

Phono-Syntactic Theoretical Analysis of Jussive Structures in Arabic Syntax: Chomsky (1968 & 1995) Views

By:

Dr. Atef Jalabneh & Abdullaeroof Zuhi [□]

Abstract

The objective of this work is purely theoretical within the modern linguistic theory in an attempt to study the phonological as well as the syntactic problems took place in the structure of jussive in Modern Standard Arabic with reference to Theory of Generative Phonology of Chomsky's and Halle (1968) and Schane (1973) and Chomsky (1995) Minimalist Program. We formulate correct phonological rules to govern deletion, change and reduction of Vs and Cs. As a result of such phonological processes, the category T is deleted and still the sentence is correct. We try to verify the reasons found behind the grammaticality of the jussive structures though T is weak. In an attempt, we refer to Agr theory of Chomsky (1995:121 and 146-150) to justify how Agrs guarantees the grammaticality of jussive structures.

[□] Department of Linguistics, Middle East University for Graduate Studies, Amman-Jordan

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We argue that in such constructions Arabic has no [Spec, T]; but, instead, there is [Spec, AgrsP] in which nominative case and [D-] and [P-] features are checked at spell-out and guarantees the correctness of the jussive structures at PF. We also argue that jussive particles delete the tense system but remain tensless and cannot affect the Agr system. Among them, polarity negative items of jussive negate the whole CP in the position of [Spec, CP] at LF after movement while other nominal items remain in situ in [Spec, CP] at all levels.

Key words: vowels, consonants, deletion, reduction, minimalist program, Agr, T, CP, spell-out and etc.

Theoretical Background of Vs and Cs Deletion and Reduction as per the Theory of Generative Phonology

Deletion is a phonological process in which a consonant or a vowel is to be omitted in an environment due to feature changing. For instance, Sanford Schane (1973:52-53) has demonstrated that the word-final consonants, in French, are deleted when the following word begins with a consonant or a liquid as in (1a, b), but are retained when the following word begins with a vowel, or glide as in (2a, b):

1a. petit ← → tableau [peti tablo]
 small picture

'A small picture'

1b. petit → livre [peti livre]

'A small book'

In (1a and 1b), the final voiceless stop *t* is deleted as the next word starts with the stop *t* and the liquid / features.

2a. petit → ami [petit

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ami]

	Small	friend	'A small friend'
2b.	petit	→ oiseau	[petit waso]
	small		bird
		'A small bird'	

In (2a and 2b), the final voiceless stop *t* is retained as the next word starts with the vowel *a* and the glide *w* respectively. A look at the above data, we argue that the phonological rule for deletion in French is stated as [delete a word final consonant when it occurs before the class of [+consonantal] segments]. It is evident that in (1) and (2), the process is phonemically motivated but not syntactically because *petit* is phonemically written as /petit/ though phonetically is compulsory pronounced as [peti] and [petit] respectively. In other words, the NP in which the consonant /t/ is available occupies a grammatical function with or without its being deleted. The vowel of the definite article /e or /a 'the' is deleted whenever the following word begins with a vowel; hence, preventing two vowels from occurring next to each other as in (3):

3.	le	ami	[l ami]
	The	boy	
		'The boy'	

Not only French but also English has vowel deletion. For instance, 'he is' [hi Iz] can be said as 'he's' [hiz] in casual speech. In ordinary everyday speech most of English native speakers delete the unstressed short vowels that are italicized in (4):

4.	Mystery	general	memory	funeral
	personal	vigorous	Barbara	
			(Formkin, 1983:89)	

We may illustrate examples from English in which

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various consonants are optionally deleted in casual speech as in the specimen (5):

- 5a. He must be → [hi m s bi]
 5b. We asked him → [hi æst m]

In (5a and b), the dental stop t and the velar stop k are omitted because they are followed by voiced segments. Phonological rules that can delete the whole segment can be either optional as in English (4 and 5) or compulsory as in French (2) and (3).

A vowel may also be reduced in certain environments due to phonetic and phonological or syntactic reasons; for instance, in English vowel reduction involves the weakening of unstressed vowels to schwa. It displays morphological as well as syntactic alternations between a stressed full vowel and unstressed reduced schwa as in (6):

- 6a. [- stress] → [] - tense
 V

6b.

A			B	
/i/	compete	[i]	Competition	[]
/I/	medicinal	[I]	Medicine	
/e/	maintain	[e]	Maintenance	[]
/ə/	telegraph	[ə]	telegraphy	[]
/æ/	analysis	[æ]	analytic	[]
/a/	solid	[a]	solidify	[]
/o/	phone	[o]	phonology	[]
/U/	Talmudic	[U]	Talmud	[]

(Formkin, 1983:91)

In column A all the italicized vowels are stressed and show a variety of different vowel phones; in column B all italicized unstressed vowels are pronounced []. Yet the reduced vowels of column B are derived from different underlying phonemes. Thus [] is an allophone of all English

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vowel phonemes in total. We argue that the process of vowel reduction in English is syntactically motivated in the sense that the schwa changes the class of the word from a verb to a noun, adjective to a noun or a noun to an adjective.

Vowel Reduction Process in Jussive Structures in Arabic: Generative Phonology perspective.

Jussive is a form of a verb that occurs in a syntactic structure, which is specific to Arabic because the verb of the imperfect selects different style of tense markers other than u as it is preceded by the polarity negative items including: (i) lam 'did not' as in [lam yaf^cal-o dhaalik 'he has not do it'],(ii) lamma ' have not yet' as in [lamma ya- dr-i al-ghabiyu ma yaquul 'the stupid did not know what he spoke']. They both indicate the past reference of negation; however, the negative item (iii) la 'do not' in [la tatakallam-o 'do not talk'] or in [la ta-rd- a bi-lqaliil 'do not get satisfied with the little'] illustrates the present reference of negation of the imperfective verb (cf., Abdulhameed 1995: 335 and Wright 1984:35-37). The specific pronouns that influence two jussive verbs are including: (i) man 'who' as in [man yadn-u min al-naari yuhraq-o ' who gets nearer to fire, he will get burnt', (ii) aina 'where' in [aina tadhhab-o adhhab-o 'where you go, I go'] and (iii) mata 'when' in [mata ta- ?t-i, nu- krim-o-ka 'when you visit us, you will be dignified']. The non-specific pronouns that influence the marking of two jussive verbs in two segregated clauses which are including: (i) haithuma 'whenever /wherever' in [haithuma ya-nzil-o al-maṣar, ya-nm-u al-za^r 'whenever rain falls, wheat grows '], (ii) ma 'whatever' in [ma tuqadim-o min khair tujz-o bih, 'whatever good you offer, you will find it'], (iii) kaifama 'however' as in [kaifama tu-^camal-o tu-^caamal-o 'however you treat others, you will be treated'] and mahma 'whatever' as in [mahma ta-gra?-o yu-zid-o-ka 'ilman

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'whatever you study, you will be imparted with knowledge'. They indicate the future meaning of the verb (cf.. Wright 1984:37 and Abdulhameed 1995: 335). The conditional entity in 'if' in [in tajlis-o fi majra al- hawaa?, tamrad-o ' if you sit in current air, you will get sick'] illustrates also the future meaning of the verb. The permission entity li 'let' in [li- yunfiq-o dhu si^catin min si^catihi ' let the owner of abundance spend of his wealth'] indicates also future (cf. Wright 1984:35-37).

It is evident that Arabic accepts the tense marker a for the perfective and u and i to the imperfective; however, a look at the above analysis illustrates that whenever any of the jussive entities precedes the verb of the imperfective, the inflections are mixed. In other words, the verb is marked with zero marker as in y-anzil-o ' it falls', with u in ya-nm-u ' it grows', with ya-dr-i ' he knows' and with a as in ta-rd- a 'he satisfies'. We may argue that the traditional grammarians did not give enough satisfactory justifications why such inflections got confused. They based their analysis on the morphological realizations appeared at the end of the jussive verb. The only justification used to account for such variations is that the jussive particles cause such inflections to occur but not how. Due to such confusions, we explicate in details the vowel system in Arabic, and then propose hypotheses to account for the phonological changes take place in the phonetic form.

Modern Standard Arabic has basically three different standard forms of vowels i.e., a, i and u that occur in all lexical words in different environments which are phonetically categorized as lax. As we are confined to discuss the jussive form of the verb, we argue that, at the end of verbs, the vowel a is represented by fetha 'the accusative tense marker' as in the perfective la^cib-a 'played' whenever the verb ends in [+ consonantal]. The vowel u is called dammah 'the nominative tense marker' is used in the

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imperfect in the same environment as in $yla^{c}ab-u$ 'plays'. And the vowel *i* is labeled as *kesra* 'the genitive tense marker' and is also used in the imperfective form of the verb as in $ya?t-i$ 'comes'. (cf., Wright 1984:7). Tense vowels *aa*, *ii* and *uu* are represented in (i) *ataa* 'came', (ii) [*yamshii* 'is going' and (iii) $yad^{c}uu$ 'to call' respectively. It is evident that these vowels are listed by the traditional Arab phoneticians as a part of the alphabetical system of Arabic language. There are two more colloquial vowels used in day to day slang as in (i) *ee* in [*seef* 'sword'] and (ii) *oo* in [*joom* 'day'], (cf., Shehdeh Fari^c 2006: 74). The focus of study in this analysis is only on the standard ones whenever they occur at the end of the jussive form and are preceded by any jussive entity. Their forms are phonetically predictable as they occur in identical environments. We may argue that the jussive is restricted by two factors (i) the entity proceeds the verb, and (ii) the type of marker ends it. To account for such factors, we posit the hypothesis in (7):

7. If X is an imperfective verb preceded by Y, ends with a tense V and followed by C or V, the former V must be reduced to lax; where Y is restricted to a polarity negative items, non specific/specific pronouns, the conditional particle in 'if' and the entity *li* 'let' of permission of jussive only.

We may look at the specimens (8-11) for *aa*, (12 & 13) for *uu* and (14 and 15) for *ii* respectively.

- 8a. $ta-^{(1)}$ *lq* -*aa* *daifa-* *ka* *mustabshiran*
2nd,sg,masc. meet pres. guest your happy
'You meet your guest if you are happy'
- 8b. **la* $ta-$ *lq* -*aa* *daifa-* *ka* *mustabshiran*
not 2nd,sg,masc meet juss. Guest your happy
- 8c. *la* $ta-$ *lq* -*a* *daifa-* *ka* *illa* *mustabshiran*
not 2nd,sg,masc meet juss. guest your
unless you are happy

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'Do not meet your guest unless you are happy'

9a. ya- rd -aa bi nasiib hi
 3rd, sg,masc. accept pres. with luck his
 'He accepts his luck'

9b. *lam ya- rd -aa bi nasiib hi
 not 3rd, sg,masc. accept juss. With luck his

9c. lam ⁽²⁾ ya- rd -a bi na^oiib hi
 not 3rd, sg,masc. accept juss. With luck his
 'He has not accepted his luck'

A look at (8a) and (9a), we argue that they are correct because the vowel aa at the end of the imperfect verbs ta-lqaa 'you meet' and ya-rdaa 'he accepts' is tense. As the same vowel is not reduced to lax in the presence of la and lam 'not', (8b) and (9b) are phonetically incorrect. (8c) and (9c) are correct since the vowel aa of the jussive form is reduced to the lax a since it is followed by a consonant in the following word. If the same final vowel is followed by the lax vowel a of the definite article, in particular, in the presence of the same negative items, the former must be reduced to short as in (10c) and (11c) respectively. Also, the latter vowel in al-waladu 'the boy' and al-tulaabu 'the students' must phonetically be deleted. If not, we get the wrong sentences (10b) and (11b) respectively.

10a. yu- jz -aa al - waladu
 3rd, sg,masc. rewarded pres det boy
 'The boy is rewarded'

10b. * lamma yu- jz -aa al - waladu
 not yet 3rd, sg,masc. rewarded juss. det boy

10c. lamma yu- jz -a l - waladu
 not yet 3rd, sg,masc. rewarded juss. det boy
 'The boy has not been rewarded'

11a. ya- ns -aa al -pulaabu- duruusa- hum
 3rd, pl,masc. forgets pres. det students
 lesson their

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11b. * lam ya- ns -aa al -pulaabu- duruusa- hum
 not 3rd, pl,masc. forgotten juss. det
 student lesson their

11c. lam ya- ns -a l -pulaabu- duruusa- hum
 not 3rd, pl,masc. forgotten juss. det
 student lesson their

'They have not forgotten their lessons'

Not only aa but also uu is reduced if it is preceded by the non specific adverb NP that functions as the subject; for instance, man 'whoever' in (12b) and the conditional particle in 'if' in (13b) respectively.

12a. ya- sm -uu bi akhlaagi hi
 3rd, sg,masc. go high pres with ethics his
 'He enjoys high ethics'

12b. *man⁽³⁾ ya sm -uu bi akhlaaqi hi ya -njahu.
 whoever 3rd, sg,mas. go high juss. with
 ethics his he pass

12c. man ya sm -u bi
 akhlaaqi hi ya -njahu.
 whoever 3rd, sg,mas. go high juss. with
 ethics his he pass

'Whoever enjoys high ethics, he succeeds'

13a. ya- njah -uu al - waladu
 3rd, sg,masc. succeeds pres. Det boy
 'The boy succeeds'

13b. * in ya- njah -uu al -
 waladu yafrahu ahla hu
 If 3rd, sg,masc. succeeds juss. det boy
 be happy family his

13c. in ya- njah -i l - waladu ya
 - frahu ahla hu
 If 3rd, sg,masc. succeeds juss. det boy
 3rd,pl be happy family his

'If the boy succeeds, his family will be happy'

In (12c), the vowel uu in yasmu 'go high' is reduced

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to short because it occurs in final position of this jussive verb and followed by a consonant and simultaneously preceded by the NP 'whoever'. As the verb *yanjahu* 'succeeds' which is followed by the vowel *a* of the definite and preceded by the particle *in* 'if' the vowel *uu* is changed to *i* to give a grammatical sentence as in (13c). In short, if the high back tense closed vowel *uu* is followed by a consonant, it is reduced to lax; however, if followed by the unique vowel *a* of the definite article, it must phonetically be changed to the high front short open *i*.

Likewise, the high front tense vowel *ii* is reduced to lax whenever the jussive verb is preceded by the specific adverbial entity *mata* 'when' in (14c) and the polarity negative item *lam* 'not' in (14c) respectively:

14a. *ya- ?t -ii fa^olu al - shitaa?*
3rd, sg, masc. come pres. Season det winter
'Winter comes'

14b. **mata ya- ?t -ii fa^olu al -*
shitaa? tuzra^cu al - ashjaaru
when 3rd, sg, masc. come juss. season det winter
plant det trees

14c. *mata ya- ?t -i fa^olu al - shitaa?*
tuzra^cu al - ashjaaru
when 3rd, sg, masc. come juss. season det
winter planted det trees
'When winter comes, trees are planted'

15a. *ya- rm - ii al- rajulu shawkan fi al -pariiqi*
3rd, sg, masc. throw pres det man
thorns on det road
'He throws thorns on the road'

15b. **lam ya- rm -ii al- rajulu*
shawkan fi al -pariiqi
not 3rd, sg, masc. thrown juss. det
man thorns on det road

15c. *lam ya- rm -i l- rajulu shawkan*

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fi al -ḩariiqi
 not 3rd, sg, masc. thrown juss. det man
 thorns on det road
 'He has not thrown thorns on the road'

In (14c) and (15c), the vowel ii in yaʔtii 'come' and yarmii 'throw' is reduced to short and the vowel a of the article is deleted.

In short, the vowels aa, uu and ii at the end of the imperfective verbs are reduced to jussive mood markers if the verbs preceded by the given jussive entities and the vowels are followed either by a consonant or particularly the lax vowel a of the definite article as in the phonological rule (16); however, uu in (13c) is changed to [i] if it is followed by the same lax vowel a as in (17):

16. [+vocalic] → [+vocalic] / _ {+consonant} #
 + tense - tense +vocalic
 +lax
 +low

17. [+vocalic] → [+vocalic] / - [+vocalic] _ #
 + tense - tense - tense
 +high +high + back
 +back - back + low

We may notice that the vowel reduction process is phonetically motivated because Arabic does not accept sentences like (8b, 9b, 10b, 11b, 12b, 13b, 14b & 15b).

It is significance to notice that Arabic has a structure in which the high front tense vowel ii cannot be reduced to lax if it is followed by the short vowel a other than that of the definite article as in the specimen (18b) below.

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- 18a. ainama ta bn -ii a - bni
wherever 2nd, sg,masc. build juss. I build
- 18b. *ainama ta bn -i 0 bni
Wherever 2nd, sg,masc. build juss. I
build 'Wherever you build (something), I will do the same.'

(18a) is correct because the *ii* is maintained. (18b) is wrong as the vowel *ii* is reduced. Syntactically, the subject a 'I' cannot be omitted because it is not identical with *ta* 'you'. Thus, the shortening of the vowel *ii* and deletion of the vowel *a* are syntactically motivated since their being omitted illustrate the ungrammaticality of the sentence; furthermore, the independent clause *bni* 'build' cannot stand without the subject a 'I' being overt.

In short, if the followed vowel illustrates a lexical category, the tense vowel cannot be either deleted or reduced as in (18b); however, if the followed vowel shows a functional category, the vowel, in question, can be reduced as in (10c) and (11c).

Deletion and Change of Vowels and Consonants in Jussive Verbs.

Arabic like other languages may involve the deletion of the vowel and consonant segments; but what makes it different is that the deletion of such segments is not only phonetically but also syntactically motivated. To account for segment deletion in jussive, we propose the hypothesis (19):

19. If X is an imperfective verb preceded by Y, ends with a short V and followed by a consonant; this V has to be deleted; where Y is restricted to a negative polarity items, non specific / specific pronouns, the conditional particle in 'if' and the entity *li* 'let' of permission.

We look at the environments (20) and (21) as a

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specimen for the vowels in question:

- 20a. ya drus - u ^ʕaliyun
 3rd, sg, masc. study pres. Ali
 'Ali studies'
- 20b.* lam ya drus -u ^ʕaliy -un
 not 3rd, sg, masc. study pres. Ali nom
- 20c. lam ya drus -o ^ʕaliy -un
 not 3rd, sg, masc. study juss. Ali nom
 'Ali has not studied'
- 21a. ya bn - i ^ʕaliyun baitan min maali - hi
 3rd, sg, masc. builds pres. Ali house
 from money his
 'Ali builds a house from his own money'
- 21b.*li ya bni - i ^ʕaliyun baitan min maali - hi
 let 3rd, sg, masc. builds pres. Ali house
 from money his
 'Let Ali build a house from his own money'
- 21c. li ya bn -o baitan ^ʕaliyun min maali - hi
 let 3rd, sg, masc. builds juss house Ali
 from money his
 'Let Ali build a house from his own money'

(20a) illustrates that the normal structure of the present tense in which the vowel u marks the verbs yadrus-u 'he studies'. (20b) is incorrect because the negative marker lam and the vowel u cannot work together in the jussive form of the verb lam yadrus-u 'not pro study'. (20c) is made grammatical due to the omission of the vowel u because it is followed by a consonant. Likewise, the vowel i is deleted whenever followed by a consonant as in (21c). It is evident that this is an invariable environment in which the short vowels u, a and i are deleted in the presence of any entity of jussive in Arabic and followed by a consonant as in (21):

- 21d. [+vocalic] → [Ø] / - + consonantal
 + lax

If a verb used in the plural form in the verbal

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sentence, Arabic accepts the deletion of the vowel u and the nunational components [na] and the change of the plural entity [u] as is the case of the hypothesis (22b).

22. If X is an imperfective verb preceded by Y, ends with merely the lax V u and the plural marker u conjoined with the nunation na and followed by the lax V; the former V and the nunational consonant are to be deleted; where Y is restricted to a negative polarity items, non specific / specific pronouns, the conditional particle in 'if' and the entity li 'let' of permission.

We may look at the example (23) as a specimen to illustrate the point.

23a ya- sm u u na al- rijaalu
3rd, pl,masc. go high pres. pl. nun det men
'The men enjoy high positions'

23b. lam ya- sm -o u o al- rijaalu
not 3rd, pl,masc. go high juss. pl
nun det men
'The men have not enjoyed high positions'

(23b) is correct as the vowel u that indicates the tense is deleted; the plural marker is maintained while the nunation marker na is omitted without any syntactic effect. However, Arabic has a category of verbs ends with the short vowel a in the plural form used in the verbal sentence accepts the vowel deletion a and change of the glide plural marker [w] into a diphthong and the deletion of the structure nunation na as is the case in (24c). However, if the verb carries the singular marker, the vowel is tense as in (24a) written for the convenience of the analysis.

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24a. ya s^c -aa zaid un ila al -khair -i
 3rd, sg,masc. seek pres. Zaid nom for
 det charity loc

'Zaid seeks for charity'

24b. al - rijaalu ya s^c -a -w - na
 ila al -khair -i
 det men 3rd, sg,masc. seek pres pl nun
 for det charit loc

'The men seek for charity'

24c.lamma ya s^c -o -aw -o al - rijaalu
 ila al -khair -i
 not yet 3rd, sg,masc. sought juss. pl nun
 det men for det charity loc

'The men have not sought for charity'

(24a) can be treated as in (10c) in the jussive. (24b) is a nominal sentence in which the verb yasawna 'sought' agrees in number, person and gender with the subject al-rijaalu 'men'. (24c) is a verbal sentence because jussive is restricted to it but not to nominal. Thus, the jussive verb bears zero markers, u of the plural is changed to diphthong aw and the nunation na is deleted. We list some other verbs of the category that are treated in the same manner.

25. i. yas^ca 'to seek good act'
 ii. yarqa 'to go high'
 iii. yan?a 'to go aside'
 iv. yaqn^ca 'to condole'
 iiv. yabqa 'to stay'

In brief, jussive, in Arabic, is confined by the constraints (i) the jussive entity that precedes the verb and (ii) the tense marker. It has been argued that if the verb ends with a tense vowel, it must be reduced to lax whether followed by either V or C as in (8-15). However, if the tense vowel uu is followed by the short a of the definite article, the former must be changed to the lax i as in (13c). We also found that if the tense ii is followed by the vowel a that

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stands for a lexical item in the structure, the former vowel cannot either be reduced or changed as in (18b). If the verb of jussive is ended by the lax vowels a, u and i, they must be reduced to zero if followed by a consonant in the next word boundary as in (20) and (21). We have found that Arabic accepts the deletion of the vowel [u] if the verb is in the plural form and ends in the nunation [na] as in (23). Arabic has a category of verbs in the plural listed in (25) ends with the lax vowel a conjoined with the nunation [na] accepts the vowel to be deleted in addition to the conjoint. The plural semi- vowel [w] is changed to diphthong [aw] as in (24c).

T, Agr and Neg polarity items: A Minimalist perspective

Wright (1984:18-24) has argued al- mudaari^c al- majzuum 'the jussive of the imperfect' is a kind of mood in Arabic carries the zero marker as in [li yunfiq-o (juss) dhu si^catin min si^cat-ih 'let the owner of abundance spend of his wealth']. A look at the above analysis, we notice that jussive carries other than the mood zero marker; for instance, if the verb ends in long aa, uu and ii, then the jussive mood marker is the short form of u, a and i respectively as in (8-15). However, if the long vowel ii is followed by a short vowel of the definite article al 'the', the vowel is retained as in (18a). We argue that the Arab grammarians explained this syntactic phenomenon by saying that the imperfective verb loses its tense marker due to the overt precedence of the abovementioned jussive particles whose meaning (i.e. past or future) changes the tensed clause into mood without showing how syntactically happens. Their analysis faces a number of deficiencies:

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- (i) The particles and the negative items la 'do / does not' and lam / lamma 'not yet' do not, in fact, carry tense as that of the English auxiliary equivalents; then the question arises: how is the system of tense lost?
- (ii) The grammarians were silent on how the grammaticality of the sentence is justified whenever there is no T in the finite phrase of the primary verb. In other words, if T is weak, how the nominative case is checked at Spell-out which is a stipulation as per the Minimalist view. If we look at the English data as a specimen for the analysis, we notice that the negative item 'not' has nothing to do with tense. Only, the auxiliary system carries the tense inflection whenever used. In this case, TP node is projected in which the neg- phrase heads AgrP as suggested by Pollock (1989:365-424) and propagated by Chomsky (1995:136,147 and 173). However, the negative items in Arabic are tenseless and there is no auxiliary system; thus, the form used for the past is different from the ones used for the future. To solve the above crucial problems related to the absence of tense system in jussive mood and negation in Arabic, we refer to the theory of Agr of Chomsky (1995:120-124)

He (1995: 143) has said "if I is [+ finite](I = T = tense), then it presumably cannot be deleted, since a tensed phrase plays an LF role". This assumption leads us to provoke an inquiry: suppose there is no tensed feature to

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be checked already in the structure, then how T is a necessary factor for the nominative case checking. He also argued that in VSO structure where there is no Spec of T and with T is weak, there are no violations of Procrastinate and T has [- interpretable] features and assigns the nominative case or null; All T features are to be erased by Merge or Move, by substitution or adjunction. (ibid: 374). Thus, T theory is not the correct choice, the best alternative to solve this problem is to refer to the theory of Agr as Arabic is weak in tense and strong in its morphological realizations, namely, Agrs (cf. Jalabneh (2004: 4-10).

Chomsky (1995:121) has argued that the [Agrs, T] amalgam checks either the nominative case or null case in the position [Spec, Agrs], depending on whether T has the value [+ tense] or [- tense]. Structural case in general is simply a manifestation of the [Spec, Agrs] relation, with realization as Case or agreement, depending on language particular morphology. To prove the theory correct in Arabic we propose the following hypothesis (26):

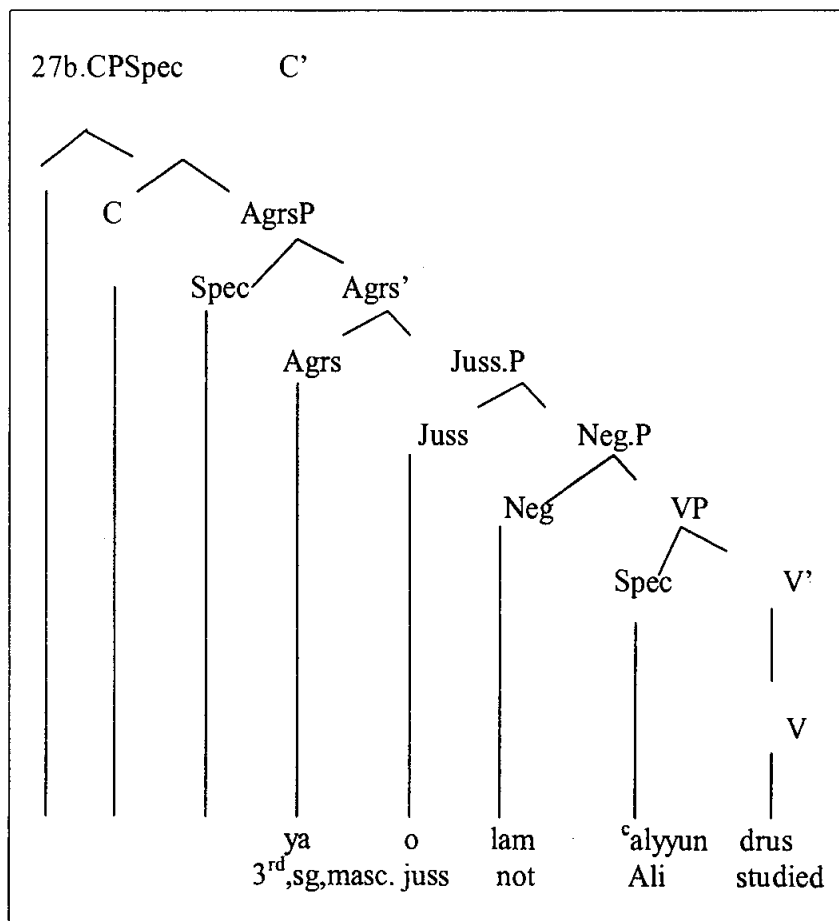
26. If X is confined to [Spec, AgrsP] position in a jussive mood structure, it either checks an optional case features if X is filled by overt DP or null feature if X is empty. Hence, [Spec, AgrsP] is optional.

To prove the hypothesis correct, we look at the example (8) repeated here as (27):

27a. lam ya drus -o ʿaliy -un
not 3rd, sg,masc. studied juss. Ali nom
'Ali has not studied'

(27b) is spell-out representation of (27a):

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It is evident that ya '3rd, sg,masc.' is an Agrs feature and lam 'not' is Neg phrase feature. In (27b), the DP ^calyyun 'Ali' is overt and occupies the position of [Spec,VP]. As it is in a caseless position, it has to move to [Spec, AgrsP] to be checked the nominative case feature by the governor Agrs. The item lam occupies [Neg, NegP] as it negates the VP; then it moves to [Spec, CP] at LF. The verb drus 'study' moves to [Juss, Juss.P] to check the zero jussive mood marker, then to [Agrs, Agrs'] to check the agreement subject feature and become yadrus 'studied'.

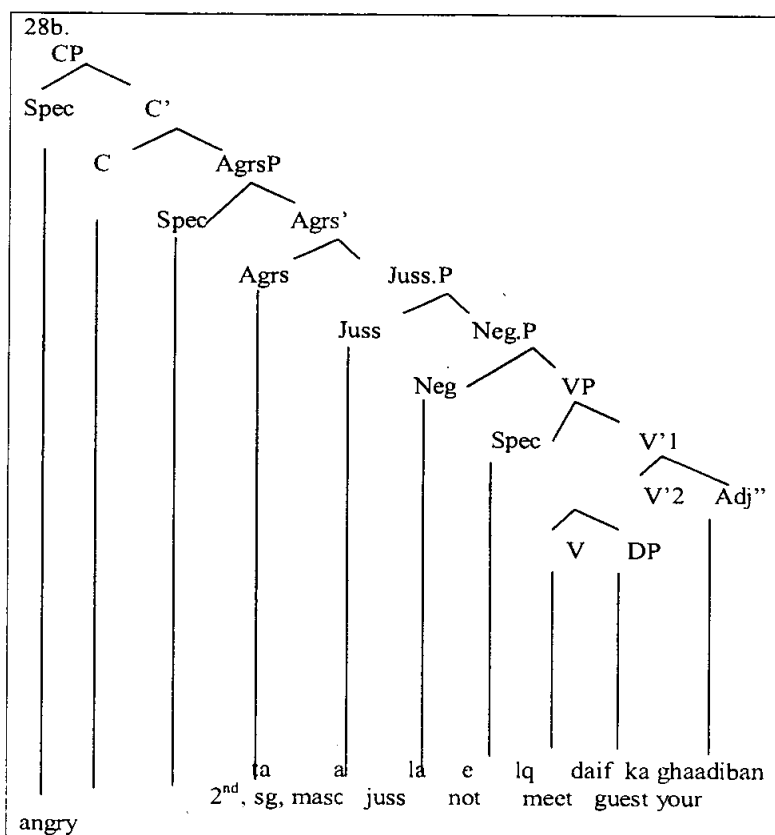
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Then, in a final cyclic movement, it moves to [C, C'] at LF. The position of [Spec, CP] is being kept for the moved lam to initiate the sentence at LF. In short, the [Spec, AgrsP] is overt because of the DP 'allyun. Case feature is [-interpretable] thus deleted at spell-out; however, Agrs, Neg, [P-] and [D-] are [+interpretable] features survives at LF.

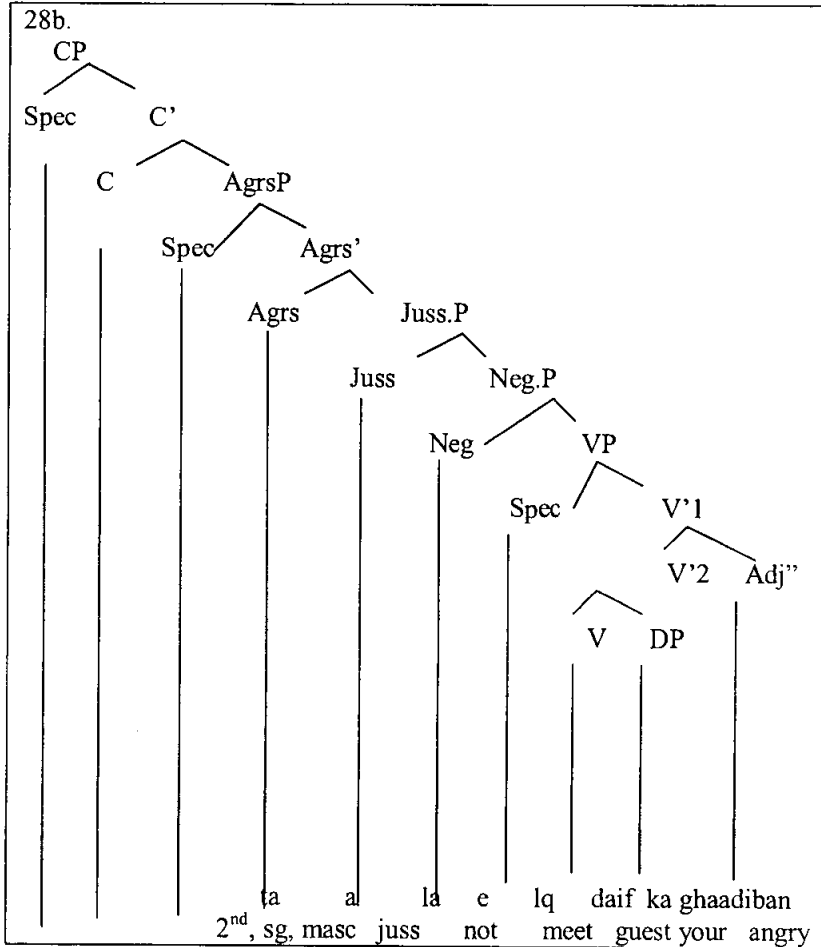
Suppose the subject position is covert, then the interpretation of the sentence in the minimalist view as in (28):

28a. la ta- lq -a daifa- ka ghaadiban
 not 2nd,sg,masc meet juss. guest your angry
 'Do not meet your guest angry'

(28b) is spell-out for (28a):



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In (28b), the interpretation of jussive is different. The structure is without an overt subject; thus, the [Spec, VP] and [Spec, AgrsP] are optional at all levels in this kind of jussive structure. The negative item *la* 'not' moves to [Spec, CP] at LF while the verb *lq* 'meet' moves to [Juss, Juss.P] to check the default accusative marker *a*. Then, it moves to [Agrs, Agrs'] to check *ta* to become *talga* 'meet' and to [C, C'] at LF. In short, suppose the second person singular *anta* 'you' is posited in [Spec, VP] at spell-out, it has to be

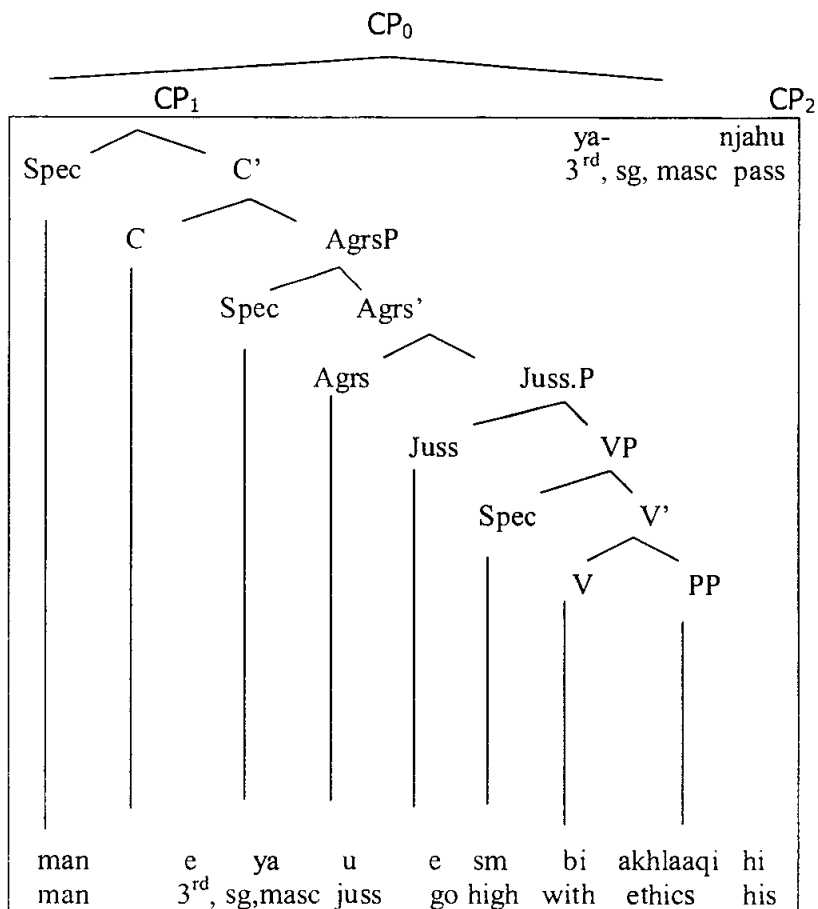
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deleted at LF reaching the same inference; thus, in both the cases, the [Spec, AgrsP] is optional. We examine the sentence (12) repeated here as (29) in which case the [Spec, AgrsP] is optional.

29a. man ya sm -u bi akhlaaqi hi ya -njahu.
 whoever 3rd, sg,mas. go high juss. with ethics hi he pass
 'Whoever enjoys high ethics, he succeeds'

(29b) is the spell-out representation for (29a):

29b.



As we notice, in CP₁ [Spec, AgrsP] is empty thus no

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features to be checked. The nominal element *man* 'who' remains in situ; whereas, the verb *sm* 'enjoys' moves to [Juss, Juss.P] to check the default nominative *u*, then to [Agrs, Agrs'] to check [P-] features at LF. It is obvious that the full verb *yasmu* 'he enjoys' remains in Agrs due to lack of features in this position. In short, if a complementizer is used in jussive then it occupies [C, C']; however, if a negative item of jussive is used, the [Spec, CP] is occupied because of its scope.

To sum up, T is weak in (27-29), thus the subject position is optional. If a DP is visible then the nominative case feature is to be checked by Agrs as in (27); however, if the same position is empty and no nominative case feature is to be checked, still Agrs is strong and guarantees the grammaticality of (28) and (29). The polarity negative items *la* and *lam* 'not' as specimens of jussive have the CP scope of negation; thus, they occupy the [Spec, CP] position at LF. Whereas, *man* 'who' occupies the position of [C, C'] to initiate a sub-ordinate clause. We may argue that the deletion of T does not hinder the correctness of the sentence because Agrs guarantees the checking of the nominative case feature when [Spec, AgrsP] is full and also it confirms the correct interpretation of Arabic sentence at LF after being attached to V. Agrs is a strong feature and cannot be deleted at any cost. Thus, the hypothesis (26) is correct as it helps to understand the significance of jussive mood in Arabic syntax in a proper manner.

CONCLUSIONS

Chomsky's (1968 and 1995) views of the theory of Generative Phonology and Minimalist Program are helpful mechanisms to account for the phonological as well as the relevant syntactic issues appeared in jussive structures in Modern Standard Arabic in an empirical and precise manner. For instance, the tense vowels [aa, uu and ii] in (8-15) are

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reduced to [a, u and i] as they are preceded by the jussive items la 'not', lam / lamma, 'not yet', man 'who' and mata 'when' and followed by a consonant or the sole lax vowel [a] of the definite article al 'the' at the end of the jussive verb as in (10c), in particular. However, [uu] in (13c) is changed to the high front lax [i] as it is preceded by the jussive conditional item in 'if' and followed by the same vowel of the article. The system of vowel reduction in Arabic is always met with the rule (16); therefore the vowel [ii] in (18a) is not reduced to [i] because the lax vowel [a] that follows represents a syntactic argument, namely, the Agrs of the first person singular masculine and feminine. If the lax vowels [a, u and i] at the end of the imperfective verb forms are followed by a consonant, they are deleted in case of jussive as in (20 and 21). If the verb carries the plural marker [u] and attached to the nunational structure [na], both are deleted in jussive construction as in (23b). Arabic has a category of verb forms ends with the vowel [a] and the nunational structure [na] and carries the plural marker [w] listed in (25) accepts the deletion of [a] and [na] in jussive structures but [w] is changed into the diphthong [aw] as in the specimen (24c).

As far as the syntactic issues involved in jussive constructions, there are problems took place in this analysis due to vowel processes. To account for them, we opt for Chomsky's (1995) views of Minimalist Program. For instance, we have noticed that the tense system of Arabic is entirely cancelled by the imposition of the jussive particles mentioned and the sentences remain correct. The Traditional Arab Grammarians were unable to justify the grammaticality of the jussive structures in the absence of T. They imposed the meaning of the polarity negative items la 'do not' and lam and lamma 'not yet' into the structure to do so, but in fact, it was incorrect because meaning, in general, is an abstract notion and cannot solve such syntactic conflicts. Furthermore, they were silent about the true grammatical functions of other nominal entities involved in

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the analysis that construct jussive mood structures.

We argue that a sentence cannot stand without T whether overt or covert unless there is a syntactic justification. As Arabic is weak in T as a property of VSO languages as proposed by Chomsky (1995:374), then there must be a syntactic factor that guarantees the correctness of the sentence due to feature checking. The ultimate alternative is the Agr- theory in which Agrs- feature accounts for such syntactic issues in Arabic structures. For instance, in (27b), the [Spec, AgrsP] is filled with a DP; thus, the nominative case feature is checked by Agrs at spell-out before being omitted at LF. The polarity negative lam 'not' in (27b) occupies the position of [Spec, CP] at LF maintaining both the jussive form of the verb and the scope of negation. We note that though lam is not attached to an auxiliary verb but still it shows the present perfect negation sense because Arabic does not have a weak auxiliary system. However, in (28b and 29b), the subject position lacks [D-] feature at all levels of syntax and the sentences are true. It is because of Agrs power represented by ta '2nd, sg, masc.' and ya '3rd, sg, masc.' that render the correctness of the sentences at LF. La 'not' rests at [Spec, CP] while man 'who' at [C, C'] to initiate the sentences at LF. In short, in all the examples, Agrs is strong and cannot be omitted as it has [+ interpretable] features at LF.

We have tried to test the validity of generative phonology and minimalist program views to account for the processes involved in jussive and we find them fit. It is a very successful exercise as they help the reader of Arabic to understand the jussive structures in a concise manner.

FOOTNOTE

- Traditional Arab Grammarians treated such prefixes as letters of the imperfect. We treat them, in stead, as Agr features for the used person in the subject whether overt or covert as Arabic a pro-drop language. For instance, [ʔal-qaa 'I meet', na-lqaa 'we meet' male and female, ya-lqaa 'he meets' ya-lquu 'they (masc.)meet', ya-lqii-na 'they (fem) meet' ta-lqaa 'she meets', ta-lqaa 'you meet' male and il-lqii 'you meet' female.
- The jussive polarity negative items lam and lamma 'have/has not' are used to negate the imperfective to indicate the present perfect sense as in (1):
 - | | | | |
|---------|-----------------------------|---|-------|
| lam | ya | - | ktub |
| has not | 3 rd , sg, masc. | | write |

'He has not written'

It is clear that in Arabic these items are used with all persons in the same manner because the items are maintained with such persons (cf., Thatcher (1981:80-84 and Wright (1984,VOL:22-24).
- The entity mata 'when' ʔinama 'where', man 'who', ma 'what', ʔay 'which/who' and kaifama 'how' are treated adverbs that indicate jussive but not a question as in [mata taʔti ghadan ? 'When will you come tomorrow?']. We notice that the primary verb taʔti 'comes' is marked by lax vowel i ,which cannot be deleted as compared to jussive.

1. We may argue that Agr features attached to the jussive verb as in yaʔti 'comes', ya^cabu 'plays' confirms the category in [Spec, AgrsP] covert or overt in jussive.

- (i).

ya-	la ^c ab-	u.	(he)or (they)
3 rd ,sg,masc.	play	pres.	

'He / they play(s)'

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(ii).	(i).	ta-	la ^c ab-	u	(she)
		3 rd ,sg,fem.	play	pres.	
				'She plays'	

The difference between (i) and (ii) is the definition of the subject. If the subject is covert, then Agrs is the indicator of category; whereas, if the subject is overt whether specified or not, Agrs is a supportive entity and the subject performs the function. Due this reason Arabic is called a pro - drop language. Pro is a null counterpart of the lexical pronouns and appears as the subject of a tensed or in tenseless as in jussive with specific reference. The element pro is a pure pronominal element with the sense of 'he' and 'they'. (Chomsky 1986:121, 164, & 178).

ABREVIATIONS

Agrs: Agreement subject
AgrsP: Agreement phrase
Aux: auxiliary
C: complementizer
CP: complementizer phrase
D-: noun features
Det: determiner
DP: determiner phrase
Fem: feminine
I: Inflection
IP: inflectional phrase
Juss.: Jussive
Juss.P: Jussive Phrase
LF: logical form
Masc.: Masculine
Neg.P: Negative phrase
Nun: Nunation
P-: verb features
Pl.: plural
Pres. Present
Sg: singular
Spec : specifier
T: tense
TP: tense phrase
VP: verb phrase

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