Pro-Drop in Hijazi Arabic: A Minimalist Perspective

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Abstract

      The purpose of this paper is to investigate the null subjects in Hijazi Arabic and address how they are derived and interpreted. There is a strong connection between rich verbal agreement inflection and pro-drop in HA as it is a highly inflectional language. It is shown in this paper that HA is a consistent null subject language. This study is framed within Holmberg's (2005, 2010) theory of null subjects. Holmberg proposed that null subjects (henceforth NSs) are defective subject pronouns labeled φPs. The null subjects are derived via incorporation into T after the features valuation and union take place. The head T (a probe) has unvalued φ-features which are valued by the defective subject pronoun (a goal) and in return, the [u case] feature on φP is valued by T. The incorporation of φP into T forms a chain which is subject to chain reduction where the lower chain copy (the defective subject pronoun in spec-VP) receives a null spell out. what is pronounced is the valued φ-features of T which appears as a verbal affix on the finite verb after the verb also gets incorporated in T. This reflects the deletion of the subject in spec-VP. The null subject is interpreted as a definite 3rd person null subject when the [uD(efiniteness)] feature of φP is valued by an A-Topic (antecedent) in spec-TopP. On the other hand, it is interpreted as a definite 1st or 2nd person null subject if it is valued by speaker/addressee features in the domain of C (Complementizer).

Introduction

Hijazi Arabic (henceforth HA) is a dialect spoken in the west of Saudi Arabia, which is also a lesser-studied dialect in the region with respect to its syntax. This paper studies the urban HA variant that is spoken in Taif city, of which I am a native speaker. The paper will completely focus on the pro-drop/null subject phenomenon in matrix clauses in HA. More specifically, the study will be restricted to the derivation and interpretation of the null subjects. As far as I am aware, there are no serious studies of the null subjects in HA within any syntactic framework. However, the null subjects in Standard Arabic (SA) have attracted a little more attention of modern Arab syntacticians either in the Government and Binding Theory (GB), a pre-minimalist approach (Ouhalla, 1994; Mohammad, 1990, 2000, among others) or in the minimalist syntax (Olarrea, 1996 and Soltan, 2006). The discussion of the studies in the existing literature will be presented in section 6.3. As the research on the null subjects in HA is minimal, this paper is an attempt to provide a minimalist analysis under the theory of null subjects advocated by Holmberg (2005, 2010). Cross-linguistically, natural languages are classified into two categories as far as the ability of dropping out the subject of finite clauses is concerned, viz. pro-drop languages and non-pro-drop languages. In pro-drop languages, the subject pronouns can be left unexpressed whereas in non-pro-drop languages, they must be overtly expressed. It is worth mentioning that the term "pro-drop" has been suggested in Chomsky's (1981) GB theory, and the null subject is often referred to as the "little pro" in syntactic theory in order to distinguish it from the "big PRO" in non-finite clauses (Chomsky 1982). It is argued in the literature that there is interaction between the richness of verbal agreement and the licensing of null subjects. In other words, the possibility of not overtly expressing a verbal argument is connected some way to inflectional morphology of the language, i.e., the inflectional markers attached to the verb determines the person, number, and gender features of the intended subject. In addition to the aforementioned classification of natural languages, null subject languages (henceforth NSLs) have been typologically classified into four types (see, Holmberg, 2010; Camacho, 2013; Roberta D'Alessandro 2014), namely consistent null-subject languages, Partial null-subject languages, expletive null-subject languages and discourse null-subject languages. Consistent NSLs are languages with rich subject agreement morphology such as Arabic, Italian, Greek, Spanish, Turkish, among others where the subjects are freely dropped. On the other hand, partial NSLs are languages with agreement and referential null subjects, such as Hebrew, Finnish, Russian, Brazilian, Portuguese or Marathi in which the pronominal subject can be optionally null. Expletive null-subject languages allow the expletive pronoun to be unexpressed/dropped, but the referential

pronoun is not permitted to be unexpressed. As for the discourse null-subject languages, although they have no verbal morphology, they permit dropping subjects and objects. In other words, null subjects as well as objects are freely permitted without agreement of any kind (see Huang,1984; Tomioka, 2003). Linguists have identified some properties that seem to correlate with NSLs. This is the discussion of the following section in (2) below.

Properties of null-subject languages

The null subjects research of Jaeggli (1982), Rizzi (1982), and others has shown that the features in (1) are connected to NSLs and are inclined to cluster together.

(1)   a. phonologically null subject pronouns (missing subjects)
        b. free subject inversion
        c. *that*-trace violation

According to Jaeggli (1982) and Rizzi (1982), a null-subject language like Italian shows positive setting for these properties, and therefore, does not allow subject pronouns (2a), allows free placement of the subject after the verb (2b), and allows the extraction of the subject of a complement clause introduced by *that* by Wh-movement (2c). However, a non-null-subject language like English shows negative setting for these features. Therefore, subject pronouns must be expressed overtly (2a), the appearance of the subject after the verb is not permitted as in (2b)[1], and finally the extraction of the subject of a *that* clause is not possible under Wh-movement (2c).

(2)   Rizzi (1982, p.45)

      Italian   English

          *Smokes   Fuma .a

        b. Fuma Mario   *Smokes John
        c. Chi hai detto che fuma?   *Who did you say that _
        smokes?

Let us now see whether HA is positively set for these features.

Phonologically null-subject pronouns in HA (missing subjects)

HA shows to freely drop the pronouns in the subject position of finite clauses as illustrated in (3) below:

(3)	a.	*sawwa-t*	*ʃa:hi:*	
		make.PFV-3SG.F	tea.SG	
		' She made tea.'		
	b.	*katab*	*risa:lah*	

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[1] The occurrence of the subject after the auxiliary verb is possible only in specific constructions such as interrogatives.

		write. PFV-3SG.M	letter-SG.F	
		'He wrote a letter.'		
	c.	*wasˁal-u:*	*lbariH*	
		arrive.PFV-3PL.M/F	last night	
		'They arrived last night.'		

Each sentence above lacks an overt subject, and each sentence is grammatical. This is due to the fact that HA is a rich agreement language. The agreement morphology provides the person, gender, and number feature necessary to identify an empty subject. The agreement features are suffixed to the verb as in (3 a & c).

Free inversion

The availability of free inversion in a language is an indication that the language is a null-subject language (Kayne, 1975; Chomsky, 1981; Rizzi, 1982; Jaeggli, 1982; Safir, 1985; Camacho, 2013, and Cognola, 2013). Free inversion languages allow the subject to appear on either side of the verb in any sentence. Put differently, a language with free inversion has available an alternative verb-subject (VS) word order in addition to the subject-verb (SV) order. Free inversion involves only the subject and verb, and not other verb argument such as the direct object. HA displays free inversion as demonstrated in the following examples in (4).

(4)	a.	*Ali*	*ra:ħ*	
		Ali	go.PFV-3SG.M	
		'Ali went.'		
	b.	*ra:ħ*	*Ali*	
		go.PFV-3SG.M	Ali	
		'Ali went.'		

The SV and VS word orders in (4) respectively are both grammatical, and the meaning of the sentences are identical despite the change in word order. As argued by Chomsky (1981), if a language allows *pro* subjects, then that language also allows free inversion.

***That-trace* violation[2]**

Prior to discussing the *that-trace* effect in HA, it is necessary to explain the meaning of the *that-trace* effect/violation. *That-trace* effect is the phenomenon that the complementizer '*that'* cannot be followed by a trace (except in relative clauses) in some languages (Chomsky, 1986). Languages in which an overt complementizer, such as the English '*that'*, cannot be

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[2] On the standard view within recent Minimalism, a moved element leaves a copy not a trace.

followed by a subject trace are said to exhibit the *that-trace* effect. In these languages, a subject cannot be extracted when it follows 'that' (Chomsky, 1986; Kayne, 1984; Perlmutter, 1971). Languages that exhibit the *that-trace* effect are said to obey the *that-trace* filter. Typically, these languages are non-NSLs. Let us now see whether HA obeys the *that-trace* effect or not. Consider the following examples in (5) below.

(5)	a.	*mi:n	te- ħassib	inn	t	fataħ	l-ba:b
		who	2SG-believe.IPFV.M	that	trace	open.PFV.3SGM	DEF-door.SG
		*'Who do you think that *t* opened the door?'[3]					
	b.	mi:n	te-Hassib	inn-**uh**		fataħ	l-ba:b
		who	2SG-believe.IPFV.M	that.3SG.M		open.PFV.3SGM	DEF-door.SG
		'Who do you think that **he** opened the door?'					

The example in (5a) shows that the extraction of the wh-phrase in the lower clause is surprisingly ungrammatical taking into account that NSLs permit a subject trace after the complementizer 'that'. This suggests that HA seems to pattern with non-NSLs in this feature. Example (5b) is the counter grammatical version of (5a) where a cliticized pronoun is realized on the complementizer '*inn*'. A number of Arab linguists (cf. Akkal, 1996; Ouhalla, 1997; Berjaoui, 2009) have argued that the preverbal Determiner Phrase (DP)[4] in SA is a topic rather than a subject. In other words, the subject-verb-object word order is precisely a topic-verb-object order. This will be assumed for HA. As the *that-trace* effect affects only a subject trace, then HA is not subject to such kind of filter due to the assumption mentioned above that the nominal element which follows the complementizer '*ʔinn*' is a topic rather than a subject. On the traditional view of the *that-trace* filter, an overt subject DP must follow the complementizer. Nonetheless, it is observed that in declarative complement clauses introduced with the complementizer '*ʔinn*' in HA, just like SA, can be followed by an object. Consider the following example in (6) below.

(6)	a.	ħassab-t	inn[5]	l-walad$_i$	ðˁarab-**uh**$_i$	Ali
		believe.PFV-1SG.M	that	DEF-boy.SG.M	hit.PFV-**3SGM.OBJ**	Ali
		'I thought that the boy was his by Ali.'				
	b.	ħassab-t	inn	s-sayya:rah$_i$	sarag-**ha**$_i$	l-walad

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[3] '*t*' stands for a trace.

[4] I am adopting the standard view within Minimalism that the nominal phrase is a DP (see e.g., AlQurashi 2013).

[5] The glottal stop is dropped in connected speech.

believe.PFV-1SG.M	that	DEF-car.SG.F	steal.PFV-**SG.OBJ**	DEF-boy.SG.M

The DPs '*alwalad*' and '*assayyarah*' are the objects/complements of the verb '*ðˤarab*' and '*sarag*' respectively as the resumptive clitics on the verbs refer to the DPs occurring after the complementizer '*ʔinn*'. This is known in the literature as the Clitic Left Dislocation (CLLD). This phenomenon is usually characterized by the presence of a lexical DP in a clause-initial position related to a resumptive pronoun incorporated into the verb, in the associated sentence (see Cinque, 1977 for Italian; Escobar, 1997 for Spanish; Aoun & Benmamoun, 1998 for Lebanese Arabic and Villalba, 2000 for Catalan). The pronominal clitic related to the CLLDed element is a direct object clitic. Another support to my argument is the fact that in SA the DP following (whether the DP immediately follows the complementizer as in (7a) or there is an intervening constituent such as a prepositional phrase (PP) as in (7b)) the complementizer '*ʔinna*' must be assigned an accusative case marker[6] (Aoun,1981; Berjaoui, 2009; Alotaibi & Borsley, 2013) as shown in the following example in (7) below.

(7)	a.	*qult-u*	*ʔinna*	*r-rajul-a*	*wasˤala*	
		sya.PFV-1SG.M	that	DEF-man.SG.M.ACC	arrive.PFV.SG	
		'I said that the man arrived.'				
	b.	*qult-u*	*ʔinna*	*fii*	*l-bait-i*	*rajul-a-n*
		sya.PFV-1SG.M	that	in	DEF-house-GEN	man.SG.M.ACC-INDEF
		'I said that there is a man in the house.'				

It can be concluded that the ungrammaticality of (5a) is not the result of the *that-trace* effect, but it is because of the idea that the DP following the complementizer is a topic and it can be sometimes followed by an object. In other words, it is an extraction of a topic rather than a subject where the former is not subject to the *that-trace* effect. If it is assumed that HA has abstract case system, it can be suggested that the ungrammaticality also results from the lack of an overt accusative DP, just like SA. Therefore, HA does not permit the violation of the *that-trace* effect and cannot be said to pattern with non-NSLs. Thus, it can be concluded that HA is a pro-drop language and, hence is a consistent NSL. In the following sections, a brief overview of HA will be presented and the basic facts about verb morphology, word order and the null subject will be outlined and discussed.

Background of Hijazi Arabic

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[6] The accusative case is assigned to the object of the verb in SA.

        HA is considered one of the main dialects spoken in Saudi Arabia[7]. It is spoken on the west of Saudi Arabia. HA has two main dialects: Bedouin and Urban HA. Bedouin HA is spoken by those who live in the countryside. Broadly, Urban Hijazi is the dialect which is primarily spoken by the majority who live in the major cities of Makkah, Jeddah, Madinah, Taif and Yanbu. By saying Hijazi dialect, it means the typical prevalent dialect which has common syntactic and morphological properties that *Hijaz* province's cities and tribes share among them (AlBarakati,1984). HA grammar has received little attention in the literature as indicated in the introduction. There are a few studies investigating some linguistic aspects of this dialect. For example, Sieny (1978) studies the syntax of basic constructions in HA within the Tagmemics framework (Cook 1969). Other studies including Al-Mozainy (1981), Jarrah (1993) and Abaalkhail (1998) investigate phonological aspects related to lexical phenomena such as vowel alternation and syllabification. As far as I am aware, not many studies have investigated the syntax of HA particularly the null subject parameter as mentioned in the introduction.

Word order and agreement in HA

        Prior to discussing the null subjects, it is worth giving a sketch of the word order in HA. Like SA and other Arabic dialects, HA manifests different word orders VS, VO, VOS, SVO, OVS, OSV and VSO as shown respectively in (8).

(8)	a.	*ra:ħ*	***ʔal-wirç***	
		go.PFV.3SGM	DEF-boy.SGM	
		'The boy went.'		
	b.	*ʔakal*	***t-tuffa:hah***	
		eat.PFV.3SGM	DEF-apple.SG	
		'He ate the apple.'		
	c.	*ʔakal*	***t-tuffa:h***	*Ali*
		eat.PFV.3SGM	DEF-apple.SG	Ali
		'Ali ate the apple.'		
	d.	*Ali*	*ʔakal*	***t-tuffa:hah***
		Ali	eat.PFV.3SGM	DEF-apple.SG
		'Ali ate the apple.'		
	e.	***t-tuffa:hah***	*ʔakal-ha*	*Ali*
		DEF-apple.SG	eat.PFV.3SGM-it.SG	Ali
		'The apple, Ali ate it.'		
	f.	***t-tuffa:hah***	*Ali*	*ʔakal-ha*
		DEF-apple.SG	Ali	eat.PFV.3SGM-it.SG
		'The apple, Ali ate it.'		

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[7] The other two major dialects are Najdi spoken in the centre of Saudi Arabia, and Sharqi spoken in the East of Saudi Arabia.

g	*Ɂakal*	*Ali*	***t-tuffa:hah***
	eat.PFV.3SGM	Ali	DEF-apple.SG
	'Ali ate the apple.'		

The word orders shown above in (8 a, b, c, d, e & f) are common in HA. The VSO word order in (8g) is less common than the other word orders. The SVO[8] is the unmarked word order in this dialect whereas the VSO is the marked word order. The verbs in the examples in (8e) and (8f) host a pronominal clitic (in boldface) referring back to the element realized in initial position. As for the verbs in (8a, b, c, d & g), they do not host a pronominal clitic referring back to the left-realized item. These word order variations show that word order in this dialect is not determined by grammatical functions or by thematic roles. However, these variations in word order serve pragmatic functions. This is not surprising indeed because Li and Thompson (1976) classify Arabic in general among other languages including Chinese to be a topic-oriented language in which grammatical functions play a very little role in determining word order. As far as the agreement is concerned, a verb exhibits full agreement with either a preverbal subject DP or postverbal subject DP in HA. Consider the following examples in (9).

(9)	a.	*ra:ħ*	***l-wirç***	
		go.PFV.3SGM	DEF-boy.SGM	
		'The boy went.'		
	b.	***Ɂal-wirç***	*ra:ħ*	
		DEF-boy.SG	go.PFV.3SGM	
		'The boy went.'		
	c.	*ra:ħ-aw*	***l-wirç-a:n***	
		go.PFV-3PLM	DEF-boy.PLM	
		'The boys went.'		
	d.	***Ɂal-wirç-a:n***	*ra:ħ-aw*	
		DEF-boy-PLM	go.PFV.3PLM	
		'The boys went.'		
	e.	*ra:ħa-t*	***l-bint***	
		go.PFV-3SGF	DEF-girl.SGF	
		'The girl went.'		
	f.	***l-bint***	*ra:ħa-t*	
		DEF-girl.SGF	go.PFV.3SGF	
		'The girl went.'		
	g	*ra:ħ-aw*	***l-bana:t***	
		go.PFV-3PLM	DEF-girl.PLF	

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[8] As mentioned in section 2.3, preverbal DPs are analyzed as topics rather than subjects as in. If the preverbal DP is associated with a pronominal clitic on the verb as in (5e & f), it is treated as a CLLDed element.

		'The girls went.'		
	h	**l-bana:t**	ra:ħ-aw	
		DEF-girl.PLF	go.PFV.3PLM	
		'The girls went.'		
	i	**ʔal-wirç-ain**	ra:ħ-aw	
		DEF-boy-DUAL.M	go.PFV.3PLM	
		'The two boys went.'		
	j	ra:ħ-aw	**l-wirç-ain**	
		go.PFV-3PLM	DEF-boy.DUAL.M	
		'The two boys went.'		

As can be noticed from the examples above in (9 a–f), HA exhibits full agreement in number and gender between the verb and the subject DP irrespective of whether the latter appears preverbally or postverbally. However, the examples in (9 g & h), the verbs seemingly display partial agreement in number, and the verbs in (9 i & j) seem to show gender agreement. This is attributable to the fact that the plural feminine marker[9] and the dual number inflections are lost as agreement inflectional markers on verbs in HA. The dual number marker is just retained on nouns only. The verb 'raH-uu' in (9 i & j) shows full agreement with the dual DP 'ʔal-wirç-ain' in number and gender. As the dual number agreement marker on verbs is lost in HA, speakers of the dialect resort to utilize the plural number agreement marker in place of the dual marker.[10] The same thing applies to the plural feminine inflectional agreement marker as in (9 g & h) where the plural masculine agreement marker appears on the verb. The plural feminine marker morpheme '-n' which appears on verbs in SA is lost in HA. It is actually not employed at all in this dialect of Arabic. In short, the dual number agreement marker and the plural feminine agreement marker on verbs are lost in HA. Despite these facts, it can be said that full agreement between the verb and the preceding or the following subject DP is manifested in HA. The verb morpholoy and the agreement markers play a crucial role in the simplicity of the identification of the subject as shown in the examples in (9) above. Basically, the verb morphology bears the phi-features of the subject DP in the sense that the rich verbal inflection on the verb reflects agreement features that are required to reveal the subject features. Given that HA has a rich inflectional paradigm, the identity of the subject DP must be identified from the rich inflection on the verb, whether it is singular or plural. Syntacticians who view the suffixes on the verbs in (9)

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[9] The plural feminine agreement marker which appears on the verb is the suffix '-n', and it is only used in SA. The plural feminine marker in both SA and HA is the suffix '-a:t' which appears on nouns.

[10] Actually, the dual number in HA is treated as a plural number when a verb agrees with a dual noun.

above as agreement markers are Ouhalla (1994) and Alexiadou and Anagnostopoulou (1998). However, Traditional Arabic grammarians treat them as the subject of the clause (AlAlamat 2014). According to Fassi Fehri (1987), agreement markers are non-pronominal affixes (non-referential affixes) which solely function to indicate the subject gender and number on the verb.

5.   Pronominals and the null subjects in Hijazi Arabic

HA has rich agreement inflection concerning how pronominal subjects can be used before finite verbs, as illustrated in (10) below.

(10)	a.	*Ɂana:*	*Ɂ-tfarradʒ*	*çala:*	*l-muba:ra:h*
		I	1SGM-watch.IPFV	on	DEF-match.SG
		'I watch the match.'			
	b.	*Ɂant*	*ti-tfarradʒ*	*çala:*	*l-muba:ra:h*
		you.SGM	2SGM-watch.IPFV	on	DEF-match.SG
		'You (male) watch the match.'			
	c.	*Ɂant-i*	*ti-tfarradʒ-ain*	*çala:*	*l-muba:ra:h*
		you-SGF	2-watch.IPFV-SGF	on	DEF-match.SG
		'You (female) watch the match.'			
	d.	*hu:*	*y-tfarradʒ*	*çala:*	*l-muba:ra:h*
		he	3SGM-watch.IPFV	on	DEF-match.SG
		'He watches the match.'			
	e.	*hi:*	*ti-tfarradʒ*	*çala:*	*l-muba:ra:h*
		she	3SGF-watch.IPFV	on	DEF-match.SG
		'She watches the match.'			
	f.	*Ɂiħna:*	*ni-tfarradʒ*	*çala:*	*l-muba:ra:h*
		we.1PLM/F	1PLM/F-watch.IPFV	on	DEF-match.SG
		'We watch the match.'			
	g	*Ɂant-um*	*ti-tfarradʒ-awn*	*çala:*	*l-muba:ra:h*
		you.PLM/F	2-watch.IPFV-PLM/F	on	DEF-match.SG
		'You (M/F) watch the match.'			
	h	hum	*y-tfarradʒ-awn*	*çala:*	*l-muba:ra:h*
		they.PLM/F	3-watch.IPFV-PLM/F	on	DEF-match.SG
		'They (M/F) watch the match.'			

The sentences in (10) reveal that the inflectional paradigm in HA is highly rich. This is demonstrated by the various forms of affixes attached to the finite verbs. Like other dialects of Arabic, the pronominal paradigm in (10) shows that the dual pronouns do not exist in HA, a property that does exist in Standard Arabic. All the pronominal subjects in (9) can be dropped without affecting the syntactic and semantic content of the construction. The following examples in (11) illustrate this point:

(11)	a.	**pro**	*ʔa-tfarraʤ*	*ҁala:*	*l-muba:ra:h*
		1SGM/F	1SGM-watch.IPFV	on	DEF-match.SG
		'I am watching the match.'			
	b.	**pro**	*ti-tfarraʤ*	*ҁala:*	*l-muba:ra:h*
		2SGM	2SGM-watch.IPFV	on	DEF-match.SG
		'You (male) are watching the match.'[11]			
	c.	**pro**	*ti-tfarraʤ -ain*	*ҁala:*	*l-muba:ra:h*
		2SGF	2-watch.IPFV-SGF	on	DEF-match.SG
		'You (female) are watching the match.'			
	d.	**pro**	*y-tfarraʤ*	*ҁala:*	*l-muba:ra:h*
		3SGM	3SGM-watch.IPFV	on	DEF-match.SG
		'He is watching the match.'			
	e.	**pro**	*ti-tfarraʤ*	*ҁala:*	*l-muba:ra:h*
		3SGF	3SGF-watch.IPFV	on	DEF-match.SG
		'She is watching the match.'			
	f.	**pro**	*ni-tfarraʤ*	*ҁala:*	*l-muba:ra:h*
		1PLM/F	1PLM/F-watch.IPFV	on	DEF-match.SG
		'We are watching the match.'			
	g	**pro**	*ti-tfarraʤ -awn*	*ҁala:*	*l-muba:ra:h*
		PLM/F	2-watch.IPFV-PLM/F	on	DEF-match.SG
		'You (M/F) are watching the match.'			
	h	**pro**	*y-tfarraʤ -awn*	*ҁala:*	*l-muba:ra:h*
		PLM/F	3-watch.IPFV-PLM/F	on	DEF-match.SG
		'They (M/F) are watching the match.'			

Examples (11) show that all the overt subject pronouns in (10) can be dropped and yet the sentences remain semantically and grammatically correct and convey the same meaning. This occurs by virtue of the rich inflectional morphology of the verb in HA. The agreement affixes on the verbs play a pivotal role in the recovery and the identification of the subject. In the case of plural feminine nouns, the gender of the subject can be identified via the context of discourse or the context in general whether the subject is a plural feminine or a plural masculine. It should be noted here that there is some sort of ambiguity between example (11b) where the subject is 2nd person singular masculine and example (11e) in which the subject is 3rd person singular feminine because they have the same verbal inflection. Nevertheless, this can be disambiguated by the context. Let us now have more examples where the unexpressed/ dropped subjects are DPs not pronominals. Consider the following examples in (11) below.

(12)	a.	*ʔal-wirҁ*	**gara:**	*l-gisˁah*
		DEF-boy.SG	read.IPFV.3SGM	DEF-story.SG
		'The boy read the story.'		

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[11] Example (10b) can be used as an interrogative where the subject is 2nd person singular masculine (***ti-**tfarraj ҁalaa l-mubarah* ?)

	b.	**pro**	**gara:**	*l-gisˤah*
		3SGM	read.IPFV.3SG	DEF-story.SG
		'He read the story.'		
	c.	*ʔal-wirç-aan*	**gar-aw**	*l-gisˤah*
		DEF-boy-PL	read.IPFV-3PL	DEF-story.SG
		'The boys read the story.'		
	d.	**pro**	**gar-aw**	*l-gisˤah*
		3PL	read.IPFV-3PL	DEF-story.SG
		'They (male) read the story.'		
	e.	*ʔal-bint*	**gara-t**	*l-gisˤah*
		DEF-girl.SG	read.IPFV-3SGF	DEF-story.SG
		'The girl read the story.'		
	f.	**pro**	**gara-t**	*l-gisˤah*
		3SGF	read.IPFV-3SGF	DEF-story.SG
		'She read the story.'		
	g	*ʔal-ban-aat*	**gar-aw**	*l-gisˤah*
		you.PLM/F	read.IPFV-3PL	DEF-story.SG
		'The girls read the story.'		
	h	**pro**	**gar-aw**	*l-gisˤah*
		they.PLM/F	read.IPFV-3PL	DEF-story.SG
		'They (female) read the story.'		

Just like examples (11) above, the examples in (12) illustrate that HA permits the occurrence of the null pro subject. As I indicated above, the rich verbal inflection on the verb reflects agreement features that are required to reveal the subject features or the phi-features (person, number and gender) of the subject DP. In some cases, as in (11 d & h), The inflectional suffix '-*aw*' on the verb is an agreement marker of a 3person plural masculine or feminine. As mentioned earlier, the plural feminine inflection is lost in this dialect. To determine whether the plural subject is feminine or masculine, the context of discourse is very helpful in revealing the identity of the subject with respect to the gender of the subject. Since the examples in (11) and (12) demonstrate that HA allows the subject DPs to be overtly unexpressed, it can be concluded that HA is a pro-drop language and, hence is a consistent NSL.

Theoretical perspectives for pro-drop
Early theoretical perspectives

Chomsky (1981) classified noun phrases in a language into overt Noun Phrases (NPs) and covert NPs. The overt NPs involve R-expressions (reference expressions) or pronouns. In contrast, the covert NPs involve elements of the empty categories (EC) which are *pro*, PRO and trace. Since this paper is essentially concerned with the category *pro*, other empty categories will not be considered here. Chomsky (1981) discussed properties associated with the null subject. It is always the subject of a finite clause. Also, due to the rich inflectional morphology agreement in phi-features

regardless of being covert, the null subject is assigned a case. He also claimed that *pro* is a pronominal anaphor, but this claim was abandoned in Chomsky (1982) and in his subsequent works (1986), (1991) and (1995).

Chomsky (1982) pointed out that *pro* is not [+anaphor, + pronominal], but [- anaphor, + pronominal]. This category has the full referential properties that a personal pronoun would have. Hence, *pro* is taken to be the null counterpart of overt pronouns. In addition, *pro* is licensed in both D(eep)-structure and S(urface)-structure. It was argued by Chomsky (1986) that the category *pro* is a type of parametric variation among languages. According to Chomsky's (1981) syntactic properties of *pro*, it is defined as the missing constituent in which only the phonetic features are null spell out.

There are divergent views on the reason behind allowing the subject to be unpronounced in finite clauses. One prevalent view is pertaining to the richness of inflectional morphology in some languages like Arabic, Italian …etc. Chomsky (1982) argued that *pro* is assigned case by AGR(eement) due to the strong agreement by which the subject in pro-drop languages can be identified. According to Chomsky (1982), AGR is assumed to carry Case in pro-drop languages (as in Italian) and does not have Case in non-pro drop languages (as in English). There are other linguists who hold this view such as Taraldsen (1978), Rizzi (1982), Picallo (1984), Hyams (1986), Haegman (1994) and Harbert (1995). Taraldsen (1978) argued that null subjects are all empty NPs and they are allowed to be null owing to the rich verbal inflectional system. Haegeman (1994) emphasized that rich agreement inflectional morphology is the only property that allows and identifies the null subjects. Harbert (1995) observed that the pro-drop is associated with agreement morphology in two aspects. First, the subject is dropped in languages which exhibit rich subject-verb agreement such Spanish and Italian. Second, pronouns can be left unexpressed/unpronounced in positions other than the subject where they exhibit agreement morphology. An example of such a situation was given by Huang (1989) when discussing Pashto. In this language, an object pronoun can receive a phonetic null realization in a perfect tense sentence where the verb shows agreement morphology as a result of agreeing with the object pronoun. The other opposing view was taken by Jaeggli & Safir (1989). They claimed that it is not the rich agreement morpholoy which is responsible for allowing pro-drop, but it is the morphological uniformity that plays a crucial role in allowing a null subject. In other words, the permission of null subjects in a language is linked to uniform morphological agreement paradigms. For them, a morphologically uniform language is the one that either has complete absence of inflectional endings like Chinese and Korean or relatively complete presence of inflectional endings like Italian and Spanish. English is

an example of a non-morphologically uniform language because some wordforms have inflectional morphemes as in the 3rd person singular subject-verb agreement in the simple present tense (he sleeps early) whereas other wordforms do not have endings as in the 1st person singular subject-verb agreement in the simple present tense (I sleep early). Other linguists such as Rizzi (1986) and Kenstowicz (1989) suggested that there are more than agreement features that need to be considered in permitting pro-drop. Kenstowicz (1989) claimed that licensing is not sufficient in allowing pro-drop. Rizzi (1986) posited two conditions for permitting *pro* in a language, namely licensing and identification. He made a distinction between the two conditions. The licensing condition refers to the idea that there is a licenser/ a licensing head for *pro*, and as the licensing condition is applied to all positions where *pro* occurs, there are different licensing heads. Therefore, *pro* occupying the subject position is licensed by INFL(ection) head, and *pro* appearing in the object position is licensed by V(erb) head. There exist languages which do not have licensing heads, and thus the null subject is not allowed to appear in any position at all as in English. It is a matter of cross-linguistic variation with respect to the presence or absence of licensing heads. As far as the identification requirement is concerned, it is applicable only to referential *pro*, and it is not an obligatory procedure. Rizzi (1986) argued that the person agreement feature is specified on INFL. Due to the optionality of the identification condition, some languages such as German will not permit referential *pro* even though INFL has person agreement feature specification. On the other hand, in other languages such as Spanish in which INFL has specification of the person feature, proper licensing and identification of referential *pro* will be sanctioned. For the successful identification of *pro*, coindexation of *pro* with the person/number features of its case-assigning and governing head is really essential.

Later theoretical perspectives
Speas (1994, 2006), making use of Chomsky's (1991) Principle of Economy which states that XP does not project unless it has overt material, suggested that the distinction between NSLs and non-NSLs stems from the idea whether AgrP (Agreement Projection) projects or not and whether it has overt material or not. Also, her idea depends on licensing AgrP rather than *pro*. According to her, the projection of AgrP relies on the existence of overt material either in AgrP head or its specifier. Therefore, the licensing of AgrP projection in languages with rich agreement morphology results from the insertion of the agreement morpheme as an independent lexical item in the head of AgrP. As a result, *pro* is inserted into the specifier position of V. The licensing of AgrP is also possible if its specifier is occupied by an overt subject, and this occurs in languages with poor agreement morphology where

pro-drop is ruled out. As for languages which do not have agreement morphology, insertion of *pro* is ruled in as AgrP is not required to be projected.

However, her analysis does not take into account the distinction between partial and consistent NSLs, and it permits pro-drop in languages with poor agreement such as Brazilian Portuguese.

Another analysis within early Minimalism was offered by Radford (1997) where he proposed that the occurrence of the null subject in a language relies on whether the tensed verbs have strong agreement features or not. In other words, there is a correlation between the richness of agreement morphology and the strength of the agreement features carried by finite verbs. Consequently, the strong agreement features carried by the tensed verb cause the verb to move from V to INFL, thereby pro-drop is sanctioned. However, movement from V to INFL does not take place if the finite verbs have weak agreement features and thus the null *pro* subject is ruled out. The recoverability of the identity of the null *pro* subject is easy particularly when a language possesses a highly inflectional agreement system.

Holmberg (2005,2010) is another minimalist account where he developed a theory of null subjects. Holmberg criticized Rizzi's (1982) parameters which were proposed to differentiate between NSLs and non-NSLs, one of which stresses the idea of pronoun referentiality. Rizzi (1982) suggested that "INFL can be specified [+pronoun], and INFL which is [+pronoun] can be referential"(p. 142). This parameter differentiates between NSLs that permit referential and non-referential null subjects, and those which only permit non-referential null subjects. Holmberg (2005, 2010) argued that notion of referentiality is not accurate because it does not capture the facts that definite null subjects are permitted in some languages, but they are not allowed in other languages. For example, not all types of null subjects (e.g., null generic pronouns) that are permitted in partial NSLs are permitted in consistent NSLs and vice versa. On the other hand, indefinite null subjects and expletive null subjects are permitted in some languages but not allowed in others. In addition, pro-drop is not permitted at all in some languages. Therefore, Holmberg (2005,2010) argued that the criterion that should be made use of to distinguish between NSLs and non-NSLs is definiteness rather than referentiality. Holmberg (2005) slightly reformulated Rizzi's parameter regarding INFL being specified [+ pronoun] and referential, where he proposed the following assumptions in line with Cardinaletti & Starke (1999):

(13)

a. "Pronouns are either DPs, with the structure [DP D [φP φ [NP N]], or φPs; "

b. "Null pronouns are φPs."   Holmberg (2005, p. 10)

'φP' is a defective 3rd person pronoun. It is labelled as such after Déchaîne and Wiltschko (2002). As can be shown in (12), Holmberg (2005) suggested a typology of null pronouns, namely defective (weak) pronouns and pronouns which are DPs. Additionally, he proposed that finite T(ense) in consistent NSLs has a valued definiteness feature whereas the one in partial NSLs does not host a D(efiniteness)-feature. However, Holmberg (2010) noticed that his assumption of the definiteness feature in T is problematic. First, some languages can have indefinite overt subjects which can establish an agreement relation with T. If T has a valued D-feature, then how can the presence of indefinite overt subject be accounted for? There will be a conflict between the D-feature in T and the occurrence of the indefinite subjects. Second, if it is assumed that finite T has an unvalued definiteness feature, the lack of a null indefinite subject pronoun will not be accounted for in NSLs. Drawing on Samek-Lodovici (1996) and Frascarelli's (2007) observation for a number of NSLs that 3rd person null subjects depend on an antecedent, Holmberg (2010) assumed that the same holds true for consistent NSLs. Consequently, following Frascarelli (2007), Holmberg (2010) assumed that "an Aboutness-shift topic (henceforth A-topic) is always syntactically represented in a designated A-topic position in the articulated C-domain, either overtly or covertly" (p. 12) and "the antecedent of a null subject is a null A-topic base-generated in the C-domain of the clause immediately containing the null subject" (p.13). According to Holmberg (2010), these assumptions can solve the problem of the valued definiteness feature on T by proposing that the finite T in consistent NSLs hosts an unvalued D-feature which is valued by an A-topic yielding a definite defective 3rd person pronoun (φP). On the other hand, the finite T in partial NSLs does not have an uD-feature, thereby a pronoun is understood to be "impersonal, that is either as generic (inclusive or exclusive) or non-thematic" (p. 14). I restrict my discussion here to consistent NSLs as Arabic is considered as a consistent NSL. The derivation of the null defective 3rd person pronoun involves incorporation into T, which is an idea familiar from the literature (Fassi Fehri 1993, Platzack 2004). Incorporation occurs during feature valuation via Agree relation in Chomsky's (2001) sense. Roberts' (2010) incorporation theory has been adopted by Holmberg (2010) in his theory of null subjects. Let us now see how the null defective 3rd person pronoun is derived and interpreted. The finite T functions as a probe by virtue of having unvalued φ-features and searches for a matching goal to value its features. It finds the defective subject pronoun in the spec-vP. Consequently, the unvalued φ-features on T are valued by the valued φ-features of φP. In other words, they are copied by T. In return, the defective subject pronoun has an unvalued NOM(inative) case feature which is valued by T. what is left is the

valuation of the uD-feature on T which is valued by the null A-Topic in spec-CP. The valuation involves sharing the referential index of the A-Topic by [uD]. After the features valuation or copying occurs, the defective subject pronoun φ-features get incorporated into T resulting in the union of the φ-features of T and the subject. Roberts (2010) suggested that the features' copying operation is not distinguished from the copying that takes place in movement. As a result, the probe and goal make a chain which undergoes chain reduction. The reduction involves deleting all similar copies other than the highest one (Nunes 2004), and it is subject to the following rules proposed by Holmberg (2010, p. 15):

(14)   a. "Pronounce the highest chain copy."

         b. "Pronounce only one chain copy."

In conformity with the rules in (14), what is pronounced in the chain is the highest copy which is T, and the lower copy, which is the subject φP, gets a null spell out. After the incorporation of V+v into T takes place, the top copy of the chain is pronounced as an agreement bound morpheme on the finite verb or the auxiliary in T reflecting the identity of the subject. As far as the 1st and 2nd person null subjects are concerned, Holmberg (2010) adopted Sigurðsson's (2004) hypothesis which states that C in CP has speaker and addressee features by which the uD feature in T is valued yielding a definite 1st or 2nd person null subjects in the spec-vP. Since the null subjects are incorporated in T, Holmberg (2010) argued that the specifier of TP is not projected, and the EPP feature is valued by the null A-Topic when valuing the [uD] feature in T. The following structure in (15) shows the derivation of the null subjects discussed above:
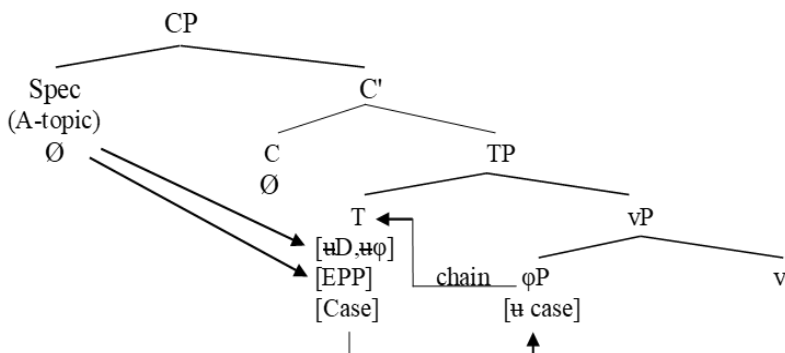
(15)

According to Holmberg (2010), when the subject is a lexical DP or a D-pronoun (i.e., with a valued D) occupies the spec-vP, the uD-feature of T will not be valued by the A-Topic, but rather it will be valued by the valued

D feature of the subject in spec-vP. Irrespective of the mutual valuation between the subject and the finite T in case and D respectively, the chain will not be established between the probe and the goal. This is due to the absence of the subject's incorporation into T. The incorporation is precluded as a consequence of a root contained in the lexical DP which cannot be copied by T via Agree. Therefore, the lexical DP in spec-vP must be pronounced. Holmberg's theory will be adopted in this paper to account for the derivation and interpretation of the null subjects in HA as stated at the outset in the introduction.

Previous studies of *pro* in Arabic

The focus of the discussion of *pro* in the pre-minimalist studies in Arabic was mainly on the phenomenon of full agreement and partial agreement. Some of the studies proposed the existence of *pro* in order to account for the agreement asymmetry manifested in SA.[12] For instance, Mohammad (1999, 2000) postulated the presence of a null expletive subject occupying the spec-IP to account for the partial impoverished subject-verb agreement in VSO word order where the verb agrees with subject in gender only. The null expletive is invariably 3rd person singular. In this situation, the partial agreement is obtained via specifier-head relation between the empty expletive in the spec-IP and its head I to which the verb moves. However, it is not clear to me how the gender agreement on the verb would be explained if the partial agreement is achieved as a consequence of agreement with a null 3rd person singular expletive pronoun. Mohammad's (1999, 2000) study did not deal with null subjects in a comprehensive way; it was restricted to one type of null subjects, and it did not explain how the null subject is derived. It was specifically focused on the agreement phenomenon in SA. Another study was conducted by Ouhalla (1994) where he suggested the existence of a resumptive *pro* generated in spec-AGR and coindexes with a preverbal DP which he analyzed as a topic rather than as a subject. Again, his study was carried out for the purpose of accounting for word order and agreement in SA and did not involve a thorough discussion of all kinds of null subjects. In Fassi Fehri's (1993) examination of bound pronominals which are suffixed to verbs, he suggested that these pronominals function as a means of identifying null arguments. Nonetheless, his account did not provide a comprehensive treatment of *pro* in SA.

Within early Minimalism (Chomsky 1995), Olarrea (1996) addressed the strong relationship between rich verbal inflection agreement and a null

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[12] The verb exhibits full agreement in all φ-features with a preverbal subject DP whereas the verb shows partial agreement in gender with a postverbal subject DP (e.g., Mohammad 1999,2000; Fassi Fehri 1993; Aoun, Benmamoun and Sportiche 1994; Ouhalla 1994; AlQurashi 2007).

pronoun (*pro*) in SVO order. He assumed that AgrsP has multiple specifiers: the first upper specifier is occupied by a left-dislocated subject, whether it is a lexical DP or a pronominal) and the lower specifier is occupied by the *pro*. The *pro* originates in the spec-VP and then covertly moves to spec-Agrs (i.e., at LF). Furthermore, the verb overtly moves from V through T to Agrs. Thus, full agreement is sanctioned in a spec-head configuration. In VSO order, the null *pro* is not posited, but rather a lexical DP occupies the spec-VP. It is not clear to me, however, what kind of features associated with the null *pro* that enables full subject-verb agreement in SVO order.

Within recent Minimalism (Chomsky 2000, 2001), Soltan's (2006) account is somehow similar to Olarrea's (1996) analysis, yet Soltan adopted Chomsky's (2000) Agree relation. Soltan (2006) postulated the existence of a null *pro* in the spec-vP in SV order only. He further assumed that the preverbal DP is externally merged in spec-TP as a clitic left-dislocated DP. The problem with Soltan's analysis is how an unspecified pronoun for ϕ-features can establish an Agree relation with T to value its ϕ-features. Due to the incomplete and incomprehensive treatment of *pro* in SA, none of the above analyses will be adopted in this paper.

Holmberg's (2010) theory and the null subjects in HA

Adopting Holmberg's (2010) theory of null subjects, this section attempts to offer an account of the null subjects in HA, and how they are derived and interpreted. Let us recall the HA data given in (11) above, repeated here for convenience in (16), where the subjects are null.

(16)	a.	**pro**	*ʔa-tʃarradʒ*	*çala:*	*l-muba:ra:h*
		1SGM/F	1SGM-watch.IPFV	on	DEF-match.SG
		'I am watching the match.'			
	b.	**pro**	*ti-tʃarradʒ*	*çala:*	*l-muba:ra:h*
		2SGM	2SGM-watch.IPFV	on	DEF-match.SG
		'You (male) are watching the match.'			
	c.	**pro**	*ti-tʃarradʒ -ain*	*çala:*	*l-muba:ra:h*
		2SGF	2-watch.IPFV-SGF	on	DEF-match.SG
		'You (female) are watching the match.'			
	d.	**pro**	*y-tʃarradʒ*	*çala:*	*l-muba:ra:h*
		3SGM	3SGM-watch.IPFV	on	DEF-match.SG
		'He is watching the match.'			
	e.	**pro**	*ti-tʃarradʒ*	*çala:*	*l-muba:ra:h*
		3SGF	3SGF-watch.IPFV	on	DEF-match.SG
		'She is watching the match.'			
	f.	**pro**	*ni-tʃarradʒ*	*çala:*	*l-muba:ra:h*
		1PLM/F	1PLM/F-watch.IPFV	on	DEF-match.SG
		'We are watching the match.'			
	g	**pro**	*ti-tʃarradʒ -awn*	*çala:*	*l-muba:ra:h*
		PLM/F	2-watch.IPFV-PLM/F	on	DEF-match.SG

|		'You (M/F) are watching the match.'			
	h	**pro**	**y-tʃarraʤ -awn**	çala:	l-muba:ra:h
		PLM/F	3-watch.IPFV-PLM/F	on	DEF-match.SG
		'They (M/F) are watching the match.'			

Even though the subjects are unexpressed in the examples in (16), they can be easily identified and recovered by virtue of the verbal inflections. Sometimes, as mentioned before, the context is helpful in resolving the ambiguity occurring between examples (16b) and (16e). The verbs in these two examples bear the same agreement prefixes indicating a 2nd person singular masculine subject and a 3rd person singular feminine subject respectively.

According to Holmberg (2010), finite T in consistent NSLs has an uD-feature as part of the unvalued ɸ-features. The uD-feature is valued by an antecedent, A-topic in the sense of Frascarelli (2007) positioned in the C-domain, on which 3rd person null subjects are dependent. I assume that any preverbal DP in HA is a topic functioning as an antecedent (A-topic) of 3rd person null subjects. In this case, the A-topic is represented overtly in the spec-Top. I also assume, following Holmberg (2010), that the A-topic can be represented covertly in spec-TopP. Not only preverbal DPs function as topics but also pronominals. Consider the following examples given in (12) above, repeated here in (17) below:

(17)	a.	*ʔal-wirç*	**gara:**		*l-gisˤah*
		DEF-boy.SG	read.IPFV.3SGM		DEF-story.SG
		'The boy read the story.'			
	b.	*hu*	**gara:**	*l-gisˤah*	
		he	read.IPFV.3SGM	read.IPFV.3SGM	
		'He read the story.'			
	c.	**pro**	**gara:**		*l-gisˤah*
		3SGM	read.IPFV.3SG		DEF-story.SG
		'He read the story.'			
	d.	*ʔal-wirç-a:n*	**gar-aw**		*l-gisˤah*
		DEF-boy-PL	read.IPFV-3PL		DEF-story.SG
		'The boys read the story.'			
	e.	*hum*	**gar-aw**	*l-gisˤah*	
		they	read.IPFV-3PL	read.IPFV-3PL	
		'They read the story.'			
	f.	**pro**	**gar-aw**		*l-gisˤah*
		3PL	read.IPFV-3PL		DEF-story.SG
		'They (male) read the story.'			

The label *pro* does not indicate the position of the null subject. I suggest that the subject in HA always occupies the spec-VP whether overtly or covertly (null subjects), and I assume that all the examples in (17) above

have a null *pro*. The preverbal DPs in (17a) and (17d) are not subjects, but rather they are topics serving as antecedents (A-topics) to the null subjects in spec-VP. In the cases of examples (17c & f), the sentences contain null A-topics as proposed by Holmberg (2010). The following structure in (18) below is the syntactic representation of example (17a):
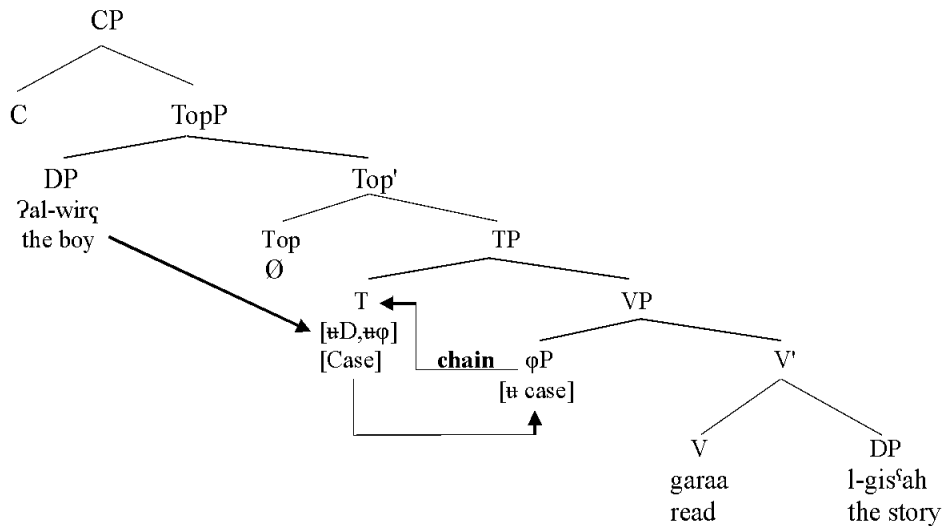
(18)

What is interesting about the representation in (18) is that it is a specTP-less structure. I assume that T does not have the EPP feature because, as proposed above, the subject in HA originates in spec-VP and does not move in both SV and VS orders and any preverbal DP is base-generated in spec-TopP. The reason why the preverbal DP in HA is merged in spec-TP but not spec-CP is that when there is a complementizer like *ʔinn* 'that', it precedes the preverbal DP, as the following example in (19) illustrates:

(19)	a.	*ħassab-t*	*inn*	*ʔal-wirç*	***garaa***	*l-gisˤah*
		think.PFV-1SGM/F	that	DEF-boy.SG	read.PFV.3SGM	DEF-story.SG
		'I thought that the boy read the story.'				

The derivation of the null subject proceeds when T (the probe) searches for a matching goal and finds the defective subject pronoun (φP) in spec-VP, and it copies its ϕ-features. In return, the T values the unvalued [*u* case] feature of φP. After the feature valuation, the φP ϕ-features get incorporated into T resulting in a union of T and the defective pronoun ϕ-features. Once the incorporation takes place, a chain is formed between the

head T and the defective subject pronoun which undergoes a chain reduction. The chain reduction conforms to two rules suggested by Holmberg (2010). What is pronounced here is only one chain copy which is the highest copy of the chain. According to these rules, the defective subject pronoun in spec-VP receives a null spell out (i.e., not pronounced) and the ϕ-features on T is pronounced on the verb as a suffix after the verb gets incorporated into T. The [u-D] is valued via the A-Topic 'ʔal-wirç' 'the boy' in spec-TopP resulting in a definite null 3rd person singular subject pronoun, with the referential index of the A-topic. The same mechanism is followed in deriving the definite 3rd person null subject pronominal when there is covert A-Topic as in (17c & f). If there is no A-topic and the C-domain has speaker or addressee features, then the [uD] feature of the defective subject pronoun gets valued by speaker/addressee feature and thus a definite 1st or 2nd person null subject is obtained.

Conclusion

The paper has discussed the derivation and interpretation of null subjects in HA within a minimalist perspective advocated by Holmberg (2005, 2010). It is proposed that the null subject originates in the spec-VP in SV and VS orders. As HA lacks the EPP feature, the spec-TP does not project and therefore, there is no subject movement. The verb always moves from V to T as the ϕ-features on T appear as an affix on the finite verb. The ϕ-features on T are valued by their counterpart of the defective subject pronoun (φP) via incorporation as a result of Agree. Copying the ϕ-features values of φP by T results in chain formation between T and φP. According to Holmberg (2005, 2010), only the top chain copy is spelled out, and the lower chain copy, which is the defective subject pronoun, is not pronounced. Thus, the null *pro* subject is derived. The unvalued D feature of φP gets valued by an A-Topic in the spec-Topic which results in having a definite 3rd person null subject. The definite 1st or 2nd person null subject is obtained via valuation of the uD feature of T by speaker/addressee features in the C-domain.

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