Adverb(ial)s in Iraqi Arabic:

Cinque's Functional Hierarchy

by

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ABSTRACT

The dissertation investigates the applicability of Cinque's (1999) functional hierarchy hypothesis to adverb(ial)s in Iraqi Arabic. Cinque's functional hierarchy is a hypothesis developed to predict adverb ordering statement in Italian and with its multiple versions, Cinque advocates the universality of his hypothesis. The investigation specifically explores two questions, is an adverb a separate part of speech Arabic? And do adverb(ial)s in Iraqi Arabic follow a rigid ordering statement similar to that suggested by Cinque's?

I argue in my investigation that the term *adverb* is still vague to Arab linguists, hence I adopt the term adveb(ial)s throughout my dissertation. While the two terms in English are quite distinct, I think, Arabic grammarians are far from settling the debate over considering it a separate part of speech. Certainly, the case is the same for Iraqi Arabic which is the vernacular I am investigating. As I turn to English, I discuss the two most recent hypotheses of adverb ordering. I review Cinque's functional hierarchy as a syntactic-based hypothesis and Ernst's scope theory which is a semantic-based hypothesis. While the two hypotheses are valid to predict adverb placement and ordering, I only test Cinque's hierarchy in my investigation of the ordering in Iraqi Arabic.

In my research, I rely on Zyman's (2012) research on adverbs in English as I utilize many of his examples and translate them to Iraqi Arabic. I suggest that Adverb(ial)s in Iraqi Arabic are in the Spec of a functional head in accordance with the Cinquian hierarchy. Generally, this claim has its roots in Baker's (1985) Mirror principle which configures the relationship between morphology and syntax. My test of Iraqi

Arabic proves that Cinque's modal is not fully applicable to Iraqi Arabic as adverbs tied to non-spinal constituents do not comply with Cinque's rigid ordering.

The data and the finding in this dissertation will contribute to the Arabic language research on the interplay between syntax, semantics and morphology. Additionally, the findings will shed light on other vernaculars in Arabic as more research is needed on the different varieties of Arabic.

DEDICATION

To my family

To my best friend Eric C. Hunter

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TRANSLITERATION

The letters of the Arabic alphabet:

ا	Consonantal sound	a	ط	……………..	<u>t</u>
ء	Consonantal sound	'	ظ	…………….	z
ا	Long vowel	aa	ع	……………	'
ب	…………………	b	غ	……………	g
ت	…………………	t	ف	……………	f
ث	…………………	th	ق	……………	q
ج	…………………	j	ك	……………	k
ح	……………….....	<u>h</u>	ل	……………	l
خ	…………………	kh	م	……………	m
د	…………………	d	ن	……………	n
ذ	…………………	<u>th</u>	ه	……………	h
ر	…………………	r	و	Consonant	w
ز	…………………	z	و	Long vowel	uu
س	…………………	s	و	Diphthong	au
ش	…………………	sh	ي	Consonant	y
ص	…………………	<u>s</u>	ي	Long vowel	ii
ض	…………………	dh	ي	Diphthong	ai

Short vowels:

َ◌(fatha)　　a　　　　◌ِ(kasra)　　i　　　　◌ُ(dhamma)　　u

Adopted from A. Yusuf Ali's

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ABBREVIATIONS

*	ungrammatical
1	first person
2	second person
3	third person
ACC	accusative case
ADV	adverb
ART	article
ASP	aspect
DEF	definite
DET	determiner
F	feminine
F-structure	functional structure
FUT	future
GEN	genitive case
INDF	indefinite
IMP	imperfective
IRR	irrrealis
M	masculine
N	noun
Neg	negative
NOM	nominative case
NP	noun phrase

PER	perfective
PRT	particle
PST	past tense
SG	singular
Spec	Specifier
TA	tense-aspect
TP	tense phrase
UG	universal grammar

CHAPTER 1: INTRODUCTION

In this chapter, I introduce the topic, the purpose of the study and the scope of the research. Then, I briefly give an account of the language/variety I will be investigating. Additionally, I fully discuss the methodology, the methodological challenges and limitations of the study. Finally, I summarize the organization of the dissertation chapters.

Purpose of the Study

The goal of this dissertation is to investigate the order of, specifically, adverbs and, more generally, adverbials in Iraqi Arabic, a variety of Modern Standard Arabic through exploring the syntactic, and the semantic properties of 'adverbs' as a modification phenomenon in human language. The question, how adverbs are integrated into the syntax of the sentence, is still a substantial question in the syntactic theory. Investigating the question has led to so much confusion due to the illusive nature of adverbs. Syntactically, adverbs can modify a list of constituents in a sentence, in addition to the sentence itself. Semantically, adverbial scopes are often too broad to capture and define. The adverb controversy stems from the relationship that adverbs have with the rest of the constituents in the syntactic tree. Traditionally, adverbs are considered adjuncts, yet recently Cinque (1999) has argued that they are specifiers with exclusively allocated projections with semantic content. Such contradicting claims are based on the unaptness to pinpoint whether adverbs/adverbials should be considered a lexical or a functional category. Cinque's 1999 and Ernst's 2002 are among the most notable studies that attempt to consistently and structurally classify adverbs, their orderings and scopes.

Both studies have received so much support and criticism over the years as their universality is put to question.

Cinque (1999)'s functional hierarchy proposes pretty rigid adverb-ordering across different languages. While his hierarchy does predict some adverb-ordering in English, it fails to predict all of them. Research has shown that other orderings have also been found to be grammatical based on corpus data and English native speakers' judgment. In 2012, Li and Lin proposed a study that accounts for adverb movement and ordering which adheres to a 'cross-linguistic relativized minimality constraint'. Both orderings suggest that both syntactic and semantic factors place constraints on adverb ordering in English. Syntactically, the questions of where adverbs appear and why they do in a specific order versus another are important to systematize their movement and their environment. With more than two decades of research on the syntax of adverbs, there is still no agreement among syntacticians over their structure or distribution.

Ernst's (2002) study is based on the adjunction principle and his theory has come to be known as the Scope theory. From a semantic perspective, adverbs are adjuncts with semantic scopes and their selection may be tied to covert arguments corresponding to syntactic constituents. These adjuncts, if not successfully licensed, become uninterpretable i.e. violating the Full Interpretation framework suggested by Chomsky' 1986 and 1995 work. Ernst (2002) argues that adverb positions are set by 'zones partly by lexical entry and partly by compositional rule.' Adverbs are classified into classes with tight or loose requirements and within these classes, there is sub-classes with tighter or looser requirements.

Research has shown that no single study has fully accounted for adverbs comprehensively and cross-linguistically. As far as our research goes, adverb/adverbial ordering in Iraqi Arabic will be tested in light of Cinque's functional hierarchy.

Arabic and Iraqi Arabic

Arabic is considered one of the Semitic languages and it is the official language in 25 countries. Modern Standard Arabic MSA was developed to revive classical Arabic which was dying out in the last few decades. Versteegh (2014, p. 8) states that, to a certain extent, today's Arabic is based on the syntax, phonetics and phonology of classical Arabic. Whereas MSA is the most formal Arabic in many countries nowadays, different countries/communities have developed their own variety of Arabic to be part and partial of their cultural identity. Iraq is no exception and Iraqi Arabic or Mesopotamian Arabic is a variety spoken in Iraq. The variety has two main sub-verities, namely, *Gelet* and *Qeltu*. Due to the rich history of Iraq, Iraqi Arabic shows great influence of Aramaic which was the lingua franca of Mesopotamia. Additionally, being a melting pot for many cultures, the variety reveals extensive borrowings from Akkadian, Persian, Turkish and, of course, Kurdish to name a few.

Do Adverbs exist in Arabic?

Cross-linguistically, Baker (2003, p. 230) sees that adverbs, in many languages, are similar to adjectives, yet they get to merge with VPs, TPs and Aps. They do not assign any thematic roles as they do not change the 'basic' projections of these entities with which they merge. In English, when adjectives merge with such entities, *-ly* is assigned and they are called adverbs. The case is the same in many languages.

(1)   a.   Chris will **quickly/carefully/casually** solve the problem.

                (VP)

            b.   **Probably/luckily/hopefully**, Chris will win the race.

                (TP)

            c.   Chris is **extremely**/**mildly**/**thoroughly** sick.

                (AP)

(Baker 2003, p. 231)

Although adverbs have been extensively studied in many European languages and different theories have been devised to account for their movement and distribution, adverbs in Arabic are understudied. First, a question whether adverbs exist in Arabic should be tackled since, traditionally, Arab traditional grammarians do not consider an adverb as a distinct part of speech. For centuries, Arab grammarians have argued that there is three parts of speech in Arabic, Noun, Verb and Particle. The concept of tense distinguishes a noun from a verb. According to (Al-Hamalawy, 1998), the noun is said to be an independent syntactic unit with no tense association, while the verb is an independent syntactic unit with tense association, finally, the particle is a dependent part of speech. Adjectives, proper nouns, participles, and pronouns are all considered nouns since they take the same clitics and inflections, in addition to occupying the same positions nouns occupy in a sentence. Verbs are very restrictive as they are only verbs proper. Finally, particles are all the words that are neither nouns nor verbs such as prepositions, question words, clitics, definite articles to name a few.

The Traditional classification was never so comprehensively challenged and changed till Tammam Hassan's (1979) research which offers a completely new

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classification of Arabic parts of speech. Under the new classification, speech in Arabic is comprised of seven parts: noun, adjective, adverb, pronoun, khlaifa, verb and functional . Adjectives are added based on the distributional and forma criteria which allow words to be both nouns and adjectives based on the context. Personal pronouns, demonstrative pronouns, and relative pronouns are all under the pronoun category. The Khalifa category is very similar to exclamation in English and it includes verbal nouns, exclamation, and other fixed expressions. The adverb category is for words denoting time and place. Functional words are within the category of particle.

Hassan (1979) states that traditional grammarians of Arabic simply did not know what to do with adverbs and their classifications. In fact, many words were mistakenly classified as adverbs and they are not. This unclear picture is the result of unclear distinction between adverbs and adverbials. Many nouns in Arabic that function as adverbials were classified as adverbs because they cannot be pluralized or they do not accept definite or indefinite articles. Fassi Fehri (1998) classifies adverbs in Arabic based on what the term 'adverb' in English denotes. Adverbs in Arabic can be of three different categories AP such as 'jayyad-an', NP 'tamaam-an' , or PP 'bi-surˤat-in'.

Considering the morphosyntactic nature of adverbs in Arabic, there are no features shared among adverbs in Arabic. Such feature-lacking category of syntactic entities complicates any attempt to classify adverbs in Arabic. In fact, even in English where assumingly the suffix -ly marks adverbs, no category can be established based solely on morphology and the adverb category is usually established based on functionality and usage. If functionality is the essence of the adverb category, this functionality needs to be carefully analyzed. Moreover, all the various morphosyntactic

properties of this functional-dependent category need to be established. Once the adverb-category is clearly defined and established, its distribution, transportability and scope will be analyzed.

Methodology and Challenges

As my goal statement suggests, I suggest that Cinque's functional hierarchy to be cross-linguistically applicable to adverbs/adverbials in Arabic i.e adverb(ial)s in Arabic follow the same rigid ordering that Cinque finds out about Italian and other languages. I review both the traditional (Ibn Malik's Al-Fiyyah) and the contemporary (Hassan's classification) stands on parts of speech in Arabic, then I explore the findings of recent research on adverbs in Arabic. Since Cinque's hierarchy is the core of our research, a detailed overview of his theory is to be presented with its criticism. In light of the minimalist approach to adjunction, adverbs and modification are also reviewed. Chomsky's 1995 research has greatly influenced how adverbs are licensed and interpreted and it highlights that adjuncts are in a way more loosely attached than arguments. My analysis of the adjunction is in terms of the semantic and syntactic properties of the sentence.

I have adopted Erik Zyman's research findings on adverb ordering in English as he also tests Cinque's functional hierarchy. Between Zyman and Cinque's, I picked sentences from both research and translated them to Iraqi Arabic. I totally relied on my knowledge of Iraqi Arabic as a native speaker. Furthermore, I had my translated sentences checked by two native speakers with graduate degrees in Linguistics to evaluate the accuracy of my translation.

When testing out adverb(ial)s in Iraqi Arabic, I ran into two challenges. One, of course, it is not very common to find consecutive adverbs in everyday language. If there is a need for a certain aspect or mood adverb, most speakers tend to rely on a verb to show that, rather than an adverb. Second, Iraqi Arabic is just a dialect of Arabic and finding data in Iraqi Arabic is very difficult. Most speakers of Arabic, regardless of the variety they speak, write in MSA. I had to listen to many TV programs where native speakers are interviewed casually in the streets to catch some instances of adverbs. Additionally, social media also provided some insights for my translation.

Structure of the Dissertation

In this chapter, I presented the topic of the dissertation and discussed the purpose of the study, methodology, challenges and organization. In Chapter 2, I give a detailed theoretical background of parts of speech in Arabic. I discuss parts of speech in Arabic from both perspectives, traditional and modern. Additionally, I shed light on the difficulty of considering adverbs as a distinct part of speech and where Arab grammarians stand today. In my discussion, I try to answer the questions whether adverb is considered a part of speech in Arabic and why there is a controversy over that. Upon discussing adverbs, I also review modification in Arabic and how the concept of modification has evolved over the years. Finally, I focus on Iraqi Arabic and give an account of how it is different from Modern Standard Arabic.

In chapter 3, I give a theoretical background of adverbs in English and how it is viewed as a distinct part speech. Then I turn to discuss adverbs and modification from the adjunction traditional perspective. After that, I present where the argument stands today by discussing the two most acceptable theories that address adverbs in the western

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linguistic tradition, namely, Cinque's functional hierarchy and Ernst's scope theory. I look at Cinque's early version of functional hierarchy and how it developed over the years. Ernst's scope theory is also discussed with its seven arguments. Both theories are considered the two most acceptable theories in the western linguistic tradition when it comes to adverb positions and orders.

In chapter 4, I test adverb ordering in Iraqi Arabic through either translating sentences with adverbs into Iraqi Arabic from Cinque or Zyman's research or offer sentences in Iraqi Arabic with similar adverb ordering. Finally, chapter 5 concludes our results with some future directions and suggestions for further research.

CHAPTER 2: Adverb(ial)s in Arabic

Introduction

In this chapter, I present a historical overview of the Arabic linguistic tradition on parts of speech. I begin with the most traditional and widely acceptable classification that traditional linguists of Arabic introduced hundreds of years ago. Then, I fast-forward move to Hassan's 1979 attempt to re-classify parts of speech and his justification for the need of such a re-classification. Additionally, I discuss the impact that Hassan's classification has brought to the literature, specifically, to the syntax and morphology of adverb(ial) classification in Arabic. Synthesizing these different views on adverb(ial)s should, first, pave the way for our future discussions and, second, clarify the latest stands Arab grammarians have taken towards one of the most controversial parts of speech i.e. adverbs. Finally, I briefly review the perspective that modern Arab grammarians offer towards adverb(ial)s through discussing how Fassi Fehri (1998, 2013) classifies and reviews adverb(ial) ordering in light of modern theories of adverb ordering, most prominently, Cinque's.

Parts of Speech in Arabic

For centuries, Arab linguists adopted a very traditional classification for parts of speech in Arabic. Almost all adopted a three-part of speech classification, Noun, Verb and Functional. I followed Beeston's (1970) terminology as he states that the term Particle used by many grammarians is inaccurate. He (1970) suggests that the term *Functionals* is a more accurate term to use for words that do not meet the syntactical and morphological requirements for *Nouns* or *Verbs* in Arabic. Such a belief remained widely acceptable by both schools of Arabic grammar, Basri and Kofi till the twentieth

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century. As-Saqy (1977) argues that prominent traditionalists such as Seebawayh, Al-Kisaai, Ibn Faris, Ibn Yaaish, Al-Soyoti and others looked at either word forms (morphology) or word grammatical functions (syntax) to classify parts of speech in Arabic, but not both at the same time. Adopting such a conservative classification led grammarians to classify a wide-range of *syntactically* and *morphologically* different words into nouns, verbs or particles. One of the most notable traditional grammarians is Ibn Malik whose book, commonly known *al-alfiyya*, sets the foundations for classical Arabic Grammar. In his book, while Ibn Malik heavily relies on word forms in his classification, the grammatical functions of words have been a much more important determinant for many other grammarians. Although attempts have been made to include syntax i.e. word functions in the discussion, Ibn Malik's widely acceptable classification became the norm among grammarians. Additionally, despite even the lack of consensus over what the form or the function of a noun, more than, a verb is, almost all grammarians nearly agree on the three-part of speech classification proposed by Ibn Malik and his successors. In 1979, Hassan reinstates that most traditional linguists classify parts of speech based on one of two criteria, either form or grammatical function, but no classification was established taking into consideration both of them *simultaneously*. Adopting one criterion over another has contributed to a great deal of overlap among words belonging to more than one part of speech. In his opinion, both criteria should be carefully investigated for a more accurate classification of Arabic parts of speech. In his review of the traditional classification, he recognizes the need for a new classification due to the inconsistencies and offers a new classification. In the next few sections, I will present of both classifications.

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Traditional Classification

Arabic speech is traditionally comprised of three parts: Noun, Verb and Functional. A noun has a referential meaning and it accepts all noun affixes, a verb, on the other hand, expresses action and has an imbedded temporal meaning, both are viewed as independent units with tense being part and partial of the verb, a functional is viewed as a dependent unit which does not stand on its own (Al-Hamalawy, 1998).

(2)   la ʕiba   al-wald-u   b-il-kurat-i

                play.3SG.M   the-boy-NOM   with-the-ball-GEN

                'The boy played with the ball.'

                " لعب الولد بالكرة "

In (2), both *al-waldu* and *il-kurat-i* are considered nouns which are independent, and do not carry tense. *la ʕiba* is the verb which is also independent but carries tense. *bi* is a functional which has no meaning till it precedes a noun in a prepositional phrase form.

Nouns

The history of Arabic grammar is saturated with disagreements over what a noun is and what constitutes a noun. As-Saqy (1977) believes that the majority of traditional grammarians try to coerce many words into the noun category without being open to the idea of adding new parts of speech. A great deal of research has been conducted over the years to capture what really constitutes a noun. In addition to accepting case markings, Sibawayh, like many others, considers the referential meaning of a noun is an essential characteristic of nouns. Ibn As-Saraj argues that plurality and definiteness are two

distinctive features of nouns. However, both Az-Zujajy and Ar-Rumanni stress the fact that no classification is correct without considering the grammatical functions of words. Nouns can function as subjects and objects and can be preceded by prepositions. With these various classificatory factors, many sub-categories of nouns were established under the umbrella of Noun. I will briefly discuss the different sub-categories of nouns in the next section.

Many grammar books have adopted the most common features on which most grammarians, traditionalists and modernists, agree to define what constitutes a noun. Hence, most agree that a noun is derived from a verb in Arabic and it is called *Masdar* or *Verbal Noun*, most nouns in Arabic are derived from verb roots which are typically comprised of three consonants, occasionally from two with the second consonant doubled. Nouns are also derived from rare four, five, or six letter roots. Verb roots in Arabic reflect the third person masculine singular perfective tense and most often the noun form is formed with the addition of one letter infix e.g. *sakata – sukūt* to *stop talking - silence*. While it is often for nouns to be derived from verbs, in less common cases, verbs are sometimes derived from nouns. A dictionary entry of *ras* meaning *head* shows that the verb *to preside - rasa* is listed under the noun entry which suggests that some verbs are derived from nouns. Classical dictionaries of Arabic list such an example following traditional Arab lexicographers, whereas modern dictionaries reverse it for the sake of standardization.

Types of Nouns

Haywood and Nahmad (1965) identify three types of nouns:

Primitive Nouns

These nouns refer to familiar object of everyday life such as *bait-house*, *thaur-ox*, some of these nouns may also be borrowed from other languages such as Greek e.g. *jɪns-race*, species adopted from *genos*. These nouns are not derived from verbs, on the contrary, many verbs are derived from them, *jansa-to become of the same race, type, kind etc.*

De-Nominal Nouns

These are nouns that are derived from other noun forms such as *waṯaniy*a from *waṯan, patriotism* from *homeland*. Compound nouns can also be classed under this category such as *rasmaliya* from *ras-head* and *mal-money*, *capitalism* from *head of wealth.*

De-Verbal Nouns

These are nouns derived from verbs and they are the most common of all. Many examples can be given here since the majority of nouns in Arabic is derived from verbs, *kitaaba* from *kataba,* writing from *to write* and *suquuṯ* from *saqaṯa, falling* from *to fall*. Often more than one form of *Maṣdar* is derived from a verb. These are still considered nouns with different meanings and different grammatical functions. Generally, a verbal noun expresses the meaning of a verb in a noun form, yet other noun forms may not express that, e.g. the verb *waṣafa to describe* is the root for *waṣf description* and *ṣifa trait*. In fact, these two nouns are morphologically and functionally very distinct. A verbal noun can be a) noun or b) noun with verb qualities taking arguments or c) an absolute object with an adverbial function. Nouns like *kitaab* from *kataba book* from *to*

write or *simaaʿa* from *samiʿa headphones* from *to hear* are nouns with zero to none

verbal force. On the other hand, nouns with more verbal force can appear in two forms,

one with only an object as in (3a) or with an object and a subject as in (3b).

(3)   a.   ʿajibt-u   min   qatl-i   zaid-in

                  astonished-1   at   murder-GEN Zaid-GEN

                  'I was astonished at the murder of Zaid.'

                            " عَجبتُ من مقتلِ زيدٍ "

         b.   ʿajibt-u   min   qatl-i   zaid-in

                  astonished-1   at   murder-GEN   Zaid-GEN

                  aba-h

                  father.ACC-his

                  'I was astonished at Zaid's killing of his father.'

                  " عَجبتُ من قتلِ زيدٍ اباه "

       In (3) a and b, there is an *Idhaafa/additoon* relationship between *murder* and *Zaid*

and to show the difference we need to consider thematic roles. In (3a), *Zaid* is the object

(experiencer), whereas in (3b), *Zaid* is the subject (agent). One could also argue that (3a)

could be ambiguous, meaning *I was astonished at Zaid's committing murder*. Such

argument suggests that *Idhaafa*-relationship does not always confirm *Almudhaf* to be an

object (experiencer), but could also suggest a subject (agent) meaning.

An absolute object or a cognitive object - almaf'uul almuṯlaq is another form of noun derived from the verb form that expresses a variety of meanings, the most common of them is used as an object stressing the meaning of verbs. Since it stresses the meaning of verbs, it often functions as an adverbial, as in:

(4)   akalt-u-hu   akl-an

              ate-1-it   eating.ACC

              'I ate it all'

              " اكلتهُ اكلاً "

Similar to de-verbal nouns, the active participle usages can have more or less verbal force. Again, when it comes with less verbal force, it does not appear with an argument e.g. *kaatib* from *kataba writer, clerk* from *to write*, *mu'alim* from *'alama teacher* from *to teach*. Other examples may carry a much more verbal force and be followed by *Almudhaaf* which grammarians consider an object e.g. *raakib* from *rakaba rider* from *to ride*, *rakib al-hiṣan horse-rider*.

Other Noun Forms

A. The noun of place and time: These are usually derived from verbs and they appear in different forms. They both refer to the place where the action is taking place and they come on the patterns of *mif'al* and *maf'al* as in *majlis* from *jalasa a seating area* from *to sit*. These nouns can also be derived from passive verbs which could refer either to a place or time as in *muṣala* from *yuṣala* and *multaqa* from *iltaqa prayer place* from *to be prayed* and *meeting* from *to be met*. Occasionally, nouns of time follow the pattern *mif'aal* as in *mi'aad* from *wa'ad a date* from *to promise*.

B. Instrument noun: These nouns also come on the *mif'al* pattern, yet verb lexicon specifies whether the noun meaning is that of time or that of an instrument as in *miftaah* from *fataha a key* from *to open.* Nouns can also come on other patterns such as *mif'ala* as an *miknasa* from *kanasa a sweeper* from *to sweep* and *mɪf'al* as in *maqas* from *qas* as in *scissors* from *to cut.*

C. Relative adjectives (nouns): Nouns may sometimes serve as adjectives in Arabic. Relative adjectives are nouns that express a person's or an object's affiliation to a proper noun as an *masri* from *masir* Egyptian from Egypt.

Adjective nouns appear in many syntactic patterns some of them are more common like others, below is a list of adjective noun patterns:

Pattern	Example	Meaning
faa'il	khalid	eternal
fa'iil	kabir	big
fa'uul	khajul	shy
fa'laan	kaslan	lazy
af'al	ahmar	red
f'al	sa'ub	hard, difficult
fa'al	hasan	good
fa'il	farih	happy
fa''al	kathab	liar
faa'il	saadiq	righteous

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maf'iil	miskiin	poor, unfortunate
mif'aal	miqdaam	brave

Table 1. A list of Syntactic Patterns of Adjective Nouns
(Adopted from Haywood and Nahmad, 1965, p.352)

It is worth mentioning here that the comparative form *af'al* falls under the adjective noun form as well as in *ahsan* from *hasan better* from *good*.

Verbs

Most Verbs in Arabic are trilateral i.e. formed from three letters, mostly, consonants. Most words in Arabic are derived from their three-consonant root *madrasa* from *darasa school* from *to study = d-r-s*) which represents the core or basic meaning of studying. All three consonants are vowelized, the first and the third are always vowelized with a schwa, the middle consonant can receive various vowels to express different meanings. Generally, when the middle consonant receives an / i / or / u /, the verb expresses a more a stative meaning or an entering to a state meaning. More specifically, the / i / expresses a temporary state as in (5a) while the / u / expresses a more permanent state as in (5b):

(5)   a.   hazina   al-walad-u

saddened.3SG.M   the-boy-NOM

'The boy became sad'

" حَزِنَ الوَلَدُ "

b.   kabura   al-walad-u

old.PER.3SG.M   the-boy-NOM

'The boy became old/big'

" كَبُرَ الوَلدُ "

Some trilateral verbs may have the same second and third consonants, *bilateral* is a term coined to identify these verbs. Some other trilateral verbs may also have a semivowel as part of the root as well. A small number of verbs in Arabic are quadrilateral verbs with roots of four letters.

Obviously, tense is mainly what distinguishes verbs from nouns. Arabic like many other Semitic languages recognizes two main tenses/aspects Past *Perfective* and Present *Imperfective*. The tense/aspect relationship will be discussed in details later in the chapter. There is the *Imperative* as well which is considered a variant imperfective form. While Arabic seems to be very economical when it comes to verb tenses, verb pattern derivation is not the same case. Trilateral verbs are considered *mujar*ad or *stripped* i.e. stripped of any affixes and these forms carry the core meaning of the verb. On the other hand, the *increased* or *mazid* forms are derived through adding prefixes, infixes and suffixes to express shades of meaning related to the stripped form as in *kataba to write* and *takaataba to write one another*.

Non-Trilateral Verbs

I previously argued that most verbs in Arabic are of three-consonant-root, a small number of verbs in Arabic have quadrilateral and quinqueliteral roots. Quadrilateral verbs are of three types:

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a) Genuine 4 radical quadrilateral such as *daḥraja to roll*, most these verbs are of foreign origins such as *talmatha to make a disciple* and *tarjama to translate*.

b) Doubled bilateral roots which sometime may suggest onomatopoeia such as *tamtam to stammer* and *gargar to gargle*.

c) Acronym verbs formed from combining two words of a familiar phrase such as *bsamala* from *bism alah in the name of Allah.*

Quinqueliteral verbs usually express shades of meaning related to their quadrilateral counterparts. The genuine quadrilateral *daḥraja* meaning to *cause something to roll* has a quinqueliteral counterpart *tadaḥraja* meaning *to roll on its own*.

Functionals

Functionals in Arabic are called *hurūf* which literally means *letters*. They can serve as *prepositions*, *conjunctions*, *interjections*, and sometimes even *adverbials*. Prepositions are of two types: inseparable from their nouns consisting of one letter and separable from their noun consisting of true particles or nouns in the accusative case. Examples of inseparable prepositions include *li, bi, ta* and *k* as in:

(6)   u-qsimu   **bi**-lahi   wa   **ta**-lahi

           1-swear   by-God   and   by-God

           'I swear by God'

           " أَقسِمُ بِاللهِ "

Examples of separable prepositions include *min, ma', lada, fii, 'an, 'ala, hata* and *munthu* as in:

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(7)   jaa'a   al-ustath-u   **ma'a**   at-ṯalib-i

           came.3SG.M   the-teacher-NOM   with   the-student-GEN

           'The teacher came with the student.'

           " جاءَ الاستاذُ مع الطالبِ "

It is worth noting here that some prepositions in Arabic are *morphologically* nouns

functioning as prepositions. They usually serve as adverbs of place or time depending on

the noun following them. The most commonly used of them are *'and, quddam, fawq,*

bein, qabl, ba'd and *nahwa* as in:

(8)   qaabalt-u-hu   **qabil**   **ad-dars-i**

           met-1SG-him   before   the-lesson-GEN

           'I met him before class.' (adv. of time)

           " قابلتُهُ قبل الدرس"

(9)   jalasa   **taḥta**   **ash-shajarat-i**

           sat.3SG.M   under   the-tree-GEN

           'He sat under the tree.' (adv. of place)

           " جَلَسَ تحتَ الشجرةِ "

Occasionally two prepositions happen to appear together, the second one has to be a noun

preposition as in:

(10)   saa'ada-ni   bi-duun   muqaabil-in

           helped.3SG-me.M   with-out   charge-GEN

'He helped me without charge.'

" ساعدَني بدون مقابل "

(11) Ra'ayt-u-hu min taḥta al-bab-i

  saw-1SG-him from under the-door-GEN

  'I saw him from under the door.'

" شاهدتهُ من تحت البابِ "

Functionals as Conjunctions

  Functionals are also used to connect sentences in Arabic and they can be attached or detached from the following the first word of the following sentence. They also could carry different meanings as in:

A) Attached particles *fa, wa* and *lɪ*:

(12) jaa'a **li-**yas'al 'an 'amal-in (cause and effect)

  came.3SG.M to-ask.3SG for work-GEN

  'He came to ask for work.'

" جاءَ لِيسأل عن عملٍ "

B) Detached particles *munthu, mataa, ma, law, lammaa, lakin, kaylaa, ḥata, thumma, baynamaa, aw, an, in, amma, ila, iṯhaa, iṯh* and *muṯh*

(13) jalasa **thumma** takallama (sequence)

  sat.3SG.M then spoke.3SG

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'He sat then spoke.'

" جَلَسَ ثَمَ تكلمَ "

Functionals as Interjections

The vocative functional *ja* meaning *hey* is used followed by a noun in the nominative case, the following noun is either a proper noun or a noun without a definite article:

(14)   ya   mu<u>h</u>ammad,   ya   akh-i

              hey   muhammed   hey   brother-my

              'hey Mohammed, hey my brother'

              " يا محمد، يا أخي "

Other common interjections are *ah, awah* and *a*, all mean (Oh)

(15)   ah   mu<u>h</u>amed

             oh   Mohammed

           'Oh, Mohammed'

            " آه، محمد "

Adverb(ial)s from a Traditional Perspective

In the Arabic linguistic tradition, adverbs do not exist as a separate or discrete part of speech. As-Saqy (1977) and Hassan (1979) state that adverbials seem to be a more appropriate term since nouns, functionals and even sometimes verbs can *function* as adverbials in Arabic grammar. The line between adverbs and adverbials seem to be very

blurry for traditionalists. The inherent flexibility and richness of word meanings in Arabic make the lack of adverbs as a category in Arabic hardly noticeable. Adverbials could appear in a variety of forms:

A) Prepositional phrases as adverbials:

(16)　　　qaada　　　　　as-syyara-ta　　　　**bi-butti-in**

　　　　　drove.3SG.M　　the-car-ACC　　　　with-slowness-GEN

　　　　　'He drove the car slowly.'

　　　　　" قادَ السيارة ببطيء "

B) Verbs as adverbials:

(17)　　　**ahsana**　　　　　　qawl-an　　　　wa　　　　'amal-an

　　　　　do.well.PER.3SG.M　saying-ACC　　and　　　　doing-ACC

　　　　　'He said and did well.'

　　　　　" أحسنَ قولاً وعملاً "

C) Nouns in the accusative case other than arguments:

(18)　　　jaa'a　　　　　　　　　　**faj'a-tan**

　　　　　came.3SG.M　　　　　　　sudden-ACC

　　　　　'He suddenly came.'

　　　　　" جاءَ فجاءةً "

D) There are numerous prepositions that are *un-nunated* accusatives. They come in types, those followed by a noun in the genitive case such as in *ba'd yaumain* meaning *after two days* and those that stand by themselves with no noun as in *thuma jaa'a* meaning *then he came.*

E) *ma* can accompany a number of words to function as adverbials as well such as *kathiran ma* meaning *often* and *sur'an ma* meaning *quickly*

F) Nouns as absolute objects / cognitive objects can function as adverbials as in:

(19)   ḍharab-tu-hu   **ḍharb-an**   shadiid-an

        hit.PER-1SG-him   beating-ACC   hard-ACC

        'I hit him very hard.'

        " ضربتُهُ ضربةً شديدةً "

G) Using adjectives with a nunation as sentence finals is called *ħal* which also functions as an adverbial describing the manner with which a verb is performed as in:

(20)   jaa'a   **musri'-an**

        came.3SG.M   quick-ACC

        'He came quickly.'

        " جاءَ مُسرعاً "

H) Some particles ending in *Sukuun* (the absence of a vowel symbol) may also function as adverbials such as *faqaṯ* meaning *only*.

Re-classification Attempts (Adverbials)

According to As-Saqy (1977), the linguistic history for the Arabic language is at no shortage of attempts to re-classify or add new parts of speech to the traditional classification. Grammarians such as Ibn Hayan, Al-Zujaji, Anise and Al-Makhzoomi have argued that a verbal noun should be a separate part of speech called *Khalifa.* I have noted earlier how thematic roles have played a major part of such a stand. The verbal qualities of nouns in (2a) and (2b) have motivated them to establish not only a new sub-category of nouns, but also a new part of speech. To Ibn Hayan, *pronouns* should not be part of the noun category because pronouns do not accept noun-prefixes and suffixes. Additionally, pronouns do not have a referential meaning of their own, instead they refer to nouns which inherently have referential meanings. Other grammarians have called for *adjectives* to be considered a separate part of speech since some adjectives syntactically do not behave like nouns and their meaning is more descriptive than referential. Hassan's 1979 mentions that Al-Zujaji's *adverbials*, specifically nouns functioning as adverbs, should be considered a distinct part of speech because they are different from all the other nouns. Such a view is very similar to Hassan's classification which I will discuss late in the chapter.

It is worth mentioning that two pre-Hassan's classification received so much scrutiny among Arab grammarians. Anis' (1978) classification suggests that the Arabic speech is comprised of four categories: Nouns, Pronouns, Verbs and Instruments. He argues that all adjectives in Arabic can be classified as nouns. Despite the descriptive meaning of adjectives, they *syntactically* behave like nouns. As for instruments, they comprise whatever does not fit the other categories. Al-makhzoomi's is another four-part-

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classification which is highly influenced by Al-kufi school of grammar. His classification involves, Nouns, Verbs, Functionals and *Kinayat*. Since his classification is heavily based on morphology, adverbials are generally categorized as nouns. Adverbials are classified as nouns with an adverbial function. As-Saqy's (1977) argues that the 'adjunct-like' qualities of adverbs and ad-hoc morphology led many grammarians to marginalize them and classify them as nouns with adverbial functions.

Modernists' Parts of Speech

As previously argued, Hassan's 1979 re-classification of parts of speech in Arabic is considered the first classification that considered *form* and *function* at the same time. With the new classification, new parts of speech are added to the already-established parts of speech i.e. Nouns, Verbs and Particles. The new classification is comprised of seven parts: *Nouns*, *Adjectives*, *Verbs, Pronouns, Khwalif, Adverbs* and *functionals*. I will briefly discuss each part below commenting on the difference between the traditional and the modern classification.

Nouns

Hassan (1979) reinstates and affirms the referential meaning that the Arabic noun carries as the core of its meaning, yet he sub-categorizes nouns into five categories:

A) Proper nouns-*mo'ain nouns* which refer to names of specific names of people and things.

B) Nominals or Gerund- *hadath nouns* which refer to nouns derived from the verb form. These are of four types:

> (1) Verbal nouns-*masdar* carrying the action meaning of the verb, yet still treated as a noun such as *inbaat* from *anbaat-planting* from *to plant*.

(2) Nominal nouns-*isim alma<u>s</u>dar* which refer to the noun derived from the verb as in *nabaat* from *anbata-a plant* from *to plant*.

(3) One-time noun-*isim almarra* which refers to nouns on the *fa'la* pattern suggesting a one-time happening as in *ḍharabtuhu ḍharba*-I hit him once.

(4) Manner noun-*isim alhayaa* which refers to nouns on the *fa'la* pattern describing the way a verb is being done as in *jaa'alastu jalsata al'ulamaa -* I sat a scientists' sitting.

C) Generic Nouns-*isim aj-jins* which refer to nouns representing groups such as Arabs, Turks, etc.

D) Nouns following a *M-pattern* starting with *M-* which refer to a noun of time, a noun of place and a noun of instrument. These do not have to be derived from verbs.

E) Vague nouns-*isim almubham* which refer to names of directions, measuring units, numbers etc. These nouns lack a functional meaning and their meaning need to be assigned whenever used.

Adjectives

Words that do not name entities but ascribe traits to entities are adjectives. These are of five

types:

a) Agent-like adjectives or agent adjectives <u>*sifa mushabha bi isim alfaa'il*</u>: adjectives derived from a verb describing the action with no reference to tense.

b) Object adjectives-<u>*sifat isim almaf'uul:*</u> adjectives derived from a verb describing the entity affected by the happening with no reference to tense.

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c) Hyperbole adjectives: adjectives similar to agent-like adjectives, yet with added emphasis on the recurrent frequency of the happening.

d) Comparative/superlative adjectives: adjectives derived on the *af'al* and *al-af'al* pattern suggesting having much more trait quality than others.

e) Verb-like adjectives <u>*sifa mushabha bil fi'il*</u>: Adjectives derived from a verb to reflect a change or state.

Verbs

Verbs share the core meaning of their nouns, yet lack the referential meaning that all nouns carry. Additionally, the most important feature all verbs show is 'tense', verbs carry tense whenever they are used. The core meaning of the *happening/event* suggested by the verb lexical meaning may require more components such as the time and the place of the *happening/event,* the instrument the event is happening with, and the description of the event. Verbs are, of course, unique in the prefixes and the suffixes they receive marking their tense and conjugation. Arabic verbs can be past, present and imperative. *Morphologically*, these patterns express tense and aspect as well, past *fa'ala*, present *yaf'alu* and future *af'alu*. Later in the chapter, I will review the tense/aspect relationship in Arabic. *Syntactically*, for the time being, I need to highlight that present tense can be used to refer to the future with future time *adverbials.* I will discuss the verb/adverb(ial) relation later in the chapter as well. Finally, the Jussive mood is a distinctive feature for verbs in Arabic, as only verbs accept jussive particles. There are six patterns of triplate verbs in Arabic, other than the non-triplates. Verbs are also distinguished as they come in the active and the passive voice. All these features make a verb a separate part of speech.

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Pronouns

A pronoun does not have a referential meaning like a noun. Also, it does not describe noun like an adjective and it does not carry tense like a verb. Pronouns in Arabic are of three types: personal pronouns, demonstrative pronouns and relative pronouns. Pronouns in Arabic are similar to particles in that they are *not* derived from the three-consonant roots. *Morphologically*, they can be detached or attached but semantically they are always tied to nouns.

Khalifa

Words with different stylistic meanings are called *Khwalif* plural of *Khalif*. These communicate various meanings, the most notable of them is exclamation. Many emotionally-charged words can be also be classified as *Khwalif*. These are of four types:

a) Khawalif as verbs such as *hayhat* and *sah*

b) Khawalif as sound-nouns to address different animals *wa'ah* for camels and *wabs* for cats or *tuq* for beating.

c) Khawalif with the meaning of exclamation on the *afa'al* pattern paired with *ma* as in *ma ajmal arrabɨ'-* what a beautiful spring

d) Khawalif with the meaning of praise or condemnation, grammarians disagree whether they should be considered nouns or verbs. They are nouns because they accept *ya* for calling and prepositions as in *ya habatha* -Oh I wish. On the other hand, they are verbs because they require arguments as in *habatha arrajul Zaidun-*Zaid is a loved man.

Adverbs

Perhaps the most controversial part of speech in Arabic is adverbs. As-Saqi (1977) and Hassan (1979) think that a wide variety of words are considered adverbs but they are not. They are more adverbials than adverbs. It is for this reason, re-classifying parts of speech in Arabic establishing a category for adverbs is very difficult. Adverbs are too broad to define and creating a set of features to describe them semantically, morphologically and syntactically is always problematic. Fassi Fehri (1998) suggests that, in the case of Arabic, it is best to deem these constituents as adverbials as they all have an adverbial-like grammatical function, yet very different in their morphosyntactic features.

Hassan (1979) does establish a part of speech for adverbs as he refers to a very small group of words in Arabic sharing very unique characteristics. These deserve the label *adverbs* and are of two types: adverbs of time *ith, itha, ithan, ian, lamma* and *mataa* and adverbs of place *ayna, anna* and *haytha*. Among their unique features, they do not carry independent lexical meanings but their meanings are more functional. Moreover, they are all tied to the verb denoting time or place.

In line with As-Saqi (1977), Hassan (1979) argues that falsely many constituents in Arabic are categorized as adverbs, but they are not. These constituents share the functional features of adverbs, but their meanings are far more lexical than functional. These should all be considered *adverbials* which are *morphologically* categorized under other parts of speech:

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a) Ma<u>s</u>dar (Gerund) as in:

(21) aa-tii-k **<u>t</u>uluu'** **ash-shamis-i**

I-visit-you rise the-sun-GEN

'I visit you at sunrise.'

" آتيكَ طُلوع الشمس "

b) Time or Place Nouns as in:

(22) a. aa-tii-k **ma<u>t</u>la'** **ash-shamis-i**

I-visit-you rise the-sun-GEN

'I visit you at sunrise.'

" آتيك مطلع الشمسِ "

b. a-q'udu **maq'ad** **at-tilmiith-i**

I-sit seat the-student-GEN

'I sit in a student's seat.'

" أقعدُ مقعد التلميذِ "

c) Prepositions as in:

(23) lam a-araa-hu **munthu** **a<u>s</u>-<u>s</u>abaa<u>h</u>-i**

NEG I-see-him since the-morning-GEN

'I have not seen him since the morning'

" لم أره منذُ الصباحِ "

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d) Some demonstrative pronouns as in:

(24) a.   rayt-u-h   **hunak**

         saw-1SG-him   there

         'I saw him there.'

         " رأيتُهُ هُناك "

    b.   a-smu'-ka   **aalan**

         ISG-hear-you   now

         'I hear you now.'

         " أسمعُكَ ألآن "

e) Miscellaneous Nouns with different meanings as in:

  1- Nouns referring to time such as *thalath layali*-three nights and *khamsat ayam*-five days.

  2- Nouns referring to directions such as *fauq, tahta, amam, wara* and *yamin*-over, under, in front of, behind and on the right.

  3- Nouns referring to time such as *'am, sana, shahar, yum* and *sa'a*-an hour, a day, a month, a year.

  4- Nouns referring to space or time relationship such as *qabl, ba'd, dun, ladun, bain,* and *wasaṯ*- before, after, without, between, in the middle of.

f) Nouns referring to unique times of the day such as *bukra, ḏhahwa, layla, masa, 'afia* and *gadwa*-tomorrow, noon, night, evening, lunchtime.

Functionals

These mainly rely on other parts of speech and their meanings are only functional. They are of two types:

a) Non-derived particles: these are not derived and they have meanings such as genitive case particles, negative particles and conjunctive particles.

b) Transformed or derived particles: These are derivative with functional meanings and they are of four types:

1- Adverbial such as interrogative or conditional particles.

2- Nominal such as *kam* and *kaif* -how, and how many/how much)

3- Verbal such as derived from complete verbs forming incomplete verbs such as *kaan* and its sisters and *kaada*.

4- Pronominal such as *min, ma* and *ay* in the meaning of conditionals, interrogative, adverbial, exclamatory etc.

All these particles add quite different meanings such as, but not limited to, negation, interrogation, emphasis, requesting, ordering, wishing, hoping, condition, negative condition, exclamation etc.

Adverb(ial)s, Verbs and Time Reference

Whether Arab grammarians classify these words as adverbs or adverbials, they are cross-linguistically tied to *Tense*, *Aspect* and *Mood*. In the next few pages, I will give an account of Arabic temporal adverb(ial)s and shed light on the relationship they carry with the rest of the TP constituents, specifically, verbs. Before diving deep into the relationship, the concepts of tense and aspect in Arabic need to be scrutinized. A great

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deal of research has been conducted to discuss the hierarchal relationship of heads and their constituents. The configuration of this syntactic relationship led to many linguistic generalizations on key syntactic elements such tense, aspect and mood. The head-constituent relations have been debated in the works of Pollock 1989, Chomsky 1995, Cinque 1999 and many others. Semitic languages like many other language families are not far from such a debate. Research in Semitic languages has raised the question whether Arabic like many other Semitic languages is a purely aspectual or non-aspectual language. While Cohen (1989), as cited in Fassi Fehri (1998), strongly argues in favor of the aspectual morphological features of Semitic/Arabic verbs, earlier research has questioned the exitance of aspect. Fassi Fehri (1998) states that such conflicting views exist due to the complex relationship among the morpho-syntactic properties of Semitic languages and Arabic is a good example.

To better understand tense in Arabic, Fassi Fehri (2012) suggests a two-layer model of tenses to account for perfective tenses, both refer to specific temporal ordering relationship between two temporal arguments.

(25)   T1 ($\pm$ Past)

                    T2 ($\pm$ Pref/Ant)

                            Asp ($\pm$ Pfv/Term)

                                    VP ($\pm$ Telic)
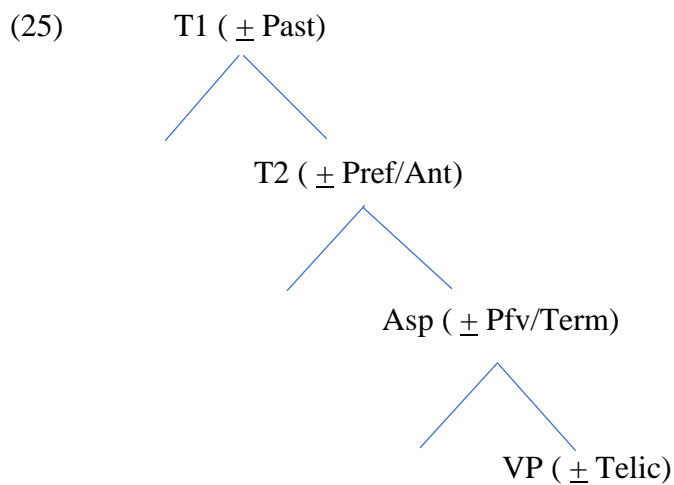
                                        Adopted from Fassi Fehri (2012, p.4)

T1 orders Utterance Time = UT referencing to Reference Time = RT and/or Event Time = ET and T2 projects RT and ET. Additionally, T1 could be defined as 'deictic' or absolute (Past, Present, or Future) and T2 is 'relative' (Perfect/Imperfect or Anterior/non-Anterior). Thereby, Perfectivity and Imperfectivety could only refer to the 'culmination' or the 'non-culmination' of the event. He argues that these two layers are reflected in the Arabic verb morphology which I will discuss next.

The Arabic verb morphology clearly shows a number of features. First, the Arabic verb is conjugated to reflect person and tense placement as a prefix for present and as a suffix for past. Second, the conjugated verb can also undertake an internal vocalic change reflecting person or tense change. Third, suffixes serve to identify Mood. All these variations in verb morphology could mark Tense, Aspect and Mood.

(26)　　　　　Kataba　　　　　　ar-risaalat-a　　　　　　amsi (*gad-an)

　　　　　　　Wrote.3SG.　　　　the-letter-ACC　　　　yesterday (*tomorrow)

　　　　　　　'he wrote the letter yesterday.'

　　　　　　　" كتبَ الرسالةَ امس "

(27)　　　　　Katab-a　　　　　　r-risaalat-a　　　　l-ʔaan-a　　　　qablu (*gad-an)

　　　　　　　Wrote-3SG.　　　　the-letter-ACC　　now　　　　　before (*tomorrow)

　　　　　　　'he has written the letter now, before (*tomorrow).'

　　　　　　　" قد كتب الرسالةَ الآن، قبل (الغد) "

　　　　　　　　　　　　　　　　　　　　　　Adopted from Fassi Fehri (2012, p.6)

In (26) and (27), Arabic ST reflects Perfectivity since it denotes both past and present perfect and it does not rely on 'contextual information' i.e. UT. Perfectivity has long been treated by syntacticians as Aspect, hence considering Arabic as an aspectual language. Additionally, considering the time reference of the adverbials used and their compatibility, it is inevitable to believe that ST controls and directs the collocation of temporal adverb(ial)s. The case is the same for Arabic Present/Imperfective, there is a correlation between the PT marking Imperfectivety and the time reference adverbials.

(28)   y-abnii   d-daar-a   l-ʔaan-a   (*ʔamsi)

          3-build   the-house-ACC   now   (*yesterday)

          'he is building the house now.'

          " يبني الدارَ الآن "

                                            Adopted from Fassi Fehri (2012, p.10)

In (28), an imperfective time reference adverbial may co-occur with an imperfective verb, yet a perfective time reference adverbial does not occur.

Conclusively, Fassi Fehri (2012) suggests that Arabic is not an aspectual tenseless language. It is, in fact, the opposite, Tense and Aspect in Arabic correlate and the Arabic system is 'top to bottom' i.e. Tense to Aspect. Moreover, such an aspectuo-temporal relationship existing in Arabic is definitely tied to time reference adverb(ial)s. These time reference adverb(ial)s are usually coerced by tense for their interpretations.

Such a coercive relation works both ways, earlier Fassi Fehri (2012) suggests that Perfective in Arabic could mean both Past or Present Perfect. These time reference adverbials could force a Past or a Present Perfect interpterion of these verbs.

(29)   Katab-a   r-risaalat-a   ʔamsi   (*gad-an)

                wrote-3   the-letter-ACC   yesterday   (*tomorrow)

                'He wrote the letter yesterday.'

" كتبَ الرسالةَ امس "

(30)   Katab-a   r-risaalat-a   l-ʔaan-a   (*gad-an)

                wrote-3   the-letter-ACC   now   (*tomorrow)

                'He has written the letter now.'

" قد كتب الرسالةَ الآن، قبل (الغد) "

                                        Adopted from Fassi Fehri (2012, p.103)

A present deictic adverb in (30) forces the Present Perfect interpretation of the verb.

Distribution and Transportability of Adverb(ial)s

In the previous section, I discussed the correlation between verbs and adverb(ial)s. Looking back at the examples (26) to (30), it seems that adverb(ial)s in Arabic tend to occupy a final position in the Arabic sentence. In light of the current literature on the syntax of the VP internal constituents, Pollock 1989, Bobaljik1996, Fassi Fehri 1996 and others, Fassi Fehri (1998) suggests a couple of arguments. First, S and O are verbal constituent which have raised to a higher projection leaving the adjuncts i.e. adverbs behind in sentence final position. Second, S and O are generated in a Spec of a

higher aspectual projection while adjuncts are generated in a Spec of a lower aspectual projection closer to the V following Larson 1988 and Stroik 1996. The two views can be drawn as follows:
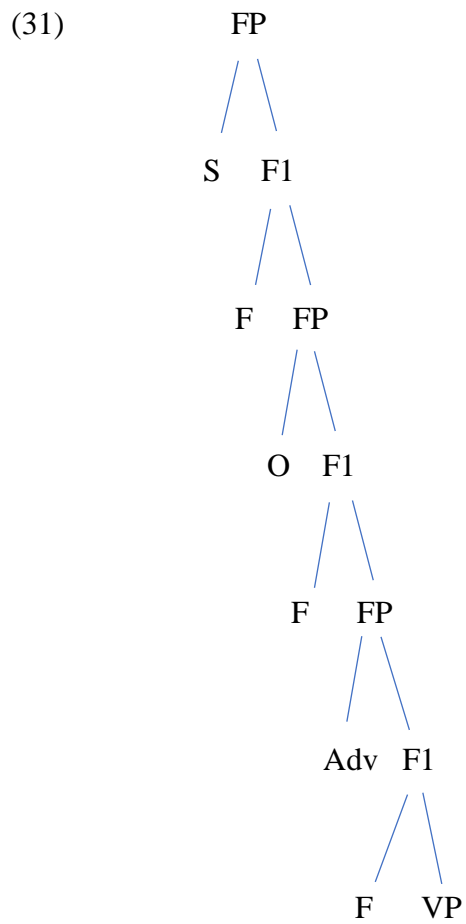
(31)

```
                    FP
                   /  \
                  S    F1
                      /  \
                     F    FP
                         /  \
                        O    F1
                            /  \
                           F    FP
                               /  \
                             Adv   F1
                                  /  \
                                 F    VP
```

Adopted from Fassi Fehri (1998, p.12)

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(32)   (VP)

             /\
            S VP
               /\
             Adv VP
                  /\
                 V   O
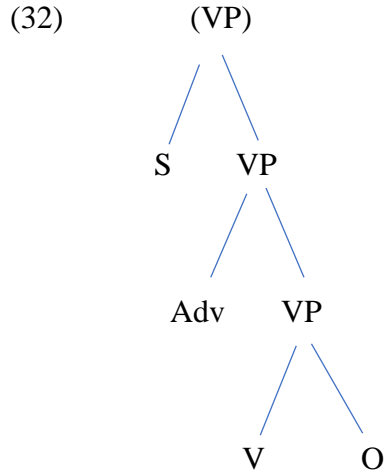
Fassi Fehri (1998) states that as adverbs are tied to different functional categories (Aspect, Tense, Modality, Force etc.), their distribution and transportability are different. Distributionally, he establishes three classes of adverbs:

Class I: adverbs in this class can go higher than the DP object or PP complement:

(33)   a-'rifu   jayyid-an   aj-jawab-a

            I-know   perfect-ACC   the-answer-ACC

            'I know perfectly the answer.'

            " أعرفُ جيداً الجوابَ "

Such adverbs cannot go higher in the structure as in (34)

(34)   *jayyid-an   a-'rifu   aj-jawab-a

            *perfect-ACC   I-know   the-answer-ACC

            '*perfectly, I know the answer.'

            " جيداً، اعرفُ الجوابَ "   (Ibid)

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Class II: these adverbs can go higher than an IP or a modal phrase (=ModP):

(35)　　　　　lam　　yakun　l-rajulu　　　qablu　　qad　　Ɂakala　　l-tuffaaħ-a

　　　　　　　not　　is　　the-man-NOM　before　indeed　ate　　　the-apples-ACC

　　　　　　　'The man had not really eaten apples before.'

" لم يكُن الرجلُ قبلُ قد أكل التفاحةَ "

qablu the adverbial climbed over *qad* the modal climbing over the tensed IP.

Class III: these adverbs can occur as sentence initial and can climb over Neg:

(36)　　　　　ṯab'an　　　　lam　　　　yaɁkul　l-rajul-u　　　　l-tuffaaħ-a

　　　　　　　evidence-ACC　not-past　　eats　　the-man-NOM　the-apple-ACC

　　　　　　　'Evidently, the man did not eat apples.'

" طبعاً، لم يأكل الرجلُ التفاحةَ "

Fassi Fehri (1998) assumes that all these classes of adverbs are situated in 'the Spec of a complex lexical item which combines the V features (typically the event feature) and functional features.' Class III, speaker-oriented adverbs are in the CP layer, class II, subject-oriented adverbs sit in the Spec of Mod, and finally class I, manner adverbs sit in a post-verbal position. Additionally, although not as specific as Cinque's 1995 or 1996 suggested hierarchy, Fassi Fehri suggests (37) to show a hierarchal order restricting the appearance of these adverb classes in Arabic.

(37)   Class III > Class II > Class I

The scope and the interpretation of all these adverbs are determined by the interplay

between the functional features and the discourse features.

(38)   tab'-an   akala   ar-rajul-u   'amd-an

                Evidence-ACC   ate.3SG.M   the-man-NOM   deliberateness-ACC

                at-tuffaah-ta   tamaam-an

                the-apple-ACC   completeness-ACC

                'Evidently, the man has deliberately eaten the apple completely.'

                " طبعاً، أكل الرجلُ عداً التفاحةَ تماماً "

Once, I discuss fully discuss Cinque's 1995 and 1996 functional hierarchy and Ernst's

2002 scope theory, I will be in a better position to discuss adverb ordering in Arabic and

more specifically Iraqi Arabic.

CHAPTER 3: The Syntax and Semantics of Adverbs in English

Introduction

In this chapter, I present an account of adverbs in the western linguistic tradition.

First, I discuss how traditional grammarians, such as Jackendoff 1972, consider adverbs

as adjunct modifiers and their reasoning behind that. In an attempt to explore the extent to

which adverb ordering and positioning is semantically and/or syntactically motivated, I

present the two most recent theories of adverbs, namely, Cinque's *syntactic-based*

Functional Hierarchy and Ernst's *semantic-based* Scope Theory. I conclude that both

theories are viable to account for adverbs and their ordering statements with certain

limitations to language specifics. Both theories are still under scrutiny as their

universality is investigated.

Modification and Adverbs

Over the last few decades, no argument has been presented to tackle modification

without referring to adverbs. An Adverb functions as a modifier, yet it is such a

controversial part of speech that seems to include whatever word that fails to meet the

morphological, syntactic and semantic criteria of other parts of speech. Morphologically,

adverbs are too derivative to pinpoint and capture. Syntactically, they could appear

anywhere in a sentence mysteriously radicalizing its interpretation through their

projections/scopes. Semantically, they could communicate and reference a variety of

meanings under Tense, Aspect and most importantly Mood. It is, however, known in the

generative grammar tradition that both syntax and semantics play a role in adverb

projection and distribution. In the hope of establishing a unified theory to elucidate such a

confusing and controversial class of words, most research has been conducted to explore the role that syntax and/or semantics play in adverb projection and distribution.

Despite the vast literature produced and research conducted, there is still so much controversy revolving around modification specifically regarding these mysterious *adjunct modifiers*. In fact, even using the term *adjunct modifiers* could create a controversy by itself, Ernst (2004, p. 7) avoids using *modifiers* to discuss adverbs and uses *adjuncts* and identify them *as non-arguments*. Chomsky (1995, p. 382) affirms that 'we still have no good phrase structure theory for such simple matters as attributive adjectives, relative clause and adjuncts of many different types.' The relationship of the adverbs to the rest of the constituents is at the core of the controversy. With their *ad-hoc* distribution and projection, so many arguments have been presented and all of them are still open for scrutiny.

Before I get to delve into the theories of adverbs, their classification, distribution and scope, it is crucial to set the distinction here between two commonly confused terms, 'adverbs' and 'adverbials'. While the former refers to a syntactic category, often considered a separate and distinct part of speech, the latter refers to phrases and clauses with an adverb-like function. As far as my research is concerned, both terms will be used interchangeably since, as discussed in chapter two, Arabic has a very blurry line between adverbs and adverbials. I will be adopting Ernst's (2004, p. 7) terminologies, 'adverbials' is a more generic term denoting function and they require 'a Fact-Event-Object' or 'a time interval for argument'; all adverbs are considered adverbials when it comes to function but it is not the case vice-versa. Additionally, both adverbials and adverbs are adjuncts requiring no arguments and assigning to thematic roles.

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The Adverb Controversy

As I previously mentioned, the relationship between adverbs and the other constituents, such as arguments, is at the core of the controversy. For sentence arguments, Van Gelderen (2013, p. 44) mentions that while all arguments are characterized by 'obligatoriness' and 'stricter word order', adverbials appear to be optional and distributionally free. Traditionalists, such as Jackendoff (1972), have long argued that adverbs and more generally adverbials are adjuncts due to these two-essential adjunct-like characteristics, a claim that was widely acceptable till Cinque's (1999) research. Jackendoff, like many other traditionalists, states that adverb classes cannot be 'interpreted' without specific semantic rules consistent with the specific syntactic constituent to which an adverb is attached. When an adverb fails to attach to a constituent, it is then 'uninterpretable' i.e. ungrammatical. Cinque (2004, p. 683) argues that adverbs should not be treated like 'accessory appendices' added to the sentence, but 'integral parts of it'. It is mainly their free-distribution and projection that have cost syntacticians years of research contributing to the controversy. This is clearly reflected in Delfitto's (2006, p. 103) 'adverbial syntax seems to lead to quite puzzling questions concerning the interplay between issues of placement and issues of movement.'

Ernst's (2001, p. 1) seems to summarize why such conflicting views have been accumulating over the years and why linguists have gravitated to some but not others. In his opinion, diverse classifications and conclusions have been reached for relying on syntax or semantics. Those who have tried to come up with 'an overall theory' have ended up encountering many puzzling questions and controversies. Adverbs can be semantically classified to many classes such as place, time, manner, quantity etc.

Morphologically, adverbs are of two types lexical and derived adverbs. Lexical adverbs are identical to many parts of speech such as those similar to adjectives (late, hard etc.), nouns (yesterday, tonight etc.) and prepositions (before, after etc.). Derived adverbs are adjective-derived adverbs with the addition of -ly suffix, (completely, randomly, slightly etc.). Delfitto (2000, p. 14) states that such a difficulty in classifying adverbs *morphologically* has incited syntacticians to investigate the structural placement of adverbs more heavily than their morphology. A number of classifications has emerged over the years, the most notable of them are Bellert's 1977, Cinque's 1999 and Ernst's 2002. I will dedicate the next few pages to discuss Cinque's then Ernst's.

Ambiguity and Adverb Placement

Whether adverbs are believed to be adjuncts/modifiers or specifiers projecting scopes of semantic content, their placement and their meaning have received so much scrutiny and a good amount of research on the parts of many linguists such as Cinque (1999-2004), Wilson and Saygin (2001), Ernst (2002), Nilsen (2003) and many others. Traditionally, S ⟶ NP VP and adverbs are attached to S or VP:

(39)   a.   *Slowly*, John has read the book.

                b.   John has *slowly* read the book.

                c.   John has read the book *slowly*.

The adverb placement in (1a, b & c) led traditional grammarians to believe that adverbs can *freely* adjoin themselves to S or VP without changing the meaning of the sentence. It seems that traditional grammarians have overlooked the fact that some

adverbs show unique ordering restrictions. This unique adverb ordering restriction is not predictable by the traditional review of adverbs and it has been the focal point of all the post-traditional studies. Here is an example from Cinque's 1999 data for Italian which shows that the negative adverb *mica = not* should follow the habitual adverb *solitamente = usually*:

(40)   a.   Alle due, Gianni non ha *solitmanete* mica mangiato, ancoa.

                 'At two, Gianni has usually not eaten yet.'

           b.   *Alle due, Gianni non ha mica solitamente mangiato, ancora.

                  'At two, Gianni has not usually eaten yet.'

                                     (Cinque 1999:4)

The same ordering restriction does appear in French as well:

(41)   a.   A deux heures, Gianni n'a *gènèralement pas* mange, encorè.

           b.   * A duex heures, Gianni n'a *pas gènèralement* mange, encorè.

                                     (Cinque 1999:5)

This adverb ordering is further expanded to account for not only two adverbs but also three adverbs. Additionally, such restriction is predictable as follows:

(42)   ADV1>ADV2>ADV3

   So

(43)   ADV1>ADV3

   And

(44)   *ADV3>ADV1 OR ADV2

In the next few pages, I discuss the development of Cinque's ordering (1999) to his

Functional Hierarchy (2004)

Alternative Hypotheses

Cinque (1999, p. 44) criticizes how the traditional adjunction restriction on

adverbs does not predict or account for adverb ordering. Between 1999 and 2004,

Cinque's adverb hypotheses went through different phases to account for different

languages and new semantic sets of adverbs. In Cinque's (1999, pp. 44-58), he began

with a pair-ordering of adverbs from Italian and French. Later he expanded his ordering

to show a primary evidence of universality based on data from English Norwegian,

Bosnian/Serbo-Croatian, Hebrew, Mandarin, Albanian and Malagasy. Despite the fact

that his ordering restriction is shown in terms of particular adverbs, yet these particular

adverbs are just representatives of wider semantic classes. Cinque (1999, p. 86) uses an

epistemic adverb *probably* to represent all the adverbs expressing 'necessary or possible

truths' such as *likely, presumably, supposedly* and so on. Cinque states that these adverb

ordering restrictions are not completely linear but *hierarchal*. Additionally, these

relations are not only precedence relations but also syntactic relations of hierarchy

including dominance and c-command.

Cinque (1999, p. 47) suggests the Multiple Spec Hypothesis as an alternative to

the adjunction theory proposed by traditional grammarians. The main drawback of this

alternative hypothesis is that it fails to predict the ordering restrictions. The hypothesis

advocates the fact that an adverb should only occupy a Spec position and the head can

have multiple specs. Adopting such a hypothesis does restrict adverb movements yet it

does not predict its ordering restrictions.

The AdvP-in-Spec Hypothesis is another hypothesis in which Cinque suggests that an AdvP occupies a unique specifier position of a functional head in the extended projection of V. Assuming the X' theory is correct as in (45):

(45)   XP

```
(45)         XP
            /  \
          ZP    X'
               /  \
             X0    YP
```
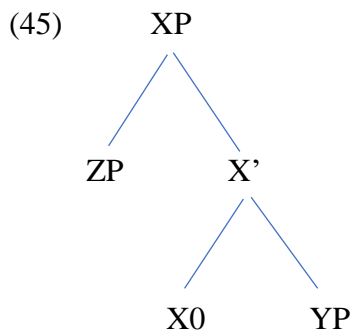
AdvPs sit in the specifier position of functional heads and head movement does not exist. Relying on data from Italian, he states that verbs appear to the right or the left of adverbs. The adverb pair will sit on both specifiers side of the head i.e. the verb. When some languages allow verb movements of a V, this movement would only affect the head position between the AdvPs. Consequently, this predicts the position and the ordering restrictions of Italian AdvPs in regards of Vs. Cinque (1999, p. 45) does state that such a hypothesis predicts the position and the ordering of adverbs for which the adjunction theory fails to account. Additionally, two adverbs can appear on the same side of the verb which occupies the head position. In this case, no head position will be between the two adverbs. Although Cinque (ibid, p. 49) provides data from Italian to support his claims and later expands it to include Romance languages, he overlooks other language families. In his later versions, he includes other languages which to some extent kindled linguists'

passion towards other languages to test his findings. In the next section, I briefly

introduce his latest version 'Functional Hierarchy'.

Functional Heads and Hierarchy

In 1999, Cinque started developing his functional hierarchy to address the

traditional adjunct theory shortcomings. In his latest version of the theory, he insists that

universally, AdvPs appear in specifiers positions of functional heads. Each functional

head carries a semantic value which specifies tense, aspect and mood. Additionally, there

is a close *semantic* relationship between the head and its specifier and this relationship is

based on semantic features checked between Spec and head. Through this, Cinque

establishes two hierarchies, syntactic and semantic i.e. structural and functional. He

claims combining these two hierarchies predicts AdvP positioning and ordering

restrictions. In the next section, I provide the data evidence that Cinque finds in different

languages to support his claim.

Evidence of Functional Heads

Since 1985, Baker's Mirror principle has been widely accepted to configure the

relation between morphology and syntax. The syntactic projection is reflected in the

morphological derivation. Cinque (1999)'s analysis recognizes this relation as the core

relation between functional heads in (46) and their AdvPs occupying the Spec position.

(46)   a.   'functional particles' or auxiliaries

         b.   'nonclosing' suffixes

         c.   'closing' suffixes.

These should serve as functional heads and AdvPs occupy their Spec positions. Taking

the Mirror principle in perspective, the suffixes that appear on the verb in a left-to-right linear order mirrors the top-to-bottom hierarchal order of heads in the clause. Thus, the following head-order is predicated Mood > T > Asp > V. (47) is an example from Spanish that shows the head-order with an example of AdvP (Asp) in Spanish:

(47) a. Esos   libros han   estado siendo leifos todo   el   año.

          those books have   been   being read   all   the   year.

          'Those books have been being read all year.'

                                        (Zagona 1988:5, via Cinque 1999:57, (20b))

      b.   T > Asp perfect > Asp progressive > Voice > V

                                        (Cinque 1999 :57, (21))

Adverbs and the head hierarchies are 'matched and refined' to introduce a version of universal hierarchy in which Cinque (1999) stresses the one-to-one relationship between adverb classes and functional heads. Adverbs check specific semantic features to appear in the Spec. of the functional head, thereby, the two hierarchies a lined perfectly. Consequently, Cinque proposes the following rigid adverb ordering and advocates its universality:

(48)

[*moodspeech-act* frankly [*moodevaulative* fortunately [*moodevidential* allegedly [*modepistemic* probably [*Tpast* once [*Tfuture* then [*modirrealis* perhaps [*modnecessity* necessarily [*modpossibility* possibly [*asphabitual* usually [*asprepetetive* again [*aspfreq(1)* often [*modvolitianal* intentionally [*aspcontinuative* still[*aspperfective(?)*. always [*aspretrospective* just [*aspproximative* soon [*aspdurative* briefly [*aspgenerative/progressive*. characteristically (?) [*aspprospecctive* almost [*aspsg.completive(1)* completely [*asppl.completive* tutto [*voice* well [*aspcelerative(11)* fast/early [*asprepetive(11)* again [*aspfreq(11)* often [*aspcompletive(11)* completely]]]]]]]]]]]]]

(Cinque 1999, p. 106, via Nilsen 2003, p.9)

In a nutshell, a very rigid-adverb-ordering was devised and later tested in a number of languages from different language families. The result is a proposal advocating that higher AdvPs are tied to the clause functional elements while lower AdvPs are tied to the verb, typically, occupying a pre-verbal position. Below is a sample of Cinque's ordering for Speech Act AdvPs:

(49)   Speech act > evaluative > evidential > epistemic > temporal > 'perhaps' > subject-oriented

(Cinque 1999, p. 11)

Under mood as a functional head/element, speech act adverbs appear as follows:

(50) mood-speechactP
  ╱   ╲
frankly   mood-speechact'
          ╱   ╲
   mood-speechact   mood-evaluativeP
                        |
                        …
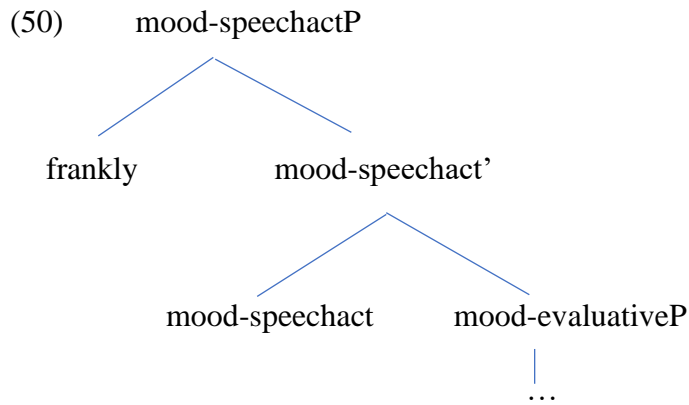
 In chapter 4, I will show case Cinque's full hierarchal proposal with examples and I will

test its applicability to Iraqi Arabic. Now, I will turn to another hypothesis introduced to

classify adverbs. While Cinque's hypothesis is more syntactic based, Ernst's is more

semantic-based.

Scope-based Theory

While Cinque argues for a syntactic based theory with semantic features to be

checked, Ernst calls for a far more important role for semantics when it comes to

adverbial syntax. In 2002, he introduced a semantic-driven and adjunct-based theory to

explain adverb ordering and positioning. In Ernst's opinion, adverbs are *semantically-*

induced to move and appear in a certain order. The rigid order that Cinque discusses is

explained in terms of semantic clashes among adverbs binding them to follow a specific

order and banning them from appearing in specific positions.

Ernst (2004, p. 92-93) claims that Cinque's syntactic approach in which adverbs

occupy the Spec of a functional head to be licensed is a bit too syntactic. While such a

system of *syntactic* features (Alexiadou 1997, Laenzlinger 1997, Cinque 1999) is devised

to restrict 'license relations', In Ernst's scope theory, adverbs are licensed by the *semantic* features of the head; these semantic features represent a scope. Inspired by Jackendoff's 1972 stressing the adjunction theory, Ernst argues that adverbs/adjuncts are classified based on whether and how they take scope. A scope is interpreted in terms of 'covert arguments' corresponding to 'few syntactic constituents. Additionally, licensing is largely dependent on fulfilling requirements of the scope. When these requirements are not fulfilled, adverbs/adjuncts become 'uninterpretable' for violating the principle of Full Interpretation suggested by Chomsky's work of 1986 and 1995.

As for adverb positioning, Ernst generally adopts the adjunction theory of adverb free positioning, yet he introduces some positioning requirements restricted 'partly by lexical entry and partly by compositional rule'. In scope-based grammar, adverb distribution is determined by semantic/scopal properties. Adverbs are classified into three groups based on their scope requirements, those with loose scope, those with moderate loose scope and those with tight scope. Within these classes, Ernst also outlines subclasses with tighter or looser requirements accounting for a range of adverbs. While Ernst's scope theory is much more restrictive than Cinque's functional hierarchy, yet it draws more considerable generalizations for a grammar theory that relies on no or few syntactic features. In the next section, I discuss the seven main arguments of the scope theory.

Arguments of the Scope Theory

Questioning the validity/applicability of the Feature Theory and Cinque's version of it to explain adverb ordering and positioning, Ernst (2004, p. 143) builds a seven-argument claim to back his Scope-based Theory. First, while the feature theory does not

account for or predicate the multiple positions an adverb can take or any other range of position it can take, the scope theory does explain the positions and the predications in terms of 'adjunct's semantic requirements' that need to be fulfilled. Second, the feature theory does not easily recognize the various wide range of positions functional, participating and predicational adjuncts can occupy, on the contrary, the scope theory easily predicts these positions through the semantics of the different adjuncts. These adjuncts do not solely rely on a separate functional head for each adjunct. Third, in the scope theory, adjunct ordering is restricted through 'semantic anomalies' heavily dependent on 'parallel cases of ordering between adverbs and heads and related sets of adjectives.' The adjunct position spectrum is explained in terms of semantic elements. Movement, in the Feature Theory, is not easily explained since it 'requires complications in movement theory.' Fourth, adjuncts with scope could have tight or loose scopes, movement is predicted on the basis how tight or loose scope is. Tight-scope-taking adjuncts have very strict positionings while loose-scope-taking adjuncts have freer positionings. The Feature Theory does not account for that and major additions are needed to explain movements and positionings. Fifth, since the Scope Theory classifies adjuncts to classes permissible to appear in one clause, semantic features play a major role in these co-occurrences of adjuncts belonging to these classes. Therefore, it is much easier to draw generalizations on co-occurrences with the Scope-Theory than the Feature theory, if any. Sixth, with no additions, coordinated adjuncts can easily be accounted for and interpreted in the Scope Theory. The Feature Theory relies on deletion and deletion conditions to account for coordinated adjuncts. Seventh, the six arguments of the Scope Theory work hand in hand to establish a set of validation rules for adjunct orderings and

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positionings. On the contrary, the Feature Theory relies on a set of 'unconnected mechanisms' which often complicates its predictions. Ernst conclusively argues that these seven arguments make the Scope Theory a much better option to deal with adjuncts.

Distribution of Adverbs

The Scope Theory tries to interpret the distribution of adverbs through relying on a number of independent, yet necessary principles. Namely, these are principles 'of phrase structures, of the feature composition of categories, of movement triggers, of weight, of mapping from syntactic structure to semantic representation' (ibid, p.439). To Ernst, adverbial's hierarchical position is the result of the interaction between the syntactic rules of composition and the requirements of semantics and lexicography.

Predicational Adverbs

Manner Adverbs

English is a head-initial language and considering the Directionality Principle, right-adjunction is allowed. Such a principle prevents adverbials from occurring between the verb and its nominal objects. When an adverb of manner adjoins to VP or PredP, the rule applies preventing it from occupying a pre-nominal object position, additionally, the rule prevents it from occurring any higher than PredP. Consequently, it occurs preverbal and does not go higher than auxiliary, negative and other heads (ibid, p. 443).

Measure Adverbs

Similar to manner adverbs, they adjoin to VP or PredP and they are tied to the 'core event' of the VP. They do occur in a pre-verbal position in head-initial languages such as English and again, they cannot go higher than PredP (ibid, p. 444).

Subject-Oriented Adverbs

These are of two types, agent-oriented and mental attitude, and they could adjoin to VP and PredP. They could adjoin to VP to reflect manner reading and they could adjoin to PredP with a clausal reading. Subject-oriented adverbs are never base-adjunction to TP because they have to reflect subject-oriented interpretation. The clausal reading is obligatory since these adverbs never appear lower in the TP (ibid, p. 444).

Speaker-Oriented Adverbs

Most of these adverbs fall into epistemic and evaluative subclasses. They usually adjoin higher than the aspectual auxiliaries unless the auxiliaries raise leaving the adverbs in a lower position. In the case of English, finite auxiliaries raise to have these adverbs below them, but with non-finite auxiliaries, these adverbs adjoin higher than them. Generally, evaluative adverbs adjoin left to the nonfinite and negation auxiliaries. Other adverb subclasses may adjoin to CP, VP or PredP relying on whether their 'lexical specifications permit' (ibid, p. 445).

Exocomparative Adverbs

Adverbs of this class come in a variety of positions and they reflect manner or clausal readings. They can also adjoin to similar nodes like those of subject-oriented or speaker-oriented adverbs (ibid, p. 445).

Domain Adverbs

In English, these are of two types: the means-domain adverbs and the pure-domain type. The former occupies the same position for manner adverbs because they are 'purely event-internal.' The latter has a unique distribution tied to 'a covert restriction on every predicate'. Because the specifications are interpreted through the context or

through various expressions, they could typically occur in a variety of positions within the clause (ibid, p. 445).

Functional Adverbials

Time-Related Adjuncts

The three types of time-related adjuncts, ' loc-time, duration and aspectual adverbs', require an event in the clause to which they are tied. Generally, the first two types are free to adjoin to the right or left of any functional head appearing anywhere in the clause, yet they cannot appear between subject and the verb. As for aspectual adverbs are a little more restricted as they have to agree semantically with tense and negation adverbs. Typically, these aspectual adverbs appear higher than other adverbials when appearing with auxiliary particularly verb *be* (ibid, p. 446).

Frequency Adjuncts

Frequency adverbs are mainly 'habitual/generics' and their distribution is not very different from time-related adverbials. They also require a clause to have an event with a functional head to adjoin to. When it comes to their semantics, they do not pose a semantic clash with auxiliaries and negation. Their occurrence is restricted since they require a clause with an extended time interval (ibid, p. 446).

Clausal Functional Adjuncts (and Related Adverbs)

These come in many different meanings such as 'purpose, causal, conditional, or concessive.' Their semantic requirements restrict their occurrence which should be above the VP. Additionally, their semantic scopes allow them to adjoin to any functional head to the left of the VP.

Participant PPs

These PPs cannot be interpreted without the compositional rule of the clausal event. These normally never occupy any VP positions since these positions are already occupied by the verb arguments. Whether they appear with verbs of arguments or 0-roles arguments, they tend to occupy Spec position. Moreover, they tend to stay lower than PredP because they are tied to the clausal internal event, i.e. any higher position requires an external event (ibid, p. 447).

Focusing and Clausal-Degrees Adverbs

Adverbs fall into this category are adverbs such as 'even, only, just, scarcely, hardly and almost' and other semantically-similar adverbs. These have very unique semantic restrictions which allow them to appear anywhere in the clause. In head-initial languages, they tend to appear between the subject and verb, the majority of VPs post semantic anomalies when combined with them.

Ernst's Adverbial Ranges

Based on the multiple principles reviewed by Ernst and the semantically-classified adverb classes he recognized, Ernst (2004, p. 448) introduced a graph to account for the occurrence of these adverb classes in relation to V and functional heads. Of course, his graph also accounts for 'Spec, in the case of Neg for some languages). He claims that his prediction is solely for hierarchical positions disregarding the Directionality principle and Weight Theory. It is worth mentioning here that the slash lines show the specified adjunct does not appear under the functional heads specified.

Ernsts' Main Claims

The general principles on which Ernst relies provide a solid ground for a semantic-based theory to predict adjunct distribution. These general but necessary principles leave the syntactic component of UG out of the adjunct syntax all together and factors such as lexicosemantic specifications are far more important in predicting adverbial occurrence. These predictions are not based on distinct adverbs, yet adverb classes and subclasses that share semantic and compositional features. This makes the newly-introduced theory more economic and more cross-linguistically applicable. In the next few paragraphs, I will give an account of Ernst's main findings (ibid p. 448).

'Nonpredicational adverbials are usually not rigidly ordered.' The semantic scope expressed by these adverbials does not usually clash with predicationals and/or other nonpredicationals. They can appear in many different orders without influencing the meaning of the clause. 'Predicational adverbs are mostly rigidly ordered.' In general, clausal predicationals always sit higher than manner adverbs. Both of these adverbs can show clausal or manner readings in specific circumstances. Within clausal predicationals, speaker-oriented with prepositions adjoin higher than event-taking subject oriented adverbs. A subclass of speaker-oriented adverbs, speech-act adverbs need a proposition to be satisfied in the predicate scope. Such a scope requirement pushes speech-act adverbs to sit higher than high adverbs such as epistemic and evaluative. When appearing together in a clause, they show a very rigid order. The least restricted class is exocomparative adverbs which have a very free distribution and can appear before or after the classes I highlighted in this section. As for 'Subjective' adverbs, their

distribution is very rigid in VO languages as they do not appear in a post verbal position. In OV languages, they can show up in a post verbal position.

Generally, whether a language is head-initial or head-final, post subject adjuncts show less rigidity than sentence-initial adjuncts. CP layer adverbials are required to 'take elements in Comp in their scope, and this often causes anomalies in semantic representation...'. Additionally, presubject position adverbs should be [+Disc] i.e. no light adverbs appear in such a position. Finally, subject-oriented adverbs adjoin to nodes below subjects since their base position is always under subjects in Spec TP.

Two readings always accompany predicational adverbs, higher positions normally have manner readings while lower positions normally have clausal ones. The higher position is usually tied to an event-internal modification which leans towards a manner reading. The lower position does not require such an event-internal modification, hence, leaning towards clausal readings.

The scope of adjuncts is determined by the distance they have to V. A wide scope suggests a bigger distance from V and vice-versa. Also, the relationship and nature of adjunct scope is tied to the order of the adjuncts and the auxiliaries in the clause. It is worth mentioning here that sometimes adjuncts occupy a position closer to V than auxiliaries. Whether adjuncts are close or far from V, their distribution heavily relies on the complexity of their lexical semantics, the more restrictive an adjunct's lexical semantics, the more restricted its distribution is. Additionally, such a restriction comes with a unique scope that could highly cause a semantic clash i.e. 'ungrammaticality' when other adjuncts' scopes exist in the clause (ibid, p. 450).

Adjuncts that are not event-internal such as location-time adjuncts and participant PPs cannot be placed lower than manner/measure adverbs. In head initial languages such as English, PPPs cannot be separate from VPs and they acquire a postverbal position. While they stay close to the V, they cannot appear in the 'AuxRange.'

Adjuncts are banned from occupying a position between V and O, or between subject and finite V. The Directionality principles keep V and O close to each other and inseparable. Additionally, the principles do not allow adjuncts to appear to the left to VP in VO languages where verbs raise to occupy Pred.

Ernst's general principles predict the order of adjuncts and the semantic clashes control their prediction. With these principles, the empiricality of the semantic theory is supported. When it comes to adjunct distribution, Ernst's semantic theory confirms the syntax-heavy claims suggested by other linguists mainly Cinque with his functional hierarchy. His findings propose that adjunct distribution specifically, this of adverbial adjuncts, is based on 'lexicosemantic specifications, principles of semantic composition (including FEO Calculus and the structural constraint on event-internal modification), Directionality Principle and Weight theory, all of which interact with phrase structure theory, familiar head and phrasal movement, and certain parameterizations to account for cross-linguistic variation (ibid, p. 452).'

It is worth mentioning here that adverbs in Romance and Germanic languages have had the lion's share of research and literature when researching projections and head movement. While adverbs are thought to have 'multiple base positions', nothing predicts that head left movement of an adverb when it appears in a postverbal position. The same is true when discussing 'boundaries based on adverbs with multiple position.'

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Summary

In this chapter, I summarize the linguistic tradition of adverbs/adverbials in English. Both syntax and semantics play a vital role in the distribution of adverbs. After the traditional adjunction view of adverbs had dominated the western linguistic tradition, Cinque came to challenge such a view and develop a functional hierarchy advocating a rigid ordering for adverbs. He argues that considering adverbs as adjuncts is inaccurate when studying adverbs in Italian and French. Additionally, he advocates that functional heads occupy head positions, while AdvPs occupy specifier positions. Adverbs check semantic features before occupying the Spec position of a specific functional head. First, he brought an adverb pair to suggest some ordering restriction in which A< B is acceptable, while B < A is not. His evidence examples were mainly from Italian and French, later he expanded his examples to account for English and other languages. Each adverb occupies a unique spec position that does not move. Although uneconomical, it is obvious that Cinque's functional hierarchy successfully predicts adverb ordering and restriction through listing all the adverbs in a language and their licensing relationships showing their specific positions in the syntactic tree.

Scope theory is another adverb ordering and restriction hypothesis that successfully predicts adverb ordering through semantic scopes. In Ernst's scope theory, adverbs have semantic scopes suggested by their lexical meaning and compositional rule. Ernst's scope-based theory is considered more semantically economical than Cinque's since each adverb represents a group of adverbs sharing semantic features and compositional properties with it. Adverbs are also classified based on how tight or loose their scopes are.

After reviewing two of the most acceptable theories elucidating adverbs and their positions in the syntactic tree, I turn to the empirical part of my research which encompasses testing Cinque's functional hierarchy. In the next chapter, I discuss Iraqi Arabic as one of the Arabic dialects spoken in Iraq, then I test how licensing relationships work in adverbs of Iraqi Arabic.

CHAPTER FOUR: Functional Hierarchy in Iraqi Arabic

Introduction

In this chapter, I revisit and summarize Cinque's (1999) ordering statement which showcases his adverb pairs. For each adverb pair, examples are shown in English, then translated to Iraqi Arabic. I adopt Erik Zyman's 2012 investigation and findings for the English applicability of Cinque's hierarchy. Once translated (if possible), I discuss whether the Iraqi Arabic adverb pairs display the rigid ordering suggested by Cinque commenting and concluding with the universality of his hierarchy. It is worth highlighting here that the translated adverb pairs have already been checked by Speakers/linguists of Iraqi Arabic before discussed. First, I will offer a brief discussion of Iraqi Arabic and how it is different from Modern Standard Arabic.

Iraqi Arabic

Iraqi Arabic or Mesopotamian Arabic is a variety of Arabic spoken in Iraq. The dialect is considered one of the dialects that is highly influenced by Aramaic which was the common language of old Mesopotamia. Additionally, the dialect today shows influences from Persian, Turkish, Kurdish and even Greek, due to the multiple invasions the land witnessed over the centuries. Evidence exists in lexical borrowings from many languages such as Aramaic, Akkadian, Persian and Turkish (Ownes 2000, p. 145)

Two sub-varieties exist in Iraqi Arabic, Gelet and Qeltu are very geographically distinct dialects. The names are derived from the sentence 'I said' which are radically different when pronounced in these two sub-varieties. As mentioned, Iraqis residing north of the Tigris speak Qeltu often called Maslawi, whereas those residing south of Euphrates speak Gelet, often referred to as Baghdadi Arabic (Muller-Kessler 2003).

As far as my translation, I adopt the Gelet dialect and its sound system. I make references to differences in translation wherever it is necessary for the sake of this research.

Testing Cinque's Hierarchy

On the basis of the adjunction's inadequate of adverb distribution and order, Cinque introduces his functional hierarchy. In his argument, AdvPs occupy the specifier positions, while functional heads occupy the head positions. The head position reflects a functional projection that is universally rigidly-ordered. AdvPs check semantic features in accordance with functions stated by the head, therefore, the two are in perfect alignment. Considering Chomsky's approach to mental grammar of which speakers of all languages have knowledge existing in their minds, I am investigating the acceptability of adverb(ial) distribution and ordering in the Iraqi Arabic native speaker's mind. The translated sentences with their acceptability in Iraqi Arabic are checked for accurate translation by native speakers/linguists of Iraqi Arabic. Such a method will allow me to show the acceptability of the translation and the adverb(ial) ordering. One final note, my advisor, Elly van Gelderen, has granted me her agreement to utilize my knowledge of Iraqi Arabic to translate these sentences.

Data and Method

I have divided this section into sub-sections, each subsection discusses Cinque's proposed and predicated adverb ordering statement. Of course, I briefly discuss the ordering in English briefly referencing to the ordering acceptability in English in Zyman's (2012) research findings, an asterisk is placed next to the English sentences that

native speakers of English may consider unacceptable/ungrammatical. Then, I translate and gloss the sentences in Iraqi Arabic and comment on their acceptability in Iraqi/Arabic as a native speaker of Iraqi Arabic. I have decided to keep my comments here very short as in a later section, I discuss the findings extensively referring back to the examples translated in the different subsections.

Functional Hierarchy

Mod speech act ° (*honestly*)>Mod evaluative° (*unfortunately*)

Based on Cinque's (1999:33) proposal, *honestly* has to precede *unfortunately*.

(51)　　a.　　Honestly I am unfortunately unable to help you.

　　　　b.　　*Unfortunately I am honestly unable to help you.

(ibid, p. 33)

(52)　　a.　　ib-sara_ha_　　ani　　li-suu'　　il-hadh　　maa　　a-gdar

　　　　　　in-honesty　　I　　for-bad　　the-luck　　NEG　　1-able.PRS

　　　　　　asaa'd-ak

　　　　　　help-you

　　　　　　'honestly, I am unfortunately unable to help you'

　　　　　　" بصراحة، اني لسوء الحظ ما اكدر اساعدك "

　　　　b.　　li-suu'　il-hadh　　ani　　ib-sara_ha_　　maa　　a-gdar　asaa'd-ak

　　　　　　for-bad　　the-luck　　I　　in-honesty　　NEG　1-able　help-you

　　　　　　'unfortunately, I am honestly unable to help you'

　　　　　　" لسوء الحظ اني بصراحة ما اكدر اساعدك "

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It looks like Cinque's ordering statement for *honestly>unfortunately* does not predict ordering in Iraqi/Arabic since both *honestly>unfortunately* and *unfortunately>honestly* are acceptable. Additionally, there is no difference in meaning with both orderings. In light of the previous example ordering, there is no evidence of predication.

Mod evaluative ° (*unfortunately*)>Mod evidential° (*allegedly*)

(53)   a.   Unfortunately, Ali allegedly stole your computer.

         b.   *Allegedly, Ali unfortunately stole your computer.

(54)   a.   li-suua   il-hadh   'ali   'alas-asas   baag   kumpyuuṭara-ak

                for-bad   the-luck   Ali   on-basis   stole.3SG   computer-your

                'unfortunately, Ali allegedly stole your computer.'

                " لسوء الحظ، علي على أساس باك كومبيوترك "

         b.   * 'alas-asas   'ali   li-suua   il-hadh   baag

                on-basis   Ali   for-bad   the-luck   stole.3SG

                kumpyuutara-ak

                computer-your

                'allegedly, Ali unfortunately stole your computer.'

                " على أساس، علي لسوء الحظ باك كومبيوترك "

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Iraqi Arabic does comply with Cinque's ordering proposal for this ordering statement. Comparing the two ordering statements, we could conclude that Mood speech act ° (*honestly*)> Mood evidential° (*allegedly*) should also be correct.

(55)   a.   *ib-saraħa 'ali 'ala-asaas   baag   kumpyuutara-ak

           in-honesty Ali   on-basis   stole.3SG   computer-your

           'honestly, Ali allegedly stole your computer.'

           " بصراحة، علي على أساس باك كومبيوترك "

However, I do think *honestly* could precede *allegedly* as in:

(56)   a.   Why doesn't Ahmed get along with Ali?

       b.   ib-saraha 'ali   'ala-asaas   baag   kumpyuṭara-ak

           in-honesty Ali   on-basis   stole.3SG   computer-your

           'honestly, Ali allegedly stole your computer.'

           " بصراحة، علي على أساس باك كومبيوترك "

(56b) can have a different interpretation as *honestly* is considered a speaker-oriented adverb.

Mod evidential ° (*allegedly*)>Mod epistemic° (*probably*)

Cinque (1999:33) claims that English showcases such an ordering statement in:

(57)   a.   Allegedly, Ali probably graduates in May.
       b.   *Probably, Ali allegedly graduates in May.

I think both ordering statements are grammatically well-formed in Iraqi Arabic.

(58)   a.   'ala-asaas   'ali   muhtamal   yi-tkharrraj   ib-ayyaar

on-basis   Ali   probably   3SG-gradute   in-may

'allegedly, Ali probably graduates in May'

" على أساس، علي محتمل يتخرج بأيار "

And

b.   muhtamal   'ali   'ala-asaas   yi-tkharraj   ib-ayyaar

probably   Ali   on-basis   3SG-gradute   in-may

'probably, Ali allegedly graduates in May'

" محتمل، علي على أساس يتخرج بأيار "

It looks like the ordering statement for Iraqi Arabic here is *Mood evidential* •
(allegedly)> OR <Mood epistemic• *(probably)*

Mod epistemic ° (*probably*)>T(Past)° (*once*)

Cinque (1999:33) states that such an adverb ordering statement is not rigid and

both orders are acceptable.

(59)   a.   Probably he once had a better opinion of us.

b.   Once he probably had a better opinion of us.

In Iraqi Arabic, both orders are acceptable as well:

(60)   a.   muhtamal   hua   fad   marra   kan   'inda   ahsan

probably   he   one   time   was.3SG   have.3SG   better

ra'i

opinion

'probably, he once had a better opinion.'

" محتمل هو فد مرة كان عنده أحسن رأي "

OR

b.   fad   marra   hua   muhtamal kan   'inda   ahsan

one   time   he   probably was.3SG have.3SG better

ra'i

opinion

'once, he probably had a better opinion.'

" فد مرة هو محتمل كان عنده أحسن رأي "

In Cinque's opinion, temporal adverbs such as *once* in this case are all base-generated in topic position and they could move high left of the periphery resulting in such a flexibility. If this happens, the move creates a structure of topic-comment and allows temporal adverbs to cross a comment adverb *probably* in this case with no violation of any rule. Such an ordering statement in Iraqi Arabic is predicated by Cinque's hierarchy.

T (Past)° (*Once*)>T(Future)° (*then*)

I don't think that the ordering statement in English cannot be predicted by Cinque's hierarchy.

(61)   a.   *Ali once was then in Iraq.

        b.   *Ali once will then be in Iraq.

I think the case is the same in Iraqi Arabic,

(62)   a.   *'ali   fad   marra   kan   ba'deen   bi-

Ali   one   time   was.3SG   then   in-

il'iraq

Iraq

'Ali once was then in Iraq.'

" علي فد مرة كان بعدين بالعراق "

        b.   *'ali   ba'deen   kan   fad   marra   bi-il-'iraq

Ali   then   was.3SG   one   time   in-the-Iraq

'Ali then was once in Iraq.'

" علي بعدين كان فد مرة بالعراق "

I think *once* as an adverb does not occur with present tense in Iraqi Arabic, yet it

occurs with past or future. On the other hand, *then* can appear with the past and the

present tense but not the future. Once and then never appear together.

T (Future)° (*then*)>Mod(irrealis)° (*perhaps*)

Cinque advocates the precedence of *then* over Mod(irrealis)° as in:

(63)   a.   Ali was then perhaps in the office.

        b.   *Ali was perhaps then in the office.

I do think (13b) is still correct and acceptable in English but let's turn to Iraqi Arabic:

(64)   a.   *'ali   kan   ba'den   yimkin   bi-il-

            Ali   was.3SG   then   perhaps   in-the-

            maktab

            office

            'Ali was then perhaps in the office.'

            " علي كان بعدين يمكن بالمكتب "

       b.   'ali   kan   yimkin   ba'den   bi-il-

            Ali   was.3SG   perhaps   then   in-the-

            maktab

            office

            'Ali was perhaps then in the office.'

            " علي كان يمكن بعدين بالمكتب "

I think (14b) is much more acceptable in Iraqi Arabic which contradicts Cinque's rigid ordering statement *then>perhaps.* In fact, what his hierarchy predicts is not grammatical in Iraqi Arabic.

Mod (epistemic)° (*probably*)>Mod(irrealis)° (*perhaps, [almost] certainly*)

    Cinque (1999: 181) suggests that his hierarchy predicts these ordering statements and he supports his proposal with the following:

(65)   a.   Probably he will perhaps try again.

            b.   *Perhaps he will probably try again.

In Iraqi Arabic, I think the two adverbs never appear consecutively:

(66)   a.   *muhtamal hua rah yimkin y-haawil   marraṭ il-

                  probably he will perhaps 3SG-try   time   an-

                  lukh

                  other

                  'probably he will perhaps try again.'

                  " محتمل هو رح يمكن يحاول مرة الخ"

            b.   * yimkin hua rah muhtamal y-haawil   marraṭ il-

                   perhaps he will probably 3SG-try   time   an-

                  lukh

                  other

                  'perhaps he will probably try again.'

                  " يمكن هو رح محتمل يحاول مرة الخ "

73

It looks like Iraqi Arabic contradicts Cinque's ordering statement, as *probably* and *perhaps* do not come together. As a native speaker of Iraqi Arabic, I think the meaning of these two adverbs are very similar and using both consecutively is redundant. I will turn now to *probably>* [*almost*] *certainly* ordering:

(67) a. *muhtamal hua raḥ bit-iatkiid y-aḥawil maraṭ il-

probably he will for-sure 3SG-try time an-

lukh

other

'probably he will certainly try again.'

" محتمل هو رح بالتأكيد يحاول مرة الخ "

b. * bit-iatkiid hua raḥ muhtamal y-aḥawil maraṭ il-

for-sure he will probably 3SG-try time an-

lukh

other

'certainly, he will probably try again.'

" بالتأكيد هو رح محتمل يحاول مرة الخ "

This ordering statement is not predicted by Cinque's proposal. In fact, these two adverbs do not come consecutively in Iraqi Arabic.

Mod(irrealis)° (*perhaps*)>Mod(necessity)° ([*not*] *necessarily*)

(68) a. They will perhaps necessarily be readmitted.

b. They will necessarily be admitted, because anything could happen.

74

Both ordering statements should be acceptable in English and Cinque hierarchy does not predict that.

(69) a. humma raḥ muḥtamal dharuuri y-inqabl-un marraṭ

    they will probably necessarily 3-admit-PL time

    il-lukh

    an-other

    'they will perhaps necessarily be admitted.'

    " هم رح محتمل ضروري ينقبلون مرة الخ "

(b.) *humma raḥ dharuuri muḥtamal y-inqabl-un maraṭ

    they will necessarily probably 3-admit-PL time

    il-lukh

    an-other

    'they will necessarily perhaps be admitted.'

    "هم رح ضروري محتمل ينقبلون مرة الخ"

As for Iraqi Arabic, it is compliant Cinque's hierarchy for this ordering statement. (19b) is ungrammatical and unacceptable. The case is the same with negation preceded by necessarily, as in:

(70) a. iz-zangiin   muhtamal   mu   dharuri   farhaan

          the-rich   perhaps   not   necessarily   happy

          'the rich perhaps aren't necessarily happy'

          " الزنكين محتمل مو ضروري فرحان "

     b. *iz-zangiin mu   dharuri   muhtamal   farhaan

          the-rich   not   necessarily   perhaps   happy

          'the rich are not necessarily perhaps happy'

          " الزنكين مو ضروري محتمل فرحان "

                                        (Cinque 1999. p. 89)

                                        (Zyman 2021, p. 36)

Such an ordering statement in Iraqi Arabic is also compliant with Cinque's

hierarchy.

Even if *necessarily* is preceded by a negation particle, it still sits lower than perhaps.

Mod(necessity)° ([*not*] *necessarily*)>Mod(possibility)° *possibly*)

According to Zyman's (2012) investigation, both orders are acceptable:

(71) a.   Ali necessarily will probably leave on time.

     b.   Ali probably will necessarily leave on time.

(72)   a.   'ali   dharuuri   ra<u>h</u>   mu<u>h</u>tamal   y-ruu<u>h</u>   '-al-

            Ali   necessarily   will   possibly   3-leave   on-the-

            wqit

            time

            'Ali necessarily will possibly leave on time.'

            "علي ضروري رح محتمل يروح عالوقت"

      b.   'ali   mu<u>h</u>tamal   ra<u>h</u>   dharuuri   y-ruu<u>h</u>   '-al-wqit

            Ali   possibly   will   necessarily   3-leave   on-the-time

            'Ali possibly will necessarily leave on time.'

            "علي محتمل رح ضروري يروح عالوقت"

Both ordering statements in Iraqi Arabic is compliant with Cinque's suggested order for English.

Mod(possibility)° (*possibly*)>Asp(habitual)° (*usually*)

The order is compliant with Cinque's hierarchy as in:

(73)   a.   Olivia possibly usually surfs on Sundays.

      b.   * Olivia usually possibly surfs on Sundays.

                            (Zyman 2021, p. 41)

In Iraqi Arabic:

(74)   a.   'ali   mu<u>h</u>tamal   'aadatan   y-ishrab

                Ali   possibly   usually   3SG-drink

              'Ali possibly usually drinks.'

" علي محتمل عادةً يشرب "

    b.   'ali   'aadatan   mu<u>h</u>tamal   y-ishrab

                Ali   usually   possibly   3SG-drink

              'Ali usually possibly drinks.'

" علي عادةً محتمل يشرب "

Both ordering statements are acceptable in Iraqi Arabic and it does not look like that Iraqi Arabic is compliant with Cinque's hierarchy.

Asp(habitual)° (*usually*)>Asp(repetitive)° (*again*)

Cinque (1999, p. 92) states that an adverb could occupy more than one position in the hierarchy as long as it is associated with different nodes. This applies to *again* which could appear in the F-structure: [Spec: Asp(repetitive(I)) ° (*again*)] and [Spec: Asp (repetitive (II)) ° (*again*)]. He advocates that repetition does not mean two different types of (*again*)s, instead, two different scopes that *again* could have into different positions. Such an interpretation could apply to any Asp(repetitive) adverbs such as often. Zyman 2012, p. 41) thinks that *again* throws a complication over Cinque's claim of the rigidity

of adverb positioning. After testing it with *usually* he finds out that English is not compliant with Cinque's claim because of (25):

(75)　　a.　　After Nicole has emerged from a bout of depression, she again1

　　　　　　any　given month, will usually2, by the end of any given night,

　　　　　　usually1 in　have

　　　　　　[[jumped for joy and then jumped for joy again2] many times.]

<div align="right">(Zyman 2021, p. 43)</div>

　　　　It looks like the ordering statement is complaint in Iraqi Arabic since (26a)

　　　　is

acceptable, while (26b) is not:

(76)　　a.　　'ali　　　'aadatan　　　marra　　thaanya　　　y-ishrab

　　　　　　Ali　　　usually　　　time　　again　　　3SG-drink

　　　　　　'Ali usually again drinks.'

" علي عادةً مرة ثانية يشرب "

　　　　b.　　*'ali　　marra　　thaanya　　　'aadatan　　　y-ishrab

　　　　　　Ali　　time　　again　　　　usually　　3SG-drink

　　　　　　'Ali again usually drinks.'

" علي مرة ثانية عادةً يشرب "

Asp(repetitive)° (*again*)>Asp(frequentative)° (*often*)

      Cinque notices two types of *again*, one quantifying over an event and another

      over the

process of that event. The first *again* should precede *often*, while the second could appear

before or after.

(77)   a.   Kyle again1 often1 [eats meat on Monday and then eats meat

                    again2 on Tuesday]

           b.   Kyle often1 again1 [eats meat on Monday and then eats meat

                    again2 on Tuesday]

                             (Zyman 2021, p. 44)

In Iraqi Arabic, it is too difficult to have three consecutive adverbs in such a sequence.

(78)   a.   *kayil   marra   thaanya   gaaliban   y-akul   laḥam yawm

                 Kyle   time   again   often   3SG-eat   meat day

                 ithanin

                 Monday

                 wa   ba'deen   y-akul   laḥam yawm   ithalathaa

                 and   then   3SG-eat   meat   day   tuesday

              'Kyle again1 often1 [eats meat on Monday and then eats meat

               again2 on Tuesday]'

            " كايل مرة ثانية غالباً ياكل لحم يوم الاثنين وبعدين ياكل لحم يوم الثلاثاء؟ "

Iraqi Arabic is not compliant with Cinque's ordering statement for *again>often*.

Asp(habitual)° (*usually*)>Asp(frequentative)° (*often*)

According to Zyman (2012, p. 46), Cinque's ordering statement for *usually>often* is not rigid at all in English and English accepts both *usually>often* and *often>usually*:

(79)   When Kristen moves to a new city,

a.   She usually will often, for any given book club that she joins,

usually not read the books.

b.   She often will usually, for any given book club that she joins,

usually not read the books.

(Zyman 2021, p. 47)

(80)   a.   'ali   'adatan   galilban   y-akul   la<u>h</u>am

Ali   usually   often   3SG-eat   meat

'Ali usually often eats meat.'

"علي عادةً غالباً ياكل لحم"

b.   *'ali   galilban   'adatan   y-akul   la<u>h</u>am

Ali   often   usually   3SG-eat   meat

'Ali often usually eats meat.'

"علي غالباً عادةً ياكل لحم"

81

Iraqi Arabic seems to be compliant with Cinque's ordering statement as usually>often is Acceptable but often>usually is not.

Asp(frequentative)° (*often*)>Mod(volitional)° (*intentionally*)

Similar to *again* SEC ---, Cinque differentiates two type *often* of a higher one quantifying the event and a lower one for the event process. Zyman (2012, p. 47)'s investigation does show that the higher *often* needs to precede *intentionally* and does not sit lower than it.

(81)   a.   Bill often intentionally [insults Cassie often].

          b.   *Bill intentionally often [insults Cassie often].

It looks like Iraqi Arabic accepts both orders and it is not compliant with Cinque's hierarchy:

(82)   a.   'ali   galilban   '-al-qastani   y-iglat

               Ali   often   with-the-intention   3SG-insult

               'ala   sami

               on   Sami

               'Ali often intentionally insults Sami.'

               " علي غالباً عالقسطني يغلط على سامي"

          b.   'ali   '-al-qastani   galilban   y-iglat

               Ali   with-the-intention   often   3SG-insult

               'ala   sami

on   Sami

'Ali intentionally often insults Sami.'

" علي عالقسطني غالباً يغلط على سامي "

Mod(volitional)° (*intentionally*)>Asp(celerativeI)° (*quickly*)

    Quickly and *rapidly* appear in two positions as well, higher for the event and lower for the process. Cinque (1999, p. 133) cited in Zyman (2012, p. 49) states that while fast shares the semantic properties of *quickly* and *rapidly*, it usually sits in the lower position.

(83)   a.   Sarah intentionally quickly raised her hand fast.

         b.   Sarah quickly intentionally raised her hand fast.

Let's turn to Iraqi Arabic:

(84)   a.   sara   '-al-qa<u>st</u>ani   ib-sur'a   ruf'a-t

        sarah with-the-intention   in-hurry   raised-3SG

        id-ha   bi-il-'ajal

        hand-her   in-the-hurry

        'Sarah intentionally quickly raised her hand fast.'

        " سارة عالقسطني بصراحة رفعت ايدها بالعجل "

        b.   sara   ıb-sur'a   '-al-qa<u>st</u>ani   ruf'a-t

        sarah   in-hurry   with-the-intention   raised-3SG

        id-ha   bi-il-'ajal

hand-her in-the-hurry

'Sarah quickly intentionally raised her hand fast.'

" سارة بالعجل عالقسطني رفعت ايدها بسرعة "

Both ordering statements are acceptable in Iraqi Arabic and it is not compliant with Cinque's hierarchy. As for the lower adverb *fast*, it is not as rigid as English and the translated adverb for *fast* in Iraqi Arabic, can appear higher.

Asp(celerative)° (*quickly*)>T(Anterior)° (*already*)

According to Cinque' (1999, p. 95), subject-oriented adverbs such as quickly in this case should always precede anterior adverbs such as already. Zeeman (2012, p. 51) does not agree and suggests that in English, the order is not as rigid as Cinque proposes:

(85)   a.   *Matt had quickly already eaten the cake.

        b.   Matt had already quickly eaten the cake.

However, (85b) could be interpreted as:

(86)   Matt had already eaten the apple and he did that quickly.

The last sentence does break Cinque's as it shows an order of already>quickly. In Iraqi Arabic, the case is the same where already>quickly is the acceptable order which is not predicted by Cinque's hierarchy.

(87)   a.   *mat   ib-sur'a   asaasan   akal   il-keek

                mat   in-a hurry   already   ate.3SG   the-cake

'Mat had quickly already eaten the cake.'

" مات بسرعة اساساً اكل الكيك "

b.   mat   asaasan   ib-sur'a   akal   il-keek

mat   already   in-a hurry   ate.3SG   the-cake

'Mat had already quickly eaten the cake.'

" مات اساساً بسرعة اكل الكيك "

Another option in Iraqi Arabic is to place quickly way lower as it is a process adverb, as
in:

(88)   mat   asaasan   akal   il-keek   ib-sur'a

mat   already   ate.3SG   the-cake   in-a hurry

'Mat had already eaten the cake quickly.'

" مات اساساً اكل الكيك بسرعة"

T(Anterior)° (*already*)>Asp(terminative)° (*no longer*)

Cinque (1999:181) claims that *already* should precede *no longer* and the other
way around results in an unacceptable adverb ordering:

(89)   a.   John already no longer wins all his games.

c.   *John no longer already wins all his games.

Zyman (2012, p. 53) does not agree with Cinque's prediction and states that the
following sentence is still acceptable in English

(90)   Thanks to the wonders of time travel and Brad's diabolical scheme, Carol

has no Longer already finished her homework.   (ibid, p. 53)

Iraqi Arabic looks like that it is compliant with Cinque's predication as *no longer*

> *already* is not an acceptable order.

(41)   a.   'ali   asaasan   mu-ba'da   y-fuuz

Ali   already   no-longer   3SG-win

'Ali already no longer wins.'

" علي اساساً مو بعده يفوز "

b.   *'ali   mu-ba'da   asaasan   y-fuuz

Ali   no-longer   already   3SG-win

'Ali no longer already wins.'

" على مو بعده اساساً يفوز "

Asp(terminative)° (*no longer*)>Asp(continuative)° (*still*)

Cinque (1999, p. 95) suggests that these two adverbs should have to distinct

functional heads which is the case of Italian:

(91)   a.   ?Arrabbiato con   me, non lo sarai   piu   ancora,

angry   with   me not it you.will.be   more   still

spero!

I.hope

'Angry with me, you will no longer still be, I hope!'

86

b.   *Arrabbiato con me, non lo sarai   ancora   piu,

        angry   with me not it you.will.be still   more

        spero!

        I.hope

He states that the case should be same in English, yet Manninen (2005) cited in Zyman (2012, p. 54) states that it is better to link both adverbs to one functional head. If that is the case in English, they should be interchangeable with no difference in meaning.

(92)   a.   Well, I hope you're no longer still mad at me!

         b.   Well, I hope you're still no longer mat at me!

Zyman proposes no difference in meaning between (42a) and (42b). Iraqi Arabic is complaint with Cinque's ordering statement and only one order (43a) is acceptable in Iraqi Arabic:

(93)   a.   'ali   mu-ba'da   liihassa   y-fuuz

                 Ali   no-longer   still   3SG-win

                 'Ali no longer still wins.'

                 " علي مو بعده ليهسة يفوز "

         b.   * 'ali   liihassa   mu-ba'da   y-fuuz

                 Ali   still   no longer   3SG-win

87

'Ali still no longer wins.'

" علي ليهسة مو بعده يفوز "

Asp(continuative)° (*still*)>Asp(perfective)° (*always*)

Zyman (2012, p. 56) states that English is not compliant with Cinque's ordering statement. Cinque does suggest (1999, p. 169) that *sempre* 'always in Italian' could appear in two positions, higher for the event and lower for the process, yet the case does not seem to be the case in English.

(94)   a.   Eliza still always roots for the Yankees.

        b.   After breaking up with a girl, Chad always still loves her.

Iraqi Arabic is compliant with Cinque's ordering as still>always is the only acceptable ordering statement and the other way around is not.

(95)   a.   'ali   lihasa   daiman   y-l'ab   tooba

             Ali   still   always   3SG-play   football

             'Ali still always plays football.'

             "علي ليهسة دائماً يلعب طوبة"

        b.   * 'ali   daiman   lihasa   y-l'ab   tooba

             Ali   always   still   3SG-play   football

             'Ali always still plays football.'

             " علي دائماً ليهسة يلعب طوبة "

Asp(perfective)° (*always*)>Asp(retrospective)° (*just*)

Zyman (2012, p. 56) claims that English is compliant with such an ordering statement:

(96) a. Whenever I go over to Jessica's, she's always just finished some

    construction project.

   b. Whenever I go over to Jessica's, she's just always finished some

    construction project.

Iraqi Arabic does not look like to be compliant with this ordering statement, in fact, always and just never appear together in Iraqi Arabic. I think both of them belong to one functional head and one or the other should appear, but not both.

(97) a. *'ali daiman hastawwa shirab gahwa

    Ali always just   drank.3SG coffee

    'Ali always just drank coffee'

    " علي دائماً هستوه شرب كهوة"

   b. *'ali hastawwa daiman shirab   gahwa

    Ali just always drank.3SG coffee

    'Ali just always drank coffee'

    " علي هستوة دائماً شرب كهوة "

Asp(retrospective)° (*just*)>Asp(proximative)° (*soon*)

Zyman (2012, p. 57) states that the ordering statement does seem incorrect. Zyman suggests having a focus phrase as in (48a & b) to have the order be acceptable in English.

(98)   a.   I can't believe it! I just fulfilled a promise soon relative to when I made it!

            b.   I can't believe it! I just fulfilled a promise soon [relative to when I made it] (, rather than [relative to some other point])!

Additionally, the other way around is also acceptable if future tense is available as in:

(99)   I will soon have just gone to bed.

In Iraqi Arabic, the ordering statement represents a semantic anomaly as just and soon never appear together.

(100)   a.   * 'ali   hastawa fad-shwaya rah y-ruh

                  Ali   just   soon   will 3SG-go

                  'Ali just soon will go.'

                  "علي هستوة فد شوية رح يروح"

            b.   * 'ali   fad-shwaya   hastawa   rah   y-ruh

                  Ali   soon   just   will   3SG-go

                  'Ali soon just will go.'

                  "علي فد شوية هستوة رح يروح"

90

Asp(proximative)° (*soon*)>Asp(durative)° (*briefly*)

Cinque is correct with such an ordering when it comes to English. English does show an order of soon>briefly:

(101)   a.   I will soon briefly tell you my life story.

b.   *I will briefly soon tell you my life story.

Iraqi Arabic does not seem to be compliant with such ordering, as both *soon>briefly* and *briefly>soon* are both acceptable.

(102)   a.   'ali   fad-shwaya   bikh-ti<u>s</u>aar   rah   y-hchi-na   qu<u>s</u>a

Ali   soon   in-brief   will   3SG-tell-us   story

'Ali soon briefly will tell us a story.'

" علي فد شوية باختصار رح يحجينه قصة"

b.   'ali   bikh-ti<u>s</u>ar   fad-shwaya   rah   y-htshina

Ali   in-brief   soon   will   3SG-tell-us

qu<u>s</u>a

story

'Ali briefly soon will tell us a story.'

" علي باختصار فد شوية رح يحجينه قصة "

Asp(durative)° (*briefly*)>Asp(generic/progressive) ° (*characteristically*)

Zyman (2012, p. 58) criticizes Cinque regarding this ordering. As Zyman recognizes two types of *briefly* that appears in English, a higher one and a lower one. The different tests that Zeeman ran to test the ordering proves that English is not compliant as a higher *briefly* could comply with the order, yet a lower *briefly* couldn't.

(103)   Lola briefly characteristically introduced herself briefly before speaking,

            but now This behavior is no longer characteristic of her.

                                                                      (ibid, p. 60)

As for Iraqi Arabic, I looked at a higher *briefly* as I couldn't find a way to have an acceptable translation for a lower *briefly*. When tested the order, Iraqi Arabic is compliant and *briefly>characteristically* is acceptable.

(104)   a.   'ali   bikh-ti̱sar   khu̱su̱san   rah   y-htshi-na   qu̱sa

                  Ali   in-brief   characteristically will   3SG-tell-us   story

                  'Ali briefly characteristically will tell us a story.'

                  " علي باختصار خصوصاً رح يحجينه قصة"

          b.   *'ali   khu̱su̱san   bikh-ti̱sar   rah   y-ht̲shi-na

                  Ali   characteristically in-brief   will   3SG-tell-us.

                  qusa

                  story

                                        92

'Ali characteristically briefly will tell us a story.'

" علي خصوصاً باختصار رح يحجينه قصة"

Asp(generic/progressive) ° (*characteristically*)>Asp(prospective) ° (*almost*)

For this ordering statement, Zyman (2012, p. 61) does propose that English is in full compliance. As in:

(105) a. When his parents get home, Scott characteristically has almost finished his homework.

  b. *When his parents get home, Scott almost has characteristically finished his homework.

Zyman (2012, p. 61) states that *characteristically* is not a very common to use and the case is the same in Iraqi Arabic. Additionally, to have *characteristically* follow or precede another adverb is rare.

(106) a. * 'ali khusuusan taqriban rah y-htshi-na

    Ali characteristically almost will 3SG-tell-us.

   qusa

   story

   'Ali characteristically almost will tell us a story.'

   " علي خصوصاً تقريباً رح يحجينه قصة"

b.   'ali   taqriban   khuṣuuṣan   rah   y-htshi-na   quṣa

      Ali   almost   characteristically   will   3-tell -us   story

'Ali almost characteristically will tell us a story.'

" علي تقريباً خصوصاً رح يحجينه قصة "

Asp(prospective) ° (*almost*)>Aspsg(completive) ° (*completely*)

This ordering statement is applicable to English as both almost>completely and completely>almost are both correct.

(107)   a.   The army had almost been completely defeated

          b.   The army had completely been almost defeated.

                                                              (Zyman 2012, p. 61)

The case is the same in Iraqi Arabic, both orders are acceptable.

(108)   a.   'ali   taqriban   khalaṣ   raḥ   y-fuuz

                Ali   almost   completely   will   3SG-win

                'Ali almost completely will win.'

                " علي تقريباً خلص رح يفوز "

          b.   'ali   khalaṣ   taqriban   raḥ   y-fuuz

                Ali   completely   almost   will   3SG-win

                 'Ali completely almost will win.'

                " علي خلص تقريباً رح يفوز "

94

Aspsg(completive)° (*completely*)>Voice° (*well*)

Zyman (2012, p. 62) explains the difficulty he faces when testing this ordering statement in English. The difficulty comes from the fact that English does not have a word similar to the Italian word *otto* 'everything' sitting higher than the adverb *completely*. Consequently, Asp (completive) can't be tested in English. On the other hand, Cinque suggested two positions for two different (*completely)*s but they can't appear together at the same time, as in:

(109)   a.   John *completely* forgot her instructions *completely*.

Zyman (2012, p.64) does provide sentences in English with completely>well and well> completely. He does not comment on the acceptability in English.

(110)   a.   Megan [solved the problem completely] well.

         b.   A: Megan solved the problem well.

               B: Did she solve it well completely, or only partially?

                                                              (ibid)

Iraqi Arabic is similar to English as it does not have a word like that of Italian sitting higher than the argument.

Voice° (*well*))>Asp (celerative II)° (*fast/early*)

  To Cinque (1999) all these adverbs sit lower in a clause, obligatorily lower than the VP. Zyman (2012, p. 64) finds out that English is not as rigid when it comes to this ordering statement, i.e. *well>fast/early* and *fast/early>fast* are both acceptable.

(111) a. Alice can [vp paint pictures] well fast.

   b. Alice can [vp paint pictures] fast well.

(112) a. Most of the kids do their homework poorly the first time around and only do it well rather late, but Sean [vp does his homework] well early.

   b. Sean [vp plans for things] early well.

  The case in the same in Iraqi Arabic seems to be compliant with Cinque's ordering statement, all these adverbs sit lower in the clause. The ordering statement is rigid:

(113) a. 'ali y-rsim   zen   ibsur'a

     Ali 3SG-drew   well   fast

     'Ali draws well fast.'

     " علي يرسم زين بسرعة "

   b. *'ali y-rsim   ibsur'a zen

     Ali 3-drew   fast   well

'Ali draws fast well'

" علي يرسم بسرعة زين "

In (113), *fast* can be exchanged for *early* and the same rigid ordering statement can be applied.

(celerative II)° (*fast/early*)>Asp (repetitive II)° (*again*)

Cinque (1999) highlights that 2 types of *again* s exist in English, a higher one for the event and a lower one for the process. If that is the case, Zyman (2012, p. 66) suggests that a sentence like (64) should be acceptable. Such a sentence makes English non-compliant with this ordering statement.

(114)   Jack again has [dropped his pen and then again [vp dropped his pen]].

Adding fast or early in such a sentence could again precede or follow, the case seems to be the same in Iraqi Arabic:

(115)   a.   'ali   wagga'   il-qalam   marrat-ilukh

               Ali   dropped.3SG   the-pen   time-another

               ıbsur'a

               fast

               'Ali dropped the pen again fast.'

               " علي وكع القلم مرة الخ بسرعة"

          b.   'ali   waga'   il-qalam   ıbsur'a   marat-

               Ali   dropped.3SG   the-pen   fast   time-

97

ilukh

another

   'Ali dropped the pen fast again.'

       " علي وكع القلم بسرعة مرة الخ"

Asp (repetitive II) ° (*again*)>Asp (frequentative II) ° (*often*)

    Zyman (2012, p. 67) does not see the ordering statement of again>often is acceptable in English in any way. Cinque does realize that often could occupy two different positions in English lower and higher one. English is non-complaint with Cinque's hierarchy because of a sentence like (66):

(116)   a.   Mike **again often**, having gone to the beach often one year, [goes to the beach **often again**] the next year.

    In Iraqi Arabic, I will test the lower adverbs as most adverb(ial)s in Arabic/Iraqi Arabic appear sentence finally:

(117)   a.   *'ali   y-waga'   il-qalam   marat-ilukh   galiban

               Ali   3SG-drop   the-pen   time-another   often

               'Ali drops the pen again often.'

        " علي يوكع القلم مرة الخ غالباً "

        b.   *'ali   y-waga'   il-qalam   galiban   marat-

	Ali	3SG-drop	the-pen	often	time-
ilukh
another

'Ali dropped the pen often again.'

" علي يوكع القلم غالباً مرة الخ "

Both ordering statements are not acceptable and not predicted by Cinque's hierarchy. Asp (frequentative II) ° (*often*)>Asp (completive II) ° (*completely*) This ordering statement cannot be tested inn Iraqi Arabic for the reasons highlighted earlier.

Domain Adverbs>Mod (speech act) ° (*honestly*)

Delfitto (2006, p. 90) and Zyman (2012, p. 69) suggest that the 'appropriateness' of a given speech act is checked with a domain adverb generated in 'a left-peripheral topic position.' It is for this reason, Cinque overlooks all domain adverbs in his 1999's hierarchy. He does provide some ordering rigidity within domain adverbs themselves in Italian such as a speech act adverb- *francamente* 'frankly should be preceded by a domain adverb-*politicamente* 'politically'. I have some of the 'left-peripheral topic position' adverbs in Iraqi Arabic to test if they could still follow a rigid order. It is worth-highlighting that some of these adverbs get semantically added to the verb such as *evidentially* to be used as *jðˤhar* 'seem'. I have selected three adverbs that could be translated to Iraqi Arabic as adverbs: *honestly* 'ib-saraħa', *wisely* 'ib-'aqlanja' and *now* 'hasa'

(118)   a.   ib-ṣaraha   'ali   ib-'aqlaaniyya   rad

             in-honesty   Ali   in-wisdom   replied.3SG

             'Honestly Ali wisely replied.'

"بصراحة، علي بعقلانية رد"

   b.   *ib-'aqlaaniyya   'ali ib-ṣaraha   rad

             in-wisdeom.   Ali   in-honestly replied.3SG

             'Wisely Ali honestly replied.'

" بعقلانية، علي بصراحة رد "

As for now 'hasa', since it is a temporal adverb, it is distributionally free.

(119)   (hasa) ib-ṣaraha (hasa) 'ali (hasa) ib-'aqlanya rad

                 now   in-honesty now   Ali now   in-wisdom replied.3SG.

                 (hasa)

                 now

                 '(Now) honestly (now) Ali (now) wisely replied (now).'

" (هسة) بصراحة (هسة) علي (هسة) بعقلانية رد"

100

Conclusion

I have summarized the findings in the table below:

	Adverb ordering statement	**predication**
a	Mod speech act ° (*honestly*)>Mod evaluative° (*unfortunately*)	x
b	Mod evaluative ° (*unfortunately*)>Mod evidential° (*allegedly*)	y
c	Mod evidential ° (*allegedly*)>Mod epistemic° (*probably*)	x
d	Mod epistemic ° (*probably*)>T(Past)° (*once*)	x
e	T (Past)° (*Once*)>T(Future)° (*then*)	NA
f	T (Future)° (*then*)>Mod(irrealis)° (*perhaps*)	x
i	Mod (epistemic)° (*probably*)>Mod(irrealis)° (*perhaps,* [*almost*] *certainly*)	x
j	Mod(irrealis)° (*perhaps*)>Mod(necessity)° ([*not*] *necessarily*)	y
k	Mod(necessity)° ([*not*] *necessarily*)>Mod(possibility)° *possibly*)	y
l	Mod(possibility)° (*possibly*)>Asp(habitual)° (*usually*)	x
m	Asp(habitual)° (*usually*)>Asp(repetitive)° (*again*)	y
n	Asp(repetitive)° (*again*)>Asp(frequentative)° (*often*)	x
o	Asp(habitual)° (*usually*)>Asp(frequentative)° (*often*)	y
p	Asp(frequentative)° (*often*)>Mod(volitional)° (*intentionally*)	x

q	Mod(volitional)° (*intentionally*)>Asp(celerativeI)° (*quickly*)	x
r	Asp(celerative)° (*quickly*)>T(Anterior)° (*already*)	x
s	T(Anterior)° (*already*)>Asp(terminative)° (*no longer*)	y
t	Asp(terminative)° (*no longer*)>Asp(continuative)° (*still*)	y
v	Asp(continuative)° (*still*)>Asp(perfective)° (*always*)	y
w	Asp(perfective)° (*always*)>Asp(retrospective)° (*just*)	x
x	Asp(retrospective)° (*just*)>Asp(proximative)° (*soon*)	NA
y	Asp(proximative)° (*soon*)>Asp(durative)° (*briefly*)	x
z	Asp(durative)° (*briefly*)>Asp(generic/progressive) ° (*characteristically*)	y
aa	Asp(generic/progressive) ° (*characteristically*)>Asp(prospective) ° (*almost*)	x
bb	Asp(prospective) ° (*almost*)>Aspsg(completive) ° (*completely*)	x
cc	Aspsg(completive)° (*completely*)>Voice° (*well*)	NA
dd	Voice° (*well*))>Asp (celerative II)° (*fast/early*)	y

ee	(celerative II)° (*fast/early*)>Asp (repetitive II)° (*again*)	x
ff	Asp (repetitive II) ° (*again*)>Asp (frequentative II) ° (*often*)	x
gg	Domain Adverbs>Mod (speech act) ° (*honestly*)	x

Y= Predictable by Cinque's hierarchy

X= Not predictable

NA= Sequence does not exist in Iraqi Arabic

Table 2. Empirical Findings of Adverb(ial)s in Iraqi Arabic

Discussion

While some adverbs in Iraqi Arabic do show ordering restrictions compliant with

what is proposed in Cinque's hierarchy, others fail to do so. It does not look like that

a certain class of adverbs is non-compliant. It seems that adverbs of different

functional heads are non-compliant. Of course, on the surface structure, it is much

easier for adverbs to behave more like adjuncts as Arabic is not a word-order

language. Functional heads of Mood, Aspect and Tense can appear anywhere in the

sentence and their Spec.(s) i.e. adverbs can follow. Additionally, on the deep

structure, another reason for such inaccuracy is reflected in the fact that some

adverbs can attach to different constituents in the syntactic tree. When they attach to

different constituents, they become relatively less rigid in their ordering. Zyman

(2012:72) highlights this fact after researching English adverbs that do not comply

with Cinque's hierarchy. According to Zyman (2012), Cinque, himself, cites many

researchers advocating how some adverbs such as focus-sensitive adverbs show less

ordering restriction than others. Cinque also suggests that some adverbs can appear

in multiple positions such as *again* which could appear higher or lower. A couple of

solution can be offered here, one either two completely different adverbs with the

same meaning exist (higher and lower), two certain adverbs can attach to different

constituents/functional heads which could appear in different positions. The

examples below show how *only* can attach to multiple constituents:

(120)   a.   faqaṭ/bas   'ali   <u>h</u>al   faqaṭ/bas   al-mushkila

           only   Ali   solved.3SG   only   the-problem

           'only, Ali solved only the problem'

           " فقط/بس علي حل فقط/بس المشكلة "

         b.   'ali   faqaṭ/bas   <u>h</u>al   al-mushkila

           Ali   only   solved.3SG   the-problem

           'Ali only solved the problem'

           " علي فقط/بس حل المشكلة "

         d.   'ali   <u>h</u>al   al-mushkila   faqaṭ/bas   b-il-kumpyuutar

           Ali   solved.3SG   the-problem   only   with-the-computer

           'Ali solved the problem only with the computer'

           " علي حل المشكلة فقط/بس بالكمبيوتر "

In (120 a, b &c), I adopted *faqaṭ/bas* as *only*, just because my two linguist translation checkers did not agree over one translation. I, as a native speaker of Iraqi Arabic, lean towards *bas*, but I decided to use both. I think that it is probably a dialectal or idiolectal difference. Anyway, in (120a) *faqat/bas* is attached to the DPs *Ali & the problem*, in (120b), it is attached to the VP *solved*, and in (120c), it is attached to the PP *with the computer*. If that is the case, I can assume: one, all these adverbs that do not comply can behave like only i.e attach to non-spinal constituents, two, some of these adverbs can appear higher or lower similar to *again* in the examples shown in (65-67). Both one and two make Cinque's hierarchy valid as it predicts the ordering statement for adverbs attached to spinal constituents only. By the same token, adverbs such as *often* in (n, o & p) in the table above are all base-generated but they could attach to non-spinal constituents. Their attachment to non-spinal constituents results in 2 positions for often which Cinque identifies as often 1 and often 2 as in (48). The case is not unique and it could be applied to all other adverbs non-compliant with the hierarchy.

The question then, what if two adverbs are available? in Italian, Cinque (1999, p. 32) identifies other adverbs that do not obey his hierarchy. Adverbs such as *probabilmante (probably)* should precede *gia (already)* and the case is the same for *piu (more)* and *forse (perhaps)*.

(121) a. Lo   avra   gia   detto [probablimante   a

          it(DO   will.have   already said   probably   to

          tutti]

everyone

'He will have already said that probably to everybody.'

b.   Non   legge   piu   romanza [forse proprio   per   questo]

    not   reads   more   novels [perhaps just   because of this]

'He no longer reads novels perhaps precisely for this reason.'

((Cinque, 1999 p. 32) cited in Zyman, 2012 p. 73)

According to Zyman (2012, p. 74), these examples only seemingly do not comply with Cinque's orders as *forse* and *probablimante* are not part of the same clause. In other words, a closer look will show that these two adverbs are in fact attached to a PP and other constituents that are not part of the spine of the main clause. Zyman calls these 'non-spinal constituents' such as nominals and PPs. I translated these two sentences to see if that is the case in Iraqi Arabic.

(122)   a.   huwa raḥ   y-kuun   asaasan   qaal   haaya

    he   will   3SG-be.PRS   already   say.3SG.PRF   that

    muḥtamal   li-lkul

    probably   to-everybody

'he will have said that probably to everybody.'

" هو رح يكون اساساً كال هاية محتمل للكل "

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b.   huwa ba‹da ma yaqra   riwayat mu<u>h</u>tamal bidhabut

he   longer no 3SG-read   novels probably precisely

il-hatha   is-sabab

for-this   the-reason

'He no longer reads novels perhaps precisely for this reason.'

" هو بعده ما يقره روايات محتمل بالضبط الهذا السبب "

It does look like that Cinque's hierarchy is valid if the two adverbs are part of the same F-structure. In all my translated examples of Iraqi Arabic, I did use the adverb pairs in the same clause and the same non-accurate results were discovered. Conclusively, I think Cinque's functional hierarchy does predict some adverb ordering in Iraqi Arabic with restrictions due to language specifics.

CHAPTER 5: CONCLUSION

In this final chapter, I briefly review the main points of this dissertation and present an account of the main research findings on Adverb(ial)s generally in Modern Standard Arabic, but specifically and most importantly in Iraqi Arabic. Additionally, I revisit some of the methodological challenges I came across and how I overcame them. Finally, I recommend some suggestions for future research.

Summary of the Chapters

In Chapter 1, I presented the topic and the purpose of the study. I highlighted the most relevant research that was done in regards of adverbs in English and Arabic to show where my dissertation research fits in the field. I briefly went over Jackendoff's 1972 work which considers adverbs as modifiers with free distribution. Although the adjunction view of adverbs dominated the western linguistic tradition for decades, the calls for a more comprehensive theory to account for modifiers grew over the years and more research was needed to investigate adverbs among other modifiers. Such calls are reflected in the work of Chomsky's work which specifically suggests the need for clear and comprehensive phrase structure rules to account for modifiers such as adverbs. After multiple attempts to challenge the adjunction theory, Cinque and Ernst introduced their theories to offer a different perspective on adverbs and their orders and positions. I briefly set the difference between the two theories despite their similar goal i.e. to find a comprehensive theory to predict adverb orderings and placements.

As for adverbs in Arabic, I touched upon adverbs/adverbials in Arabic and shed light on the dilemma of considering adverbs as a sperate part of speech and their classifications in the Arabic syntax. The main issue stems from the fact that many

classifications of parts of speech adopted the classical three part of speech classification established by classical Arab grammarians such as Ibn Malik's. I reviewed and commented on the history of Arabic as a Semitic language and Iraqi Arabic as a vernacular adopting Hymes 1971 modal cited in Bell's 1976 work on the sociolinguistics of language varieties.

As for my data, no human subjects were used to collect the data and no approval/letter from the IRB was needed. All the examples used in my investigation were examples found in different grammar books. These examples were translated to Iraqi Arabic. Moreover, I had to watch and listen to multiple TV programs to document the adverb instances used. Of course, it was not very easy examples from the programs I watched as most speakers wouldn't casually use adverbs so often. I concluded the chapter by saying a word on the limitations and the challenges I faced while researching the topic which were mainly the difficulty of finding examples and having my two translation consultants to agree on one form of translation versus another. Finally, I laid out the structure of the dissertation and the flow of the chapters.
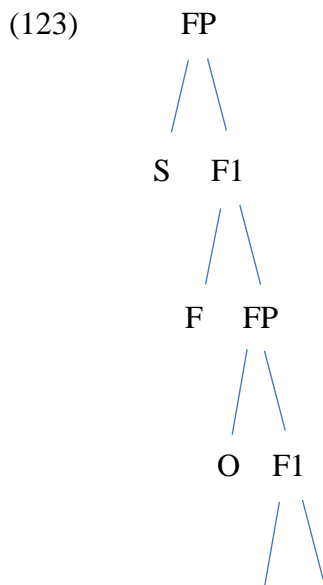
In Chapter 2, I discussed the main findings of decades of research on Arabic parts of speech. Traditionally, only three parts of speech are recognized in Arabic, namely Noun, Verb, and Functional. According to As-Saqy (1977), many attempts were made to challenge the classification and re-classify Arabic parts of speech as nuances found among word forms and their functions. Many of these attempts were not very comprehensive and the majority of the grammarians kept the traditional classification. I shed lights on two prominent Arab grammarians who were able to add new parts of speech. Al-makhzoomi cited in As-Saqy (1977) added *kinayat* and Anis cited in As-Saqy
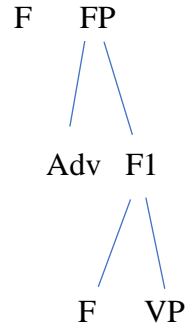
(1977) added *instrument*. Both of these parts of speech were originally classified as nouns. Hassan (1979) introduced a new classification after successfully justifying the need for a new one. Hassan's builds his classification on the argument's grammarians presented over the years. For example, Al-Zujaji cited in Hassan (1979) was the first grammarian who recognized that nouns functioning as adverbs i.e. adverbials need to be classified as a separate part of speech. Hassan (1979) takes upon the argument and grammatically justifies adding adverbs as a part of speech in Arabic. Adverbs are added by Hassan, yet only few words are formally considered as adverbs. Under Hassan's classification, only a small number of words are classified as adverbs as he considers both word forms and functions in his classification. In three sperate sections, I discussed the three parts of speech and clearly defined their sub-categories. Of course, I adopted As-Saqy's 1977 classification as it is the most detailed classification of centuries of research.

I dedicated a section to discuss my reasoning behind using the term adverb(ial)s instead of adverbs or adverbials as I think the argument is not settled yet in Arabic. Even As-Saqy 1977 and Hassan 1979 state that the number of adverbials in Arabic is far more the number of adverbs. Additionally, since adverbs are morphologically unmarked in Arabic, many grammarians have been using the terms interchangeably which makes the line blurrier between adverbs and adverbials. Of course, whether they were referred to as adverbs or adverbs, all Arab grammarians agree that adverb(ial)s are tied to Tense, Aspect and Mood.
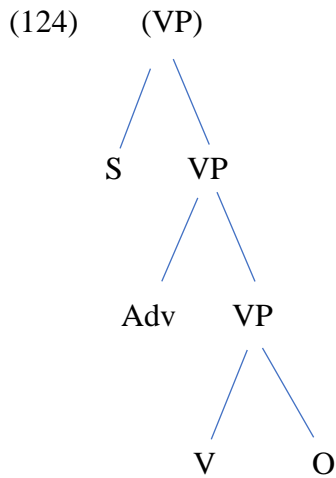
Then, I turned to, the most recent discussion of adverb(ials), Fassi Fehri's research and reviewed his take on adverb(ial)s in Arabic after reviewing tense in Modern

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Standard Arabic. In his opinion, adverbs are tied to different functional categories (Aspect, Tense, Modality, Force etc.). He assumes that adverbs are of three classes speaker-oriented, subject-oriented and manner adverbs. Regardless of their class, he proposes two arguments for the distribution of adverb(ial)s in Arabic. First, S and O are verbal constituent which have raised to a higher projection leaving the adjuncts i.e. adverbs behind in sentence final position. Second, S and O are generated in a Spec of a higher aspectual projection while adjuncts are generated in a Spec of a lower aspectual projection closer to the V following Larson 1988 and Stroik 1996. Of course, it is worth noting here that earlier research on Semitic languages including Arabic does not consider Arabic as an aspectual language, while others such as Cohen (1989) cited in Fassi Fehri (1998) strongly disagrees and classifies Arabic among other Semitic languages as aspectual. Such a classification does place aspectual adverbs as other adverbs in the Spec position of a functional head. The following diagram is what Fassi Fehri proposes to account for adverb(ial) distribution in Arabic.

(123)   FP
         / \
        S   F1
           / \
          F   FP
             / \
            O   F1
               / \

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```
F    FP
       /\
      /  \
    Adv   F1
          /\
         /  \
        F    VP
```

Adopted from Fassi Fehri (1998, p.12)

```
(124)    (VP)
         /\
        /  \
       S    VP
            /\
           /  \
         Adv   VP
               /\
              /  \
             V    O
```

Adopted from Fassi Fehri (1998, p.13)

To Fehri, adverb positioning is closely tied to the interplay between features of the functions and the discourse. These features are imbedded in 'the Spec of a complex lexical item which combines the V features (typically the event feature) and functional features.' Such a claim is in accordance with other Pollock (1989) and Bobaljik (1996) research findings on VP internal constituents.

In the third chapter, I discussed modification and how modification research has contributed to the research on adverbs. Adverbs are modifiers and both syntax and semantics play a vital role in their placement and ordering. In fact, Ernst (2002) even

argues that the term adjunct modifiers that syntacticians usually use to refer to adverbs strikes a controversy by itself. Such a controversy is reflected in Chomsky's (1995) work as he highlights that syntacticians are yet to come up with 'a good phrase structure theory' to account for adverbs among other modifiers. Before I discussed the resent theory of adverb placement and ordering, I set the difference between the two commonly-used yet confused terms, adverbs and adverbials. In English the difference is far clearer than Arabic and I stated the reasons for adopting the term adverb(ial)s when discussing the topic in Arabic.

Then, I concentrated on the word 'controversy' to explain why, as if, it has become a synonym for adverbs whenever adverbs are discussed. The issue with adverbs is the question whether they follow a free or strict word order. Certainly, their free word order and optionality has induced the adjunction theory. Jackendoff's (1972) adjunction theory stayed generally acceptable to account for adverbs till Cinque's (1999) and Ernst's (2002) theories. Cinque (2004) states that adverbs should not be treated like 'accessory appendices' added to the sentence, but 'integral part of it'. They are attached to constituents to be interpretable once they check semantic features relevant to them. Certainly, the rigidity is tied to find these features that need to be checked and satisfied. Although, Cinque's functional hierarchy is considered a syntactic theory, semantics is part and partial of it. It is the complex interplay between syntax and semantics is what makes researching adverb such a challenge. This is clearly reiterated in Delfitto's (2006, p. 103) 'adverbial syntax seems to lead to quite puzzling questions concerning the interplay between issues of placement and issues of movement.'

Then, I reviewed Ernst's research which begins with a summary of the controversy that surrounded adverbs. In his opinion, diverse classifications and conclusions have been reached for relying on syntax or semantics. Those who have tried to come up with 'an overall theory' have ended up encountering many puzzling questions and controversies. Adverbs can be semantically classified to many classes such as place, time, manner, quantity etc. Morphologically, adverbs are of two types lexical and derived adverbs. Lexical adverbs are identical to many parts of speech such as those similar to adjectives (late, hard etc.), nouns (yesterday, tonight etc.) and prepositions (before, after etc.). Derived adverbs are adjective-derived adverbs with the addition of -ly suffix, (completely, randomly, slightly etc.). He mentions that over the years, A number of classifications has emerged over the years, the most notable of them are Bellert's 1977 and Cinque's 1999.

After that, I started introducing Ernst's scope theory which advocates and calls for a bigger role of semantics to explain adverb placement and interpretation. The rigid order that Cinque proposes in his hypothesis and finds enough evidence to support it is explained in terms of semantic scopes. He classifies adverbs based on how tight or loose their scopes are. When there is a semantic anomly i.e. a scope of a specific adverb clashes with a scope of another's or with some semantic features of a specific constituent, placement and ordering restrictions occur.

Then I presented how Cinque, over the years, modified his hypothesis. In his multiple versions, he began accounting for different languages and semantic sets of adverbs. In 1999, he came up with his pair-ordering of adverbs in Italian and French. Later he expanded it to account for other, mostly, European languages. I presented how

the hypothesis evolved to account for adverb classes and Cinque's reasoning in establishing an hierarchical ordering instead of a linear one. I showed how Cinque (1999, p. 47) suggests the Multiple Spec Hypothesis as an alternative to the adjunction theory proposed by traditional grammarians. The main drawback of this alternative hypothesis is that it fails to predict the ordering restrictions. The hypothesis advocates the fact that an adverb should only occupy a Spec position and the head can have multiple specs. Adopting such a hypothesis does restrict adverb movements yet it does not predict its ordering restrictions. Another alternative is the AdvP-in-Spec Hypothesis is another hypothesis in which Cinque suggests that an AdvP occupies a unique specifier position of a functional head in the extended projection of V. Assuming the X' theory is correct as in:

(125)
```
              XP
             /  \
           ZP    X'
                /  \
              X0    YP
```
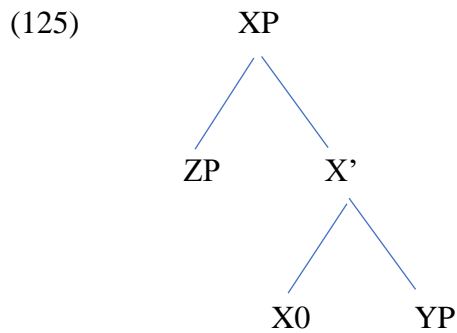
In his multiple versions, Cinque relied on Basker's 1985 Mirror Principle to explain the relationship between functional heads and their AdvPs. occupying the Spec position. Cinque predicts an order of Mood > T > ASP > V. For each functional head, a number of AdvPs with relevant meaning can be listed. Meaning relevance is shown in a list of semantic features to be checked. The result is two types of AdvPs, one at the CP

layer and one at the VP layer. Finally, I discussed how Cinque's hypothesis predicts adverb ordering and placement.

Then, of course, I dedicated a section to present and highlight Ernst's scope theory with its seven arguments. The scope theory is a semantic-driven and adjunct-based theory to explain adverb placement and ordering. In the scope theory, adverbs are believed to be semantically induced to appear in a specific order. The rigid order that Cinque discusses is explained in terms of semantic clashes among adverbs binding them to follow a specific order and banning them from appearing in specific positions. Ernst argues that heads carry semantic features and these semantic features represent the scope. Additionally, licensing is largely dependent on fulfilling requirements of the scope. When these requirements are not fulfilled, adverbs/adjuncts become 'uninterpretable' for violating the principle of Full Interpretation suggested by Chomsky's work of 1986 and 1995.

After reviewing the semantic induction of adverbs, I turned to discuss how Ernst's scope theory was inspired by the adjunction theory. Ernst (2004, p. 93) does state adverbs are generally free to appear anywhere in the sentences, yet their placement is not completely free. They are affected 'partly by lexical entry and partly by compositional rule.' They are free to appear anywhere as long as their movement and placement do not cause a semantic anomaly. In other words, the licensing-relationship on which Cinque relied to justify the rigidity of adverb ordering is justified here in terms of scopes to accord semantically with each other. Finally, I reviewed the seven arguments presented by Ernst to back his scope theory. His arguments mainly revolve around how his scope theory succeeds to predict adverb placement and ordering through semantic scopes

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instead of sperate functional heads. Before concluding the chapter, I presented with examples how Ernst classified adverbs as semantic classes of adverbs with similar semantic features.

In chapter 4, I tested Cinque's functional hierarchy applicability to Iraqi Arabic, a vernacular of Modern Standard Arabic. I began the discussion with setting the difference between Modern Standard Arabic and Iraqi Arabic/Mesopotamian Arabic. The Iraqi Arabic vernacular is considered one of the varieties that is highly influenced by Aramaic which was the common language of old Mesopotamia. Additionally, the vernacular today shows influences from Persian, Turkish and even Greek, due to the multiple invasions the land witnessed over the centuries. Ownes (2000, p. 145) states that evidence exists in lexical borrowings from many languages such as Aramaic, Akkadian, Persian and Turkish languages. Additionally, I presented the two vernacular of Iraqi Arabic (Gelet and Qeltu) and how they are different from each other and then I narrowed down the presentation to the vernacular I picked for my test. The names are derived from the sentence 'I said' which are radically different when pronounced in these two sub-varieties. As mentioned, Iraqis residing north of the Tigris speak Qeltu often called Maslawi, whereas those residing south of Euphrates speak Gelet, often referred to as Baghdadi Arabic (Muller-Kessler 2003). I showed why I leaned towards using Gelet for my research as it is now considered the mainstream Iraqi Arabic and also as I am a Gelet native speaker.

Before I started with my test, I went over and presented Cinque's main findings and how his hierarchy works for Italian and French among other languages. In a sperate

section, I discussed the methodology of my research and, of course, the data I used to test adverb(ial)s in Iraqi Arabic.

In my methodology, I relied on Zyman's (2012) research which tests the accuracy of Cinque's hierarchy on the English language. In his research, he relied on the judgment of native English speakers. In my test, I adopted his findings and most of his sentences to translate to Iraqi Arabic/Gelet. After translating the sentences, I ran my translation by two Iraqi Arabic native speakers with advanced degrees in linguistics and presented the results of my test in a table 2. Throughout the test, I heavily relied on Fassi Fehri's research (1998, 2002) to compare the Iraqi Arabic versions of the sentences to his MSA adverb research. I came across some examples that I could not translate and I explained why a translation is not possible for these examples. Conclusively, I summarized the findings and discussed them in light of current research on adverbials in other languages. Certainly, Iraqi Arabic is as any other language / dialect / vernacular is continuously changing and future research may show different results. I also think the door is still wide open for similar research on adverbials in other languages.

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