference-kind.[3]

(50) *ðawl al-midarris-iin al-gudaama ʔaħsan min al-ǧudud
these DEF-teachers-PL.M DEF-old.PL.M better.COMPAR from DEF-new
*These old teachers are better than new ones.

Now, let us turn to *generic* inanimate agentives. Internal syntax of such agentives is just as that of animate ones.

(51) a. haaða šaaħin baṭṭaariyya ǧadiid
this.SG.M charger.SG.M battery.SG.F new.SG.M
This is a new battery charger.

b. *haaði ħaasibah li-muna
this.SG.F printer.SG.F.INDEF for-Mona
*This a printer is for Mona.

The sentences above are examples of generic inanimate agentives with a class-membership interpretation. It is also clear that such agentives of this type pattern with animate ones with respect to the nominal characteristics they exhibit. In (51),a, the agent nominal *šaaħin* takes part in nominal CS: *šaaħin baṭṭaariyya* 'battery charger', and is also modified by the adjective *ǧadiid* 'new'. Sentences involving such agent nominals are ruled out when attempting to modify them with demonstratives, as illustrated in (51),b.

Generic inanimate agentives with a reference-to-kind reading reveals the same nominal properties displayed by reference-to-kind animate ones: CS and adjectival modification as in (52)a, as well as relative clauses modification as in (52),b.

[3]Example (50) is marked ungrammatical if the agent nominal *ʔal-midarris-iin* is interpreted as a generic reference-to-kind NP, but it is grammatical if the agent nominal has the interpretation of a *specific* agentive.

(52) a. ṭaabiʕaat al-warag al-gadiim-ah ti-saxxin
printers.PL.F DEF-papers.PL.M DEF-old-SG.F 3F-get.hot.IMPFV.SG
bi-surʕa
with-speed
Old paper-printers get hot quickly.

b. ʔaħmad yi-krah aš-šawaaħin illi
Ahmad 3M-hate.IMPFV.SG DEF-chargers.PL.F REL.COMP
maṣnuuʕ-ah fi ṣṣiin
made.PASS.PTCP-SG.F in China
Ahmad hates chargers that are made in China.

The table below summarizes the main observations on *generic* agent nominals (animate & inanimate).

(53)

Property	Class-membership agentives	Reference-to-kind agentives
Morphosyntactic definiteness	NO	YES
Semantic interpretation	Generic non-referring NPs	Generic weakly-referring NPs
Ability to form Construct-state	YES	YES
Compatibility with relative clause modification	NO	YES
Compatibility with demonstrative modification	NO	NO

Since I utilize the compatibility with demonstrative modification as a reliable test to distinguish *specific* agent nominals from *generic* ones, it is concluded that while *specific* agent nominals allow demonstrative pronouns, *generic* ones prohibit such modification.

It remains to say that external syntax of generic agent nominals (animate & inanimate) resembles that of specific agentives in taking the same structural positions: subject, object and prepositional object, regardless of whether such agentives yield a class-membership reading or a reference-to-kind one.

A further kind of evidence for treating agent nominals as regular NPs can be gleaned from plurality. In § 2.2.1, I pointed out that SINGULAR nouns in Arabic can form *sound* and/or *broken* plurals. Table (54) shows that agent nominals (animate or inanimate) can make their plural counterparts in the same way regular nouns do.

(54)

Singular Agent Nominal	Its Plural Counterpart
kaatib 'writer'	*kaatib-iin* (Sound Plural) / *kuttaab* (Broken Plural)
laaʕib 'player'	*laaʕib-iin* (Sound Plural) / *liʕʕiibah* (Broken Plural)
ṭaabiʕah 'printer'	*ṭaabiʕaat* (Sound Plural)
šaaħin 'charger'	*šawaaħin* (Broken Plural)

4.4.3 Syntactic Analysis

We saw in § 4.3 that authors such as Alexiadou and Schäfer (2010), Roy and Soare (2012), among others, have taken semantic *eventivity* of agent nominals as a motivation to argue for syntactic VPs inside such nominals. I argue here to dissociate semantic eventivity from syntactic nominality. In other words, there is ample evidence that agent nominals in HA head pure NP constructions with NP-like constituents: complements and modifiers. As noticed above, agent nominals in HA exhibit *lexical coherence* in the sense that such nominals select dependents of uniformly nominal type: construct-state construction, adjectival modification, relativization and the like. If there were a syntactic VP inside such nominals, we would expect to find VP-style constituents such as selecting for an OBJ, adverbial modification, and such.

There is no denying that agent nominals in HA are derived from their corresponding verbs. However, the internal structure of the verbal base of such nominals is changed to assimilate to the internal structure of the derived nouns. Such relations between morphology and syntax has been accounted for by Haspelmath (1995, p. 58)'s universal generalization shown in (55).

(55) a. In words derived by inflectional word-class-changing morphology, the internal syntax of the base tends to be preserved.

b. In words derived by derivational word-class-changing morphology, the internal syntax of the base tends to be altered and assimilated to the internal syntax of primitive members of the derived word-class.

It follows from the above generalization that agent nominals in Arabic are derived via derivational word-class-changing morphology since the internal syntax of such nominals deviates from that of their verbal base. Given that, I argue that such nominals should be treated as pure NPs due to nominal properties they reveal. If this view is assumed, agent nominals will be dealt with as regular NPs that occupy nominal structural positions: subjects, objects, or prepositional objects. Now, let us consider the example in (56) that involves a generic reference-to-kind animate agentive.

(56) ʔaħmad yi-ħibb **al-midarris-iin** al-ǧudud
Ahmad 3M-like.IMPFV-SG DEF-teachers-PL.M DEF-new.PL.M
Ahmad likes new teachers.

The main clausal predicate of the above sentence is the verb *yi-ħibb* 'like', and it has the (simplified) lexical entry in (57).

(57) *yi-ħibb* I (↑ PRED) = like <SUBJ , OBJ >
(↑ TENSE) = PRESENT

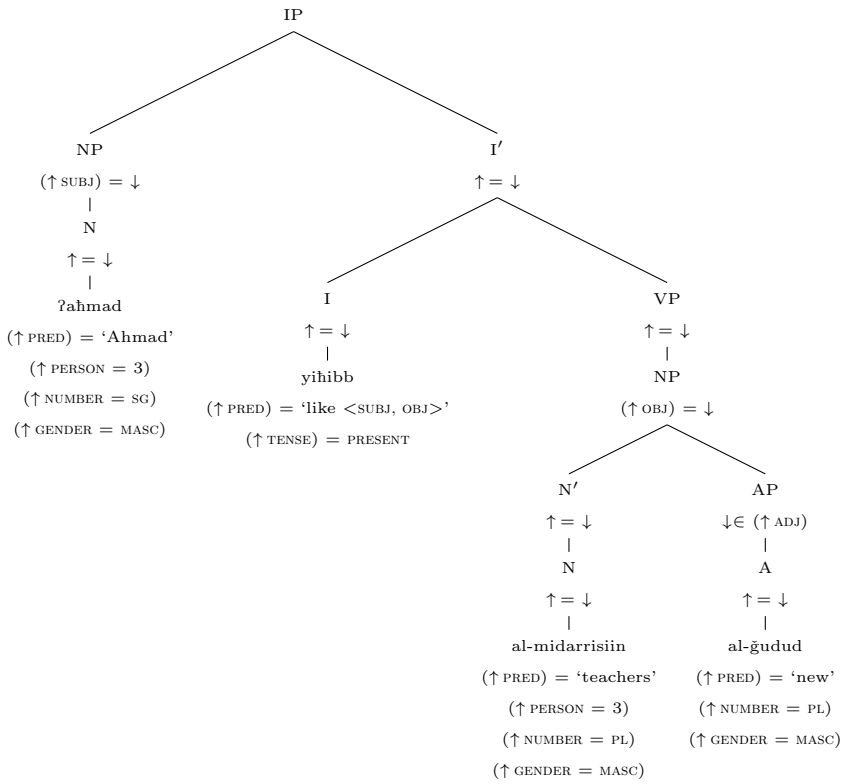
Since there is only one verb, *yi-ħibb* 'like', it occupies the **I** position to encode the tense which is PRESENT as shown in the second line of the lexical entry. The lexical entry shown above ensures that the f-structure associated with the verb, which is the head of the **I** node (i.e the **IP** as ↑ indicates), has an attribute of PRED whose vlalue is the semantic form: 'like < SUBJ , OBJ >'. Added to this, the f-structure of this clausal predicate has a feature TENSE whose value is PRESENT. It should also be recalled that the predicate *yi-ħibb* 'like' requires two thematic arguments (SUBJ and OBJ) as they are positioned between angle brackets <>. With this in place, let us consider the f-structure in (58) assigned for the sentence in (56), in order to see how the lexical entries and phrase structure rules associated with the above sentence feed into the content of its f-structure.

(58)
$$\begin{bmatrix} \text{PRED} & \text{'LIKE < SUBJ , OBJ >'} \\ \text{TENSE} & \text{PRESENT} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'AHMAD'} \\ \text{GEND} & \text{MASC} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'TEACHERS'} \\ \text{GEND} & \text{MASC} \\ \text{PERS} & 3 \\ \text{NUM} & \text{PL} \\ \text{DEF} & + \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'NEW'} \\ \text{GEND} & \text{MASC} \\ \text{NUM} & \text{PL} \\ \text{DEF} & + \end{bmatrix} \right\} \end{bmatrix} \end{bmatrix}$$

The above f-structure is mono-clausal since it contains a unique predicate. It is also clear that the f-structure above satisfies the three basic well-formedness conditions of Consistency, Completeness and Coherence (see § 3.1 for details). It should also be noticed that the OBJ *al-midarris-iin* 'the teachers' has a non-governable GF of an ADJ which is *al-ǧudud* 'the new' modifying that object. Recall that in LFG the value of ADJ appears as a set of an f-structure since it can occur recursively.

Now, I turn to the c-structure in (59) which is admitted by the lexical entries and phrase-structure rules associated with the sentence above.

(59)



Note that the c-structure in (59) models the structure of the sentence in (56) in its surface configuration (i.e linear word order) without assuming any underlying movements of constituents. Moreover, this c-structure follows the Lexical Integrity Principle, repeated below for convenience.

Lexical Integrity Principle: Morphologically complete words are leaves of the c-structure tree and each leaf corresponds to one and only one c-structure node (Bresnan et al., 2016, p. 92).

Furthermore, note that the VP constituent does not project a V node since there is only one verb that has to occupy the **I** position to encode TENSE (recall the LFG assumption of optionality of c-structure positions, discussed in § 3.1).

4.5 Conclusion

This chapter has been dealing with syntactic and semantic properties of the nominal type of ACT.PTCPs that serve as *agent nominals*. I have started by looking in some detail at nominalization and various syntactic proposals to treat it in the linguistic literature. Then, I have argued that agent nominals in HA can be classified into: specific (animate or inanimate) agentives, and generic (animate or inanimate) ones. While specific agentives denote particular referents that can be easily identified by the speaker and hearer, generic agentives either denote class-membership NPs or reference-to-kind NPs. Different tests have been utilized to draw a clear-cut distinction between *specific* and *generic* agentives such as the ability to accommodate demonstrative pronouns, their behavior in the context of verbless clauses, and some other tests. I have also argued that this type of ACT.PTCPs should be treated as pure NPs, and there is no evidence to propose a syntactic VP for deriving such nominals. Based on Haspelmath (1995, p. 58)'s universal generalization, I have claimed that nominal ACT.PTCPs (or agent nominals) are formed via derivational word-class-changing morphology because the internal syntax of such nominals is changed and assimilated to the internal syntax of nouns, rather than preserving the internal syntax of verbal base.

Chapter 5

Deverbal Active Participles in HA

5.1 Introduction

The purpose of this chapter is to explore semantic and syntactic properties of the second major type of ACT.PTCPs in Arabic: the verbal type which I designate as '*deverbal*' ACT.PTCPs (following Mughazy (2004)).[1] In regard to morphology and agreement, deverbal ACT.PTCPs are indistinguishable from nominal ACT-PTCPs in the sense that they follow the same derivational rules to be formed out of their corresponding verbs (verbal roots), and they agree with their subjects in both NUMBER and GENDER. From its name, it should come as no surprise that this type has a verbal function to the degree that traditional Arab grammarians (and also Wright (1974) and Cantarino (1975)) have claimed that it is equivalent to the imperfective/present form of the verb. It will be argued here that a deverbal ACT.PTCP should be given a verbal status for the following cogent reasons: a) it exhibits a regular syntactic and semantic relationship with its corresponding verb from which it is derived since it always shares the meaning and argument structure of the verb

[1]This type of ACT.PTCPs has received different terms in the literature: 'Active Participle', Fassi Fehri (1993); and 'Deverbal Active Participle', Mughazy (2004); 'Deverbal Agentive', Al-Malahmeh (2013).

out of which it is formed, b) it licenses adverbial modification , and c) it bears the standard verbal characteristic of ASPECT. I further argue, contra previous studies on this type of participles, that deverbal ACT.PTCPs should be treated as non-finite forms of verbs since they do not bear TENSE, rather their reference time is bound with the event time of the matrix verb whether it is the null copula in case of non-verbal predication, or the overt verb in other cases. Different kinds of evidence that weigh for categorizing this type of participles as verbs will be presented and detailed. It must be emphasized that although I argue for the verbality of deverbal ACT.PTCPs, they usually function as predicated elements in non-verbal predication. This should not be understood as a contradiction between verbality status and the syntactic context of non-verbal predication. This is because I agree that deverbal ACT.PTCPs are different from regular VPs in that they do not mark TENSE and PERSON features. However, I argue that the lack of the above-said verbal properties should not deprive this type of participles its verbality status. Regarding TENSE values, I will argue that deverbal ACT.PTCPs behave just as non-finite verb-forms, hence I classify them as inflectional non-finite forms of verbs. With respect to the lack of PERSON values, I argue that such participles pattern with the construction of '*Positive Imperative*' in Arabic in which verbs do not carry PERSON features. In spite of such observations, I will stick to the traditional term of '*non-verbal predication*' to refer to the syntactic context, in which such participles function as predicated elements. In this chapter, claims that disfavor the argument for verbality of such participles will also be presented and criticized on a variety of grounds. In regard to the syntactic employment, deverbal ACT.PTCPs in Arabic have different uses within the matrix clause. Such syntactic contexts in which deverbal ACT.PTCPs occur will be presented and analyzed in details. The discussion of syntactic and semantic properties of this type of participles, as well as how they should be analyzed will be deferred after the following subsection which is perforce devoted to sketch out the

most familiar studies on deverbal ACT.PTCPs in Arabic.

5.2 Previous Analyses of Deverbal ACT.PTCPs

Although deverbal ACT.PTCPs have been studied extensively among researchers working on Arabic linguistics, there is no consensus on the membership of its category (whether it is a noun, a verb, or an adjective). This is meant to say that the deverbal ACT.PTCP has been given different analyses as shown below:

(1)

Category	Authors
a noun	Qafishah (1968) , Wise (1975), Cuvalay-Haak (1997), Gadalla (2000), Jelinek (2002), Al-Aqarbeh (2011)
an adjective	a 'deverbal adjective' Wright (1974), a 'complex adjective' Mughazy (2004)
a mixed-categories construction (of verbal and adjectival properties)	(Fassi Fehri (1993), Brustad (2000))

5.2.1 Against Nominal Status Analysis

It should be recalled that nouns in Arabic have the following set of nominal features: DEFINITENESS, NUMBER, GENDER, and CASE which is lost in Arabic vernaculars. Regarding definiteness, some researchers (Qafishah (1968) , Cuvalay-Haak (1997), Jelinek (2002), and Al-Aqarbeh (2011)) have claimed that a deverbal ACT.PTCP can license the definite article *ʔal/l-* 'the' as the example below shows. According to Al-Aqarbeh (2011), this type of participles should be given the nominal status.

(2) il-binit il-waaqif-i fi ṣ-ṣaf
the-girl the-standing-SG.F in the-class
the standing girl in the class (Al-Aqarbeh (2011))

In the above example, Al-Aqarbeh (2011) treats the marker *il-* prefixed to the deverbal ACT.PTCP *waaqif* 'standing' as the definite article, and she claims that this type of participles bears the definiteness characteristic.[2] This *l-* that precedes the verbal ACT.PTCP has also been attested in other Arabic vernaculars including HA.

(3) miin al-walad il-ğaalis hinaak (HA)
who DEF-boy REL.COMP-sit.ACT.PTCP.SG.M there
Who is the boy (who is) sitting there?

I, along the lines of Mughazy (2004)'s argument, argue that the marker *al* or *il* that is prefixed to the deverbal ACT.PTCP is not the definite article, rather it is the reduced form (an allomorph) of the relative complementizer *illi* that modifies only definite NPs. It is evident above that the gloss of the example from HA indicates this interpretation which is understood to mean *al-walad illi ğaalis* 'the boy (who is) sitting'.

Against nominality status, Mughazy (2004) also claims that deverbal ACT.PTCPs are not nouns since they, unlike nouns, do not admit the definite article. He illustrates his claim by the following example (taken from Mughazy (2004, p.29)).

(4) a. ʔana kaatib l-oh gawaab
I write/ACT.PTCP to-him letter
I have written him a letter.

b. *ʔana el-kaatib l-oh gawaab
I write/ACT.PTCP to-him letter
*I the have written him a letter.

(5) a. mona misafr-a
Mona travel/ACT.PTCP-f.
Mona is travelling.

[2]Al-Aqarbeh (2011) claims that verbal ACT.PTCPs should be subsumed under non-verbal predicates (nouns, adjectives) since they lack the verbal feature of PERSON. We will see later that this is a hasty conclusion.

b. *mona el-misafr-a
Mona the-travel/ACT.PTCP-f.
*Mona is the travelling.

Al-Malahmeh (2013, p. 130) also builds on the above claim to argue that deverbal ACT.PTCPs pattern with verbs in that they do not license definite markings.[3]

(6) a. *sami el-naayem
Sami the-sleep-VERBAL/ACT.PTCP
*Sami the has fallen asleep.

b. *sami el-jaay
Sami the-come-VERBAL/ACT.PTCP
*Sami the is going to come.

In this regard, I strongly agree that deverbal ACT.PTCPs can not license the definite marker, hence they can not be nominals. However, I must point out that the syntactic context of non-verbal predication is not the appropriate context to apply the nominal property of DEFINITENESS. According to the grammar of Arabic (and also noted by Al-Malahmeh (2013)), the syntactic context of non-verbal predication restricts the DEFINITENESS of nominals and adjectives. To put it plainly, there is an obvious association between predication in such a context and DEFINITENESS in such a way that nominals and adjectives must be morphologically indefinite when predicated. This restriction also holds true across Arabic vernaculars. The following examples are illustrative.

(7) a. zayd-un muʕallim-un/mariiḍ-un (MSA)
Zayd-NOM teacher.SG.M-NOM.INDEF/sick.SG.M-NOM.INDEF
Zayd is a teacher./Zayd is sick.

[3]Al-Malahmeh (2013) takes into consideration the observation of the traditional grammar of Arabic that all predicated nouns and adjectives must be indefinite in the syntactic context of verbless clauses. Surprisingly, based on the same context, i.e verbless clauses, he returned to argue (page 140) that verbal ACT.PTCPs resemble verbs in that they do not permit definite markings.

b. *zayd-un al-muʕallim-u/al-mariiḍ-u
Zayd-NOM DEF-teacher.SG.M-NOM/DEF-sick.SG.M-NOM
*Zayd the teacher/the sick.

(8) a. ʔaħmad mihandis/ğaayiʕ (HA)
Ahmad engineer.SG.M.INDEF/hungry.SG.M.INDEF
Ahmad is an engineer/Ahmed is hungry.

b. *ʔaħmad al-mihandis/al-ğaayiʕ
Ahmad DEF-engineer.SG.M/DEF-hungry.SG.M
*Ahmad the engineer/the hungry.

c. el-ʕarabiyy-a gidiid-a/*eg-gidiid-a (CA)
the-car-f. new.f./*the-new.f.
The car is new/*The car the new. (Mughazy (2004))

d. sami mʕallim
Sami teacher
Sami is a teacher.

e. *sami el-mʕallim
Sami the-teacher
Sami is the teacher. (Al-Malahmeh, 2013, p. 130)

As a result, it is a fallacy to employ the syntactic context of non-verbal predication in which such participles serve as main predicates for defining categories in terms of DEFINITENESS as either nominals or adjectives since both categories are [- DEFINITE]. It follows from this that we should find an appropriate syntactic context for testing DEFINITENESS with this type of participles. It seems to be the case that the remaining syntactic context concerns the other common use dubbed as 'adjunctival' participles where such participles function as secondary predication. This point becomes clearer if (9) is contrasted with (10).

(9) *gaabal-t al-walad al-laabis θawb
meet.PFV-1SG.SUBJ DEF-boy DEF-wear.ACT.PTCP.SG.M thobe.SG.M.INDEF
bunni
brown.SG.M.INDEF

Intended: I met the boy wearing a brown thobe.

(10) gaabal-t l-walad illi laabis
meet.PFV-1SG.SUBJ DEF-boy REL.COMP wear.ACT.PTCP.SG.M
θawb bunni
thobe.SG.M.INDEF brown.SG.M.INDEF
I met the boy who is wearing a brown thobe.

Observe that the deverbal ACT.PTCP *laabis* 'wearing' in (9) does not admit the definite article *l-* 'the', when modifying its subject *l-walad* 'the boy'. Thus, the elegant solution to remedy this ungrammaticality is by means of the relative complementizer *illi* 'who' meditating between the subject *the boy* and its modifying deverbal participle *wearing* as in (10). Given that we have utilized an appropriate syntactic context for testing the DEFINITENESS criterion of nouns, it is now safe and reasonable to argue that deverbal ACT.PTCPs do not pattern with nouns because such participles disallow prefixing with the definite article.[4]

A further type of supporting evidence in favor of denying such participles the nominality status that has not received considerable attention in all previous studies on deverbal ACT-PTCPs emerges from the construction of Construct State nominal (CS). The CS construction is the most salient feature in Arabic nominal system in which a noun takes another noun as its complement. Consider the following example.

(11) kitaab al-bint
book.SG.M DEF-girl.SG
'the girl's book'

In the above example, the head noun of the whole construction is *kitaab* 'book' that takes the inner noun *al-bint* 'the girl' as its nominal complement. It is clear that the nominal complement *al-bint* 'the girl' expresses the possessor of the head nominal

[4]Recall that we mentioned earlier that examples such as (9) are accepted provided that the *l-* prefixed to deverbal ACT.PTCPs is viewed as a short form of the relative complementizer *illi* 'who', rather than the definite article.

kitaab 'book', hence I call it the 'possessive' complement.[5] It should be noted that although the head noun *kitaab* is indefinite (not prefixed with the definite article *l-*), the whole construction is definite since the possessive complement *al-bint* is definite (definitness inheritence, discussed earlier). The other characteristic of this construction is that the two members of the construction are inseparable. Let us take adjectival modification as an example. When an adjective modifies a noun in Arabic, it must follow its modified noun immediately, and has to agree with it in all nominal features: NUMBER, GENDER, DEFINITENESS, CASE, as shown below

(12) a. kitaab-un qadiim-un (MSA)
book.SG.M-NOM old.SG.M-NOM
'an old book'

b. ʔal-kitaab-u l-qadiim-u
DEF-book.SG.M-NOM DEF-old.SG.M-NOM
'the old book'

However, the adjective modifying the head noun in the CS must appear after the entire CS construction, rather than following the head noun immediately as illustrated below.

(13) a. kitaab bint gadiim (HA)
book.SG.M girl.SG.F.INDEF old.SG.M.INDEF
'a girl's old book'

b. *kitaab gadiim bint
book.SG.M old.SG.M.INDEF girl.SG.F.INDEF
'a girl's old book'

c. kitaab al-bint al-gadiim
book.SG.M DEF-girl.SG.F DEF-old.SG.M
'the girl's old book'

[5] I employ the term 'possessive' complement with the understanding that the typical, but not the exclusive, referent of this nominal complement is a 'possessor' (see Kremers (2003) for examples of other thematic roles).

d. *kitaab al-gadiim al-bint
book.SG.M DEF-old.SG.M DEF-girl.SG.F
'the girl's old book'

As noted above, the adjective *gadiim* 'old' modifies the head noun of the CS, *kitaab* by showing up after the CS, and exhibits full agreement in NUMBER, GENDER, DEFINITENESS with its modified noun. When the adjective follows its modified noun directly and separates it from its possessive complement, the sentence is ruled out as in (b / d). Now, we will see if the same line of reasoning involving the CS nominal can be extended to deverbal ACT.PTCPs. Consider the following example.

(14) ʕali kaatib giṣṣat-ayn fi sanah waaħid-a
Ali write.ACT.PTCP.SG.M story.F-DUAL in year.SG.F one-F
Ali wrote two stories in one year.

In the above example, the deverbal ACT.PTCP *kaatib* 'write' takes the noun *giṣṣat-ayn* 'two stories' as its complement, and it is modified by the temporal adverbial phrase *fi sanah waaħid-a* 'in one year'. So, If the participle *kaatib* were a head noun that takes *giṣṣat-ayn* as its possessive complement to form the entire CS nominal *kaatib giṣṣat-ayn*, we would expect that nothing can intervene between them. But this is not the case since the ACT.PTCP *kaatib* 'writer' and its complement *giṣṣat-ayn* 'two stories' can be separated by the phrase *fi sanah waaħid-a* 'in one year' as demonstrated below.

(15) ʕali kaatib fi sanah waaħid-a giṣṣat-ayn
Ali write.ACT.PTCP.SG.M in year.SG.F one-F story.F-DUAL
'Literally: Ali wrote in one year two stories.'

As a result, it is reasonable to argue that the above construction that is composed of *kaatib* and *giṣṣat-ayn* is not a CS. In fact, the ACT.PTCP *kaatib* is a deverbal participle that is derived from its corresponding transitive verb *katab* 'to write', and it also retains its argument structure by subcategorizing for its object *giṣṣat-ayn*

'two stories'. Given that adverbial modification has been traditionally considered as a central verbal characteristic, it should be said that deverbal ACT.PTCPs have a structurally verbal nature since they admit adverbial modification, as has already been noticed in the above example in which the deverbal ACT.PTCP is modified adverbially by the phrase *fi sanah waaħid-a* 'in one year'.

Another type of evidence against categorizing deverbal ACT.PTCPs as nominals comes from pluralization. As noted earlier in § 2.2.1, there are two kinds of plural nouns in HA: a) the sound plural (masculine or feminine), and b) the broken plural. The sound plural involves adding the plural suffix (*-iin* for masculine, *-aat* for feminine) to the singular noun stem without changing its internal vowel patterns

(16) a. [laaʕib/laaʕib-iin] , [midarris/midarris-iin]
[player.SG.M/player-PL.M] , [teacher.SG.M/teacher-PL.M]
'[a player (masculine)/players (masculine)] , [a teacher (masculine)/teachers (masculine)]'

b. [laaʕib-a(h)/laaʕib-aat] , [midarris-a(h)/midarris-aat]
[player-SG.F/players-PL.F] , [teacher-SG.F/teachers-PL.F]
'[a player (feminine)/players (feminine)],[a teacher (feminine) / teachers (feminine)]'

The broken plural requires changing the vowel patterns of the singular stem.

(17) [kitaab / kutub] , [kaatib / kuttaab]
[book.SG.M /book.PL.F] , [writer.SG.M / writers.PL.M]
'[book/books] , [a writer (masculine)/writers(masculine)]

This is meant to say that a singular noun in Arabic can form a sound plural and/or a broken plural. Recall from the previous chapter, a nominal ACT.PTCP bears this nominal characteristic of pluralization, and as noted above with the nominal ACT.PTCP *kaatib* 'writer' and its broken plural counterpart *kuttab* 'writers'. When it comes to deverbal ACT.PTCPs, they can form only the sound plural, and they are unable to make broken plurals as shown below.

(18) a. ʔal-awlaad kaatib-iin al-waağib (HA)
DEF-boys write.ACT.PTCP-PL.M DEF-homework
The boys have written the homework.

b. *ʔal-awlaad kuttaab al-waağib
DEF-boys writers.PL.M DEF-homework
Intended: The boys have written the homework.

This observation has extended to other Arabic vernaculars.

(19) a. el-wilaad ʕaml-iin el-waagib
the-boys do.ACT.PTCP-PL the-homework
The boys have done the homework.

b. *el-wilaad ʕummaal el-waagib
the-boys do.ACT.PTCP-PL the-homework
The boys have done the homework. (Mughazy, 2004, p. 28)

(20) a. henne kuttaab hal-ktaab
they writer-IPL this-book
They are the writers of this book.

b. henne kaatb-iin hal-ktaab
they write-DA.SPL this-book
They have written this book. (Boneh, 2005, p. 13)

To sum up, the properties that have been adduced from the above discussion against defining deverbal ACT.PTCPs in Arabic as nominals can be summarized as follows: a) they lack the crucial nominal feature of DEFINITENESS, b) they can not be involved in nominal CS constructions, and c) they are unable to form broken plurals.

5.2.2 Against the mixed-category Analysis

Although Fassi Fehri (1993) takes into account the view of traditional grammarians of Arabic that deverbal participles in general and pure adjectives are contrasted on the basis of their aspectual properties in the sense that whereas adjectives express permanent states, participles denote temporal or transitory states, he argues against their claim that all verbs can derive participles. Fassi Fehri (1993) claims that the stativity/dynamicity dichotomy is not sufficient to distinguish adjectives from participles. According to this dichotomy, dynamic/processive verbs such as *ʔakal* 'eat', *katab* 'write' can derive only participles: the deverbal ACT.PTCP *ʔaakil* 'eating', kaatib 'writing', and the PASS.PTCP *maʔkuul* 'eaten', *maktuub* 'written'. Such verbs can not form pure adjectives (**ʔakiil*, **katiib*). On the other hand, stative verbs such as *kabur* 'to become big', *ṭaal* 'to become tall/long' can derive only pure adjectives *kabiir* 'big', *ṭawiil* 'tall/long', but they do not have participles (**kaabir*,**makbuur*).

Fassi Fehri (1993) points out that the above dichotomy is problematic since there are participles that are derived from stative, not dynamic, verbs (*ʕaarif* 'knowing', *maʕruuf* 'known'), in addition to the verbs that can allow the formation of both adjectives and participles. Take an example of the verb *ɣariq* 'to drown' that can have its pure adjective *ɣariiq* 'drowned', and its deverbal ACT.PTCP counterpart *ɣaariq* 'drowning'. As a result, Fassi Fehri (1993) employs what he labels as the '*contingency*' criterion to distinguish various kinds of states in such a way that whereas pure adjectives express non-contingent/permanent states, participles denote contingent/temporal states. With this criterion in hand, the pure adjective *ɣariiq* 'drwoned' differs from the deverbal ACT.PTCP *ɣaariq* 'drowning' in that the former is viewed as a permanent/non-contingent state, whereas the latter has a contingent/temporal state of affair in the sense that the event of 'drowning' starts at some point in time and will finish at another.

To summarize the above discussion, dynamic/processive verbs and verbs with contingent states can derive participles, while verbs with permanent states can form pure adjectives. Additionally, when we encounter a verb that can allow the formation of both participles and pure adjectives such as the above example of *xariq* 'drown', *xaariq* 'drowning', *ɤariiq* 'drowned'), the two categories are contrasted in terms of contingency. That is, participles express a contingent/temporal state of affair, but pure adjectives denote non-contingent/permanent states. This has led Fassi Fehri (1993) to claim that participles resemble adjectives in that they are stativized, but they differ from each other in that whereas the input to affixation with adjectives is a state (s), the one with participles is an event (e). The below rules clarify his claim.[6]

a. s → s (adjectives)

b. e → s (participles)

As for categorial properties, Fassi Fehri (1993) suggests that deverbal ACT.PTCPs should be analyzed as a mixed-category construction that exhibits a mixture of verbal internal syntax and adjectival external syntax at the same time. With respect to verbal properties, Fehri convincingly argues that the verbal ACT.PTCP inherits the same argument structure of the corresponding verb from which it is derived as shown below.

(21) ʕamr-un ḍaarib-un zayd-an (MSA)
Amr-nom beating-nom Zayd-acc
Amr is beating Zayd. (Fassi Fehri, 1993, p. 181)

In the above example, the deverbal ACT.PTCP *ḍaarib* is derived from its parent verb *ḍarab*, and it subcategorizes for the theme object argument *Zayd* and assigns

[6]See also Koontz-Garboden (2007, 2012) on the Monotonicity Hypothesis and how events are turned into states.

it the accusative case as if it were a verb. The same argument holds if a deverbal ACT.PTCP is derived from a ditransitive verb. That is, it inherits both direct and indirect object arguments which are assigned the accusative . The example below demonstrates the point.

(22) ʕamr-un saalib-un zayd-an maal-a-hu
Amr-nom depriving-nom Zayd-acc money-acc-his
Amr is depriving Zayd of his money. (Fassi Fehri, 1993, p. 187)

A further verbal characteristic is that deverbal ACT.PTCPs allow adverbial modification as illustrated below.

(23) ʕamr-un ḍaarib-un zayd-an bi-šiddat-in
Amr-nom beating-nom Zayd-acc with-violence-gen
Amr is beating Zayd violently. (Fassi Fehri, 1993, p. 187)

Modifying the verbal ACT.PTCP with an adjective instead of an adverb results in ungrammaticality as in (24).

(24) *ʕamr-un ḍaarib-un šadiid-un zayd-an
Amr-nom beating-nom viloent-nom Zayd-acc

When it comes to external syntax, Fassi Fehri (1993) claims that verbal ACT.PTCPs are similar to adjectives in many respects. He points out that deverbal ACT.PTCPs show the adjectival agreement morphology since they agree with their subjects in gender and number. Moreover, a deverbal ACT.PTCP resembles adjectives in that it can be the main predicate in non-verbal predication, as all the above examples show. In addition, Fehri points out that a further adjectival property is that deverbal ACT.PTCPs can function as complements of copular verbs like *kaan* 'be'

(25) kaana ʕamr-un muʔmin-an bi-maa y-aquul-u
was Amr-nom believing-acc in-what 3-say-s.m.
Amr was believing in what he says. (Fassi Fehri, 1993, p. 187)

Fassi Fehri also claims that deverbal ACT.PTCPs resemble adjectives in functioning as adverbial adjuncts or accusative circumstantial adjunct (the so-called ħaal). This is demonstrated below.

(26) daxala zayd-un l-bayt-a [mumtaṭiy-an ħiṣaan-an]
entered Zayd-nom the-house-acc riding-acc horse-acc
Zayd entered the house riding a horse.

It should be said that there are various counterarguments that cast doubts on the above claims seeking to treat deverbal ACT.PTCPs as adjectives. With respect to Fassi Fehri (1993)'s claim that deverbal ACT.PTCP behave like adjectives in serving as adverbial adjuncts, I build on Al-Malahmeh (2013)'s argument that the position of adverbial adjuncts is not restricted to adjectives and deverbal ACT.PTCPs only, since verbs with imperfective forms and PASS.PTCPs can also occupy this position.

(27) a. ğa l-walad yi-ğri (HA)
come.PFV.3SG.M DEF-boy 3M-run.IMPFV.SG
The boy came running.

b. ʕali rawwaħ bebkii
Ali went home IMPFV-cry.3SG.M
Ali went home crying. (Al-Malahmeh, 2013, 130)

c. ʔal-bint ğa-t maẓruub-ah (HA)
DEF-girl come.PFV.3SG-F beat.PASS.PTCP.SG-F
The girl came beaten.

d. ʕali rawwaħ maktool
Ali went home beat-PASS.PTCP
Ali went home beaten. (Al-Malahmeh, 2013, 130)

A similar line of reasoning can be extended to Fassi Fehri (1993)'s claim that deverbal ACT-PTCPs can be employed as complements of copular verbs. VPs, NPs, PPs and PASS-PTCPs in Arabic can also complement copular verbs, as illustrated below respectively.

(28) a. ʕali kaan yi-ðaakir
Ali be.PFV.3SG.M 3M-study.IMPFV.SG
Ali was studying.

b. ʕali kaan midarris
Ali be.PFV.3SG.M teacher.SG.M
Ali was a teacher.

c. ʕali kaan fi l-bayt
Ali be.PFV.3SG.M in DEF-house
Ali was in the house.

d. ʕali kaan maẓruub
Ali be.PFV.3SG.M beat.PASS.PTCP.SG.M
Ali was beaten.

Fassi Fehri (1993) concludes his analysis suggesting that a deverbal ACT.PTCP in Arabic is a mixed-category construction whose internal syntax displays verbal properties (to inherit argument structure, assign accusative case to its object(s), allow adverbial modification), while its morphology and external syntax exhibit adjectival properties. He therefore claims that a deverbal ACT.PTCP starts out as a verb, and converts to an adjective.

5.2.3 Against Adjectival Status Analysis

Mughazy (2004) presents a number of arguments for treating deverbal ACT.PTCPs as adjectives, and I will show that his arguments are rife with problems. Mughazy (2004), built on Fassi Fehri (1993), points out that deverbal ACT.PTCPs have the same core external syntax (distribution) as predicative adjectives that function as the main predicate in non-verbal predication (verbless constructions). Moreover, Mughazy has taken the syntactic definiteness of deverbal ACT.PTCPs in verbless constructions as strong evidence for its adjectival categoriality. According to him, deverbal ACT.PTCPs must always be indefinite in verbless constructions, just as all

predicated adjectives must be indefinite. Consider the below examples (taken from Mughazy (2004, p. 51)).

(29) el-ʕarabiyy-a gidiid-a
the-car-f. new-f.
The car is new

(30) *el-ʕarabiyy-a eg-gidiid-a
the-car-f. the-new-f.
The car is the new

(31) mona misafr-a
Mona travel.ACT.PTCP.SG-f
Mona is traveling.

(32) *mona el-misafr-a
Mona the-travel-f
Mona is the traveling.

As I argued earlier, it is a fallacy to take the DEFINITENESS criterion in the context of non-verbal predication as a reliable test for defining categories, since all predicated NPs and APs are indefinite in such a syntactic context.

Along the lines of Fassi Fehri (1993)'s argument, Mughazy (2004) claims that another adjectival property of deverbal ACT.PTCPs is that they can occupy the position of circumstantial adjuncts as illustrated below.

(33) ʕali rawwaħ ϕ zaʕlaan
Ali went home unhappy
Ali went home unhappy

(34) ʕali rawwaħ ħaasis b-el-weħda
Ali went feel.ACT.PTCP with-the-loneliness
Ali went home feeling lonely.

I also provided evidence that such a claim is far from convincing since the position of circumstantial adjuncts is not restricted to deverbal ACT.PTCPs, and I showed that VPs and PASS.PTCPs can also serve as adjuncts. The examples are repeated below for convenience.

(35) a. ğa l-walad yi-ğri
come.PFV.3SG.M DEF-boy 3M-run.IMPFV.SG
The boy came running.

b. ʔal-bint ğa-t maẓruub-ah
DEF-girl come.PFV.3SG-F beat.PASS.PTCP.SG-F
'The girl came beaten.'

Furthermore, Mughazy (2004) claims that the crucial evidence for analyzing deverbal ACT.PTCPs as adjectives is their ability to form comparative and superlative constructions as in the following two examples:

(36) a. al-kinaaya-t-u ʔastr-u
the-metaphor-f-nom conceal.ACT.PTCP.COMPARATIVE-NOM
li-l-ʕayb
for-the-uncomely
Metaphors are better at concealing what is uncomely. (Al-Tawħiidii, 1985, p.1)

b. ʔiħna ʔaʔdar minn-ak ʕala ħall el-muškila di
we become able to.ACT.PTCP from-you on solving the-problem this
We are better able to solve this problem than you. (Ratib, 1975, p. 22)

Al-Malahmeh (2013) objects to the above claim because of its limited data, but he accepts the sentence (36) of item (b) claiming that *gaadir* 'able to' is a dynamic modal and it can form its comparative/superlative form *ʔagdar* 'more able to'. I strongly argue that the whole argument of utilizing the comparative/superlative construction noticed above is amiss regardless of whether the data is limited. It appears

that Mughazy (2004) and Al-Malahmeh (2013) confuse deverbal ACT.PTCPs with pure adjectives (which I gave the term '*adjectival*' ACT.PTCPs) that take the same morphology of the other two types of ACT.PTCPs: nominal and deverbal. Recall that I mentioned earlier that all the three various types of the ACT.PTCP category: nominal, deverbal and adjectival are indistinguishable in terms of both morphology and agreement with their subjects although they have different functions.

Let us return to the above examples employed in favor of analyzing deverbal ACT.PTCPs as adjectives. To begin with the comparative/superlative word *aqdar* in (36)/b, it is derived from the pure adjective *qaadir* 'able to or capable of'. This can be evidenced by its ability to exhibit the adjectival characteristic of licensing degree modifiers, which is taken as a significant difference between deverbal ACT.PTCPs and adjectives by Fassi Fehri (1993), Mughazy (2004) and Al-Malahmeh (2013). The examples below illustrate that the word *qaadir* is a pure adjective, rather than a deverbal participle, since it admits the degree modifier in MSA *ǧiddan* 'very' as in (37)/a and (37)/b.

(37) a. ʔal-ǧins qaadir ǧiddan ʔan yu-xriǧ hilaal min
DEF-sex.SG.M able.SG.M very COMP 3M-take(out).SG Hilaal from
ħuzn-i-h
grief-GEN-his
The sex is very much able to help Hilaal overcome his sadness. (Al-Fakhraani, 2000, p. 130)

b. ʔa-ħtaaǧ ʔilaa raǧul qaadir ǧiddan
1SG-need.IMPFV for man.SG.M able.SG.M very
I need a very capable man. [from twitter]

From (37) item (b), it is fairly clear that the word *qaadir* 'capable of' is definitely an adjective since in addition to its ability to accommodate the degree modifier, it serves as a nominal modifier for the NP *raǧul* 'man' with which it agrees in terms

of NUMBER and GENDER.

It is worth saying that the above observation with respect to licensing the degree modifier with the adjective *qaadir* has also been attested in Egyptian Arabic which employs the degree modifier *ʔawi* 'very' equivalent to the MSA *ǧiddan* 'very', as in (38)

(38) rabbi-na ʔaadir ʔawi (Egyptian Arabic)
God-our able.SG.M very
Our God is very able. [From Twitter]

The same line of explanation can extend to the adjectival ACT.PTCP *saatir* 'concealing or covering' whose comparative/superlative form is *ʔastar* shown in the sentence (36) item (a). Consider the following example in which the adjectival ACT.PTCP *saatir* allows the degree modification.[7]

(39) ... fi libs ɤayr saatir ǧiddan
... in clothes.SG.M not cover.SG.M very
'... in a very revealing outfit' Haafiẓ (2015, p. 53)

In addition to the above discussion, if the proposal advocated by Mughazy (2004) (and others) that takes comparative/superlative constructions as evidence for treating deverbal ACT.PTCPs as adjectives were on the right tract, we would be deprived of any reasonable explanation for the ungrammaticality of deverbal ACT.PTCPs with comparative/superlative constructions. Consider the following scenario in which I ask three boys (Ali, Ahmad, and Khalid) to do some homework. Ali was the first to finish writing this homework, and then Ahmad, and then Khalid. There are no doubts that the below examples are not acceptable in any Arabic vernaculars.

(40) a. *ʕali ʔaktab li-l-waaǧib min ʔaħmad [Comparative]
Ali write.COMPAR to-DEF-homework from Ahmad

[7]It is worth noting that the word *saatir* can also be a nominal ACT.PTCP (an agent nominal) equivalent to the word 'barricade' in English. Beyond any doubt, comparative and superlative constructions have nothing to do with nominals in Arabic, and therefore the nominal *saatir* that means 'barricade' is not involved in the above discussion.

*Ali is more writing to the homework than Ahmad.

b. *ʕali ʔaktab waaħid li-l-waağib [Superlative]
Ali write.SUPERLATIVE one to-DEF-homework
*Ali is the most writing one to the homework.

Al-Malahmeh (2013) also asserts the ungrammaticality of such sentences in any Arabic dialect, and provides the following examples from Jordanian Arabic.

(41) a. *sami ʔaakal li-t-tuffaaħa minn-ak
Sami eat-COMPAR to-the-apple than-you
Sami is more eating to the apple than you.

b. *sami ʔaakal waħad fi ṣ-ṣaf
Sami eat-SUPERLATIVE one in the-class
Sami is most eating one in the class. (Al-Malahmeh (2013, p. 131))

To return to degree modification as a standard property of adjectives, all the above-mentioned researchers (Fassi Fehri (1993), Mughazy (2004), Al-Malahmeh (2013)) arrived at an obvious judgement that such participles do not tolerate degree modifiers.

(42) a. el-walad da šaaṭir giddan
the-boy this clever very
This boy is very clever.

b. *el-kalb ħaaris el-beet giddan
the-dog guard.ACT.PTCP the-house very
The dog is very guarding the house. Mughazy (2004, p. 50).

In this regard, HA is not an exception. Consider the examples below showing that while adjectives welcome degree modification as in (43),a, any attempt to modify deverbal ACT.PTCPs with degree expressions will result in ungrammaticality as illustrated in item (b).

(43) a. muna farħaan-a marrah
Mona happy.SG-F very
'Mona is very happy.'

b. *muna raayiħ-a marrah
Mona leave.ACT.PTCP.SG-F very
'*Mona is very leaving.'

A further kind of evidence against treating deverbal ACT.PTCPs as adjectives stems from the construction of Adjectival Construct, and it definitely casts doubts on the previous studies seeking to classify deverbal ACT.PTCPs as adjectives (Fassi Fehri (1993) and Mughazy (2004)).[8] If deverbal ACT.PTCPs were adjectives, they would be able to form an ADJECTIVAL-CONSTRUCT construction. We have seen in (15)(repeated below as (44) for convenience) that deverbal ACT.PTCPs can be separated from its nominal complement by an adverb.

(44) ʕali kaatib fi sanah waaħid-a giṣṣat-ayn
Ali writing.ACT.PTCP.SG.M in year.SG.F one-F story.F-DUAL
'Literally: Ali wrote in one year two stories.'

(44) proves that the deverbal ACT.PTCP does not satisfy the strict constraint of adjacency, which is an obligatory characteristic of the adjectival construct (and also nominal construct state). As a result, deverbal ACT.PTCPs can not form the adjectival construct, hence they are not adjectives.

To sum up, it should be made transparent that there is an urgent need for abandoning any claim seeking to define deverbal ACT.PTCPs on a par with adjectives. The arguments presented above against the position of dealing with deverbal ACT.PTCPs on a par with adjectives can be summarized as follows. Deverbal ACT.PTCPs: a) do not license degree modifiers, b) are unable to form comparative/superlative constructions, and c) can not take part in Adjectival Construct constructions.

[8]See the discussion on Adjectival Construct in 2.2.1.4.

5.3 Deverbal ACT.PTCPs in HA

This part seeks to provide a descriptive account of deverbal ACT.PTCPs in HA by investigating their verbal properties and syntactic contexts which they occupy. Different kinds of evidence supporting the position of defining this type of participles as verbs will be presented and carefully scrutinized. Moreover, arguments presented in the literature against the verbality of this type of ACT.PTCPs will also be discussed in detail and responded to.

A typical starting point of investigating and working out the full scope of deverbal ACT.PTCPs is to consider the following example.

(45) muna misawwiy-a l-ʕaša
Mona make.ACT.PTCP.SG-F DEF-dinner
Mona has made the dinner.

In the above example, the deverbal ACT.PTCP *misawwiy* 'make' is derived from its canonical transitive corresponding verb *yisawwiy* 'to make'. As seen, this ACT.PTCP shows agreement with its subject *Mona* in number and gender. It also inherits argument structure of its corresponding verb subcategorizing for its theme object *l-ʕaša* 'the dinner'. A further characteristic that typifies verbs is adverbial modification as in (46).

(46) muna misawwiy-a l-ʕaša bi-surʕa
Mona make.ACT.PTCP.SG-F DEF-dinner with-speed
Mona has made the dinner quickly.

It should be noted that the adverb of manner *bi-surʕa* 'quickly', modifying the way *Mona* has made the dinner, can occur in the different, but expected, positions within the sentence. So, in addition to the above sentence-final position, consider (47).

(47) a. bi-surʕa muna misawwiy-a l-ʕaša
with-speed Mona make.ACT.PTCP.SG-F DEF-dinner

b. muna bi-surʕa misawwiy-a l-ʕaša
Mona with-speed make.ACT.PTCP.SG-F DEF-dinner

c. muna misawwiy-a bi-surʕa l-ʕaša
Mona make.ACT.PTCP.SG-F with-speed DEF-dinner
Mona has made the dinner quickly.

Now, let us turn to the point of selecting argument structure. We mentioned above that the deverbal ACT.PTCP selects for its theme object *l-ʕaša* 'the dinner'. Since CASE morphology is absent in Arabic vernaculars including HA, one might claim that the NP *l-ʕaša* 'the dinner' functions as a nominal complement for *misawwiya* that would wrongly be viewed as an NP, hence claiming that the whole construction *misawwiy-a l-ʕaša* is a Nominal Construct State or a possessive construction. My counterargument to this claim is to observe the above example (c) in (47), repeated below for convenience.

(48) muna misawwiy-a bi-surʕa l-ʕaša
Mona make.ACT.PTCP.SG-F DEF-dinner with-speed
Mona has made the dinner quickly.

As noted, the adverb of manner *bi-surʕa* 'quickly' intervenes between *misawwiya* 'make' and *l-ʕaša* 'the dinner', which is not the case of any two members of CS. As a result, this reasoning is taken as sufficient evidence that the NP *l-ʕaša* 'the dinner' is assigned the object grammatical function subcategorized for by the deverbal ACT.PTCP.SGF *misawwiy-a* 'make', despite the fact that it does not bear the expected overt accusative case found in MSA.

Still with selectional properties, argument structure inheritance is also guaranteed even if the deverbal ACT.PTCP is derived from a ditransitive verb. In (49), the deverbal ACT.PTCP *middi* 'give' is ditransitive selecting for its direct theme object *l-filuus* 'the money', and its indirect object *Ahmad*.

(49) ʔana middi ʔaħmad l-filuus bi-nafs-i
I give.ACT.PTCP.SG.M Ahmad DEF-money by-self-my

I gave/have given Ahmad money myself.

The above examples display how a deverbal ACT.PTCP can be able to subcategorize for its objects. Bresnan and Moshi (1990, p. 166-167) define objects by stating that "objects are hypothesized to have the primitive property of complementing transitive predicators such as verbs and adpositions, and not complementing intransitive predicators such as basic nouns and adjectives". It has been noticed that transitivity as a central verbal characteristic has been retained and unaffected due to the fact that a deverbal ACT.PTCP could be transitive or ditransitive depending on transitivity of its corresponding verb.

In addition, I argue that deverbal ACT.PTCPs bear a verbal characteristic that should be taken as a reliable diagnostic when distinguishing verbs on one hand from nouns and adjectives on the other hand. This verbal property is concerned with pronominal objects (discussed in § 2.2.1). Pronominal objects in Arabic are dependent pronouns suffixed only to verbs. It would be instructive to start comparing between NPs and deverbal ACT.PTCPs in terms of how they behave when attached with suffixed pronouns. Let us begin with nouns.

(50) a. kitaab al-bint
book DEF-girl
the girl's book

b. kitaab-**ha**
book-3SG.F.POSS
her book

It is clear that in (50),a, the construction is a nominal construct state in which *kitaab* 'book' is the head noun that takes *al-bint* 'the girl' as its nominal complement serving as the possessor. (50),b exhibits that we can replace the full NP *al-bint* 'the girl' with its corresponding dependent possessive pronoun *-ha* 'her' suffixed to the head

noun *kitaab* 'book'. Now, consider the following examples to see how pronominal objects work.

(51) a. ʕali kallam al-bint
Ali talk.PFV.3SG.M DEF-girl
Ali talked to the girl.

b. ʕali kallam-**ha**
Ali talk.PFV.3SG.M.SUBJ-3SG.F.OBJ
Ali talked to her.

As seen above, the full NP *al-bint* 'the girl' functioning as the theme object in (51)/a can be replaced with its corresponding pronominal object *-ha* 'her.OBJ' suffixed to the verb in (51)/b. It is needed to show that whereas the possessive pronoun acts as a possessive complement in (50), it acts as an object argument in (51) that does not denote a possession relation. In Arabic, dependent possessive pronouns and their pronominal-object counterparts have the same form and occupy the same position. This behavior of the two types of pronouns covers the following: 1PL.M/F, 2SG.M/F, 2PL.M/F, 3SG.M/F, 3PL.M/F, as shown in table (52).

(52)

PERS.NUM.GEND	Possessive Pron	Pronominal Obj	Independent Pron
1PL.M/F	kitaab-**na**	ẓarab-a-**na**	naħn
2SG.M	kitaab-**ak**	ẓarab-**ak**	ʔant-a
2SG.F	kitaab-**ik**	ẓarab-**ik**	ʔant-i
2PL.M	kitaab-**kum**	ẓarab-**kum**	ʔant-um
2PL.F	kitaab-**kum/-kun**	ẓarab-**kum/-kun**	ʔant-um/-un
3SG.M	kitaab-**uh**	ẓarab-**uh**	huw
3SG.F	kitaab-**ha**	ẓarab-**ha**	hi
3PL.M	kitaab-**hum**	ẓarab-**hum**	hum
3PL.F	kitaab-**hum/-hun**	ẓarab-**hum/-hun**	hum/hun

However, the two types of pronouns have two different forms only with 1SG. Consider the following.

(53) a. kitaab-**i**
book-1SG.POSS
my book

b. ʕali kallam-n-**i**
Ali talk.PFV.3SGM.SUBJ-EPENTHETIC-1SG.OBJ
Ali talked to me.

Whereas the possessive pronoun corresponding to 1SG shows up as *-i*, the pronominal object counterpart must be preceded by the epenthetic element *-n-* that always appears if and only if the pronominal object is 1SG.[9]

It is argued here that whereas nouns, as expected, license possessive pronouns as in (54)/a, they do not admit pronominal objects as in (54)/b.

(54) a. kitaab-**i**
book-**my**
my book

b. *kitaab-**ni**
book-**me**
* book-me

With respect to deverbal ACT.PTCPs, they pattern with their corresponding verbs in licensing pronominal objects as below.

(55) ʕali mikallam-**ni** ʔams
Ali talk.ACT.PTCP.SG.M-1SG.M/F.OBJ yesterday
Ali talked to me yesterday.

Regarding adjectives, they admit neither possessive pronouns nor pronominal objects.

[9]In traditional grammar of Arabic, this epenthetic **-n-** is called *nuun ʔal-wiqaayah* 'the nuun of protection'. Note, I will deal with this epenthetic element as part of the pronominal object of 1SGM/F since it always precedes it, whereas it does not appear with other pronominal objects.

(56) a. *zaʕlaan-i
angry-**my**
*my angry

b. *zaʕlaan-**ni**
angry-**me**
* angry me

From above, it could be obtained that pronominal objects are licensed by devebal ACT.PTCPs as this is the case with verbs. On the other hand, neither nouns nor adjectives can admit them. As a result, this is taken as another type of evidence that deverbal ACT.PTCPs should be treated as verbs, and should be denied the nominal or adjectival status. So far, it has been indicated that this type of ACT.PTCP has a structural verbal nature since its arguments (object(s) whether full NPs or pronomial, and adverbs) are the typical elements realized structurally within VPs. In what follows, I present the claims advocated by some researchers who argue against treating deverbal ACT.PTCPs as verbs.

Let us start by taking up a standard argument against categorizing deverbal ACT.PTCPs as verbs which is held to relate to negation. As traditionally assumed, Arabic vernaculars display two main types of negation: a) verbal negation, and b) predicate negation (Brustad (2000), Benmamoun (2000), Aoun et al. (2010), to mention a few). The verbal negation involves negating the perfective and imperfective forms of verbs by placing the negation particle *maa* before verbs as illustrated below.

(57) a. ʔal-walad **maa** ðaakar (HA)
DEF-boy NEG study.PFV.3SG.M
The boy did not study.

b. ʔal-walad **maa** yi-ðaakir (HA)
DEF-boy NEG 3M-study.IMPFV.SG
The boy does not study.

c. **maa** ħabb-et-ha (Syrian Arabic)
NEG loved-I-her
I didn't fall in love with her. (Brustad, 2000, p.284)

d. **maa** xallaw šay (Kuwaiti Arabic)
NEG left.3PL thing
They didn't leave anything. (Brustad, 2000, p.285)

Some other dialects employ different strategies such as the discontinuous negation *ma-š* in Moroccan Arabic (58)/a , and Egyptian Arabic (58)/b.

(58) a. Nadia **ma**-ğa-t-**š**
Nadia NEG-come.PAST-3SGF-NEG
Nadia didn't come. (Benmamoun, 2000, p.69)

b. **ma**-bi-yi-ktib-**š**
NEG-asp-3m-write.NEG
He isn't writing. (Benmamoun, 2000, p.83)

In respect of the predicate negation, it involves negating non-verbal predicates, and it employs both the negative particle *maa* and pronominals or subject clitics hosted by *maa*. The composition of the negative particle and incorporated weak pronouns realized as agreement features with the subject is labelled as 'negative copulas' (Cowell (1964), Brustad (2000), Aoun et al. (2010), among others). The following examples from HA are illustrative.

(59) a. ʔaħmad **ma-hu** midarris
Ahmad NEG-PRON.3SG.M teacher.SG.M
Ahmad is not a teacher.

b. muna **ma-hi** midarris-ah
Mona NEG-PRON.3SG.F teacher-SG.F
Mona is not a teacher.

c. ʔana **maa-ni** midarris
I NEG-PRON.1SG teacher.SG.M
I am not a teacher.

In HA, it is also possible that the negative particle shows up as *muu* that is underlyingly decomposed into the negative *ma* and the masculine pronominal subject *hu*, regardless of subject NUMBER and GENDER. Given that, the above examples could be repeated as below.

(60) a. ʔaħmad **muu** midarris (HA)
Ahmad NEG teacher.SG.M
Ahmad is not a teacher.

b. muna **muu** midarris-ah
Mona NEG teacher-SG.F
Mona is not a teacher.

c. ʔuxwaan-i / xawaat-i **muu** hina
brothers-my / sisters-my NEG here
My brothers / My sisters are not here.

However, there are speakers who prefer to show the GENDER distinction as in (61) in which the negative element *mi* is underlyingly decomposed into the negative particle *ma* and the feminine pronominal subject *hi* to show GENDER agreement with *Mona*.

(61) a. muna **mi** midarris-ah (HA)
Mona NEG teacher-SG.F
Mona is not a teacher.

b. haaði **mi** zoojti
This.SG.F NEG wife-my
This is not my wife. (Matar (1976) / Gulf Arabic)

Egyptian and Lebanese Arabic employ the non-discontinuous element *mi-š*, whereas Moroccan Arabic uses *maaši* as below respectively.

(62) a. huwwa **miš** hina
he NEG here
He is not here. (Brustad, 2000, p.283)

b. huwwe **miš** hon
he NEG here
He is not here. (Aoun et al., 2010, p.97)

c. huwa **maši** hna
he NEG here
He is not here. (Aoun et al., 2010, p.97)

It follows from the above that predicate negation differs from verbal negation in that it has a weak pronoun cliticized on the negative particle, and it should be noted that Benmamoun (2000) claims that the motivation for such incorporated pronouns/subject pronominals is to compensate the loss of PERSON agreement with the subject in non-verbal clauses.

With this background in mind, Mughazy (2004) and Al-Malahmeh (2013) take the behavior of deverbal ACT.PTCPs regarding predicate negation as sufficient evidence to deny them the verbal categoriality. Let us consider the following examples of deverbal ACT.PTCPs involved in negation.

(63) a. ʔinta **muu/ma-nta** ğaay? (HA)
You NEG come.ACT.PTCP.SG.M
Aren't you coming?

b. ʔal-awlad **muu** ħall-iin l-waağib (HA)
DEF-boys NEG do.ACT.PTCP-PL.M DEF-homework
The boys have not done the homework.

c. huwwa **muu** naayim (Jordanian Arabic)
He not-he sleep.ACT.PTCP.SG.M
He has not fallen asleep. Al-Malahmeh (2013, p.148)

In fact, it is not surprising that deverbal ACT.PTCPs employ the strategy of predicate negation as seen above, since they usually function as predicated elements. However, Mughazy (2004) and Al-Malahmeh (2013) argue that if deverbal ACT.PTCPs were verbs they would follow the strategy of verbal negation, rather

than predicate negation. I argue here that this argument is not crucial for two main reasons. One is that it is the construction of non-verbal predication itself that determines the type of negation. That is, non-verbal predication places a restriction on its predicated elements (NPs, APs, PPs, and PARTICIPLES), such that all predicated elements have to employ the type of predicate negation, since they function as predicates. It follows that there seems to be a direct association between non-verbal predication and predicate negation. However, it is worth remarking on the fact that whereas this association with negation is very strict and active in the majority of Arabic dialects, it is inactive in a few of them, as we will see below.

The other reason for re-considering the above claim concerning the negation mechanism of participles is related to the observation that there are many counterexamples in various Arabic dialects which show that non-verbal predicates can employ the strategy of verbal negation rather than predicate negation. Consider the examples below which illustrate that non-verbal predicates (NPs, APs, PPs) can be negated as verbs; either they are preceded by the negation particle *ma* only as in Khartoum Arabic (a Sudanese dialect), or they are preceded by the negation particle *ma* realized as a proclitic and also license the negation enclitic *-š*.[10]

(64) a. ʔinta **ma** raağil / kwayyis / fi l-bayt (Khartoum Arabic)
You NEG man / nice / in DEF-house
You are not a man / nice / in the house.

b. Omar **ma**-mudir-**š**
Omar NEG-director-NEG
Omar is not a director. (Eisele, 1988, p.188)

c. Omar **ma**-kbir-**š**
Omar NEG-big-NEG
Omar is not big. (Eisele, 1988, p.188)

[10]Note that the examples of Khartoum Arabic were provided and confirmed grammatical by many Sudanese friends from the capital city of Khartoum.

d. Omar **ma**-fiha-**š**
NEG-in-it-NEG
Omar is not in it (Benmamoun, 2000, p.84)

e. **ma**-taħt-uu-**š**
NEG-under-it-NEG
not under it (Wise, 1975, p. 10) / Moroccan Arabic

The same observation has been attested with respect to deverbal ACT.PTCPs which are negated as if they are verbs. See a sample below (examples (a) and (b) are taken from Brustad (2000, 289-293)).

(65) a. **maa** ħaab-ha (Syrian Arabic)
NEG love.ACT.PTCP.SG.M-her
You don't love her!

b. **maa**-ṣaayid-š (Egyptian Arabic)
NEG-fish.ACT.PTCP.SG.M-NEG
I am not fishing.

c. da ʔana **ma** daayr-u
DEM.3SG I NEG want.ACT.PTCP.SG-3SG.M
I don't like that. (Roset, 2000, p. 254)

d. ʔana **ma** ǧaay (Khartoum Arabic)
I NEG come.ACT.PTCP.SG.M
I'm not coming.

In addition to the above claims around negation, Mughazy (2005), Al-Aqarbeh (2011) and Al-Malahmeh (2013) claim that deverbal ACT.PTCPs should not be dealt with as verbs since they lack the verbal feature of PERSON agreement. I also argue here that this is a hasty conclusion that would wrongly predict that verbs in the construction of *positive imperatives* in Arabic will be deprived of verbality since they also lack PERSON agreement as we will see below.

As mentioned earlier, verbs in Arabic take one of the two morphological patterns: a) the perfective, and b) the imperfective. The construction of positive imperative in Arabic requires the imperfective form of verb in which the prefix carries PERSON agreement, whereas the suffix marks NUMBER agreement. Now, we will take the following examples shown in (66) from MSA with imperfective forms that involve the 2.PERSON. Notice that the suffixes marking the INDICATIVE MOOD are in boldface.[11]

(66)

PERS.NUM.GEND	IMPERFECTIVE
2SG.M	ta-drus-**u**
2SG.F	ta-drus-ii-**na**
2PL.M	ta-drus-uu-**na**
2PL.F	ta-drus-na

Now, contrast what we have already seen above with the positive imperative construction that also involves 2.PERSON.

(67)

PERS.NUM.GEND	POSITIVE IMPERATIVE
2SG.M	ʔu-drus-ϕ
2SG.F	ʔu-drus-ii-ϕ
2PL.M	ʔu-drus-uu-ϕ
2PL.F	ʔu-drus-na

By contrasting the two forms of verbs, it is fairly evident that the imperative is formed by replacing the prefix marking the 2 PERSON in our case here with an initial glottal stop followed by a vowel.[12] Additionally, the INDICATIVE marker is replaced with the JUSSIVE marker ϕ. Therefore, researchers such as Benmamoun (2000), Soltan (2007), and others argue that the verb in the imperative construction

[11]Note that the suffix -na with 2PL.F marks the FEMININE GENDER, not the INDICATIVE MOOD

[12]Since it is prohibited in MSA to have a complex onset (a sequence of consonants), the glottal stop and an epenthetic vowel are employed for syllabification purposes (see Brame (1970) for further discussion).

loses its verbal feature of PERSON as shown above. However, it would be absurd to claim that verbs in such a construction lose their verbality status due to the absence of PERSON agreement. As a result, the argument advocated by Mughazy (2005), Al-Aqarbeh (2011) and Al-Malahmeh (2013) that deverbal ACT.PTCPs are not verbs because they lack PERSON agreement is not on firm ground.

5.3.1 Verbality of deverbal ACT.PTCPs (Revisited)

Crosslinguistically, participles are analyzed as a mixed category construction that displays verbal and adjectival characteristics. Studies on deverbal ACT.PTCPs in Arabic whose researchers argue that such participles exhibit some adjectival properties (Fassi Fehri (1993) and Mughazy (2004)) rely on: the adjectival morphosyntax of the participle, the semantic stativity of the participial construction, the absence of certain verbal properties such as PERSON, and syntactic contexts where such participles appear. Regarding the association between '*stativity*' and '*adjectivehood*', I assume that this is not a sufficient testing ground for the adjectivality status of such participles since Vendler (1957) proposes that some verbal predicates such as *'be','own', 'exist'* are lexically stative. In addition, it is not plausible to rely more on the stative interpretation of participial constructions than on the participle itself that clearly functions as its related verb. There is no denying that a participial construction in Arabic is a stativizing construction that denotes a state resulting from an underlying eventuality expressed by the corresponding verb of the participle, and this state is predicated over the subject of the participial construction. However, I favor to dissociate semantic eventivity from syntactic analysis when defining such participles. This should be understood to mean that it is the internal syntax of a certain category that defines its membership as a verb, a noun or an adjective. As a result, I argue that there is ample evidence for analyzing deverbal ACT.PTCPs in Arabic syntactically as a special type of VPs. This evidence stems from regular

verbal constituents that occur in such participial constructions such as: argument structure inheritance, adverbial modification, and marking ASPECT. Let us start with the subcategorization framework.

(68) a. ʔal-walad misawwi l-waağib bisurʕa
DEF-boy make.ACT.PTCP.SG.M DEF-homework quickly
The boy (has) made the homework quickly.

b. muna middi-a ʕali l-kitaab gabl yawmayn
Mona give.ACT.PTCP.SG-F Ali DEF-book before two days
Mona gave Ali the book two days ago.

It is obvious above that deverbal participial constructions display the so-called '*lexical coherence'* since the complements selected by such participles are of a uniform type: they are all verbal constituents. With respect to external syntax which has been taken as a reliable criterion by Fassi Fehri (1993) and Mughazy (2004) for categorizing deverbal ACT.PTCPs in Arabic as adjectives, I argue that the distributional similarities and differences between verbs and adjectives in Arabic are problematic since the two categories share much of their external syntax. For example, verbs and adjectives in Arabic are able to function as clausal adjuncts, the so-called *circumstantial adjunct*, or *ħaal*, as shown in (69).

(69) a. ʔaħmad ğaa **yi-ğri**
Ahmad come.PFV.3SG.M 3M-run.IMPFV.SG
Ahmad came happy.

b. ʔaħmad ğaa **mabsuuṭ**
Ahmad come.PFV.3SG.M happy.SG.M
Ahmad came happy.

Moreover, verbs and adjectives can serve as attributive modifiers as in (70).

(70) a. bint **ti-bki** daxal-at al-ɣurfa
girl 3.F-cry.IMPFV.SG enter.PFV.3SG-F DEF-room.
A girl crying entered the room.

b. bint **mariiẓ-a** daxal-at al-ɤurfa
girl.INDEF sick.SG.INDEF-F enter.PFV.3SG-F DEF-room.
A sick girl entered the room.

However, deverbal ACT.PTCPs behave exactly like verbs when modifying *definite* NPs in the sense that both have to employ the relative complementizer *ʔilli* 'that' separating the definite NPs from the phrasal modification. The data below clarifies the point.

(71) a. ʕali yi-ʕrif al-walad *(illi) sawwa
Ali 3M-know.IMPFV.SG DEF-boy REL.COMP make.PFV.3SG.M
l-ħaadiθ
DEF-accident
Ali knows the boy who (has) made the accident.

b. ʕali yi-ʕrif al-walad *(illi) misawwi
Ali 3M-know.IMPFV.SG DEF-boy REL.COMP make.ACT-PTCP.SG.M
l-ħaadiθ
DEF-accident
Ali knows the boy who (has) made the accident.

What follows from the above observation is that if such participles were to necessitate adjectival categoriality, they would behave like adjectives in accommodating the attachment with the definite article *l-* 'the'.

(72) a. ʕali yi-ʕrif al-walad al-mariiẓ
Ali 3M-know.IMPFV.SG DEF-boy DEF-sick.SG.M
Ali knows the sick boy.

b. *ʕali yi-ʕrif al-walad al-misawwi
Ali 3M-know.IMPFV.SG DEF-boy DEF-make.ACT.PTCP.SG.M
l-ħaadiθ
DEF-accident

A further point about the criterion of morphosyntax that Fassi Fehri (1993) and Mughazy (2004) utilize as evidence for categorial identity between deverbal ACT.PTCPs

and adjectives is held to relate to the agreement features that such participles manifest. The two authors claim that participles exhibit the agreement morphology typical of an adjective since they agree in NUMBER and GENDER features of their subjects. In this regard, two main points should be clarified. First, in Arabic both features of NUMBER and GENDER are marked on verbs, nouns, and adjectives, whereas PERSON and TENSE are exclusively verbal features. Since CASE is lost in Arabic dialects, we are left with the PERSON feature. There is no denying that deverbal ACT.PTCPs lack both PERSON and TENSE values, but it was observed earlier in § 5.3 that person feature is not always a testing ground for assigning categorial status of a word since the construction of positive imperative in Arabic does not mark person morphology on verbs, though no one can deny the positive imperative its verbality. With respect to TENSE values, it is a widely-held assumption that non-finite verbs do not mark TENSE values.

The second point is that although languages crosslinguistically have regular tendencies to mark morphological features of person and number on verbs, while number, gender and case are marked on nouns and adjectives, exceptions that challenge such regular tendencies still arise. For instance, Nordlinger and Sadler (2003, 2004a,b) point out that some languages mark tense features on nominals (see chapter 3 for details).

According to Lowe (2016), it is only internal syntax that should be taken as the primary criterion for categorial status, and a truly mixed category construction is the one whose internal syntax is itself mixed. Added to this, any construction that exhibits a mismatch between its uniform internal syntax and external syntax and/or its morphosyntax should not be treated as a mixed-category construction, and therefore no *head-sharing* analysis is motivated. Built on this, I propose that deverbal ACT.PTCPs in Arabic manifest exclusively uniformly verbal internal syntax that does not require any mixed categories analysis. So, such participial phrases

will be analyzed as VPs which are headed by participial Vs, as we will see later.

It has still remained to remark on the correlation between the syntactic structure of such participles and the morphological structure of the head. This issue can straightforwardly be accounted for by Haspelmath (1995, p. 58)'s universal generalization stated in (73).

(73) a. In words derived by inflectional word-class-changing morphology, the internal syntax of the base tends to be preserved.

b. In words derived by derivational word-class-changing morphology, the internal syntax of the base tends to be altered and assimilated to the internal syntax of primitive members of the derived word-class.

Built on the above generalization, deverbal ACT-PTCPs in Arabic are derived via inflectional word-class-changing morphology since the internal syntax of such participles resembles that of their corresponding verbs. Given that, I argue that such participles should be treated as inflectional non-finite subtypes of the verbal lexical category.

The next part will be concerned with another hotly debated phenomenon that relates to the semantics of deverbal ACT.PTCPs in Arabic.

5.4 The Semantics of Deverbal ACT.PTCPs in the literature

It should be recalled that the construction of non-verbal predication (verbless clause) denotes stativity, and encodes the default present interpretation associated with a null copula linking the constituents of that construction, which licenses present time adverbials. In case of past and future tense interpretations, an overt copular verb is required to license past and future time adverbials respectively. This point is clarified by concrete examples such as those in (74)

(74) a. ʕali midarris/taʕbaan/fi l-bayt ðalḥiin
Ali teacher/tired.SG.M.INDEF/in DEF-house now
Ali is now a teacher/tired/at home.

b. ʕali kaan midarris gabl xams sanawaat
Ali be..PFV.3SG.M teacher.SG.M.INDEF before five years
Ali was a teacher five years ago.

c. ʕali kaan mariiẓ ʔams
Ali be..PFV.3SG.M sick.SG.M.INDEF yesterday
Ali was sick yesterday.

d. ʕali kaan fi l-bayt ʔams
Ali be..PFV.3SG.M in DEF-house yesterday
Ali was home yesterday.

e. ʕali raaḥ yi-kuun/yi-ṣiir midarris (ʔas-sanah
Ali ASPECTUAL 3M-be.SG/become.SG teacher.SG.M.INDEF DEF-year.F
l-ǧaay-ah)
DEF-coming-F
Ali will be/become a teacher next year.

f. raaḥ ʔa-kuun fi jiddah baʕd yawmayn
ASPECTUAL 1SG-be.IMPFV in Jeddah after 2 days
I will be in Jeddah after two days.

However, the construction of non-verbal predication that employs deverbal ACT.PTCPs as their predicates deviates from the above mentioned generalizations in the sense that they admit different temporal adverbials (past, present, and futurate) without requiring any overt copular verbs. To inject some concreteness into the discussion, consider the examples below.

(75) a. ʔaħmad ğaay ðalħiin
Ahmad come.ACT.PTCP.SG.M now
Ahmad is coming now.

b. ʔana mikallim ʕali ʔams
I talk.ACT.PTCP.SG.M Ali yesterday
I talked to Ali yesterday.

c. muna misaafir-ah jiddah bukrah
Mona travel.ACT.PTCP.SG-F Jeddah tomorrow
Mona is going to travel/traveling to Jeddah tomorrow.

It is obvious that the non-verbal construction in (75)/a admits the present adverbial *ðalħiin* 'now'. Moreover, it allows the past adverbial *ʔams* 'yesterday' in (75)/b. Additionally, it licenses the futurate adverb *bukrah* 'tomorrow' in (75)/c. Another interesting characteristic of deverbal ACT.PTCPs we ought to consider is that they exhibit various aspectual properties (progressive, resultative, and so on) as the examples below demonstrate.

(76) a. ʔaħmad ʕaayiš fi makkah
Ahmad live.ACT.PTCP.SG.M in Makkah
Ahmad lives in Makkah.

b. ʔana raayiħ al-bayt
I go.ACT.PTCP.SG.M DEF-home
I am going home.

c. muna duub-ha misawwiy-ah l-ʔakl
Mona just-F make.ACT.PTCP.SG-F DEF-food
Mona has just made the food.

d. hum saakin-iin hina min ʕišriin sanah
they live.ACT.PTCP-PL.M here from twenty years

They have been living here for 20 years.

In (76),a, the deverbal ACT.PTCP *ʕaayish* 'live' has a present habitual reading. In (76),b, the deverbal ACT.PTCP *raayiħ* 'going or leaving' provides a present progressive interpretation. A present perfect or resultative reading is provided in (76),c with the deverbal ACT.PTCP *misawwi* 'make' that allows the optional adverb *duub* 'just' marking the perfectivity. In (76),d the sentence has a present perfect progressive as the English translation indicates. It is worth remarking on the fact that the various aspectual properties of deverbal ACT.PTCPs and the different temporal interpretations of their sentences arise in the absence of any copular verbs. As a result, a question arises as to how such constructions can have the various aspectual and temporal interpretations without the need for any overt copular verbs. Needless to say, a great body of research has been directed towards this phenomenon attempting to account for aspecto-temporal issues in which researchers utilize different approaches: the Lexical aspect approach and the Formal aspect approach (Cowell (1964), El-Tonsi (1982),Eisele (1988, 1990, 1999); El-Bakry (1990), Mitchell and El-Hassan (1994), Brustad (2000), Holes (2004), Boneh (2005, 2010); among others), the Neo-Davidsonian or Subatomic account (Mughazy (2004) on Egyptian Arabic), and Evidentiality account (Al-Malahmeh (2013) on Jordanian Arabic). It should be said that most of the above-mentioned studies are based squarely on the assumption that there is an interaction between the lexical aspect of verbs from which deverbal ACT-PTCPs are derived and the temporal interpretations of their sentences. In addition, whereas most of those studies were primarily descriptive in nature, Eisele (1988), based on Egyptian Arabic, was the first to advocate a semantic account utilizing the tense logics of Reichenbach (1947) and Dowty (1979, 1982) in an attempt to account for the various aspectual and temporal interpretations of

deverbal ACT-PTCPs. An attempt is made below to sketch out the most familiar proposals in the literature advocated for dealing with this interesting phenomenon.

5.4.1 Eisele (1988, 1990, 1999)

As noted earlier, verbless clauses that take NPs, APs, and PPs as their predicate complements have a null copula that always gives rise to the default present deictic time reference which, in turn, prohibits non-present (past and future) adverbials. However, we have seen that when verbless clauses take deverbal ACT.PTCPs as predicate complements, that generalization does not hold since different temporal interpretations of the discourse (past and futurate) arise. Eisele (1988) argues that it is the lexical aspect of verbs from which deverbal ACT-PTCPs are derived that determines various types of aspectual properties and temporal interpretations of such construction. For example, Eisele (1988) points out that deverbal ACT.PTCPs formed out of stative verbs provide a simple present reading since the state denoted by such participles coincides with the default present reference time associated with null copula, hence licensing present adverbials. Consider the following example in which the deverbal ACT.PTCP *saamiʕ* is derived from the state verb *samiʕ* 'hear', and it denotes a present state of *hearing* that coincides with the default present reference time of the null copula that accommodates the present time adverbial *ðalħiin* 'now'.

(77) ʔana saamiʕ-ak ðalħiin
I hear.ACT.PTCP.SG.M-2SG.OBJ now
I hear you now.

With respect to deverbal ACT.PTCPs derived from motion verbs, i.e. verbs that "have to do with going, coming, etc. to and from places" (Cowell, 1964, p. 244), Eisele (1999) points out that this type of verbs gives rise to future readings in

the absence of futurate adverbials.[13] Consider the examples below in which the deverbal ACT.PTCPs *misaafir* 'traveling' in (78),a and *raayiħ* 'going' in (78),b yield future interpretations, even if future adverbials are not available.

(78) a. muna misaafir-ah jiddah (baʕd yawmayn)
mona travel.ACT.PTCP.SG-F Jeddah (after two days)
Mona is going to travel/traveling to Jeddah (after two days).

b. ʔana raayiħ faransa
I go.ACT.PTCP.SG.M France
I am going to France (Eisele, 1999, p. 129)

The above examples could amount to saying that temporal interpretations of the discourse rely on the aspectual properties of the corresponding verbs of such participles, especially in cases where time adverbials are absent as seen in (78). Moreover Eisele (1999) points out that deverbal ACT.PTCPs of motion verbs can also give rise to an ongoing present reading. Let us take the following example from HA with a context in which while I am leaving the house (walking towards my car), someone asks me where I am going, and I reply saying 'I am going to work'.

(79) ʔana raayiħ al-ʕamal
I go.ACT.PTCP.SG.M DEF-work
I am going to (the) work.

Eisele (1999) calls such deverbal ACT.PTCPs as pseudo-inchoatives since they resemble inchoatives in that they indicate a present continuous/progressive reading that denotes an active, motional 'being in between two places' event. Eisele states that in such cases the ACT.PTCP "seems to function almost as if it were indicating three

[13]Note that this type of verbs has received different terms. For instance, Cowell (1964) objects to the term 'verbs of motion' since a verb like *ʔaʕad* 'to sit' does not indicate motion, so Cowell employs the label 'translocative'. Eisele, on the other hand, prefers to designate them as 'locational' in the sense that such verbs "express the position or location of the subject in some way, at times very abstractly" (Eisele, 1999, p. 142). It is worth noting that I will stick to the term 'motion verbs' throughout this work.

things at once: a prior event (moving from source), a present or resulting state (being in between source and goal), and a future event (arrival at goal)" (Eisele, 1999, p. 143). In addition, Eisele (1999) points out that deverbal motion ACT.PTCPs can be interpreted as 'resultatives' when they collocate with the adverb *lissa* 'just', and in this case such participles are associated with deictic past time reference. The example below demonstrates his point.

(80) ʔaħmad wa ʕali lissa/duub/taww ǧaay-iin min makkah
Ahmad and Ali just come.ACT.PTCP-PL.M from makkah
Ahmad and Ali have just come from Makkah.

In (80), the deverbal ACT.PTCP *ǧaay* 'come' can be collocated with any of adverbs: *lissa*, *duub*, or *taww* which HA utilizes to modify a verb that is done recently.[14] It should be said that when the adverb is removed from (80), the interpretation of the sentence is not resultative anymore. Rather, the sentence yields either the futurate reading, or the present progressive one, and in such case the context or an appropriate time adverbial is of great significance to provide the intended meaning.

The last class of verbs discussed by Eisele (1999) is non-stative non-inchoative accomplishment and achievement verbs which Eisele calls 'resultatives'. Consider the following example taken from Eisele (1999, p.133).

(81) ʔana kaatib il-gawaab imbaariħ
I ACT.PTCP.SG.M DEF-letter yesterday
I wrote the letter yesterday.

In such examples, a deverbal ACT.PTCP can license past time adverbials that contrast with the default present deictic time associated with the null copula of non-verbal

[14]It is worth stressing that the adverb *lissa* 'just' used in (80) is not the one that means 'still'. According to Eisele (1999), motion participles can collocate with *lissa* that means 'just', but not with the one that means 'still' which can modify inchoative participles such as *ʔaaʕid* in Egyptian Arabic that is equivalent to the Hijazi Arabic *ǧaalis* 'sit'.
i. ʔaħmad lissa raayiħ al-madrasa
Ahmad has just gone to school (*Ahmad is still going to school)
ii. ʔaħmad lissa ǧaalis fi l-bayt
Ahmad is still staying at home.

predication. Eisele (1999) argues that a resultative participle denotes an asserted state associated with an implied underlying event in such a way that while the asserted state takes the default present reference time of the null copula, the implied underlying event that started before that asserted state takes past reference time. In concrete, the deverbal ACT.PTCP *kaatib* 'write' in (81) implies a preceding event of *writing* licensing the past adverbial *imbaariħ* 'yesterday', and at the same time asserts a state associated with the default present tense of the null copula. Eisele (1999)'s analysis can successfully account for sentences of deverbal ACT.PTCPs associated with two different time adverbials (past and present) as the following example illustrates.

(82) muna l-yawm mixalliṣ-ah l-ğaamiʕa min θalaaθ sanawaat
Mona today finish.ACT.PTCP.SG-F DEF-university from three years

Today, Mona has finished the university for three years.

Built on Eisele (1999)'s analysis, whereas the present time adverbial *l-yawm* 'today' modifies the asserted state (Mona's state of having finished the university) associated with the present tense of the null be, the implied underlying event of finishing the university that precedes the state is modified by the past adverbial *min θalaaθ sanawaat* 'three years ago'. Such constructions are attested in Arabic varieties, as the following example indicates from Egyptian Arabic.

(83) ʔana delwaʔt miʔaddim ʕala waẓiifa f-el-ħokuuma men
I now apply.ACT.PTCP.SG.M on job in-DEF-government from
sana
year

Now I have applied for a government job a year ago. (Mughazy, 2004, p. 109)

The main points of Eisele (1999) could be summarized in the table below.

(84)

TYPE OF DEVERBAL-ACT.PTCP	INTERPRETATION
STATIVE	Present Simple (ʔana **saamiʕak** 'I hear you')
MOTION	Present Progressive or futurate (ʕali **ǧaay** 'Ali is coming.')
INCHOATIVE	Present Progressive (Mona **ǧaalis**ah 'Mona is sitting/staying.')
OTHERS (Non-stative Non-inchoative accomplishment and achievement)	Resultative (Simple Past 'Perfect' / Present Perfect) (ʔaħmad **misawwiy** ħaadiθ 'Ahmad (has) made an accident.')

5.4.2 Holes (2004)

Holes (2004) argues that deverbal ACT.PTCPs derived from stative verbs denote a situation coincident with the utterance time as in (85). He further claims that in such cases the imperfective form of the verb (labelled as the p-stem), or the perfective form of the verb (what he calls the s-stem) can replace stative ACT.PTCPs without affecting the sentence's interpretation.

(85) ʔinn-i muṣaddiq-u-ka
COMP-1SG believe.ACT.PTCP.SG.M-NOM-2SGM.OBJ
I believe you. (Holes, 2004, p. 220)

Holes (2004) points out that deverbal ACT.PTCPs of motion verbs produce a futurate interpretation across most, if not all, Arabic vernaculars, as in (86).

(86) wayn raayiħ
where go.ACT.PTCP.SG.M
Where are you going? (Holes, 2004, p.221)

In addition, Holes (2004) observes that whereas the perfective form of dynamic verbs always expresses completed actions (what he designates as 'complete episodes') as in (87), dynamic deverbal ACT.PTCPs denote resultative interpretations, as shown in (88) (examples are taken from Holes (2004, p.221))

(87) a. klit (Moroccan Arabic)
eat.PFV.1SG
I ate.

b. ʔakalit (Baghdadi Arabic)
eat.PFV.1SG
I ate.

c. kalet (Bahraini Arabic)
eat.PFV.1SG
I ate.

(88) a. waakil (Moroccan Arabic)
eat.ACT.PTCP.SG.M
I have eaten.

b. maakil (Bahraini and Baghdadi Arabic)
eat.ACT.PTCP.SG.M
I have eaten.

5.4.3 Mughazy (2004)

Based on Egyptian Arabic, Mughazy (2004) utilizes the Neo-Davidsonian/Subatomic Approach (Higginbotham (1983), Parsons (1990)) to account for the varied temporal interpretations of the discourse of non-verbal predication that involves deverbal ACT.PTCPs as their predicates. Before discussing Mughazy (2004)'s analysis, a

sketch on (Neo-)Davidsonian semantics is presented below.

- Davidsonian event-semantics

Before Donald Davidson (1967)'s seminal work "The logical form of action sentences"[15], the standard view on predicates was that a predicate such as the transitive verb 'to butter' in the classical example (89) expresses direct relationships between its arguments and the proposition, thus resulting in the logical form (90).

(89) Jones buttered the toast.

(90) BUTTER (jones, the toast)

As noticed in (90), the verb 'butter' is a two-place predicate that establishes a relation between only two individuals/arguments which are *Jones* and *the toast*. Davidson (1967), built on action verbs[16], argues that the representation in (90) does not enable us to make reference to the action described by the sentence and the contribution of adverbial modification (*slowly, in the kitchen, at midnight*) to the meaning of sentence. As a result, Davidson proposes that verbs of action introduce an "extra" or an additional hidden event argument that represents the action proper. So, the sentence (89) would be assigned the logical form in (91).

(91) ∃e [BUTTER (e, jones, the toast)]

As seen above, the transitive verb 'butter' is a three-place predicate in the sense that it takes three arguments: the implicit event argument, and the two participants in that event (*Jones* and *the toast*). Such a representation paves the way to account

[15]Donald Davidson (1967) modified a theory of logical form that was originally advocated by Frank Ramsey (1927), and introduced in an expanded form by Reichenbach (1947).

[16]Davidson argues that not all verbs have the hidden 'Davidsonian argument', and he proposes that the presence of an underlying event variable is what enables us to differentiate between the semantic representations of event sentences and those of fact or state sentences. Therefore, many researchers (Galton (1984), Herweg (1991), Katz (2000), among others) have assumed that whereas event verbs have the hidden/underlying Davidsonian's argument, state verbs do not.

in a nice way for the contribution of adverbial modifiers to the sentence, as shown in Davidsonian's classical sentence in (92) which takes its logical form in (93).

(92) Jones buttered the toast in the bathroom with the knife at midnight

(93) ∃e [BUTTER (e, jones, the toast) & IN (e, the bathroom) & WITH (e, the knife) & AT (e, midnight)]

(93) says that there was an event of Jones' buttering the toast, that event was located in the bathroom, that event was performed with a knife, and the event took place at midnight.

Whereas the Davidsonian event-based approach to predicates was confined to the verbs of action, it was pushed further in the Neo-Davidsonian paradigm that was developed by Higginbotham (1983)[17] and Parsons (1990) who argue that the Davidsonian's hidden argument should have a wider distribution in such a way that it can be extended to all verbs (Vendler (1967)'s aspectual-class distinctions: processes, accomplishments, achievements, and states), or all verbs of "eventuality" after Bach (1986). Another core assumption of Neo-Davidsonian account is that any verb is a one-place predicate that ranges over events. In addition, the relations between an event and its participants/arguments are expressed as thematic roles linking that event with its participants. So, in the Neo-Davidsonian view the example (92) will be represented as in the logical form (94).

(94) ∃e [BUTTER (e) & AGENT (e, jones) & PATIENT (e, the toast) & IN (e, the bathroom) & INSTRUMENT (e, the knife) & AT (e, midnight)]

It is worth saying that the Neo-Davidsonian's view to extend the underlying event analysis to stative predicates has been the subject of much debate in the

[17] Higginbotham (1985, p. 10) states that "[t]here seem to be strong arguements in favor of, and little to be said against, extending Davidson's idea to verbs other than verbs of change or action. Under this extension, statives will also have E-position".

literature. For example, Katz (2000) argues that statives do not have a Davidsonian argument.[18] Moreover, according to Kratzer (1995) while stage-level predicates have the event argument, individual-level ones do not. In addition, Maienborn (2003) classifies states into two distinct groups on the basis of whether a stative verb has a Davidsonian-state argument or a Kimian-state argument. One example that reflects the heated debate on this issue is centered on the argument of direct reference to events that is taken as strong evidence for Davidsonian semantics (See Parsons (1990) for more on the arguments in favor of the Davidsonian underlying argument). As mentioned earlier, one type of evidence taken as a strong argument in favor of Davidsonian event approach comes from event anaphora; i.e the ability to make reference to events in the sense that an event is viewed as a linguistic object that can be picked up as a referent. Higginbotham (1983) and Parsons (1990), among others, argue that the underlying event introduced by the verb can be taken as an antecedent as the following example illustrates.

(95) John buttered the toast. It was quick.

In (95), the Davidsonian hidden argument of *butter* in the first sentence acts as the antecedent for the anaphor *it* in the second sentence as a kind of event anaphora. On the Neo-Davidsonian account, Parsons (1990) and Higginbotham (1996) take examples such as those in (96) as evidence that stative predicates can also provide antecedents for state anaphora which is analogous to event anaphora.

(96) a. John was sick. It lasted three days.

b. Peter is sick. It is worrying his mother.

c. Danny owns a car. It makes it easier for him to get around.

[18]It is widely held that since stative verbs denote states rather than actions or processes, the hidden Davidsonian argument for statives is called a state argument instead of an event argument.

However, Katz (2000) objects to such examples by emphasizing that we should distinguish between two kinds of reference: reference to propositions (or fact anaphora) and event reference (or event anaphora). Let us consider his examples below.

(97) a. Smith stabbed Jones. That bothers me.

b. Smith stabbed Jones. It happened at noon.

Katz (2000) makes appeal to Vendler (1968) who states that whereas the second sentence in (97)/a can be paraphrased as *this fact bothers me*, the second sentence in (97),b can not be paraphrased as *this fact happened at noon*, but rather we can paraphrase it as *this event happened at noon.*[19]

As a result, Katz (2000) argues that the reference in (96) is proposition reference/ fact anaphora since we can paraphrase (96),b as: *the fact that Peter is sick is worrying his mother*. So, stative predicates lack state anaphora, and the Davidsonian argument altogether.

Now, returning to Mughazy (2004)'s proposal, Mughazy argues that the widely-held assumption that the construction of non-verbal predication (verbless clauses) expresses the default simple present tense interpretation associated with the null copular still holds, even with predicated deverbal ACT.PTCPs. However, Mughazy (2004) claims, contra others, that the licensing of various time adverbials (past, present, future) in such a construction has nothing to do with the aspectual properties of the corresponding verbs from which these participles are derived. In addition, Mughazy claims that deverbal ACT.PTCPs should be treated as complex adjectival

[19]Katz (1995, p. 20) points out that whereas reference to propositions allows to replace the pronoun of anaphor with *this fact* or with a that-clause, reference to events disallows that as shown below.
(i) Smith stabbed John. It bothered me.
(ii) a. That Smith stabbed John bothered me. (Proposition reference)
b. *That Smith stabbed John was quick. (Event reference)
Roy (2013, p. 20) points out that we can not paraphrase (96),a as: **The fact that Steve was sick lasted three days*, and this suggests that event reference is truly available with statives.

predicates that differ from regular adjectives in that they denote current states and entail preceding events, and the states hold of the subject at utterance time or longer intervals including utterance time irrespective of the aspectual properties of the corresponding verbs of such participles. Mughazy claims that deverbal ACT.PTCPs in verbless clauses have two components: a) an asserted state, and b) an onset event that brings about that state. Mughazy (2004, p. 158) points out that "an event is an onset of a state if, and only if, the change that constitutes the event is completed at some moment t such that the state begins to obtain at t". Moreover, he argues that there are two types of adverbial modification. The first type is time adverbs associated with the state, denoted by the participle, which always holds at utterance time, hence they are present adverbials. The second type is adverbs that specify the event time of the onset event. The adverbs associated with the onset event can be: a) past time adverbials if the state is bound at its beginning with the implied event viewed as retrospective onset event, and b) future time adverbials when the state is bound at its end with the underlying event viewed as prospective event. The following example is devoted to clarify Mughazy's argumentation.

(98) ʕali dilwaʔti baaʕit eg-gawaab men ʔisbuuʕ
Ali now send.ACT.PTCP.SG.M DEF-letter from week
Ali is now in a state of having sent the letter a week ago. (Mughazy, 2004, p. 18)

Mughazy claims that deverbal ACT.PTCPs in non-verbal predication necessitate quantification over both state and event variables, hence they are complex stative predicates. As a result, the example in (98), would be represented as in (99).

(99) ∃s∃e[sending(e) & Agent(e, Ali) & Patient(e, the letter) & A week ago (e) & Having sent the letter(s) & Theme(s, Ali) & Now(s) & ONSET(e, s)]

The logical form in (99) reads as follows: there is an event of sending such that it is a sending of the letter by Ali, and this event happened a week before

utterance time. In addition, there is a state such that it is a state of Ali's having sent the letter, and this state holds of Ali at utterance time and it came about at the point in time when the event of Ali's sending the letter was completed. According to this, whereas present time adverbs are anchored to the target state variables, past time adverbials are associated with the onset variables since an onset event must be complete before utterance time. Mughazy (2004) establishes a distinction between two types of state: a) the target state that holds in utterance time, and b) the resultant state that terminates before utterance time. Mughazy (2004, p.185) provides the following example:

(100) el-ħarami daaxil el-ʔooḍa men eš-šibbaak
DEF-thief ACT.PTCP.SG.M DEF-room from DEF-window
The thief is in the state of having entered the room through the window.
The thief has entered the room through the window.

According to Mughazy, the complete event of the thief's entering the room brings about: the resultant state of the thief's being in the room which holds prior to utterance time, and the target state of the thief's having entered the room which holds now (at speech time).

With respect to motion deverbal ACT.PTCPs, Mughazy (2004) claims that there is no motivation for treating them as a language-specific aspectual class as other researchers do (El-Tonsi (1982), El-Bakry (1990), Mitchell and El-Hassan (1994), Eisele (1988), and Brustad (2000)). Instead, Mughazy suggests that participles derived from motion verbs (such as *misaafir* 'travel', *raayiħ* 'going') should be analyzed as inceptive achievements that indicate initial stages of change of location. So, they can express future interpretations, or present progressive readings as inceptive verbs do (*ṭaar* 'fly'). In addition, Mughazy (2004, p. 206) points out that deverbal ACT.PTCPs can yield futurate interpretations if and only if "the speaker is believed to be committed to the completion of the future onset events that bring about the

target states denoted by the [deverbal ACT.PTCP] predicates".

5.4.4 Boneh (2005, 2010)

We should recall (from the introduction chapter) that the classical approach to temporality adopts the assumption that TENSE and ASPECT are relations between time spans or intervals. Reichenbach (1947) proposed a three-interval structure of time: the speech time (**S**), the event(uality) time (**E**), and the point of reference (**R**).Whereas TENSE was classically taken to relate the eventuality time (the time at which the event occurs) to the speech or utterance time (the time at which the utterance is produced), ASPECT functions to express a particular viewpoint on the event as either: a) PERFECTIVE that presents an event as completed, or b) IMPERFECTIVE that views an event as on-going. Later, Klein (1994) introduces a new time span dubbed as "**Topic** or **Assertion Time**" (the time about which something is claimed or asserted) that replaces the Reichenbach (1947)'s "point of reference". For Klein, TENSE serves to relate the topic/assertion time to the utterance time, and the classical notion of TENSE is therefore only obtained when the topic time is simultaneous to the event time. In addition, Klein (1994) views ASPECT as a relation between the TOPIC/ASSERTION-TIME and the EVENT-TIME. The tables below illustrate the types of relations expressed by TENSE and ASPECT (note that I will stick to represent the utternace-time as (UT), the eventuality-time as (EV-T), and the assertion-time as (ASSERT-T)).[20]

(101)

TENSE	Type of Relation
PAST	UT **after** ASSERT-T
PRESENT	UT **includes or within** ASSERT-T
FUTURE	UT **before** ASSERT-T

[20]I employ the term ASSERTION-TIME (ASSERT-T) following Klein (1994, 1995, 2009), Demirdache and Uribe-Etxebarria (2000), and Boneh (2005).

(102)

ASPECT	Type of Relation
PERFECTIVE	EV-T $\subseteq$ ASSERT-T
IMPERFECTIVE	ASSERT-T $\subseteq$ EV-T

It is also worthwhile noting that different proposals have been advocated towards refining the relations between the assert-time (TT) and the eventuality-time (EV-T), which all share the assumption that the eventuality-time (EV-T) can be divided into subparts or phases that make up a complex eventuality-time (EV-T) (Smith (1991), Kamp and Reyle (1993), Klein (1994), and Caudal (2005)). For Kamp and Reyle (1993, p.558), a complex event could be decomposed into three subparts: a) the preparatory phase (the period covered by the event that precedes the natural endpoint), b) the culmination point (the natural conclusion of the event), and c) the result-state (the state resulting from the event). Klein (1994) treats telic verbs with the stages of: SOURCE-STATE and TARGET-STATE (in addition to "pre-time" and "post-time"). Caudal (2005) suggests the following three phases: preparatory state, inner stage, and result stage. In regard of STATIVES, they are treated as a simple situation with only one single stretch.

Adopting Vendler (1967)'s aspectual verb classification (accomplishments, achievements, activities, and states), Kamp and Reyle (1993) point out that verbs differ in terms of which part(s) of their three proposed phases of an eventuality would be involved in that eventuality. Table (103) summarizes their main observations.

(103)

TYPE OF VERB	Phase(s) involved
ACCOMPLISHMENTS	Preparatory + Culmination
ACHIEVEMENTS	Culmination
ACTIVITIES	Preparatory
STATES	a single stretch (corresponding to: Preparatory **or** Result-state)

In addition to that, according to Kamp and Reyle (1993), and Klein (1994), languages have different aspectual paradigms on the basis of which phase of the eventuality is associated with viewpoint aspect.

Returning to Boneh (2010) who adopts the above observations of Kamp and Reyle (1993) , and Klein (1994), based on Syrian Arabic Boneh classifies verbs into: **dynamic** (accomplishments, achievements, and activities), **stative**, and **directional motion**. Whereas deverbal ACT.PTCPs of dynamic verbs yield an anteriority reading as in (104), those derived from statives give rise to an inchoative reading since such states are simultaneous to the utterance-time, as in (105), (all examples are taken from Boneh (2010, p. 24-25)).

(104) a. sami kaateb er-risaale
Sami write.ACT.PTCP.SG.M the-letter
Sami has written the letter.

b. sami mDayeeʕ nDaaraat-o
Sami lose.ACT.PTCP.SG.M glasses-3SG.M
Sami has lost his glasses.

(105) sami mʔaamen be-l-maxluuʔaat l-faDaaʔiye
Sami believe.ACT.PTCP.SG.M in-the-creatures the-out of space
Sami has come to believe in aliens (he is now in a state of believing in aliens).

With respect to **Directional-motion** verbs, Boneh (2010, p. 25) claims that they could yield either an imminent future reading as in (106), or an anteriority reading as in (107).

(106) sami naazel ʕa s-suuʔ
Sami go down.ACT.PTCP.SG.M to the-market
Sami is about to go down to the market.

(107) sami naazel ʕa s-suuʔ
Sami go down.ACT.PTCP.SG.M to the-market
Sami has gone down to the market.

Moreover, Boneh argues that the referent of the subject of such participles is in a state associated with an underlyingly preceding eventuality, hence her term "POST-STATE". Whereas Klein (1994, 1995) considers ASPECT as a relation between the ASSERTION-TIME and the EVENTUALITY-TIME, Boneh (2010) suggests that ASPECT of deverbal ACT.PTCPs should be viewed as a relation between the ASSERTION-TIME and the POST-STATE TIME. (108) illustrates her proposed relation.

(108) ASSERT-T $\subseteq$ POST-STATE T

For clarifying her proposal, Boneh (2010) makes a comparison between the perfective ASPECT and the ASPECT expressed by deverbal ACT.PTCPs for all types of verbs, as shown below in (109) (taken from (Boneh, 2010, p. 30-31)). Note that: ++++++ represents **preparatory phase and culmination point**, ====== represents **Post-State**, and [ ] represents **Assertion-Time**.

(109)

TYPE OF VERB	Perfective ASPECT	Participles ASPECT
ACCOMPLISHMENTS	[++++++=]=	++++++=[=====]=
ACHIEVEMENTS	[+=]=	+=[======]=
ACTIVITIES	[+++++]	++++++=[=====]=
STATIVES/POSITIONAL VERBS	[++++++]	=[=====]= or [=====]=

For Boneh, the crucial difference between the perfective viewpoint ASPECT and the aspectual properties of participles lies in where the culmination point (represented as +++++) is positioned with respect to the part included in the ASSERT-TIME. With the perfective ASPECT, accomplishments and achievements behave alike in the sense that the culmination point is included in the ASSERT-TIME. Activities pattern like accoplishment in that the preparatory phase is included in the ASSERT-TIME. However, the single stretch of a stative verb is seen as a state that held or to be held at some time.

To the contrary, ASPECT of participles indicates that the culmination point of dynamic verbs is not included in the ASSERT-TIME. An equally important characteristic is held to relate to the POST-STATE that always holds of the referent of the subject with all types of eventualities. It is also noticed that the ASSERT-TIME is included in the POST-STATE TIME, which means that what is asserted is just a portion of the POST-STATE. Regarding statives, they behave differently since they are not complex, and the whole single stretch is therefore assumed to be the POST-STATE itself. Furthermore, Boneh (2010) claims that the POST-STATE TIME could hold even after the EVENTUALITY-TIME has ended, as shown below in (110) in which although *Marconi* no longer exists, his POST-STATE of inventing the radio still holds.

(110) marconi mextareʔ r-radio
Marconi invent.ACT.PTCP.SG.M the-radio
[Roughly: Marconi is in a post-state of having invented the radio.] (Boneh, 2010, p. 32)

5.4.5 Mansouri (2016)

Mansouri (2016) recently argues that deverbal ACT.PTCPs in Arabic are *stativizing* constructions that take as an input dynamic eventualities and produce states. With respect to '*stativization*', Michaelis (2011, p. 1361) describes it as "a linguistic procedure through which a speaker creates a stative predication from one whose lexical verb or argument array, or both, requires a dynamic construal". A '*stativizing*' construction, as defined by Frajzyngier (1985, p. 62), is a construction "whose function, primary or secondary, is to change a non-stative verb to a 'stative' verb or a non-stative construction into a stative one". In plain terms, languages employ stativizing devices to construe stative predication/constructions from inherently dynamic or non-stative ones. In English, for example, de Swart (1998), Herweg (1991), Michaelis (2011), among others, point out that the *Progressive* and *Perfect* constructions are recruited as stativizing devices that are able to shift a dynamic predication to a stative one. For example, *progressive constructions* in English utilize an auxiliary head (*be* or *have*) which subcategorizes for a participle yielding a construction that denotes a state that holds during the utterance time at which a given eventuality goes on. Take (111) as a simple example.

(111) John is cleaning the room.

In (111), the participial complement 'cleaning' denotes the eventuality associated with 'clean' from which the state in which '*John*' is involved is derived, yielding the interpretation: 'John is in the state of cleaning the room'. This state selects a subinterval that precedes the natural endpoint or culmination of that eventuality.

Returning to Arabic, Mansouri (2016) points out that such participles function syntactically as verbs with two usages: the progressive usage as in (112)a, and the resultative one as in (112)b.

(112) a. al-ħujjaaj-u mutawajjihuuna ʔilaa Makka
the-pilgrims-NOM head towards.ACT.PTCP.NOM to Makka
The pilgrims are heading towards Makkah. (Mansouri, 2016, p. 71)

b. ʔanaa faaʔiz-un fii l-musaabaqat-i
I win.ACT.PTCP-NOM in the-race-GEN
I have won the race. (Mansouri, 2016, p. 73)

5.5 Aspectual Semantics of deverbal ACT.PTCPs in HA

Before I dwell on the semantics of deverbal ACT.PTCPs in HA, a few words should be said with respect to the use of the terms 'state', and 'stative'. The two traditional terms '*state*' and '*stative*' have been distinguished by Holisky (1978, p. 157) in such a way that while the former refers to 'a situation in the real world', the latter is a verb that denotes 'a real world state'. Moreover,'*stative*' is viewed as a semantic feature that can be described and analyzed by its properties, rather than componential analysis (Lakoff (1966), Vendler (1967), Holisky (1978), among others). Following Mansouri (2016), I argue that a deverbal ACT.PTCP is a stativizing construction whose subject is involved in a state associated or combined with an underlying eventuality. Specifically, it is the participle itself that predicates the eventuality, and that allows for providing two reduced aspectual readings, which are themselves dependent upon the Aktionsart class of that participle's corresponding verb. The two aspectual readings are: the PROGRESSIVE, which refers to an eventuality that is ongoing when viewed with respect to the sentence's reference time, while the other aspectual reading is the PERFECT, which denotes an eventuality that has culminated prior to the sentence reference time. Deverbal participles that yield progressive interpretations will be labelled as *progressive participles*, and those that induce perfect readings will be designated as *perfect participles*.

5.5.1 Progressive Participles

Certain Aktionsart classes of verbs select for the PROGRESSIVE reading of their associated participles. Such classes include: a) *motion* verbs, b) a particular set of *activity* verbs, and c) *stative* verbs. Participles derived from motion verbs in HA such as ones associated with the verbs like *raaħ* 'go', *ǧaa* 'come' and the like give rise to a PRESENT PROGRESSIVE reading, as in (113).

(113) a. ʔaħmad ǧaay
Ahmad come.ACT.PTCP.SG.M
Ahmad is coming.

b. ʔal-awlaad raayiħ-iin
DEF-boys leave.ACT.PTCP-PL.M
The boys are leaving.

Now, I turn to lexical aspect of *activities*. Activities are characterized by their lack of the culmination or endpoint of eventualities. Michaelis (2004) has drawn a distinction between two types of *activities*: *homogeneous* and *heterogeneous*. According to her, homogeneous activities are "activities which have episodic construals, e.g., sleeping, sitting in a chair, and holding something in one's hand, these activities lack subevents; they are simply periods of stasis" (Michaelis, 2004, p. 10). Heterogeneous activities, on the other hand, are described as "activities which, like running and singing songs, have heterogeneous internal part-structure when parsed into sufficiently small sub-intervals" (Michaelis, 2004, p. 10).[21] With this background at hand, I claim that participles that are associated with verbs of the homogeneous activity set give rise to a PROGRESSIVE reading, just as the participles derived out of motion verbs do. The examples in (114) are illustrative of this.

[21] I should say that while Michaelis (2004)'s distinction between *homogeneous* and *heterogeneous* activities has been extended to the data of HA, I will leave testing more examples from this dialect and other Arabic varieties for future research.

(114) a. ʔal-bint naayim-ah
DEF-girl sleep.ACT.PTCP.SG-F
The girl is sleeping.

b. ʔaħmad maasik walad-uh
Ahmad hold.-ACT.PTCP.SG.M boy-his
Ahmad is holding his son.

Now, it has remained to comment on inherently *stative* verbs. It is widely assumed that stative verbs in English such as *have, own, love, hear, etc.* do not usually form the progressive V+ing. Vlach (1981, p. 274) argues that since the progressive construction already has a stativizing effect on inherently non-stative verbs, their occurrence with stative verbs is redundant. It is also agreed that the PROGRESSIVE reading associated with stative verbs, as in *I'm living here*, is understood to express a more specific reading, whereby it ends up denoting reference to the temporality of the state itself, i.e. temporary state. In this regard, Frajzyngier (1985, p. 67) states that the progressive aspect with stative verbs in English has at least two functions. One is that the progressive serves as a stativizing device. The other is to restrict the time of the state to the utterance time.

In HA, verbs of stative lexical aspect can also form deverbal ACT.PTCPs as shown in (115)

(115) a. ʔana miṣaddig-ak
I believe.ACT.PTCP.SG.M-2SG.M.OBJ
Literally: I am believing you (I believe you).

b. ʕali ʕaayiš hina
Ali live.ACT.PTCP.SG.M here
Ali is living here (or Ali lives here).

The two stative participles above induce a PRESENT PROGRESSIVE interpretation, and can additionally be replaced with their corresponding verbs in the imperfective aspect, just as I have meant to demonstrate through the varied English

translations provided. What this means is that the above observations discussed previously for English stative verbs, when their associated participle forms express a PROGRESSIVE reading, are extendable to HA too. In other words, when stative verbs in Arabic associate with deverbal ACT.PTCPs, they denote temporary states. In the next section, telic predicates (*accomplishments* and *achievements*) and *heterogenous* activities like ɤ*anna* 'sing' that yield perfect readings will be scrutinized.

5.5.2 Perfect Participles

Participles that express a PERFECT reading include those that associate with verbs of *accomplishment* and *achievement*. Consider the data below.

(116) a. Mona misawwiy-ah l-ʔakl [Accomplishment]
Mona make.ACT.PTCP.SG-F DEF-food
Mona (has) made the food.

b. ʔana milaaħiẓ inna ʕali ğaa [Achievement]
I notice.ACT.PTCP.SG.M COMP Ali come.PFV.3SG.M
I (have) noticed that Ali came.

The stativizing participial construction in (116)/a denotes a state associated with the underlying eventuality of 'make' that is completed prior to the utterance time.

When it comes to the *heterogeneous* set of activity verbs, they form participial constructions that entail states with a PERFECT reading, as illustrated in (117).

(117) xalid miɤanni θalaaθ aɤaani
Khalid sing.ACT.PTCP.SG.M three songs
Khalid sang (has sung) three songs.

Table (118) summarizes the above observations on the various Aktionsart classes of verbs and aspectual interpretations of their corresponding deverbal ACT.PTCPs.

(118)

Verb Type of Participles	Aspectual Reading
Motion Verbs	Progressive
Homogeneous Activities	Progressive
Stative Verbs	Progressive
Accomplishments	Perfect
Achievements	Perfect
Heterogeneous Activities	Perfect

In sum, we have observed how stativizing deverbal ACT.PTCPs in HA are able to associate with two readings, i.e. PROGRESSIVE and PERFECT, and in the absence of time adverbials that can help better ground the expressed reading, the interpretation expressed by a given participle is very much associated with its corresponding verb's lexical aspect. Despite this observation, it is worth noting that time adverbials do interact quite closely with deverbal ACT.PTCPs, and each of the two readings denoted by the participles select for certain time adverbs that match, or are compatible with the intended reading as yielded by the participial construction involved.

5.5.3 Deverbal ACT.PTCPs and Time Adverbs

I pointed out earlier that deverbal ACT.PTCPs are non-finite forms of verbs; i.e. they lack TENSE specification, but they encode ASPECT. As we will see later, such participles appear in three different syntactic contexts: as primary predicates in non-verbal/verbless predication, as adjunctival phrases, and as complementary phrases within a matrix clause. In all syntactic contexts, such participles do not encode inherent tense reference, and the relation between the participle and its sentence reference time is an *aspectual* one. Given that TENSE in Arabic is provided by the matrix verb (see § 2.2.2), a deverbal ACT.PTCPs' tense reference is determined either

by the eventuality's time reference as encoded by the matrix verb when such participles are adjunctival or complementary, or by the default present-tense reference encoded by the null-copula in non-verbal predication (i.e. the utterance time of the clause). It still remains to be explained how adverbial modification interacts with the stativizing function of participles. I assume that the participles, whether they express PROGRESSIVE or PERFECT readings, are able to associate with certain time adverbials, so long as temporal compatibility is maintained. Perfect participles only license past-time adverbials, since they express a situation that is completed prior to the default PRESENT TENSE/utterance time of the sentence. Progressive participles are able to accommodate two types of time-adverbials: a) present-time adverbials that coincide with the utterance time; i.e. the PRESENT TENSE reference of the non-verbal predication at which the underlying eventuality combined with the state is taking place, or b) future-time adverbs associated with the state whose underlying eventuality is meant to be interpreted as happening/taking place in the near future. To inject some concreteness to the above description, consider the examples in (119).

(119) a. ʔaħmad ğaay
Ahmad come.ACT.PTCP.SG.M
Ahmad is coming.

b. ʔaħmad ğaay l-ħiin
Ahmad come.ACT.PTCP.SG.M DEF-now
Ahmad is coming now.

c. ʔaħmad ğaay bukra
Ahmad come.ACT.PTCP.SG.M tomorrow
Ahmad is coming tomorrow.

d. *ʔaħmad ğaay ʔams
Ahmad come.ACT.PTCP.SG.M yesterday
Ahmad is coming yesterday

As observed above, participles of motion verbs give rise to a PRESENT PROGRESSIVE reading even in absence of present-time adverbs as in (119) item (a). In (119) item (b), the present-time adverb *l-ħiin* 'now' is accommodated, and it coincides with the default present-tense reference of non-verbal predication encoded by the null-copula, and in such case the two constructions are equivalent. The same construction welcomes modification with the use of the future-time adverbial *bukra* 'tomorrow' in item (c) above, with the understanding that the subject *Ahmad* has arranged or intended to come tomorrow. An attempt to modify the deverbal progressive-expressing participle with a past-time adverb results in ungrammaticality as item (d) shows. Moreover, it should be noted that modifying such deverbal participles either with present or future time adverbials is restricted to participles of motion verbs, since the other two Aktionsart classes of stative verbs and homogeneous activities license only present-tense time adverbials, and rule out any sentence with future or past time adverbs.

(120) a. muna miṣṣaddigat-ni (l-ħiin
Mona believe.ACT.PTCP.SG.F-1SG.OBJ (DEF-now
/*bukra /*ʔams) [**Stative verb**]
/*tomorrow/*yesterday)
Mona believes me (now /*tomorrow /*yesterday).

b. ʔal-awlaad ğaalis-iin fii s-sayyaara (l-ħiin /*bukra
DEF-boys sit.ACT.PTCP-PL.M in DEF-car (DEF-now /*tomorrow
/*ʔams) [**Homogeneous activity**]
/*yesterday)
The boys are sitting in the car (now /*tomorrow /*yesterday).

In the case of stativizing deverbal PERFECT-expressing ACT.PTCPs, past-time adverbial modification is allowed, while on the other hand, present-time adverbials are prohibited. The data in (121) are illustrative of this contrast.

(121) a. ʔal-bint mixalliṣ-a diraasat-ha (gabl sanatayn
DEF-girl finish.ACT.PTCP.SG-F study-her (before two years
/*l-yawm /*as-sana l-ğaay-ah)
/*DEF-today/*DEF-year DEF-coming-F) [**Accomplishment**]
The girl finished her study (two years ago/ *today /*next year).

The girl is in the state of having finished her study (two years ago/*today/*next year).

b. ʔana (ʔams /*bukra
I (yesterday/*tomorrow/*DEF-now) notice.ACT.PTCP.SG.M
/*l-ħiin) milaaħiẓ al-axṭaa
DEF-mistakes [**Achievement**]
I (yesterday / *tomorrow / *now) noticed the mistakes.

I am in the state of having noticed the mistakes yesterday.

c. xalid miʏanni θalaaθ aʏaani (l-baariħ
Khalid sing.ACT.PTCP.SG.M three songs (DEF-last night
/*l-ħiin /*bukra)
/*DEF-now/*tomorrow) [**Heterogeneuous activity**]
Khalid sang (has sung) three songs (last night /*now /*tomorrow).

It follows from (121) that a PERFECT-expressing participle is unable to accommodate present-time adverbial modification. However, take the example in (122).

(122) ʔali **l-ħiin** mixalliṣ diraasat-uh **min xams sanawaat**
Ali DEF-now finish.ACT.PTCP.SG.M study-his from five years
Ali now is in the state of having finished his study five years ago.

The above sentence does not contradict the behavior considered above, concerning the temporal and aspectual readings of predicated deverbal ACT.PTCPs in non-verbal constructions. The sentence in (122) specifically exemplifies a non-verbal predication that takes as its primary predicate the deverbal ACT.PTCP *mixalliṣ* 'finished', which is what in turn yields the observed PERFECT reading. There are, however, two different time adverbials involved: a) the present-time adverb *l-ħiin* 'now', and b) the past-time adverb *min xams sanawaat* 'five years ago'. Whereas the

former is licensed by the PRESENT TENSE reference encoded by the null copula of non-verbal predication, the latter is allowed by the accomplishment aspectual class of the underlying eventuality that combines with the stativizing deverbal ACT.PTCP. Table (123) summarizes the above observations on the interaction between deverbal ACT.PTCPs in HA and time adverbials they license.

(123)

ACT.PTCP lexical type/ Aspectual Reading	Type of Time Adverbials
Motion Verbs / Progressive	Present OR Future
Homogeneous Activities / Progressive	Present
Stative Verbs / Progressive	Present
Accomplishments / Perfect	Past
Achievements / Perfect	Past
Heterogeneous Activities / Perfect	Past

In the following section, I present some analyses on participles from the LFG literature to show how participles are treated in the LFG syntactic framework. § 5.6 presents the two analyses introduced by Haug and Nikitina (2012) on Latin participles, and Lowe (2015) on participles in Rigvedic Sanskrit, on which I build my analysis on deverbal ACT.PTCPs in HA.

5.6 Participles in LFG

5.6.1 Participles in Latin (Haug and Nikitina (2012))

According to Haug and Nikitina (2012), participles in Latin are non-finite forms that display the nominal features of CASE, GENDER, and NUMBER. On the other hand, however, such participles carry the verbal features of VOICE and TENSE. The TENSE information expressed is relative, rather than, absolute tense. In addition, participles in Latin are referred to following their corresponding finite verbs, as shown in table (124) (taken from Haug and Nikitina (2012)), in which for example the verb *amare* 'love' associates with three participle forms: the PERFECT, PRESENT, and FUTURE participle forms.

(124)

NAME	FORM	REL-TENSE	VOICE
PERFECT Participle	*amatus*	anterior	passive
PRESENT Participle	*amans*	simultaneous	active
FUTURE Participle	*amaturus*	posterior	active

Haug and Nikitina (2012) also point out that a participle in Latin has a wide range of uses. As illustrated in the data set below, the participle form can appear as a free predicative (125), a subject predicative (126), an object predicative (127), as an attributive (128), a nominalized (129), an absolute (130), as part of a periphrastic structure, in the context of an auxiliary (131), and in the "dominant" use (132).[22]

(125) Rosa florens pulchra est.
rose:NOM bloom:PTCP.PRES.NOM beautiful.NOM is
A rose is beautiful when it blooms.

[22]Haug and Nikitina (2012) state that the future participle in Latin only shows up in periphrastic forms. In addition, both uses of the attributive and the free predicative are alike, and the choice between the two depends on the context in which they appear.

(126) Rosa florens est.
rose:NOM bloom:PTCP.PRES.NOM is
The rose is blooming.

(127) Vidi puerum currentem.
see:PERF.1S boy:ACC run:PTCP.PRES.ACC
I saw the boy running.

(128) Rosa florens pulchra est.
rose:NOM bloom:PTCP.PRES.NOM beautiful.NOM is
The blooming rose is beautiful.

(129) Medici leviter aegrotantes leniter curant.
doctors:NOM lightly be.ill:PTCP.PRES.ACC mildly cure:PRES.3P
Doctors cure the lightly ill mildly.

(130) His pugnantibus illum in equum quidam ex
them:ABL fight:PTCP.PRES.ABL him:ACC in horse:ACC someone:NOM from
suis intulit.
his own:ABL mount:PERF.3SF
While they were fighting, one from his [attendants] mounted him on a horse.

(131) a. Te sum visurus.
you:ACC be:PRES.1S see:PTCP.FUT.NOM
I will see you. [FUTURE]

b. Amatus est.
love:PTCP.PERF.NOM be:PRES.3S
He was/has been loved. [PRESENT PERFECT]

(132) Occisus dictator Caesar aliis pessimum
kill:PTCP.PERF.PASS.NOM dictator:NOM Caesar:NOM others:DAT worst:NOM
aliis pulcherrimum facinus videretur.
other:DAT most.beautiful:NOM deed:NOM perceive:IMPF.SUBJ.PASS.3S
The slaying of Dictator Caesar seemed to some the worst, and to others, the most glorious deed.

Haug and Nikitina (2012) argue that the internal syntax of the participle phrase in Latin is constant, regardless of the function it takes, or expresses. The subject of the participle always co-refers with an argument present in the f-structure level of the sentence, as is clear from the subject participle function in (126) and the object participle function in (127). Moreover, the participle always shows agreement with its subject in CASE, NUMBER, and GENDER. In an attempt to account for this 'configurational' relationship between the participle and its subject, and to retain a unified analysis of participial agreement features across their different uses in Latin, Haug and Nikitina (2012) propose a constant *functional* control relation that is lexically-expressed, and required by the participle, between itself and the participle's f-structural nominal subject. Let us consider how this works in the context of a 'subject predicative' function, as shown above in (126), and repeated in (133) for convenience.

(133) Rosa florens est.
rose:NOM bloom:PTCP.PRES.NOM is
The rose is blooming

The f-structure Haug and Nikitina (2012) assign to (133), is that in (134), which involves a biclausal analysis for this copular structure, where the copula *est* 'be' heads the matrix f-structure, and is also associated with the following functional control equation:

'be' (↑ SUBJ) = (↑ XCOMP SUBJ)

(134)
$$\begin{bmatrix} \text{PRED} & \text{'BE} < \text{SUBJ,XCOMP} > \text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'ROSE'} \\ \text{CASE} & \text{NOM} \\ \text{GEN} & \text{FEM} \\ \text{NUM} & \text{SG} \end{bmatrix} [1] \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{'BLOOM} < \text{SUBJ} > \text{'} \\ \text{SUBJ} & [1] \end{bmatrix} \end{bmatrix}$$

The authors also point out that the above functional control analysis can be extended to the object predicative use, but in which case, a different control equation is required. So, in the sentence: *puella vidit puerum currentem* 'The girl saw the boy running', the verb 'see' associates with the equation: (↑ OBJ) = (↑ XCOMP SUBJ). For such structures, Haug and Nikitina (2012) assign the following f-structure in (135):

(135)
$$\begin{bmatrix} \text{PRED} & \text{'SEE} < \text{SUBJ , OBJ , XCOMP} > \text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'GIRL'} \\ \text{CASE} & \text{NOM} \\ \text{GEN} & \text{FEM} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'BOY'} \\ \text{CASE} & \text{ACC} \\ \text{GEN} & \text{MASC} \\ \text{NUM} & \text{SG} \end{bmatrix} [1] \\ \text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{'RUN} < \text{SUBJ} > \text{'} \\ \text{SUBJ} & [1] \end{bmatrix} \end{bmatrix}$$

For the attributive use of the participle in (128), repeated below in (136), Haug and Nikitina (2012) argue that the participle in these contexts should be assigned an f-structure which takes on an open adjunct (XADJ) function, whose subject is also functionally controlled by the noun the participle modifies, which is *rosa* 'rose', in (136). According to the researchers, proposing an adnominal adjunct function of this sort, with a control equation:
(↓SUBJ) = ↑, ends up yielding a cyclical f-structure.

(136) rosa florens pulchra est
rose:NOM bloom:PTCP.PRES.NOM beautiful.NOM is

The blooming rose is beautiful.

$$\left[\begin{array}{ll} \text{PRED} & \text{`rose'} \\ \text{CASE} & \text{NOM} \\ \text{GEN} & \text{FEM} \\ \text{NUM} & \text{SG} \\ \text{XADJ} & \left\{\left[\begin{array}{ll} \text{PRED} & \text{`BLOOM <SUBJ>'} \\ \text{SUBJ} & [1] \end{array}\right]\right\} \end{array}\right] [1]$$

It remains to explain how Haug and Nikitina (2012) account for the agreement between the participle and its subject. They utilize the standard approach to agreement in LFG, and argue that the agreement can be treated through two means: a) via feature-sharing, in which the agreement features of both the controller and the target are represented in their f-structures, or b) via the co-specification view, in which both the controller and the target specify the values of only the controller f-structure set of features, and then make the target contribute features to that set.

5.6.2 Participles in Rigvedic Sanskrit (Lowe (2015))

Based on Classical Sanskrit, Lowe (2015) argues that participles retain a lot of properties the characterize the tense system of finite verbs. Since participles do not carry the verbal feature of TENSE, Lowe points out that participles in Sanskrit should be treated as non-finite inflected forms of verbs that exhibit adjectival agreement properties. In addition, beyond the differences of TENSE marking, a notable difference between a finite verb and a participle resides in the fact that while the former marks the PERSON value of its subject, but not its GENDER value, the participle marks GENDER, but not PERSON. NUMBER, on the other hand, can be specified by both categories. In general, participle clauses in Sanskrit are also able to serve as secondary predications within the scope of the main predication. Lowe (2015) states that participles in Sanskrit exhibit a wide range of functions within their clause. These can be 'adnominal' participles, 'converbal' participles, 'absolute' participles, and 'complementary' participles. In what follows I will discuss the two most common uses of participles in Sanskrit: their adnominal and converbal uses, and how

Lowe (2015) analyzes them in LFG.

5.6.2.1 Adnominal Participles

In this use, participles function as modifiers to nouns, and agree with their modified nouns in GENDER, NUMBER, and CASE. This is, of course, the most common use of 'attributive' adjectives crosslinguistically. Let us consider the following example in (137).

(137) yásminn índraḥ ... / óko dadhé
which.L.NT Indra ... / home.A established
brahmaṇyántaś=ca náraḥ
speak_sacred_formulae.PRS.PTC.ACT.PL.M=and men
In which (place) Indra ... / established his home, and (likewise did) men *who speak sacred formulae.* (Lowe, 2015, p. 87)

In the above example, Lowe (2015) states that the adnominal participle *brahmanyantas* 'speak sacred formulae' modifies the noun *narah* 'men' yielding the interpretation that: *not all men, but only the men who speak the sacred formulae.* Given that, Lowe (2015) treats the function of such participles as adjuncts within the f-structure headed by the nouns being modified. Moreover, he argues that they should be analyzed as reduced relative clauses, as illustrated by the fact that he introduces the attribute REL-TOPIC, as shown in (138).

(138)
$$\begin{bmatrix} \text{PRED} & \text{'men'} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'SPEAK\_SACRED\_FORMULAE} < \text{SUBJ} > \text{'} \\ \text{VFORM} & \text{PARTICIPLE} \\ \text{REL-TOPIC} & \left[\text{PRED} \quad \text{'PRO'} \right][1] \\ \text{SUBJ} & [1] \end{bmatrix} \right\} \end{bmatrix}$$

By virtue of it being an adjunct, the adnominal participle in Sanskrit is optional, hence it appears as a member of the ADJ set in the f-structure. Specifically, Lowe (2015) argues that an adnominal participle should be analyzed as a closed adjunct

(ADJ), i.e. an ADJ, and not an XADJ, and whose subject is then functionally controlled by the null pronoun showing up as the value of the REL-TOPIC attribute. This null pronominal element, which is taken to be equivalent to an explicit relative pronoun in relative clauses, functions as the participle's subject. Since the participle always agrees with its subject, it also adopts the same agreement features of the noun it modifies.

5.6.2.2 Converbal Participles

The other major use of participles in Sanskrit is the 'converbal' use. Converbal participles are indistinguishable from adnominal participles, with respect to their morphology, and agreement. However, unlike adnominal participles, which make a predication at the nominal level, converbal participles predicate of something that modifies either the clause, or the main predicate of the clause. To clarify this behaviour, take the following example.

(139) víṣūco áśvān **yuyujāná** īyata/ ékaḥ
separated.A.PL horses.A **yoke.**PF.PTC.MED.N.SG.M speeds alone
Having yoked the separated horses, he speeds (off) / alone. (Lowe, 2015, p. 94)

It is clear from the above example that there are two sequential events: the eventuality of 'yoking the separated horses', which modifies the subject of the clause at the clausal level, rather than providing a noun phrase modification, and the eventuality of 'speeding off'. As noticed, the eventuality expressed by the perfect partciple *yuyujaná* 'yoke' takes place before the following eventuality denoted by the main verb *yata* 'speed'. It follows that the participle is viewed as a temporal adjunct at a sentence/clause level that interacts with the main predicate/verb of the clause to produce a combined predication for the entire clause. However, Lowe (2015) points out that a 'converbal' participle with a PRESENT-TENSE reference overlaps with the

reference expressed by the main predication to modify the eventuality denoted by that main/verb predication. It also provides modification at the clausal-level, and for this reason, it is viewed as an event modifier serving to modify the whole clausal meaning. The sentence in (140) is an example of this.

(140) áthód asthāt svayám átkaṃ **vásānaḥ**
and=up stood own garrment.A **wear.**STV.PTC.N.SG.M
And he has stood up, wearing his own garment. (Lowe, 2015, p. 95)

The f-structure in (141) is the one Lowe (2015) associates with the example in (139).

(141)
$$\begin{bmatrix} \text{PRED} & \text{'SPEED<SUBJ>'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'PRO'} \\ \text{PERS} & 3 \\ \text{CASE} & \text{NOM} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{MASC} \end{bmatrix} [1] \\ \text{XADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'YOKE < SUBJ , OBJ>'} \\ \text{TENSE} & \text{PERFECT} \\ \text{VFORM} & \text{PARTICIPLE} \\ \text{CASE} & \text{NOM} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{MASC} \\ \text{SUBJ} & [1] \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'HORSES'} \\ \text{ADJ} & \{ [\text{PRED} \quad \text{'SEPARATED'}] \} \end{bmatrix} \end{bmatrix} \right\} \\ \text{ADJ} & \{ [\text{PRED} \quad \text{'ALONE'}] \} \end{bmatrix}$$

As illustrated through the above f-structure, Lowe (2015) argues that a converbal participial clause serves as a modifier function, and should be associated with the governable grammatical function of XADJ, whose subject is functionally controlled by the subject of the matrix verb. That is, the subject of the participial phrase is constrained to display a relation/dependency with the subject of the matrix verb, which consequently results in agreement with the subject GF in CASE, NUMBER and GENDER.

5.7 The Syntactic Employment of Deverbal ACT.PTCPs

Deverbal ACT.PTCPs in HA can be found occurring in different syntactic contexts. They can function as the main clausal predicate, they can be adjuncts within the matrix clause, or clausal complements of the matrix predicate. It should be recalled that I treat such participles as non-finite verb forms that lack TENSE feature, though they encode ASPECT as clarified earlier. I also argued before that deverbal ACT.PTCPs have internal structure of verbs manifesting regular VP constituents (selecting an object, adverbial modification). In addition, ASPECT is expressed. This behavior suffices to argue that deverbal ACT.PTCPs should be treated as verbs, and their participial phrases are therefore VPs headed by Vs. However, it is worthwhile saying that these participles differ from regular VPs in some respects. First, they are not able to express tense, thus they are treated as non-finite forms of verbs. Second, they do not mark PERSON values, and in this sense they resemble positive imperative VPs. Such peculiar characteristics of deverbal ACT.PTCPs necessitate distinguishing their proposed VPs from regular VPs headed by non-participial forms. To do so, I will follow Kuhn (1999), Frank and Zaenen (2002), Falk (2003), Lowe (2016) and others in representing this special type of VPs as a complex c-structure category. I will therefore utilize the abbreviations in (142) in the c-structure and in phrase-structure rules for representing participial Vs and VPs.[23]

(142) a. $V_{ptc} \equiv$ V
($\downarrow$VFORM) = PARTICIPLE

b. $VP_{ptc} \equiv$ VP
($\downarrow$VFORM) = PARTICIPLE

I utilize the abbreviation V_{ptc} that stands for any verb in its participial form.

[23] An equivalent representation proposed by Kuhn (1999), Frank and Zaenen (2002), Falk (2003) is VP[$_{part}$]. Lowe (2015) prefers to employ Ptc and PtcP for verbal participles and verbal participial phrases respectively.

The V_{ptc} plays a crucial role in the grammar of Arabic, such that this verb is not able to occupy the **I** position as regular Vs do, since it can not provide the tense specification. This is why a V_{ptc} has to be distinguished from regular Vs. When it comes to the subcategorization framework and type of modification, both V_{ptc} and V behave alike in selecting for argument structure, in being able to be modified adverbially, and in encoding ASPECT values.

Deverbal ACT.PTCPs that serve as primary predication in their clause will be referred to as '*predicative*' participles, while those participles that play the role of adjuncts will be referred to as '*adjunctive*' participles. Participles with a complementary function will be given the label '*complementary*' participles. With respect to morphology, deverbal ACT.PTCPs of various uses are derived from their related verbs following the same morphological rules discussed earlier, so the difference in semantic interpretations has no impact on how a participle is formed. Moreover, all participles maintain agreement in NUMBER and GENDER with their subjects.

5.7.1 Predicative Deverbal ACT.PTCPs

The first common use of deverbal ACT.PTCPs in Arabic is the '*predicative*' use in which they function as primary predication either with a null copula as in the construction of non-verbal predication, or with an overt/explicit copula. Some concrete examples of this use are provided in (143), and it is clear from the English translation how it is in fact the absence or presence of the copula that determines the sentence's TENSE value.

(143) a. ʔaħmad ğaay l-ħiin
Ahmad come.ACT.PTCP.SG.M DEF-now

Ahmad is coming now.

Ahmad is in the state of coming now.

b. ʔaħmad kaan ğaay ʔams
Ahmad be.PFV.3SG.M come.ACT.PTCP.SG.M yesterday

Ahmad was coming yesterday.

Ahmad was in the state of coming yesterday. [PROGRESSIVE]

(144) a. ʔana mikallim muna ʔams
I talk.ACT.PTCP.SG.M Mona yesterday

I talked to Mona yesterday.

I am in the state of having talked to Mona yesterday.

b. ʔana kin-t mikallim muna gabl ti-ği
I be.PFV-1SG talk.ACT.PTCP.SG.M Mona before 2-come.IMPFV.SG.M

I had talked to Mona before you came.

I was in the state of having talked to Mona before you came. [PERFECT]

As discussed earlier, deverbal ACT.PTCPs are stativizing constructions with either a PROGRESSIVE reading, as in (143), or a PERFECT reading as in (144). I have also argued in § 3.1.1 that non-verbal predication in Arabic can utilize the *single-tier* analysis regardless of whether the copula is present or not, with the understanding that the copula is responsible only for encoding TENSE, while the predicated NPs, APs and PPs contribute the main clausal predication. The same assumption can be extended to predicative deverbal ACT.PTCPs when these contribute the primary predication of the structure. On this view, the copula, whether null or explicit, yields the TENSE value. With this in mind, the deverbal ACT.PTCP *mikallim* 'talk' in (144) appears with the representative lexical entry in (145).

(145) *mikallim* $\mathbf{V}_{ptc}$ $(\uparrow \text{PRED}) = \text{'talk <SUBJ, OBJ>'}$

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

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

$(\uparrow \text{ASPECT}) = \text{PERFECT}$

Moreover, the phrase structure rules I proposed for Arabic throughout this work (see § 3.1) are able to account for sentences in which predicative deverbal ACT.PTCPs function as main predicates in non-verbal predication. I present the two phrase structure rules in (146) for some discussion.

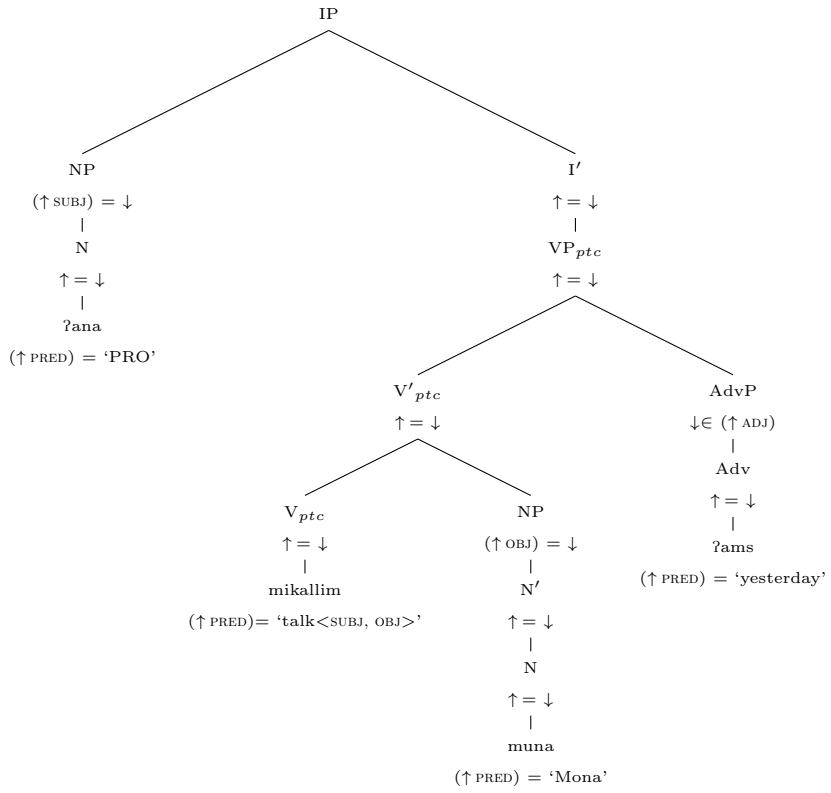
(146) a. IP $\longrightarrow$ NP ($\uparrow$ SUBJ) $=\downarrow$ I′ $\uparrow=\downarrow$

b. I′ $\longrightarrow$ { I $\uparrow=\downarrow$ | ϵ (TENSE)=PRES } VP_{ptc} $\uparrow=\downarrow$

The rule in (146)/b contains a disjunction to express the two possibilities of phrase structure expansions of **I′** . In one possibility, a copular verb that provides tense appears in **I** . In the other possibility, a copular verb is null and provides the default present reference-time. In both cases, predicative deverbal ACT.PTCPs contribute the main clausal predication. It is important to note that the symbol ϵ in the above rule does not license or introduce any empty node in the c-structure, as shown below (147), but that empty rule node expresses some functional constraints which are interpreted as: if the sentence has a null-copula, it is then in the present tense.

The rules assumed for Arabic and the above lexical entry for the participle *mikallim* 'talk' in example (144)/a admit the c-structure in (147), while its corresponding f-structure is shown in (148).

(147)



(148)
$$\begin{bmatrix} \text{PRED} & \text{'talk <SUBJ, OBJ>'} \\ \text{VFORM} & \text{PARTICIPLE} \\ \text{ASPECT} & \text{PERFECT} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{MASC} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'PRO'} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{MASC} \end{bmatrix} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'Mona'} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{FEM} \end{bmatrix} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'YESTERDAY'} \end{bmatrix} \right\} \\ \text{TENSE} & \text{PRESENT} \end{bmatrix}$$

As observed above, the participle *mikallim* 'talk' subcategorizes for a subject and an object, and expresses *perfect* aspect. The sentence is in the present tense that is associated with the null copula of non-verbal predication, and this tense specification is licensed by the rule shown in (146)/b. It is crucial to say that tense value is not provided by the deverbal ACT.PTCP *mikallim* 'talk' since it has no

inherent tense-reference; otherwise, this would have been information belonging to its lexical entry, which isn't, given its status as a non-finite form. So, the deverbal ACT.PTCPs' tense reference above is bound with the default present-tense reference encoded by the null-copula. The adverbial temporal adjunct *ʔams* 'yesterday' is licensed by the semantic ASPECTual interpretation of the participle, which yields the value PERFECT. Additionally, it is illustrated in the f-structure that the participle displays agreement with its subject in NUMBER and GENDER.

5.7.2 Adjunctive Deverbal ACT.PTCPs

The second common use of deverbal ACT.PTCPs in HA is the 'adjunctival' use, for which the label '*adjunctive*' participles is employed. The adjunctivality of deverbal participles is expressed in two distinct structural contexts. In the first context, the adjunctivality function manifests itself as modification at the nominal level, giving rise to the '*attributive*' use of participles. In the second context, the predication made by adjunctive participles occurs at the clausal level, where the participial phrase modifies the matrix predicate of the clause, or the clause itself. This results in what I term as the '*circumstantial*' function of participles. Other than their syntactic context, nothing changes in terms of morphological considerations, such that modifying participles always agree with their subjects in NUMBER and GENDER.

5.7.2.1 Attributive participles

Attributive participles are utilized to modify NPs. Consider the following example.

(149) bint misaafir-a waħda-ha sawwa-t ħaadiθ
girl travel.ACT.PTCP-SG.F alone-her make.PFV-3.SG.F accident
A girl traveling alone made an accident.

In (149), the deverbal participial phrase *misaafira waħdaha* 'traveling alone' modifies the head noun *bint* 'a girl' that functions as the SUBJECT of the matrix

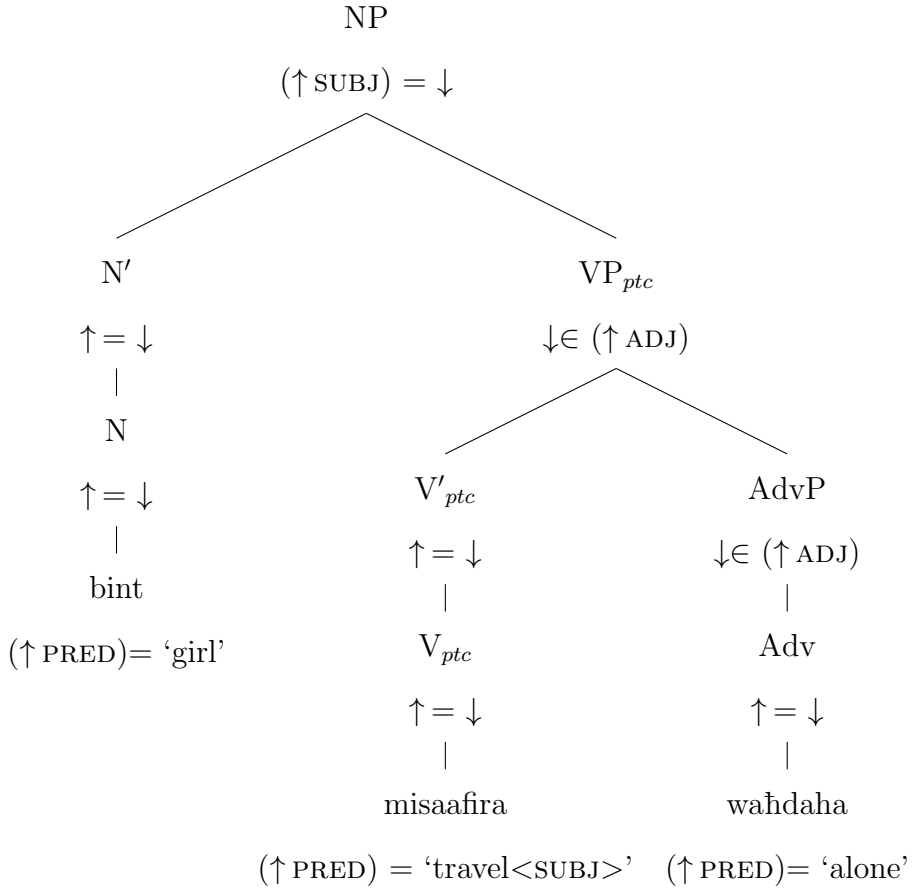
clause. Semantically, the participial phrase above restricts the possible referents of its modified NP to that one girl who was traveling alone, from a set of girls. The participle in this context, as expected, agrees with its modified noun in NUMBER and GENDER in the usual way attributive adjectives would, more generally. As a consequence, an attributive participle should be treated just as an attributive adjective. With this in mind, the proposed phrase-structure rule that licenses the above noun phrase *bint misaafira waħdaha* 'a girl traveling alone' is given in (150).

$$(150) \quad \text{NP} \rightarrow \begin{array}{c} \text{N} \\ \uparrow = \downarrow \end{array} \left(\begin{array}{c} VP_{ptc} \\ \downarrow \in (\uparrow \text{ADJ}) \\ (\downarrow \text{SUBJ}) = (\uparrow \text{GF}) \end{array} \right)$$

According to (150), both the head noun and any optional attributive participle phrase form one NP constituent. Such optional participial VPs appear as optional daughters of the NPs they modify. Given their modifier function, the participle's function is associated with an ADJ set, at f-structure. Moreover, the SUBJ function of the participle is understood to be functionally-controlled and identical with whatever GF the head of the NP which the participle modifies, associates with, and then agrees with it, as its controller, in NUMBER and GENDER. In this regard, I follow Haug and Nikitina (2012) who analyze attributively used participles as open adjuncts (XADJ) at f-structure, where given the nature of the open adjunct, the value of the SUBJ of the attributive participle is provided by an external argument rather than an internal one. The f-structure for the SUBJ NP in (149) is shown in (151), while the relevant c-structure is given in (152).

(151)
$$\begin{bmatrix} \text{PRED} & \text{`GIRL'} \\ \text{NUM} & \text{SG} \\ \text{GEN} & \text{FEM} \\ \text{XADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{`TRAVEL <SUBJ>'} \\ \text{VFORM} & \text{PARTICIPLE} \\ \text{ASPECT} & \text{PROGRESSIVE} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{FEM} \\ \text{SUBJ} & [1] \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{`ALONE'} \end{bmatrix} \right\} \end{bmatrix} \right\} \end{bmatrix} [1]$$

(152)



It should be noted that although modifying participial phrases behave as normal adnominal modifiers, they differ from regular adnominal modifiers in that when modified NPs are morphologically DEFINITE; i.e attached with the definite article *l-*, a relative pronoun has to intervene between that modified NP and its modifying participle. The data in (153) clarifies this crucial difference between normal adnominal modifiers and adnominal/attributive participles.

(153) a. walad mariiḍ daxal al-ɤurfa
boy.SG.M.INDEF sick.SG.M.INDEF enter.PFV.3SG.M DEF-room.
A sick boy entered the room.

b. ʔal-walad al-mariiḍ daxal al-ɤurfa
DEF-boy.SG.M.INDEF DEF-sick.SG.M.INDEF enter.PFV.3SG.M DEF-room
The sick boy entered the room.

c. bint misaafir-a waħda-ha sawwa-t ħaadiθ
girl travel.ACT.PTCP-SG.F alone-her make.PFV-3.SG.F accident
A girl traveling alone made an accident.

d. ʔal-bint illi misaafir-a waħda-ha sawwa-t
DEF-girl REL.PRON travel.ACT.PTCP-SG.F alone-her make.PFV-3.SG.F
ħaadiθ
accident
The girl (who's) traveling alone made an accident.

There is no mystery about the inability of modifying participles for accommodating the definite article since I argued earlier that deverbal ACT.PTCPs should be treated as verbs that always prohibit attaching with the definite article.

5.7.2.2 Circumstantial participles

The other adjunctival use of deverbal ACT.PTCPs targets the clausal level, rather than the nominal level as is the case with attributive participles discussed above. Let us consider the following two examples, where (154) is from MSA while (155) is from HA.

(154) daxala zayd-un [mumtaṭiy-an hiṣaan-an]
entered Zayd-NOM [riding-ACC horse-ACC]
Zayd entered riding a horse. MSA

(155) ʕali ğaa [raakib sayyaara ğadiid-a]
Ali come.PFV.3SG.M [ride.ACT.PTCP.SG.M car.SG.F new-SG.F]
Ali came driving/riding a new car. HA

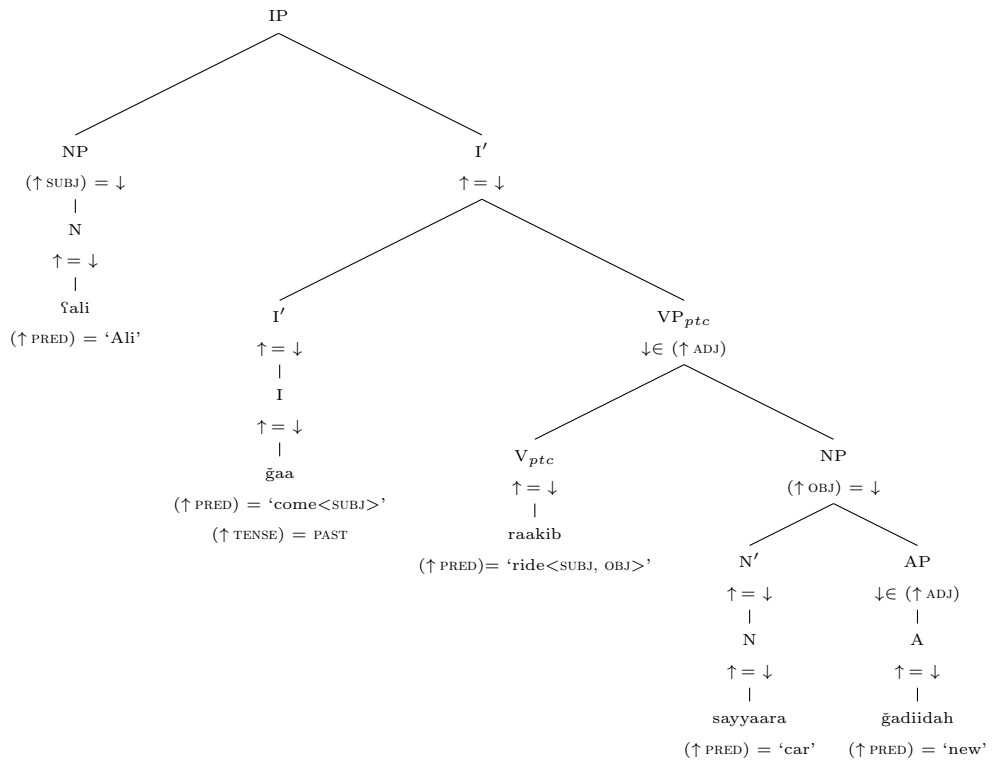
The two participial phrases in brackets exemplify the so-called *Circumstantial Adjunct* or *ħaal* construction in Arabic grammar. In each sentence, there are two distinct predications: the first is the primary predication of the matrix verb of the clause, and the second is the secondary predication provided by the participial phrase that serves as a circumstantial adjunct. The two predications interact to result in a combined predication for the entire clause in a way that the secondary predication of the participle adds additional information to the primary predication of the matrix clause. In doing so, the participial predication modifies the matrix predication and the whole clause. In these structures, the participle exhibits agreement in NUMBER and GENDER with the SUBJ of the matrix clause. I therefore claim that the participle selects for a SUBJ that is functionally-controlled by the SUBJ of the clausal f-structure. The phrase structure rule in (156) admits such a VP_{ptc} to appear as an optional daughter of the clausal IP node. At f-structure, such circumstantial participial phrases are also formalized as open clausal adjuncts XADJ, modifying the whole clause.

(156) $\text{IP} \rightarrow \ldots \left(\begin{array}{c} VP_{ptc} \\ \downarrow \in (\uparrow \text{ADJ}) \\ (\downarrow \text{SUBJ}) = (\uparrow \text{SUBJ}) \end{array} \right)$

The f-structure for (155) is given in (157), and its c-structure is shown in (158).

(157)
$$\begin{bmatrix} \text{PRED} & \text{`COME<SUBJ>'} \\ \text{TENSE} & \text{PAST} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`ALI'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{MASC} \end{bmatrix} [1] \\ \text{XADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{`RIDE} < \text{SUBJ , OBJ>'} \\ \text{ASPECT} & \text{PROGRESSIVE} \\ \text{VFORM} & \text{PARTICIPLE} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{MASC} \\ \text{SUBJ} & [1] \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`CAR'} \\ \text{ADJ} & \{ [\ \text{PRED} \quad \text{`NEW'}\ ] \} \end{bmatrix} \end{bmatrix} \right\} \end{bmatrix}$$

(158)



It still remains to explain how to identify the reference time of such adjunctive participles, whether functioning as attributive or circumstantial modifiers. As discussed earlier, deverbal ACT.PTCPs express only ASPECT, and they do not provide any inherent TENSE value. I have also pointed out that the temporal reference of such participles is determined by the eventuality time of its matrix verb, whether it

is null or explicit. Let us take the example in (155) again, repeated below as (159), to clarify this point.

(159) ʕali ğaa [raakib sayyaara ğadiid-a]
Ali come.PFV.3SG.M [ride.ACT.PTCP.SG.M car.SG.F new.SG.F]
Ali came driving/riding a new car.

As stated before, there are two different predications: the primary predication expressed by the matrix verb *ğaa* 'came', and the secondary predication expressed by the circumstantial participle *raakib* 'riding'. It is obvious that the above sentence has PAST TENSE reference, which is encoded on the matrix verb *ğaa* 'came', which is a perfective form. The eventuality of 'riding' expressed by the progressive participle overlaps with the eventuality of 'coming' expressed by the matrix verb *ğaa* 'came'. Having said that, the temporal reference of the participle forms is identified with that of their matrix clause. What this means, then, is that the circumstantial progressive participle *raakib* 'riding' that occurs with the PAST TENSE expressing matrix verb *ğaa* 'came' is understood as having taken place in the same reference time, relative to the utterance time. The same observation extends to attributive participles, and other uses of deverbal ACT.PTCPs.

5.7.3 Complementary Deverbal ACT.PTCPs

Besides 'predicative' and 'adjunctive' (attributive or circumstantial) participial functions, deverbal ACT.PTCPs can be utilized as clausal complements to matrix verbs. This context is a familiar linguistic phenomenon which in the linguistic literature is what Declerck (1982) refers to as "Participial Perception Verb Complements". The participle forms in the examples below are meant to illustrate the phenomenon.[24]

[24]The above phenomenon of perception verb complements (Participial and Infinitival) has received a lot of attention, and a number of various analyses within Transformational Grammar have been proposed (Rosenbaum (1967), Huddleston (1971), Akmajian (1977), Declerck (1981, 1982), to mention a few).

(160) a. John saw Mary swimming in the river.

b. Tom heard someone whistling a tune.

c. Mother watched the boys playing. Declerck (1982, p.1)

Returning to Arabic, matrix verbs of perception can subcategorize for deverbal ACT.PTCPs as their complements. The example in (161) is illustrative of this.

(161) ʔaħmad šaaf al-bint ğaay-ah
Ahmad see.PFV.3SG.M DEF-girl.SG.F come.ACT.PTCP-SG.F
Ahmad saw the girl coming.

In the above sentence, the verb 'see' subcategorizes for a SUBJ, OBJ and a participial phrase heading an XCOMP, whose SUBJ is functionally-controlled by the object of matrix clause, with which the XCOMP's SUBJ agrees in NUMBER and GENDER. The phrase structure rule in (162) licenses the f-structure and c-structure of such constructions, where deverbal ACT.PTCPs function as the PREDs of open complements to matrix perception verbs.

(162) IP $\rightarrow$ ... $\begin{pmatrix} VP_{ptc} \\ (\uparrow \text{XCOMP}) = \downarrow \\ (\uparrow \text{OBJ}) = (\downarrow \text{SUBJ}) \end{pmatrix}$

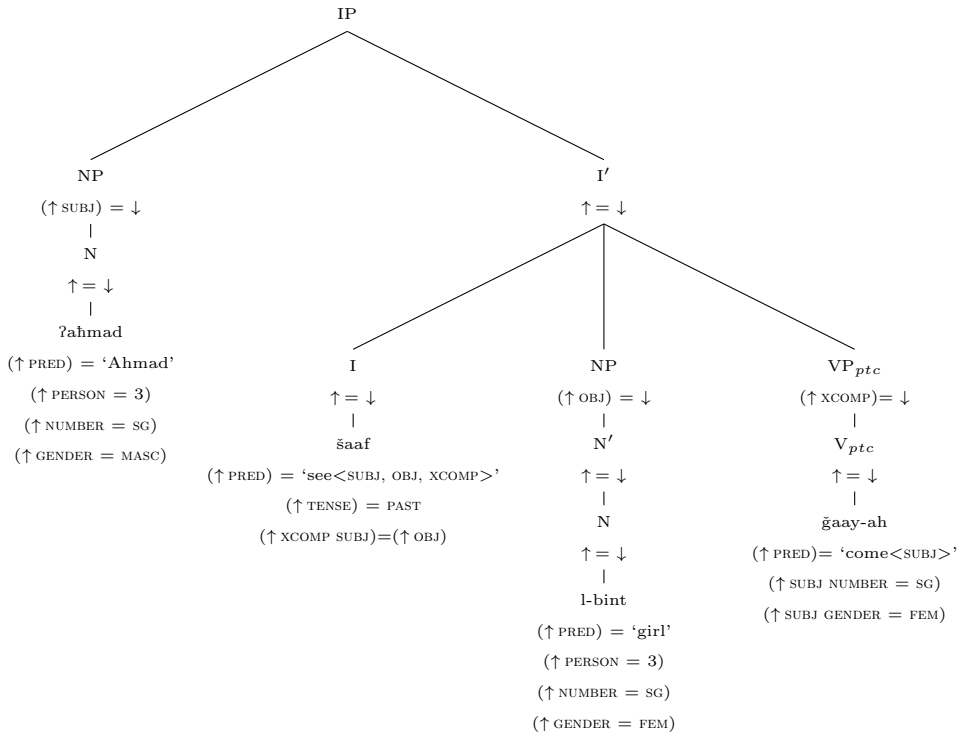
The annotation (↑ OBJ)= (↓SUBJ) in the above rule will account for the ungrammaticality of examples such as (163), in which the participle's SUBJ is functionally-controlled by the matrix subject, rather than the sole appropriate candidate, which is the matrix OBJECT.

(163) *ʔaħmad šaaf l-bint ğaay
Ahmad see.PFV.3SG.M DEF-girl.SG.F come.ACT.PTCP.SG.M
Intended: Ahmed saw the girl coming.

The f-structure and c-structure for the example in (161) are provided in (164) and (165) respectively.

(164)
$$\begin{bmatrix}
\text{PRED} & \text{`SEE<SUBJ, OBJ, XCOMP>'} \\
\text{TENSE} & \text{PAST} \\
\text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`AHMAD'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{MASC} \end{bmatrix} \\
\text{OBJ} & \begin{bmatrix} \text{PRED} & \text{`GIRL'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{FEM} \end{bmatrix} [1] \\
\text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{`COME} < \text{SUBJ} > \text{'} \\ \text{VFORM} & \text{PARTICIPLE} \\ \text{ASPECT} & \text{PROGRESSIVE} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{FEM} \\ \text{SUBJ} & [1] \end{bmatrix}
\end{bmatrix}$$

(165)



A further point should be said about the agreement between the participle's SUBJ and its controller, which in this construction is understood to be an OBJ

GF. The standard theory of agreement in LFG can straightforwardly capture the agreement between the participle and its subject either via feature-sharing, in which the agreement features of both the controller and the target are represented in their f-structures, or via co-specification, i.e. the approach in which both the controller and the target specify only the values of the set of features of the controller's f-structure, and then make the target contribute the respective features to that set.

5.8 Conclusion

In this chapter, I have provided a descriptive account of deverbal ACT.PTCPs by exploring their syntactic and semantic properties. I have presented different kinds of evidence for defining this type of participles as a verbal category. Based on Haspelmath (1995, p.58)'s universal generalization, I have argued that deverbal ACT.PTCPs are non-finite inflectional forms of verbs since they represent an example of categories that are derived by inflectional word-class-changing morphology. That is, the internal structure of verbal base of such participles is preserved. Moreover, although deverbal ACT.PTCPs are semantically stativizing constructions, they should be treated as syntactic VPs due to verbal properties they exhibit. In addition, aspectual properties of such participles and how they interact with various time adverbials have been explored and discussed in detail. With respect to functionality, I have distinguished three common uses of such participles: *predicative*, *adjunctive* (attributive and circumstantial), and *complementary* participles.

Chapter 6

Adjectival Active Participles in HA

This chapter is concerned with the third type of ACT.PTCPs in Arabic for which I employ the term '*adjectival*' ACT-PTCPs. Adjectival ACT.PTCPs in Arabic are pure adjectives that follow the same morphological processes of formation that we have witnessed with nominal and deverbal ACT.PTCPs to the degree that the three various types: nominal, deverbal and adjectival, are indistinguishable in terms of morphology and agreement, as stressed earlier. Before investigating morphological, syntactic and semantic properties of adjectival ACT.PTCPs in HA, a very brief overview on '*adjectives*' in the literature is provided.

6.1 Adjectives in the linguistic literature

Adjectives have received a fair amount of research in the literature. With respect to proposals of semantic categorizations for adjectives, Dixon (1982) discerns many categories of adjectives: physical property, dimension, age, color, value, speed, qualification, human propensity, similarity, and difficulty. Moreover, adjectives have

been taken as a distinct word class since they have certain criteria that set them apart from nouns and verbs. Huddleston (1984), Baker (2003), Dixon (2004), among others suggest four properties that are characteristic of adjectives: a) attributive usage b) predicative usage, iii) gradability or intensification, and iv) ability to form comparatives/superlatives. Let us apply the aforementioned features of adjectives to the English adjective *young*.

(1) a. The **young** boy came. [Attributive position]

b. That boy is **young**. [Predicative position]

c. He is **very** young. [Gradability]

d. She is **younger** than her brother. [Comparative]

e. She is **the youngest** lady to win the Oscar. [Superlative]

It should be pointed out that although the above-said tests are generally regarded as prototypical properties of adjectives, they need not be applicable in all languages.[1]

6.2 Adjectives in Arabic

As is the case with most nouns in Arabic, the majority of adjectives are derived from verbs to the degree that Wright (1974, p. 131) refers to such adjectives as '*verbal adjectives*'. Furthermore, adjectives in Arabic have different morphological

[1]Dixon (2004, p. 26) states that while adjectives, but not nouns, license comparatives in Russian, Finnish and Hungarian, both adjectives and nouns admit the comparative construction in Portuguese, Sanskrit and Dyirbal.

patterns. Table (2) shows the most common morphological patterns of adjectives in Arabic.

(2)

Base verb	CV template	The adjective word 'Meaning'	Morphological Pattern of Adjectives
baʕud	CaCuC	baʕiid 'far'	CaCiiC
ħasun	CaCuC	ħasan 'nice'	CaCaC
ʕaṭiš	CaCiC	ʕaṭšaan 'thirsty'	CaCCaan
wasix	CaCiC	wasix 'dirty'	CaCiC

A further common morphological pattern of adjectives is the one that takes the form of nominal and deverbal ACT.PTCPs, hence I prefer to give such adjectives the label *adjectival* ACT.PTCP*s* due to their form, and I regard them as the third main type of Arabic ACT-PTCPs. Section § 6.2.1 is devoted to investigate properties of adjectival ACT.PTCPs.

6.2.1 Adjectival ACT.PTCPs in HA

As mentioned before, the three types of ACT.PTCPs: nominal, deverbal, and adjectival behave in the same way with respect to morphology and agreement. Recall also that the form of an ACT.PTCP in Arabic is based on the consonantal-root type of the corresponding verb whether it is triliteral or augmented. Table (3) shows illustrative examples of adjectival ACT.PTCPs and their morphology.

(3)

consonantal root	Perfective form	Imperfective form	Adjectival ACT-PTCP MSA	Adjectival ACT.PTCP HA	CV template
√brd triliteral regular	barad	NA	baarid 'cold'	baarid	CaaCiC
√wsʕ triliteral assimilated	wasiʕ	NA	waasiʕ 'wide'	waasiʕ	CaaCiC
√ʔmkn augmented	ʔamkan	yu/yi-mkin	mu-mkin 'possible'	mi-mkin	mu/mi-CCiC
√tʔxxr augm-geminate	taʔaxxar	ya-tʔaxxar	mu-tʔaxxir 'late'	mi-tʔaxxir	mu/mi-CCaCCir

In regard of agreement, Arabic adjectives always show agreement with their subjects in gender and number. Concerning DEFINITENESS agreement, attributive adjectives in Arabic must agree in DEFINITENESS with their modified NPs.

6.2.1.1 The Semantics of Adjectival ACT.PTCPs

An adjective serves to assign a property to an NP with which it is associated. Among other semantic properties of adjectives is '*gradability*' that has long been assumed as a prototypical property of adjectives (Jackendoff (1977), among others), and that is utilized here to distinguish adjectival ACT.PTCPs from the other two ACT.PTCPs' types: nominal and deverbal. Take the examples below.

(4) a. ʔal-bayt-u waasiʕ-un ǧiddan (MSA)
DEF-house-NOM spacious-NOM very

b. ʔal-bayt waasiʕ marrah (HA)
DEF-house.SG.M spacious.SG.M very

The house is very spacious.

As seen above, the degree expressions *ǧiddan* in MSA and its equivalent in HA *marrah* 'very' can combine with the adjectival ACT.PTCP *waasiʕ* 'spacious', while such degree modifiers are prohibited to combine with nominal and deverbal ACT.PTCPs, as shown in (5).

(5) a. *Zayd-un muʕallim-un ǧiddan (MSA)
Zayd-NOM teacher.SG.M-NOM very
*Zayd is a very teacher.

b. *ʔaħmad midarris marrah (HA)
Ahmad teacher.SG.M very
*Ahmad is a very teacher.

c. *Zayd-un qaadim-un ǧiddan (MSA)
Zayd-NOM coming.SG.M-NOM very
*Zayd is very coming.

d. *ʔaħmad ǧaay marrah (HA)
Ahmad coming.SG.M very
*Ahmad is very coming.

In addition to degree modifiers, gradability of adjectives in Arabic has its reflections on comparative and superlative morphology of adjectives in such a way that gradable adjectives can form comparative/superlative constructions. This well-known correlation between gradable adjectives and comparative/superlative morphology chimes in with what is found in Arabic, as HA data below illustrates.

(6) a. ʔaṭ-ṭaayif baarid marrah fi š-šita
DEF-Taif cold.SG.M very in DEF-winter
Taif (city) is very cold in winter.

b. ʔabha ʔabrad min aṭ-ṭaayif
Abha colder.COMPAR from DEF-Taif
Abha (city) is colder than Taif.

c. ʔabha ʔabrad madiinah fi l-mamlakah
Abha colder.SUPERLATIVE city in DEF-kingdom
Abha is the coldest city in the Kingdom.

The gradable adjectival ACT.PTCP *baarid* 'cold' is modified by the degree expression *marrah* 'very' in (6),a. As a result, the adjective *baarid* 'cold' is able to form comparative and superlative constructions in (6),b and c respectively. It should be recalled that neither nominal nor deverbal ACT.PTCPs can form comparative/superlative constructions. Consider the examples in (7), showing that deverbal ACT.PTCPs do not admit comparative/superlative morphology.

(7) a. *ʕali ʔaktab li-l-waaǧib min ʔaħmad [Comparative]
Ali write.COMPAR to-DEF-homework from Ahmad
'*Ali is more writing to the homework than Ahmad.'

b. *ʕali ʔaktab waaħid li-l-waaǧib [Superlative]
Ali write.SUPERLATIVE one to-DEF-homework
'*Ali is the most writing one to the homework.'

To conclude, the semantic property of gradability and its interaction with comparative/superlative constructions are both taken as striking characteristics that set adjectival ACT.PTCPs from both nominal and deverbal ACT.PTCPs. In the next section, I turn to syntactic properties of this type of ACT.PTCPs.

6.2.1.2 The Syntax of Adjectival ACT.PTCPs

The literature on adjectives demonstrates substantial agreement on that adjectives are classified in terms of two main syntactic contexts as: *predicative* and *attributive*. This two-way classification can be extended to Arabic adjectives. It follows that adjectival ACT.PTCPs fall into two major types: predicative and attributive.

- Predicative adjectival ACT.PTCPs

Predicative adjectival ACT.PTCPs predicate something to the subject, and appear as complements of a copula (whether this copula is overt or null). As is the case with predicated NPs, predicative adjectival ACT.PTCPs have to agree with their associated subjects in NUMBER and GENDER. When it comes to DEFINITENESS, such adjectives satisfy the definiteness constraint that requires predicated NPs and APs to be morphosyntactically INDEFINITE in predicational/non-equational verbless clauses. Examples in (8) clarify the points of number-gender agreement and definiteness restriction.

(8) a. ʔat-tadxiin miẓirr
DEF-smoking.SG.M harmful.SG.M.INDEF
Smoking is harmful.

b. ʔal-baṭaaṭis al-magliyy-ah miẓirr-ah
DEF-potatoes.PL.F.INANIMATE DEF-fried.SG-F harmful.SG-F.INDEF
Fried potatoes are harmful.

As for equational verbless constructions, predicated adjectives pattern with predicated NPs in that they are morphologically DEFINITE due to the presence of the pronominal copula that separates the adjective from the subject.

(9) ʔal-maa huw l-mihim (mu l-akal)
DEF-water.SG.M PRON.3SG.M DEF-important.SG.M (NEG DEF-food)
Water is what is important (not food).

With respect to LFG analysis, recall that I argued earlier (see § 3.1.1, and § 5.7.1) that the single-tier analysis can account for predicated constituents in Arabic nonverbal predication in such a way that whereas predicated constituents contribute the main clausal predicate, the copula (whether null or overt) provides TENSE. As a result, predicative adjectives (including those of the adjectival ACT.PTCP type) should be treated on the basis of the phrase-structure rules stated in (10).

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

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

With this in mind, the sentence in (11) will be assigned the f-structure in (12).

(11) ʔal-ɤurfah baarid-ah
DEF-room.SG.F cold.SG.INDEF-F
The room is cold.

(12)
$$\begin{bmatrix} \text{PRED} & \text{'COLD <SUBJ>'} \\ \text{NUM} & \text{SG} \\ \text{GEND} & \text{FEM} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'ROOM'} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \\ \text{GEND} & \text{FEM} \end{bmatrix} \\ \text{TENSE} & \text{present} \end{bmatrix}$$

- Attributive adjectival ACT.PTCPs

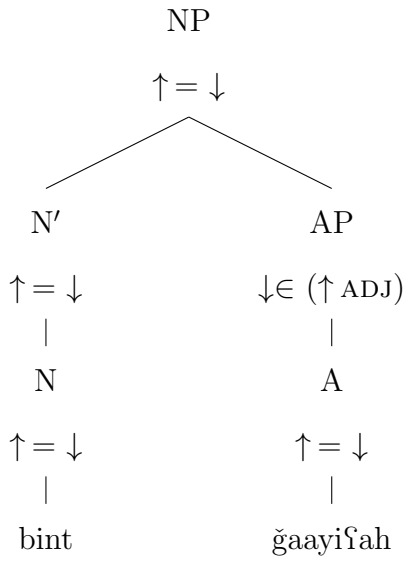
It is well-known that *attributive* adjectives modify NPs. Attributive adjectival ACT.PTCPs show agreement in GENDER, NUMBER and DEFINITENESS (in addition to CASE in MSA) with their head NPs. Take the following examples.

(13) a. bint ğaayiʕ-ah
girl.SG.F.INDEF hungry.SG.INDEF-F
a hungry girl

b. ʔal-bint al-ğaayiʕ-ah
DEF-girl.SG.F DEF-hungry.SG-F
the hungry girl

In LFG, the rule of adjectival modification in (14) and lexical entries license the f-structure and phrase-structure tree for the sentence in (13),a.

(14) NP $\longrightarrow$ N′ (↑ = ↓) AP* (↓ ∈ (↑ ADJ))



$$\begin{bmatrix} \text{PRED} & \text{'GIRL'} \\ \text{GEND} & \text{FEM} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \\ \text{DEF} & - \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'HUNGRY'} \\ \text{GEND} & \text{FEM} \\ \text{NUM} & \text{SG} \\ \text{DEF} & - \end{bmatrix} \right\} \end{bmatrix}$$

Now, I move on to another striking property of adjectives in Arabic that distinguishes the lexical category of adjectives from that of verbs, hence setting adjectival ACT.PTCPs apart from deverbal ACT.PTCPs. This property is held to relate to the so-called *adjectival construct.* [2]

[2]This construction has received different terms: 'adjective ʔiḍaafa', 'false ʔiḍaafa', 'unreal ʔiḍaafa', 'ʔiḍaafa ɤayr ħaqiiqiyya'.

- The Construction of Adjectival Construct

Recall that I mentioned earlier that a striking property of adjectives in Arabic is the ability to form the *adjectival construct* construction that involves an adjective which takes as a complement an immediately following definite noun. Consider the examples below.

(15) a. ʕalaa naar-in **mutawassiṭat-i l-ħaraarat-i** (MSA)
on fire-GEN medium-GEN DEF-hot-GEN
on a medium-hot fire (Ryding (2005))

b. ʔimraʔ-at-un **ğamiil-at-u -l-wağh-i** (MSA)
woman-F-NOM beautiful-F-NOM the-face-GEN
a woman with a beautiful face (Kremers (2005))

c. šaxṣ **ṭayyib al-galb** (HA)
person kind DEF-heart
a warm-hearted person

The phrases in boldface above are instances of adjective construct, and each phrase modifies a preceding noun. The whole construction is utilized to "describe a distinctive quality of an item, equivalent to hyphenated expressions in English such as fair-haired, long-legged, many-sided" (Ryding, 2005, p. 254). In other terms, the nominal complement (or the 'inner' NP) in adjectival construct "specifies the degree or manner of the property expressed by the adjective" (Al-Sharifi and Sadler, 2009, p. 27), and therefore that noun functions "to restrict the interpretation of the adjective to the appropriate dimension" (Al-Sharifi and Sadler, 2009, p. 40).

Moreover, the adjacency requirement of the construct-state nominal construction must also be satisfied in the adjective construct in such a way that nothing can intervene between the head adjective and its nominal complement. However, the adjective construct differs from the nominal construct in that whereas the nominal

complement is always morphologically DEFINITE in the former, it can be definite or indefinite in the latter.

Regarding this phenomenon, adjectival ACT.PTCPs can behave as regular adjectives since they are able to form the adjectival-construct construction. Examples are provided in (16).

(16) a. šift walad **ħaafi l-agdaam**
see.PFV.1SG boy.SG.M.INDEF **bare.**SG.M DEF**-foot**
I saw a barefoot boy.

b. **raafiʕ ar-raas**
holding high DEF-head
holding his head (up) high

With respect to analyzing an adjectival-construct construction in LFG, I adopt Al-Sharifi and Sadler (2009)'s analysis in which the two authors suggest that the nominal complement that follows the adjectival head is a subcategorized (direct) argument of the adjective. This argument is called OBJ, but it could well be OBJ_θ. So, the adjectival-construct *ħaafi l-agdaam* 'barefoot' in (16), a, that functions attributively in the sense that it modifies *walad* 'a boy', would be assigned the f-structure in (17).

(17)
$$\begin{bmatrix} \text{PRED} & \text{'BOY'} \\ \text{ADJ} & \left\{ \begin{bmatrix} \text{PRED} & \text{'BARE <OBJ>'} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'FOOT'} \\ \text{DEF} & + \end{bmatrix} \end{bmatrix} \right\} \end{bmatrix}$$

6.3 Conclusion

In this chapter, I have investigated syntactic and some semantic characteristics of the third type of ACT.PTCPs in Arabic: *adjectival act.ptcp*s. I have argued that they should be treated as pure adjectives since they display regular adjectival properties

such as the compatibility with degree modifiers, the ability to form comparative and superlative constructions, and the ability to take part in ADJECTIVAL-CONSTRUCT constructions. I have also distinguished between *predicative* ACT.PTCPs and *attributive* ACT.PTCPs.

Chapter 7

Conclusion

7.1 Summary of the main arguments

In this work, I have classified ACT.PTCPs in HA into three distinct types: *Nominal* ACT.PTCP*s*, *Deverbal* ACT.PTCP*s*, and *Adjectival* ACT.PTCP*s*. I have stressed that it is crucial to take into account syntactic and semantic properties of the above-said types in order to differentiate between them, and therefore to define the membership of sub-category for each one as: *Nominal*, *Verbal* or *Adjectival*. With respect to *nominal* ACT.PTCPs/agent nominals, I have drawn a distinction between *generic* (animate or inanimate) agentives and *specific* ones. I have utilized different tests to set specific agentives apart from generic ones such as compatibility with demonstratives, verbless clauses context (predicational and equational), and relative clause modification. I have emphasized that such nominals should be given a purely nominal status and there is no need to propose any verbal structure (or syntactic VPs) to derive them, since their structure exhibits uniformly nominal dependents such as nominal CS, adjectival modification, demonstratives, and the like. With Haspelmath (1995)'s universal generalization in mind, I have reached a conclusion that although agent nominals in HA are formed out of their corresponding verbs, they

are derived by derivational word-class-changing morphology, and because of that the internal structure of such nominals' base are altered to assimilate to the the internal structure of the new derived category which is a noun.

As regards *deverbal* ACT.PTCPs, I have argued that this type of participles should be assigned verbal status because of the common verbal properties it reveals such as argument structure inheritance, adverbial modification, and ASPECT values. Since such participles do not indicate any TENSE values, I have proposed to treat them as non-finite forms of verbs. Therefore, I have viewed such participles as a special type of VPs. To distinguish this type of VPs from regular VPs, I have represented them syntactically as VPs_{ptc} headed by Vs_{ptc}. Having taken into consideration Haspelmath (1995)'s universal generalization, deverbal ACT.PTCPs are derived by inflectional word-class-changing morphology since the verbality of such participles is preserved. I have also looked at their semantics, and argued that deverbal ACT.PTCPs are stativizing constructions that yield two aspectual reading in terms of the Aktionsart class of the verb from which a participle is formed. The first aspectual reading is the *progressive* that is associated with motion verbs, stative verbs, and homogeneous activities, while accomplishments, achievements, and heterogeneous activities give rise to the *perfect* interpretation. I have also considered how such aspectual readings interact with time adverbials. Regarding the syntactic employment of deverbal ACT.PTCPs, a three-way distinction has been drawn between *predicative*, *adjunctive* (attributive & circumstantial), and *complementary* participles.

When it comes to *adjectival* ACT.PTCPs, I have shown that they are pure adjectives that follow the same processes of word-formation of the other two types. I have discussed how such adjectival participles exhibit typical adjectival properties such as degree modification, the ability to make their comparative/superlative counterparts, and the ability to form adjectival-construct constructions. I have drawn a two-split distinction between *predicative* and *attributive* adjectival ACT.PTCPs.

7.2 Directions for further research

As mentioned from the very beginning, this work is concerned with the category of ACT.PTCPs. This, therefore, suggests that an investigation of semantic and syntactic properties of the category of *passive* participles in Arabic is a direction for future research.

Moreover, arguments and analyses advocated in this work could be strengthened by extending or testing them against data beyond Arabic in order to better understand how the category of participles behaves crosslinguistically.

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