A Contrastive Study on the Syntactic Structure of Standard English and Standard Arabic Determiner Phrase

دراسة تباينيّة حول البناء النحوي لعبارة المحدِّدات في اللغة الإنجليزية القياسية واللغة العربية القياسية

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Abstract

The determiner phrase is a syntactic category that appears inside the noun phrase and makes it definite or indefinite or quantifies it. The present study has found wide parametric differences between the English and Arabic determiner phrases in terms of the inflectional features, the syntactic distribution of determiners and the word order of the determiner phrase itself. In English, the determiner phrase generally precedes the head noun or its premodifying adjectival phrase, with very few exceptions where some determiners may appear after the head noun. In Arabic, parts of the determiner phrase precede the head noun and parts of it must appear after the head noun or after its postmodifying adjectival phrase creating a **discontinuous determiner phrase**. In English, a few determiners may be postposed by transformation after the head noun. In Arabic, a large number of determiners may appear after the head noun or after its postmodifying adjectival phrase. Because of the idiosyncratic syntactic distribution of the subclasses of English and Arabic determiners, the study has found that the syntactic features of each determinative are better listed in the strict subcategorization of the lexical entry of each determinative and let the categorial rules describe their order within the determiner phrase and within the noun phrase.

keywords: determinatives, English determiner phrase, Arabic (discontinuous) determiner phrase, predeterminers, determiners, postdeterminers

1 Introduction

The present study addresses itself to three main syntactic questions: the categorial rules (phrase structure rules) that generate the English determiner phrase and the Arabic determiner phrase as well as transformational rules; the interrelation between these rules and the strict subcategorization of determinatives; a contrastive analysis between English and Arabic determinatives and determiner phrases. We shall follow Huddleston and Pullum (2002: 54) in distinguishing between **determinative**, a lexical category, and **determiner**, a function in the NP structure. To make our study manageable, we shall not deal with the logic and semantics of quantification and quantifiers. These are studied by, among others, Quine (1960), Lyons (1977), and Saeed (1997).

2 The English determiner phrase

Determinatives are lexical categories. In English dictionaries they are classified in a different way. For example, Hornby's *Oxford Dictionary* (1977) and *Merriam-Webster's Dictionary* (1999) classify the demonstrative determinative *this*, the ordinal number determinative *first* and the quantifying determinative *much* as adjectives. A detailed classification of English and Arabic determinatives is given in the appendix to this study.

Determinatives are defined by Leech and Svartvik (2002: 280-281) as "words which specify the range of reference of a noun, e.g. by making it definite (*the book*), indefinite (*a book*), or by indicating quantity (*many books*)". A determiner is a function in the NP and dependent, (Huddleston and Pullum, 2002: 54, 330). Dependent in that the type of determiner selected depends on the semantic content of the head noun. For example, a plural noun such as *novels* can be preceded by *the, these, his, their, many, two*, but it can not be preceded by *a, this, much, one*. A mass noun such as *water* can be preceded by *the, this, my, much* or zero, but it can not be preceded by *a, one, these, many*, or the speaker intends the head noun to be definite or indefinite, cf. *the gun, a gun*. In this way determiners subcategorize for nouns.

The English determinatives and determiners are studied by Quirk, et al. (1972: 136-146), Culicover (1982: 91, 101-102) who writes a brief categorial rule for some determiners), Kolln (1986: 123-128), Leech and Svartvik (2002: 280-286). Huddleston and Pullum (2002: 24-25, 54-55, 330, 354-298) give a detailed account of the subclasses of English determinatives and the semantic conditions imposed on using determiners. In none of these references the interrelation between the strict subcategorization and categorial rules of determiners has been discussed.

2.1 Categorial rules and strict subcategorization

The subclasses of English determinatives and their Arabic equivalents are given in the appendix. For our syntactic study of the English determiner phrase, we shall classify the determiners in the appendix into

determiners: The articles, demonstratives, possessive pronouns, the genitive NP, *whose*. These occupy the center of the determiner phrase and they are also called central determiners.

predeterminers: The quantifiers. Some quantifiers are ambivalent in that they are fluctuant. Sometimes they appear before a certain determiner, and sometimes they appear after it depending on the intended meaning, cf. *many of these books, these many books, both of the cars, the cars both.*

postdeterminers: The ordinal numbers, cardinal numbers. These normally appear after determiners, if any.

The categorial rules that generate the English determiner phrase are written in the following schemata:

a. NP → { DetP (AdjP) N ; N_{ging} CarNum }

b. Maximal DetP → PreDet Det PostDet

c. PostDet → { OrNum CarNum ; CarNum *more* }

Schema a states that the English noun phrase could be generated as consisting of a determiner phrase, an optional adjectival phrase and a head noun, or as a singular head noun and a cardinal number.

Schema b states that the English maximal determiner phrase is generated as consisting of a predeterminer, determiner and postdeterminer.

Schema c states that the English postdeterminer could be generated as consisting of an ordinal number and a cardinal number, or a cardinal number and *more*.

The following examples illustrate the configurations in schemata (a-c) above:

(1) [$_{NP}$ [$_{DetP}$ [$_{Det}$ These] [$_{OrNum}$ first] [$_{CarNum}$ two]] ([$_{AdjP}$ white wollen]) [$_{N}$ suits]]

are quite expensive.

(2) Read [$_{NP}$ [$_{N}$ chapter] [$_{CarNum}$ three]] of this book!

In sentence (2) the cardinal number *three* has the meaning of an ordinal number, i.e. *chapter three* means the *third chapter*, cf. also *three chapters*, *chapter three*.

(3) We need [[two] [more] [days]] to finish this work.
NP CarNum Quant N

It is not the case that the three subcategories of determiners, the PreDet, Det and PostDet should always appear with the head noun. The meaning intended by the speaker or the semantic content of the head noun decides which and how many determiners ought to appear with the head noun. Consider the bracketed NPs in the following sentences:

zero determiner:

(4) a. [Water] is liquid.

b. [Mozart] is a great composer.

one determiner:

(5) a. [The tea] is as sweet as I like it.

b. [Many countries] import petroleum.

two determiners:

(6) a. What can we do with [this much food]?

b. We need [many more workers].

three determiners:

(7) a. I didn't collect [my last two salaries].

b. [All this first chapter] needs rewriting.

2.2 Transformations

The preposition *of* has two main functions: the genitive *of* that links the annexed noun to the annexing noun, which plays the role of syntactic head in the genitive construct, and in the subject position, it agrees, in

English, with its verb in person and number as in

(8) [*The results* of the war] *are* appaulling.

The other function of the preposition *of* is partitive when it follows a quantifier or a cardinal number and precedes a definite noun as in

(9) [Much of the water] is polluted.

(10) [Some of those paintings] are classical.

(11) [Three of his papers] deal with geopolitics.

The initial determiners in the NPs (9-11) are **external** to the head noun since in the above NPs the head nouns of these determiners are ellipted to avoid repetition, cf.

(9) a. [Much (water) of the water] is polluted.

(10) a. [Some (paintings) of his paintings] are classical.

(11) a. [Three (papers) of his papers] deal with geopolitics.

When the head noun becomes indefinite the preposition *of* is obligatorily deleted and the determiner becomes **internal**, cf.

(9) b. [Much water], *[Much of water]

(10) b. [Some paintings], *[Some of paintings]

(11) b. [Three papers], *[Three of papers]

Quirk, et al. (1972: 141) state that the preposition *of* may be deleted if it is preceded by one of the determiners *all, both, half* and followed by a definite head noun. The first two are universal determinatives and the last is a fraction:

(12) all (of) the milk

(13) both (of) the cars

(14) half (of) the money

But this preposition can not be deleted from the NPs in sentences (9-11) above.

Furthermore, the determiners *all, both* may be postposed after a plural head noun, (Quirk, et al., 1972: 141):

(15) The students { all } passed their exam.

If the head is a subject pronoun in the genitive case and the determiner is postposed after deleting the preposition, the pronoun acquires the nominative case, otherwise it retains its case:

(16) a. All of *them* passed the exam.

b. *They* all passed the exam.

(17) a. We will meet all of *them*.

b. We will meet *them* all.

2.3 How syntax can handle the determiner phrase

In the model of Transformational-Generative Grammar, the grammar of verbal languages consists of four modules: the lexicon which includes morphology, the syntax, the phonology which includes phonetics, and the semantics. On the interrelation between the lexicon, the categorial rules and transformational rules, Chomsky (1970: 139) argues:

> In general it is to be expected that the enrichment of one component of the grammar will permit simplification in other parts. Thus certain descriptive problems can be handled by enriching the lexicon and simplifying the categorial component of the base, or conversely; or by simplifying the base at the cost of greater complexity of transformations, or conversely. The proper balance between various components of the grammar is entirely and empirical issue. We have no a priori insight into the "trading relation" between the various parts. There are no general considerations that settle this matter. In particular, it is senseless to look to the evaluation procedure for the answer.

(See also Jackendoff (1977) on constraining categorial rules.)

The above investigation of the syntactic distribution of the English determiners and the word order of the determiner phrase raises the following question. What syntactic and semantic features of determinatives can be incorporated in the strict subcategorization of the lexical entries of determinatives and what can be incorporated in the categorial rules? There are two answers to this question. Firstly, the term **rule** means *inter alia* "a valid generalization". Thus we have rules for mathematics, physics, chemistry. A rule is assumed to predict the regular behavior of the phenomena in question and operate on them without exception. Secondly, if many determiners have syntactic and semantic idiosyncrasies, how can the categorial rules, which operate in a general

manner, describe them? It seems quite reasonable to sort out the idiosyncratic features and list them in the strict subcategorization of the lexical entries of determinatives and take the general features the determiners share and formulate them in categorial rules (as we have done in schemata (a-c) at the beginning of this study). We shall take two examples of determinatives and list their subcategorization.

all

quantifier, universal, predeterminer

all of { Def Art / $Demon_n$ } (OrNum) (CarNum) (AdjP) N_n

all of { Def Art / $Demon_{sing}$ } (AdjP) N_{mass}

1. all of N_{def}

   1 2 3 $\Rightarrow$ 1 ø 3

2. al of N_{def}

   1 2 3 $\Rightarrow$ t ø 3 1

3. all of Pro_{gen} V

1 2 3 4 $\Rightarrow$ t ø Pro_{nom} 1 4

n means number agreement, t means the trace left be the moved element, ø means the element is deleted.

four

$$\left[\begin{array}{l}\text{cardinal number, postdeterminer}\end{array}\right]$$

X ——— (more) (AdjP) N_{pl}

There are a few English phrasal determiners each of which ought to have an independent lexical entry. Examples of phrasal determiners include

(18) [a $\left\{\begin{array}{l}\text{great}\\ \end{array}\right\}$ many] things “a large number of”

(19) [a few more] workers (where *a few* is additive)

(20) [a little more] time (where *a little* is additive)

(21) [many $\left\{\begin{array}{l}\text{a}\\ \end{array}\right\}$] man (“many men”, literary style)

To avoid unnecessary repetition, we shall deal with other issues of the English determinatives and the determiner phrase along our investigation of their Arabic counterparts.

3 The Arabic determiner phrase

The Arabic determiner phrase has never been studied in the books of Arabic grammar. Following the Aristotlian tripartite division of the parts of speech, the Arabic lexical items are categorized into nouns, verbs, particles. Determinatives are classified as either nouns or particles.

Before we proceed with exploring the Arabic determiner phrase, it is worth noting here that the Arabic determiner phrase is much more intricate than its English counterpart in terms of the assignment of gender, number and case, and the syntactic distribution of determiners inside the determiner phrase and also inside the noun phrase. We shall investigate the Arabic subclasses of determinatives in the order they are listed in the appendix. In Arabic the definite article and the possessive pronouns are bound morphemes, hence they can not shift their positions; the others are free morphemes. We shall use the phonemic representation in transcribing Arabic examples. We shall also use the nominative case, which is stripped of any governor that assigns the accusative case or the genitive case unless otherwise stated.

3.1 The Article

The definite article *ʔal-* is usually prefixed to the noun or to both the noun and its adjective, e.g.

(22) ʔal-maaʔ-u ʔal-baarid-u

the-water-nom m the-cold-nom m

(the cold water)

In the above example, the definite article prefixed to the adjective is not redundant, because deleting it will convert the above noun phrase into a sentence:

(23) ʔal-maaʔ-u baarid-u-n.

(the water is cold)

Arabic does not have an indefinite article. Some grammarians analyze the suffix *-n* at the end of common nouns such as *maaʕ-u-n* "water" as an indefinite article. But the same suffix appears at the end of proper names such as *Muhammad-u-n*, *Aliyy-u-n, Zayd-u-n*, and proper names are intrinsically definite. Furthermore, there is a class of common nouns and adjectives which are called *mamnuuʕat-u-n min ʔal-ṣarf*. These nouns and adjectives receive the accusative case marker when they are in the genitive case. When these nouns and adjectives are indefinite, they do not receive the *-n* suffix, e.g. *ṣaħraaʔ-u* "a desert", *sawdaaʔ-u* "a black". On the other hand, if the noun or adjective appears at the end of the sentence and is followed by silence, the *-n* sound and the case marker that precedes it may not be pronounced, cf. *haaðaa baab-u-n* "this is a door" or *haaðaa baab*. In vernacular dialects this *-n* and the case marker preceding it are never pronounced. We may analyze this *-n* as a phonological annex.

In English when the mass noun has a generic meaning, it is not preceded by the definite article. In Arabic it must be preceded by the definite article, cf.

(24) ʔal-maaʔ-u saaʔil-u-n.

the water liquid

(water is liquid)

3.2 The demonstratives

English has four demonstrative determiners marked for number: *this, that* (sing): *these, those* (pl). Arabic has thirteen, (see the appendix): in terms of number, they are classified into singular, dual, plural; in terms of gender, all of them except *haaʔulaaʔi* "these" are classified into masculine, feminine. In terms of case, only the dual demonstratives *haaðaani: haaðayni*, *haataani: haatayni* are inflected to case. These are inflected to case because they carry the same dual suffix *-aa*, which inflects the nouns and adjectives to the nominative case and the suffix *-ay*, which inflects them to the accusative and genitive case.

In English the definite article and the demonstrative are mutually exclusive in that they can not cooccur in the same noun phrase, cf.

(25) *this the cold water

In Arabic they can:

(26)	haaðaa	ʔal-maaʔ-u	ʔal-baarid-u
	this	the-water	the-cold

where *haaðaa* is parsed as appositive and *ʔal-maaʔu ʔal-baaridu* in apposition with the preceding demonstrative. Deleting the definite article from both the noun and its adjective will convert the noun phrase into a sentence:

(27)	haaðaa	maaʔ-un	baarid-un
	this	water	cold

(this is cold water)

3.3 The possessive pronouns

The English possessive pronouns are seven. In Arabic they are thirteen, (see the appendix). The possessive *your* is matched by five Arabic possessive pronouns, and the possessive *their* is matched by three Arabic possessive pronouns. Arabic does not have neuter gender. The neuter gender pronoun *its* is matched by either an Arabic masculine or feminine pronoun depending on the gender of the antecedent.

Since the Arabic possessive pronouns are bound morphemes suffixed to nouns and the definite article is a bound morpheme prefixed to nouns, no other determiner can intervene between them and their nouns. This has a bearing on the form of the word order of the Arabic determiner phrase.

The annexed noun, *ʔal-mudaafu ʔilayhi*, and the possessive relative pronoun *whose* are analyzed as determiners since these can be substituted for by possessive pronouns. (English has one case marker, namely the s-genitive. Arabic has three marked cases, nominative, accusative and genitive. Each case is assigned a set of case markers.)

In English the annexed noun phrase of the inflected genitive precedes its annexing head noun, like the possessive pronouns which also appear before their head nouns. In Arabic both the annexed noun phrase and the possessive pronouns appear after the head noun:

(28)	musaaʕid-u	ʔal-mudiir-i
	assistant -nom m	the-manager-gen m

If the above noun phrase is determined by a demonstrative determiner, this must appear after the annexed noun, but if it appears before the annexing noun, the noun phrase becomes a sentence, cf.

(29) a. musaaʕid-u ʔal-mudiir-i haaðaa

(this manager's assistant)

b. haaðaa musaaʕid-u ʔal-mudiir-i.

(this is the manager's assistant)

The English possessive relative pronoun *whose* is matched by eight Arabic relative pronouns marked for gender and number and the dual is also marked for case, (see the appendix). These relative pronouns have three functions: nominative, accusative and genitive depending on their syntactic distribution in the embedded sentence. What concerns us here is their function in the genitive construction. Consider the following deep and surface structure:

(30) deep structure

karrama	ʔal-mudiir-u	ʔal-muhandis-ayni	[faaza
honored	the-manager	the-engeneer-two	won
tas̲miim-u ʔallaðayni]			
design	whose (dual, gen)		

(The manager honored the two engineers [whose design won])

surface structure

karrama ʔal-mudiir-u ʔal-muhandis-ayni [ʔallaðayni faaza tas̲miim-u-humaa]

In the deep structure the relative pronoun *ʔallaðayni* is posited after the annexing noun. In the surface structure it is fronted to the beginning of the embedded sentence and its trace is filled by the possessive pronoun *-humaa*.

The relative pronoun is in the accusative case because its antecedent annexed noun *ʔal-muhandisayni* is in the accusative case. The relative pronoun and the genitive pronoun at the end of the annexing noun are both dual because their antecedent noun is dual.

3.4 The cardinal numbers

Perhaps the syntactic distribution of the Arabic cardinal numbers is the most idiosyncratic and intricate in the structure of the noun phrase. In English the cardinal number is not marked for case. It always appears before the head noun or before its premodifying adjectival phrase with one exception: in *chapter two* the cardinal number appears after the head noun; it has the meaning of ordinal number. In general, if the head noun is singular, the cardinal number is singular, e.g. *one car*; if plural, the cardinal number is plural, e.g. *two/ three/ four cars*. The English cardinal number does not carry with it the definite or the indefinite article, cf. *the car, the one car*. These syntactic features of the English cardinal numbers which make them very easy to use in the noun phrase do not apply to the Arabic cardinal numbers as we shall see.

The syntactic intricacy of the Arabic cardinal numbers is attributed, on one hand, to the subclass of the cardinal number itself and, on the other hand, to the form of the head noun that governs it. For the sake of conducting a precise analysis of the Arabic cardinal numbers, we shall sort them into the following subclasses.

Simple cardinal numbers

These are subdivided into three subclasses:

(a) The digit numbers from 1 to 10. These have the following syntactic features:

1. They have masculine and feminine forms, e.g. *waaħid* "one" (masc): *waaħidat* (fem), *ʔiθnaani* "two" (masc): *ʔiθnataani* (fem).

2. Their masculine and feminine forms are inflectable to case, e.g. *θalaaθ-u* "three" (masc, nom): *θalaaθ-a* (acc): *θalaaθ-i* (gen).

3. The cardinal numbers *waaħid* "one" (masc): *waaħidat* (fem), *ʔiθnaani* "two" (masc, nom): *ʔiθnataani* (fem) appear after the head noun or after its postmodifying adjectival phrase and agree with the head noun in number, gender and case. These two cardinal numbers have an emphatic function since the singular noun means "one" and the dual noun means "two".

(31) a. kitaab-un waaħid-un "one book" (masc)

b. ʔal-kitaab-u ʔal-waaħid-u "the one book".

(32) a. sayyaarat-un waaħidat-un "one car" (fem)

b. ʔal-sayyaarat-u ʔal-waaħidat-u "the one car"

4. The cardinal numbers from *θalaaθ* "three" to ʕašr "ten" appear before the head noun. If the head noun is definite, the definite article is prefixed to the cardinal number. These cardinal numbers are inflectable to the nominative, accusative and genitive case. The head noun is always in the genitive case and in the plural. As for gender, these cardinal numbers are masculine if the head noun is feminine, and feminine if the head noun is masculine:

(33) a. sitt-u (masc) sayyaaraat-in (fem) "six cars"

b. sittat-u (fem) kutub-in (masc) "six books"

When these cardinal numbers are postposed after their head nouns, they syntactically behave like adjectives and receive the same case of the head noun, and may or may not receive its gender. Postposing them entails laying emphasis on the cardinal number:

(34) kutub-un (masc, nom) sittatu-un (fem, nom)/ sitt-un (masc) (six books).

The second subclass of simple cardinal numbers comprises the multiples of 10, i.e. 20, 30, 40… 90. These are inflectable to case, e.g. *ʕišr-uu-na* "twenty" (nom): *ʕišr-ii-na* (acc, gen). These do not have masculine feminine contrast. The head noun after them is in the singular form and in the accusative case:

(35) a. ʕišr-uu-na (nom) kitaab-an (sing, acc) "twenty books"

b. ʕišr-ii-na (acc, gen) kitaab-an

The members of this subclass may be postposed after the head noun, which is inflected to the plural. Here they receive the same case of the head noun:

(36) ʔal-kutub-u (nom) ʔal-ʕišr-uu-na (nom)

the-books the-twenty

The third subclass of simple cardinal numbers comprises *miʔat* "hundred", *ʔalf* "thousand" and the borrowed cardinal numbers *milyɔ:n* "million", *bilyɔ:n* "billion", *milyaar* "milliard". These are inflectable to the dual and the plural as well as to case, but they do not have masculine feminine contrast. Their head nouns are in the singular form and in the genitive case:

(37) a. miʔat-u (nom)/ miʔat-a (acc)/ miʔat-i (gen) kitaab-in (sing, gen) (one hundred books)

b. miʔat-aa (dual, nom)/ miʔaat-ay (acc, gen)/ kitaab-in (sing, gen) (two hundred books)

Compound cardinal numbers

The compound cardinal numbers are from 11 to 19. Each cardinal number consists of a digit number plus ten. The two members of the compound number *ʔaħada ʕašara* "eleven" (masc) (liter., one ten) are inflectable to gender and agree in gender with their head noun, but are uninflectable to case and the head noun is in the accusative case and in the singular form:

(38) a. ʔaħada ʕašara kitaab-an "eleven books" (masc)

b. ʔiħdaa ʕašarata sayyaarat-an "eleven cars" (fem)

The two members of the cardinal number *ʔiθnaa ʕašara* "twelve" (masc) (liter., two ten) are inflectable to gender and the first member is inflectable to case. It agrees in gender with its head noun, which is in the accusative case:

(39) a. ʔiθnaa ʕašara kitaab-an "twelve books" (masc, nom)

b. ʔiθnataa ʕašarata sayyaarat-an "twelve cars" (fem, nom)

The cardinal numbers from 13 to 19 are uninflectable to case. The first member of each of these cardinal numbers is feminine and the second member is masculine if the head noun is masculine, but the first member is masculine and the second member is feminine if the head noun is feminine. The head noun after these cardinal numbers is singular and in

the accusative case:

(40) a. sitta-ta ʕašara kitaab-an “sixteen books” (head noun masc)

b. sitta ʕašara-ta sayyaarat-an “sixteen cars” (head noun fem)

Coordinated cardinal numbers

The coordinated cardinal numbers are the multiples of 10, e.g. 20, 30… 90 plus a digit number from 1 to 9. The two numbers are joined by the coordinator *wa-* “and”. In Arabic the digit number precedes the multiple number; in English the opposite is true. Both members are inflectable to case but the digit numbers from 3 to 9 disagree in gender with the head noun, which is in the singular form and in the accusative case:

(41) a. θalaaθat-un wa-ʕišr-uuna kitaab-an

three (fem) and-twenty book (masc)

b. θalaaθ-un wa- ʕišr-uun sayyaarat-an

three (masc) and -twenty car (fem)

There are three points worth mentioning about the Arabic cardinal numbers. The first point relates to assigning the definite article to the cardinal number or to the head noun or to both. In fact, there is wide disagreement among grammarians on this issue, and discussing the views of grammarians will involve us in wide digression from the main concern of the present study, but on these views the reader is referred to Hassan (1975: 438-439), Wright (1975: 439) and Ibnu Anbaariy (1998: problem 43, 291-311). As for the Arabic vernacular dialects, the definite article is assigned to all the subclasses of the cardinal numbers we have reviewed above.

Chomsky (1965: 11) posits two levels of language: competence and performance. He argues that acceptability belongs to the level of performance (the actual use of language) and grammaticalness belongs to the level of competence (the idealized form of language). The above disagreement on the proper placement of the definite article makes it extremely difficult to decide on one certain construction and select it as being the one that belongs to competence.

The second point relates to subject-verb AGR(eement) which is discussed by Chomsky (1981: 52, 211, 250, 276f) under the Government and Case Theory. A Tensed verb agrees with the head noun of its subject noun phrase and governs it in person, number, and in Arabic in gender also. In the above discussion we have cited examples of noun phrases in which the cardinal number is plural and the head noun is singular. In the Arabic word order VSO the verb is always singular, but if it is SVO, the verb must agree with its subject noun phrase in number. Consider the following sentence:

(42) ʔišruuna raǰulan { waṣala (sing) / waṣaluu (pl) }

twenty man

Logically, the cardinal number is plural: it means the number of men is more than two, taking into account the dual. Morphologically, the head noun is singular. In fact, there is no ready answer to which of the above two constructions is grammatical.

The third point relates to the use of cardinal numbers by speakers of Arabic vernacular dialects. Since the syntactic distribution of these cardinal numbers is highly intricate in Standard Arabic, their inflectional and syntactic features have been greatly simplified. Case markers are dropped from both the cardinal numbers and the head nouns, the masculine gender of the cardinal number is taken as the canonical form used with all head nouns. The accusative and genitive forms of some cardinal numbers are used in the nominative case. For example, the Standard Arabic

accusative and genitive form *ʕišriin* "twenty" is also used as a nominative form. All this simplification has occurred because it is much easier for the human brain to process and compute simplified structures.

3.5 The ordinal numbers

Compared with the intricate syntactic distribution of the Arabic cardinal numbers, the Arabic ordinal numbers are syntactically somewhat simpler to use. In English the ordinal number precedes its head noun or its premodifying adjectival phrase. In Arabic it appears after its head noun or after its postmodifying adjectival phrase. It carries the definite article if the head noun is definite and receives the same case of the head noun:

(43) ʔal-faaʔiz-uʔal-ʔawwal-u

the-winner the-first

Two things about the Arabic ordinal numbers are worth mentioning. Firstly, the ordinal numbers from first to tenth can be preposed before the definite head noun, which must be plural and in the genitive case or before an indefinite head noun, which must be singular and in the genitive case. When the ordinal number is preposed, it receives the case assigned to it by its syntactic role in the sentence:

(44) a. ʔawwal-u ʔal-faaʔiz-iina (from a specified number)

first the-winners

b. ʔawwal-u faaʔiz-in (from an indefinite number)

first winner

Secondly, the cardinal numbers *ʕišruun* "twenty" (nom) *ϑalaaϑuun* "thirty"… *tisʕuun* "ninety", *miʔat* "hundred", *ʔalf* "thousand" also behave as ordinal numbers when they appear after the head noun or after its postmodifying adjectival phrase:

(45) a. ʔal-kutub-u ʔal-ʕišruuna

the-books the-twenty (the twenty books)

b. ʔal-kitaab-u ʔal-ʕišruuna (the twentieth book)

What makes the number cardinal in (45a) and ordinal in (45b) is the fact that the head noun is plural in the former and singular in the latter.

The above review demonstrates the fact that the syntax of the English ordinal number is much simpler to use in the noun phrase.

3.6 The multipliers

Multipliers include *twice, double, three times*, etc. In English these appear before a singular head noun which is preceded by the definite article, a demonstrative, or a possessive pronoun:

(46) a. { twice / double } { the / this } salary

In Arabic, *diʕf* "double", *diʕfaa* "two times", *θalaaθat-u ʔadʕaaf-i* "three times" are inflectable to case and the head noun is in the genitive

case. The following Arabic noun phrase is a translation of the above noun phrase:

(46) b. { diʕf-u / diʕf-aa } { { ʔal / [illegible] } raatib-iya / raatib-i }

3.7 The fractions

Fractions include *half, quarter, two-thirds*, etc. In English these appear before a singular head noun which is preceded by an optional *of* and the definite article, a demonstrative or a possessive pronoun:

(47) a. { half / quarter } (of) { the / this } salary

In Arabic, *nisf* "half", *rubʕ* "quarter", *ϑuluϑaa* "two thirds" are inflectable to case. They precede the head noun which is in the genitive case. The following is a translation of the above noun phrase:

(47) b. { nisf-u / rubʕ-u / ϑuluϑ-aa } { { ʔal / [illegible] } raatib-iya / raatib-i }

If we compare the syntactic distribution of fractions with those of multipliers, we shall find that they are similar.

3.8 The quantifiers

In the appendix, a glance at the subclasses of English quantifiers and their syntactic distribution in the noun phrase tells us that none of them is inflectable to case or gender. Furthermore, none of them can be postposed after the head noun except *all, both*. In Arabic the syntactic distribution of quantifiers is quite different, as it will become evident in the following investigation.

1. All the quantifiers are inflectable to case except *laa-* "no", *faqa<u>t</u>* "just", *laa siyyamaa* "especially". The following quantifiers are inflectable to gender:

masculine	**feminine**
kilaa "both"	kiltaa
ʔayy "any"	ʔayyat
ʔaaxar "another"	ʔuxraa
ʔal-ʔaaxar "the other"	ʔal-ʔuxraa
qaliil "few, little"	qaliilat
kaθiir "many, much"	kaθiirat
kaafiy "enough"	kaafiyat
waafiy "sufficient"	waafiyat
bi<u>d</u>ʕ "a few"	bi<u>d</u>ʕat

All the above quantifiers except the last one agree in gender with their head nouns. The quantifier *bidʕ* and its feminine *bidʕat* disagree in gender with the head noun:

(48) a. bidʕat-u (fem) kutub-in (masc) “a few books’

b. bidʕ-u (masc) sayyaaraat-in (fem) “a few cars”

2. The quantifiers *kilaa* “both” (masc) and *kiltaa* (fem) are uninflectable to case when they precede the head noun which is in the genitive case, but they become inflectable when they are postposed after the head noun which receives the case assigned to it by its syntactic role in the sentence, and a dual genitive pronoun coreferential with the head noun is suffixed to them:

(49) a. kil-aa ʔal-kitaab-ayni (nom, acc, gen) “both books”

b. ʔal-kitaab-aani kil-aa-humaa (nom)

c. ʔal-kitaab-ayni kil-ay-himaa (acc, gen)

the-books-two both-of them (dual)

3. The quantifiers *ʔaaxar* “another”, *ʔal-ʔaaxar* “the other”, *qaliil* “few, little”, *ʔaqall* “less”, *ʔal-ʔaqall* “the least”, *kaθiir* “many, much”, *kaafiy*, *wafiy* “enough, sufficient”, *waħiid* “only”, *tamaaman* “just”, *faħasb* “only”, *faqat* “only” appear after the head noun and receive its same case except the last three which are uninflectable to case.

4. The quantifiers *ǰamiiʕ* “all”, *kilaa, kilay, kiltaa, kiltay* “both”, *baʕd* “some”, *ʔakθar* “more”, *muʕðam* “most” can be postposed after the head noun or after its postmodifying adjectival phrase. When these quantifiers are postposed, a genitive pronoun coreferential with the head noun is

suffixed to the quantifier which syntactically behaves like an adjective. The postposing has the function of laying emphasis on the quantifier itself:

(50) a. muʕðam-u ʔal-maaʔ-i "most of the water"

b. ʔal-maaʔ-u muʕðam-u-hu

the-water most-of it

This postposing is similar in function to the English left-hand dislocation.

To end this section, we shall give the strict subcategorization of the predeterminer *ǰamiiʕ* "all", and compare it with that of the predeterminer *all* given in section 2.3 above.

ǰamiiʕ

[quantifier, universal, predeterminer
inflectable: -u(nom), -a(acc), -i(gen)
——— X Y DefArt- { $N_{sing, pl}$ / -gen m } (AdjP)]

ǰamiiʕ X Y DefArt N-gen AdjP Z ⇒

X Y DefArt $N_{c\alpha i}$ (AdjP) Z ǰamiiʕ$_{c\alpha}$-$GenPro_i$

The convention cα means the predeterminer agrees in case with the head noun, and i means the genitive pronoun is coindexed with the head noun.

X Y Z are variables.

The two predeterminers differ in the following respects. The Arabic predeterminer receives a case marker. It assigns the genitive case to the head noun which must be preceded by the definite article. In terms of transformation, they both can be postposed after the head noun, but postposing the Arabic predeterminer triggers further syntactic processes. In English, however, the preposition *of* is deleted in the process of postposing.

3.9 Categorial rules

Let us write the following expansions of the Arabic determiner phrase:

(51) a. θalaaθat-u ʔayyaam-in

three days

b. ʔayyaam-un θalaaθat-un

(52) a. ʔal-θalaaθat-u ʔayyaam-in

b. ʔal-ʔayyaam-u ʔal-θalaaθat-u

(53) a. haaðihi ʔal-θalaaθat-u ʔayyaam-in

b. haaðihi ʔal-ʔayyaam-u ʔal-θalaaθat-u

(54) a. ǰamiiʕ-u haaðihi ʔal-θalaaθat-i ʔayyaam-in

b. ǰamiiʕ-u haaðihi ʔal-ʔayyaam-i ʔal-θalaaθat-i

(55) a. ǰamiiʕ-u haaðihi ʔal-θalaaθat-i ʔayyaam-in ʔal-ʔuulaa

b. ǰamiiʕ-u haaðihi ʔal-ʔayyaam-i ʔal-θalaaθat-i ʔal-ʔuulaa

(56) a. kitaab-u Zayd-in haaðaa (this Zayd's book)

b. haaðaa kitaab-u Zayd-in (this is Zayd's book)

(57) a. kutub-u Zayd-in ʔal- θalaaθat-u (Zayd's three books)

b. *ʔal- θalaaθat-u kutub Zayd-in

(58) a. kutub-iya ʔal-θalaaθat-u (my three books)

b. *ʔal- θalaaθat-u kutub-iya

Ignoring the adjectival phrase, which in Arabic immediately follows the head noun, we notice that, in the above expansions of the determiner phrase, the determiner phrase in (51a-54a) precedes the head noun. In (51b, 52b) the cardinal number follows the head noun. In (53b) the demonstrative *haaðihi* "these" precedes the head noun but the cardinal number *ʔal- ϑalaaϑat-u* "the three" follows it. In (54b) the quantifier *ǰamii ʕ-u* "all" and the demonstrative *haaðihi* precede the head noun, but the cardinal number *ʔal-ϑalaaϑat-i* follows it. In (55a) three determiners precede the head noun, but the ordinal number *ʔal-ʔulaa* "the first" must follow it. In (55b) the cardinal number is postposed immediately after the head noun before the ordinal number. In (56a) the demonstrative *haaðihi* must follow the head noun. If it is fronted as in (56b), the noun phrase becomes a sentence. In (57a) the cardinal number must follow the annexed noun, and in (58a) it must follow the possessive pronoun. The noun phrases in (51b-55b) are assumed to be transforms of those in (51a-55a). We shall write the categorial rules that generate the maximal expansion of the determiner phrase in (55a) and a categorial rule for generating the determiner phrases in (56-58).

a. NP → { $DetP_1$ N (Adj P) $DetP_2$; { Demon } ; NP_{gen} }

b. $DetP_1$ → PreDet Det

c. $DetP_2$ → PostDet

d. PostDet → OrNum

In the noun phrases (51-55) one transformation occurs. It is postposing the cardinal number after the head noun or after its postmodifying adjectival phrase, which triggers the following: the head noun will receive the case assigned to it by its syntactic role in the sentence, the cardinal number will receive the definite article if the cardinal number is definite. We shall formulate this transformation as follows:

cardinal number postposing

Def Art CarNum N (AdjP) ⇒

Def Art $N_{c\alpha}$ (AdjP) Def Art $CarNum_{c\alpha}$

CarNum N (AdjP) ⇒

$N_{c\alpha}$ (AdjP) $CarNum_{c\alpha}$

In other respects, when the cardinal number indicates plural and the head noun is singular, postposing the cardinal number triggers pluralizing the head noun:

CarNum $N_{sing} \Rightarrow$

N_{pl} $CarNum_{pl}$

In the NP (55a) above, the determiner phrase is split into two parts: one part precedes the head noun and the other part, namely the ordinal number, follows it. We shall call such a determiner phrase **discontinuous determiner phrase**. Discontinuous structures are not unfamiliar in Arabic. According to Aoun (1979) (in Chomsky, 1981: 128), for those who argue that the basic word order of the Arabic sentence is VSO there is a **discontinuous verb phrase** where the verb and its object are interrupted by the subject. There is also the **discontinuous morpheme**. The Arabic present tense 2nd person and 3rd person dual and plural verbs carry with them an enclitic suffixed to the verb and a proclitic prefixed to the verb, e.g. *ya-drus-aa* "they two study". These two clitics form a discontinuous subject pronoun that indicates person, gender and number.

4 Concluding remarks

In the present study of the English and Arabic determiner phrase, a great deal of ambivalence has been found in the syntactic distribution of determinatives. Many of these determinatives exhibit idiosyncratic syntactic distribution. So what is the form of syntactic rules that will describe such idiosyncratic features? Chomsky's Universal Grammar (1981, 1995) consists *inter alia* of **principles** (which are constant and are assumed to apply to all verbal languages) and **parameters** (which vary from one verbal language to another). Our investigation has not found any principles governing the structure of the English and Arabic determiner phrase.

If we want to describe adequately the syntactic distribution of determinatives and the syntactic structure of the determiner phrase, we need three things: strict subcategorization for describing the idiosyncrasies of determinatives as well as idiosyncratic transformations of determiners, categorial rules for describing the general word order of the determiner

phrase, and transformational rules for describing transformations in general terms.

The study has also found that the parametric features of the Arabic determiner phrase far exceed those of the English determiner phrase. Compare, for example, the parametric features of the Arabic cardinal numbers and quantifiers with those of their English counterparts

Appendix: English and Arabic Determinatives

Note: Many of the Arabic determinatives in the list are inflectable to gender and case which are studied in the paper.

1. Articles

the	ʔal-
a, an	ø

2. Demonstratives

this	haaðaa (sing, masc)
	haaðihi (sing, fem)
these	haaðaani (dual, masc, nom)
	haaðayni (dual, masc, acc, gen)
	haataani (dual, fem, nom)
	haatayni (dual, fem, acc, gen)
	haaʕulaaʕi (pl, masc & fem)
that	ðaalika (sing, masc)
	tilka (sing, fem)
those	ðaalikumaa (dual, masc)
	tilkumaa (dual, fem)
	ðaalikum (pl, masc)
	tilkum (pl, fem)

such	haakaðaa

3. Possessives

my	-ya
our	-naa
your	-ka (sing, masc)
	-ki (sing, fem)
	-kumaa (dual)
	-kum (pl, masc)
	-kunaa (pl, fem)
his	-hu (sing, masc)
her	-haa (sing, fem)
its	-hu/-haa
their	-humaa (dual)
	-hum (pl, masc)
	-hunna (pl, fem)

the annexed genitive NP

ʔal-mudaafu ʔilayhi

whose	ʔallaðii (sing, masc)
	ʔallatii (sing, fem)
	ʔallaðaani (dual, masc, nom)
	ʔallaðayni (dual, masc, acc & gen)

ʔallataani (dual, fem, nom)

ʔallatayni (dual, fem, acc & gen)

ʔallaðiina (pl, masc)

ʔallaatii (pl, fem)

4. Cardinal numbers (examples)

simple:

one	waaħid
two	ʔiθnaani
miʔat	hundred

compound:

twenty-one	ʔaħada ʕašar (11)
hundred-thousand	miʔat ʔalf

coordinated:

	waaħid wa-ʕišruun (21)
hundred and twenty	miʔat wa-ʕišruun

5. Ordinal numbers (examples)

first	ʔawwal

second θaaniy

6. General ordinals

next taaliy

last ʔaxiir

7. Multipliers (examples)

double diʕf

twice diʕfaa

8. Fractions (examples)

quarter rub ʕ

half nisf

two thirds θuluθaa

9. Main quantifiers

universal:

all ǰamiiʕ

both kilaa (masc)

kiltaa (fem)

distributive:

each, every kull

existential:

some baʕd

any ʔayy

disjunctive:

either ʔayy

neither ʔayy… laysa 'not'

negative:

no laa

alternative-additive:

another ʔaaxar

the other ʔal-ʔaaxar

positive paucal:

a few bidʕ (masc)

bidʕat (fem)

a little qaliil

negative paucal:

few, little qaliil

fewer, less ʔaqall

fewest, least ʔal-ʔaqall

multal:

many, much	kaθiir
more	ʔakθar
	maziid min
most	muʃðam

sufficiency:

enough	kaafiy
sufficient	waafiy

10. Others

restrictive:

just	faqat
only	faqat, waħiid
especially	laa siyyamaa

selective-specific:

which, what	ʔayy

selective-universal:

whichever	ʔayyumaa
whatever	ʔayyumaa

11. Open-class quantifiers

(followed by *of*)

general:

a bit of	ħarf min
a piece of	qit̲ʕat min
an item of	band min

typical:

a slice of	šariiħat min
a roast of	qit̲ʕat mašwiyyat min
a loaf of	raɤiif min
a bowl of	s̲aħn min
a bottle of	qinniinat min

measures:

an acre of	ʔaykar min
a spoonful of	milʕaqat min
a pound of	rat̲l min

References

Aoun, J. (1979). On Government, Case Marking, and Clitic Placement, mimeographed, MIT.

Chomsky, Noam (1965). *Aspects of the Theory of Syntax.* Cambridge, Mass.: MIT Press.

Chomsky, Noam (1970). Remarks on Nominalization, in Fillmore, C. and T. Langendoen, eds., *Studies in Linguistic Semantics*. New York: Holt, Rinehart and Winston.

Chomsky, Noam (1981). *Lectures on Government and Binding.* Dordrecht: Foris Publications.

Chomsky, Noam (1995). *The Minimalist Program.* Cambridge, Mass.: MIT Press.

Culicover, Peter W. (1982). *Syntax, 2nd ed.* New York: Academic Press.

Hassan, Abbās (1974). *Al-Nahwu Al-Wāfi*, *1*. Cairo: Daaru Al-Ma'aarif.

Hornby, A.S. (1977). *Oxford Advanced Learner's Dictionary of Current English.* Oxford: Oxford University Press.

Huddleston, Rodney and Geoffrey K. Pullum (2002). *The Cambridge Grammar of the English Language.* Cambridge: Cambridge University Press.

Ibnu Al-Anbaariy Kamaalu-Deen (1998). *Al-Insaafu fii Masaa'ili Al-Khilaaf*. Beirut: Daaru Al-Kutubi Al-Ilmiyya.

Jackendoff, Ray (1977). Constraints on Phrase Structure Rules, in Culicover, Peter W. and Thomas Wasow, eds., *Formal Syntax*. New York: Academic Press.

Kolln, Martha (1986). *Understanding English Grammar, 2nd ed*. New York: Macmillan Publishing Company.

Leech, Geoffrey and Jan Svartvik (2002). *A Communicative Grammar of English, 3rd ed.* London: Penguin Books.

Lyons, John (1977). *Semantics, vols. 1&2.* Cambridge: Cambridge University Press.

Merriam-Webster's Collegiate Dictionary (1999). Springfield, Mass.: Merriam-Webster, Incorporated.

Quine, Willard Van Orman (1960). *Word and Object*. Cambridge, Mass.: MIT Press.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik, (1972). *A Grammar of Contemporary English.* London: Longman.

Saeed, John I. (1997). *Semantics.* Oxford: Blackwell.

Wright, W. (1975). *A Grammar of the Arabic Language*. Cambridge: Cambridge University Press.

دراسة تباينيّة حول البناء النحوي لعبارة المحدِّدات في اللغة الإنجليزية القياسية واللغة العربية القياسية

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المستخلص

عبارة المحدِّدات فصيلة نحوية تظهر داخل عبارة الاسم وتجعلها معرفة أو نكرة أو تحدد مقدارها. لقد وجدت الدراسة الحالية اختلافات واسعة تتغير بتغيير المحدد بين عبارات المحدِّدات الإنجليزية والعربية من حيث السمات التصريفية، والتوزيع النحوي للمحدِّدات، وترتيب المحدِّدات في داخل عبارة المحدِّدات نفسها. ففي اللغة الإنجليزية تسبق عبارة المحددات الاسم الرأس أو عبارة الصفات، إن وجدت، باستثناء حالات قليلة جداً حيث تظهر بعض المحدِّدات بعد الاسم الرأس. أما في اللغة العربية، فإن أجزاء من عبارة المحدِّدات تسبق الاسم الرأس وبعضها يجب أن يظهر بعد الاسم الرأس أو بعد عبارة الصفات التي تظهر بعد الاسم الرأس، حيث تنتج من هذا الترتيب **عبارة محدِّدات مقطّعة**. في اللغة الإنجليزية يمكن نقل بضعة محدِّدات بعملية التحويل النحوي بعد الاسم الرأس. أما في اللغة العربية، فيوجد عدد كبير من المحدِّدات يمكن نقلها بعد الاسم الرأس أو بعد عبارة الصفات. ولما كان لكل فئة من فئات المحددات الانجليزية والعربية توزيع نحوي خاص بها، وجدت الدراسة أن السمات النحوية لكل محدّد يفضّل ذكرها في التصنيف الفرعي المحكم للمدخل المعجمي لكل محدِّد وترك القواعد التوليدية تصف ترتيبها ضمن عبارة المحدِّدات وضمن عبارة الاسم.