



## The null pro subject in Najdi Arabic

Aysha Muqbil Almineeai<sup>a</sup> , Abdul-Hafeed Ali Fakhir<sup>b1</sup> 

<sup>a</sup> Department of English, College of Arts, University of Bisha, KSA

<sup>b</sup> Department of English, Najran University, KSA & Department of English, Ibb University, Yemen

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### Abstract

This study aims to examine the null pro subject in Najdi Arabic and directly answer the following questions within Holmberg's (2008) theory of null subjects: (i) Is Najdi Arabic a pro-drop and hence a consistent null subject language (NSL)? and (ii) How is the null pro subject derived and interpreted in the syntax? We argue that Najdi Arabic is pro-drop and hence a consistent NSL and that full agreement are associated with null subject pronouns. Furthermore, we reveal that the null subject in Najdi Arabic is derived by incorporating a subject pronoun in the head T position as a consequence of Agree. The interaction between Holmberg's analysis and Najdi Arabic data reveals that the subject pronoun in Spec-vP configuration is not pronounced in Najdi Arabic because it is not the highest chain copy; what has to be articulated of the subject chain is a verbal affix on the verb as a reflection of the deleted subject of the structure. The interpretation of the null pro subject in Najdi Arabic depends on the antecedent of the null pronominal that values T's D-feature. When the A-topic values the D-feature, then a definite third person null subject structure results in the derived structure.

*Keywords:* chain copy; d-feature; probe-goal; null subject; unvalued  $\phi$ -features; Najdi Arabic

## 1. Introduction

The syntax of null subjects has received considerable attention in the languages of the world and has presented certain syntactic challenges to syntactic minimalist theory. Generally, the null pro subject analysis in natural language grammar has been a constant source of debate in the last four decades of generative syntax, particularly in Standard Arabic. Moreover, research attempts have been made to study and examine the null pro phenomenon in Standard Arabic and in other Arabic varieties to present a satisfactory account of the subject under investigation.

This study reviews two prominent approaches that attempted to account for null subjects and agreement phenomena in Standard Arabic and other Arabic varieties. The first one is viewed in the existing literature as a pre-minimalist approach, which is commonly known as a Spec-head approach, which has been assumed for the treatment of the null pro and agreement in Arabic (Aoun, 1982; Aoun et al., 1994; Daud et al., 2021; Fass Fehri, 1993; Mohammed, 1990; Ouhalla, 1994, amongst others). The second one is based on minimalism (known as a minimalist approach) and has benefited from

<sup>1</sup> Corresponding author.

E-mail address: [a.hafeed1@gmail.com](mailto:a.hafeed1@gmail.com)

Chomsky's (1995, 2001, 2005) to explain the null empty category and agreement phenomena in Arabic. This approach is mainly influenced by Chomsky's (2001) Agree framework, and has been seen in works by Al-Horais (2009), Alotaibi (2013), Fakh & Al-Sharif (2017), Fakh (2014, 2016), Olarrea (1996), Soltan (2006).

However, this study argues that neither of these two approaches is sufficiently adequate and that they cannot provide a neat account of the null pro in Najdi Arabic. Furthermore, we provide an alternative minimalist account; our analysis will adopt Holmberg's (2008) minimalist approach of null subjects. We adopt Holmberg's (2008) theory owing to its simplicity, economy and convincing analytical steps in the syntactic analysis of the null pro phenomenon in Najdi Arabic.

This paper attempts to study the null pro subject in Najdi Arabic (spoken by numerous people in the region of Riyadh, the capital of Saudi Arabia) and provide a unified account of the subject under study. The aim of the paper is to show whether Najdi Arabic is a pro-drop language and hence a consistent NSL. It discusses the syntactic interaction between Najdi Arabic and Holmberg's (2008) theory of null subjects, which will be adopted as the basis of our analysis. The reasons why the null pro element in Najdi Arabic has been selected for investigation can be summarised as follows: (i) this topic has not been studied in detail yet, (ii) a unified analysis of the null pro subject in Najdi Arabic must be provided to show how it is derived syntactically in the clause structure of Najdi Arabic, and how it is interpreted in the syntax, based on the minimalist analysis advocated in Holmberg's (2008) null subjects theory, and (iii) the current study hopes to enrich the theoretical literature on null subjects and provide a simple analysis of the syntax of Arabic and other relevant languages.

The study is organised as follows. The second section reviews previous analyses on the subject under investigation. The third section provides an overview of Najdi Arabic. The fourth section introduces the null pro subject in Najdi Arabic and shows how it can be dropped in the syntax. The fifth section introduces Holmberg's (2008) theory of null subject which constitutes the basis of the current study. The sixth section presents an alternative analysis of the null pro subject in Najdi Arabic. The seventh section concludes.

## 2. Literature Review

### 2.1. Pre-minimalist approach of null subjects in pro-drop languages

Much attention has been paid to the null pro subject in the existing literature in syntactic theory. It has received considerable attention in languages that have rich agreement inflectional paradigms in the 30 years. This section attempts to survey the previous analyses and review the most pressing issues relevant to the properties of the null pro subject.

In Chomsky's (1981) GB theory, the notion of the null pro subject refers to an empty element, which behaves similarly to an ordinary pronoun with regard to anaphoric reference; hence, it is commonly viewed as pro. Furthermore, the origin of the term '*pro-drop*' has been suggested in Chomsky's (1981) government and binding framework, where he indicated that the subject position cannot be governed in finite clauses in languages that permit the null pro subject. Moreover, Chomsky (1982) indicated that in pro-drop languages, the null pro subject is placed in the construction in order to receive a thematic role and provide Case and agreement features. It has been assumed that AGR has Case in languages with pro-drop properties, such as Italian, and lacks Case in non-drop languages, such as English. On the basis of the rich subject-agreement morphology marked on the verb, several syntacticians indicated that the licensing of the null pro element has a strong association with the rich AGR morphology on the verb.

Meanwhile, some linguists, such as Perlmutter (1971), adopted another position of analysis; they argued that the attempt to identify the feature identity of the null pro from the verb inflection may not be sufficient, given that more is involved in this regard. Furthermore, the link between the null pro subject and rich agreement morphology was indirect (Chomsky, 1982). Based on the Case assignment considerations in the GB framework, Chomsky assumed that the licensing of the null category pro in subject positions is established when the head INFL identifies its content features via nominative Case licensing. However, other instances of many other languages show that nominative Case can be assigned via structural government but not through feature matching, and this is not sufficient for the recovery of feature identity in the syntax. Other subsequent analyses on the null pro subject demonstrated that empty elements must be identified in the sense that their phi-features identity should be recovered from their morpho-syntactic environments. As for the identification of the null pro subject, Borer (1986), Chomsky (1981, 1986), and Rizzi (1986a) stressed that this can be accomplished through co-indexation with rich agreement inflection on the verb.

Many developments transpired in the syntactic analysis in the theory of pro in recent years. For instance, Harbert (1995), Rizzi (1986a) and Safir (1985b) explored the syntax of the null pro and classified languages on certain syntactic differences: (i) some languages, such as English, which disallow the dropping of overt subject pronouns (be it a thematic or pleonastic pronoun), and (ii) other languages that permit the thematic and pleonastic pronouns to be dropped, as the case in Spanish.

Empty category pro theory underwent various analyses which led to the formulation of the null theory. Rizzi's (1986a,1997) seminal work was viewed as the most essential approach on the null pro subject, which inspired later research in syntactic theory. Rizzi (1986a) offered a unified analysis, where he proposed two conditions on the null pro: a 'Licensing condition' and an 'Identification requirement'. Based on Rizzi's analysis, the licensing of pro is possible if a licensing head governs Case, this of course may vary by language. In languages where the null pro takes place in the subject position, Rizzi stressed that the head INFL is a licensing head (this can be observed in languages such as, Italian and Spanish).

Mohammed (1990) discussed the empty category pro in Arabic and viewed it as an expletive pronominal; he argued that Standard Arabic is an SVO language in the underlying structure. Mohammed (1990) indicated that in "VS sentences the agreement features marked on the verb morphology are the result of the presence of the expletive subject" (p. 115). Given this, Mohammed (1990, p. 115) suggested "a configuration that can create two subject positions: one position for the real subject and another for the expletive subject", and consequently proposed that "VS sentences in Arabic have the structure" in (1):

1. [<sub>s</sub> [NP *pro*] [V NP]

where NP is the subject

(Mohammed, 1990, p. 115)

Furthermore, Ouhallah (1991) discussed preverbal subjects in Standard Arabic and suggested that they are topics, which are generated in [Spec- IP]. He stressed that they are co-indexed with a resumptive pro, occupying [Spec- AGRP]. Ouhalla stated that the null empty category can be identified and assigned Case in Standard Arabic. Meanwhile, Fassi-Fehri (1993) examined pronominal bound forms affixed on Arabic verbs and stressed that such forms serve to identify empty (pro) arguments in the syntax. Though Fassi-Fehri's account attempted to offer an explanation of pronominal forms attached on Arabic verbs, it did not seem to present a straightforward treatment of the null pro in the language.

## 2.2. Minimalist approach of null *pro* subject in Standard Arabic and Arabic dialects

The earlier minimalist studies, that addressed the agreement asymmetry in VSO versus SVO word orders in Arabic, have been seen in works by Olarrea (1996) and Soltan (2006). These analyses assumed that rich verbal agreement morphology in Arabic has a strong association with the null empty category *pro* in the subject position. Given Chomsky's (1995) earlier minimalist approach, Olarrea (1996) examined the agreement asymmetry in Arabic word order, where he assumed that the word orders VSO and SVO can be derived via movement of the verb to the head AgrS position; this movement is motivated by the strong verb features of the head Agr that reflect the syntactic properties of NSLs. Let us illustrate the point in (2):

### 2. a. saafar-uu

travelled.3mp.nom

They travelled.'

### b. hum saafar-uu

they travelled.3mp.nom

'They arrived.'

### c. ?al-muhandis-uun saafar-uu

the.engineers.nom travelled.3mp.nom

'The engineers travelled.'

Olarrea's (1996) analysis reveals that the sentences in (2) have a null *pro* in [Spec-VP] configuration at PF, given that a left-dislocated subject appears in (2b, c) and a null subject in (2a, b). Olarrea (1996) indicated that "full agreement in Standard Arabic is realised when there is a null *pro* in the thematic subject position" (p. 174). Al-Horais (2009) stressed that evidence exists that shows the presence of the null *pro* subject that "comes from the fact that in Arabic an indefinite NP in preverbal position is not allowed" (p. 9), as shown in (3) below, which is ungrammatical compared to the grammatical (2c) above.

### 3. \*muhandis-uun saafar-uu

engineers.nom.indef travelled.3mp

Meaning: 'Engineers travelled.'

The preceding analysis revealed that Olarrea's (1996) account viewed agreement in Standard Arabic from the point of view of a Spec-head configuration, where he assumed LF movement of the subject (be it a full lexical NP (VSO order) or a null pronominal element (SVO order)) into the head node of AgrSP. Given this, Al-Horais (2009) argued that Olarrea's (1996) account has a problem. For Al-Horais (2009), "the problem is that LF-movement is no longer invoked in the minimalist syntax" (p. 9). Furthermore, Chomsky (1995) not only rejected the existence of Agr projection but also dispensed it altogether in the syntax.<sup>1</sup> Therefore, Olarrea's (1996) account faced serious problems and will not be adopted in our syntactic account of the null subject in Najdi Arabic.

However, through the advent of Chomsky's (2000, 2001) minimalist Agree model, how we look at agreement analysis has changed; it has been assumed that agreement in human language is analysed within a 'local search domain', which Chomsky calls 'Operation Agree', but not via a specifier-head relation of the Principles and Parameters approach (1981, 1991). Thus, Soltan (2006) argued that T(ense) in Standard Arabic has three uninterpretable features: T tends to have phi-features for person and number features, T must have a separate gender feature and T seems to show up with an EPP feature in the syntax. This signifies that "T in Standard Arabic is always valued for gender but need

not be valued for person and number, and need not have a specifier" (Al-Horais, 2009, p. 10). Meanwhile, Al-Horais (2009) argued against Soltan's (2006) analysis and indicated that "[it] does not, in fact, provide a satisfactory Minimalist account for the agreement asymmetry in Arabic. The analysis suffers from two serious problems" (p. 12). The first problem, for Al-Horais (2009), is that "agreement with the null pro subject is only compatible with a full T (u  $\phi$ -features, gender and EPP features), necessarily required so pro can be identified and the derivation converges at the interface" (p. 13). The problem here is that, Rizzi's (1997) treatment of the pro identification cannot be handled in this approach to feature-valuing under Chomsky's (2001) Agree operation because the head T has uninterpretable  $\phi$ -features and such features must be licensed via an Agree relation with the subject of the sentence, which is identified for  $\phi$ -features (Al-Horais 2009). The problem with Chomsky's (1995, 2001) minimalist approach is that the  $\phi$ -features of the head T can only be licensed by the interpretable features of argumental DPs in the syntax. We concur with Al-Horais (2009) that the problem with Soltan's analysis is that it relies only on the assumption that the null pro must be identified given that "[w]ithin this theory of agreement, it is obviously not possible for an inherently unspecified pronoun to be specified by the  $\phi$ -features of I [i.e. T, AGR], as those features are themselves inherently unspecified" (Holmberg, 2005, p. 537).<sup>ii</sup>

In his syntactic analysis of Standard Arabic, Furthermore, Altamimi (2015) analysed the pro-drop phenomenon in Arabic and discussed its properties in discourse and then compared it to the Saudi Najdi dialect. Altamimi pointed out that Najdi Arabic is syntactically similar to Standard Arabic concerning the empty category parameter. Altamimi (2015) indicated that "little variation in pro drop with regard to the type of nearby verb is traced when classifying verbs as psych or action" (p. v). However, Altamimi's analysis did not address the syntactic analysis of the null pro in Najdi Arabic in detail within the minimalist approach. His analysis seemed to have a superficial discourse-perspective and did not offer an in-depth account of the null pro that can explain the phenomenon in question.

Moreover, Al-Horais explored the asymmetries of agreement in Standard Arabic on the basis that verbal agreement in Standard Arabic has association with a null element in the subject position. Though Al-Horais's (2009) analysis attempted to explain the agreement asymmetries in Standard Arabic, our paper addresses the null pro subject in Najdi Arabic and benefits from the analysis advocated in Holmberg (2008) and Al-Horais (2009) in developing an alternative analysis. Holmberg's (2008) theory forms the basis of our unified analysis.

Al-Sharafi (2013) analysed the relationship between the null subject and agreement patterns in Modern Standards Arabic. He argued that the full agreement results from copying features and the incorporation process between pro and tense, where they form a chain reduction condition. He indicated that the verbal agreement is represented as the highest copy, which is pronounced, whereas the lowest copy is spelled out as a null copy. He pointed out that the null subject in the investigated cases is a deleted pronoun, and not an independent element. Meanwhile, Al-Momani (2015) studied the null subject pronouns in Jordanian Arabic and examined sentences formed without subject pronouns. He stated that the possibility of not overtly expressing a verbal argument has some association with the inflectional morphology of Jordanian Arabic.

Fakh (2014b) investigated the null subject in three languages: Standard Arabic, Early Modern English, and Modern Standard English. He explained that "the rich AGR inflections in Early Modern English and Standard Arabic serve to identify the null pro subject, since the feature-content of the latter (i.e. the *pro*) can be recovered from the AGR morpheme on the verb morphology" (p. 1). Interestingly, Fakh stressed that both Standard Arabic and Early Modern English are shown to be pro-drop languages and allow the occurrence of the empty category pro in the subject position of finite sentences. However, this cannot be tolerated in Modern Standard English because it has poor agreement morphology.

Though Fakh's minimalist account is neat and accounts for many facts of the null subject in Standard Arabic, the present study adopts another simple syntactic framework advocated in Holmberg's (2008) theory of null subjects; the latter will be the basis of our alternative treatment of the null pronominal subject in Najdi Arabic.

### **3. Method**

The method adopted in the current paper is analytical and descriptive in nature. The data of the current study has been collected from certain native speakers of Najdi Arabic in Riyadh, Saudi Arabia. It is, however, supported by the linguistic literature on Najdi Arabic and English. Furthermore, we have used our own intuitions as well as other native speakers' judgments concerning various Najdi Arabic structures. We have adopted the Minimalist framework advocated in Holmberg's (2008) theory in order to examine how Holmberg's analysis can be accessed to that of Najdi Arabic and how the null pro subject in Najdi Arabic can interact with the assumptions of this theory.

### **4. Overview of Najdi Arabic**

This section presents a brief background of Najdi Arabic to distinguish it from other Arabic varieties. Najdi Arabic is one of the most common varieties of Standard Arabic in the Arabian Peninsula. The dialect is spoken by over three million people in Najd region and its surrounding districts. Najdi Arabic is commonly used in Riyadh, Saudi Arabia. Compared with the other dialects of Arabic, Najdi Arabic retains more traces of Classical Arabic as noted by Ingham (1994). Najdi Arabic is the major dialect in Saudi Arabia and is considered by its native speakers as the most influential dialect for it has preserved much of Standard Arabic properties (Ingham, 1994). Furthermore, Najdi Arabic is generally recognised as the language of Najd region (Alotaibi, 2013; Al-Sweel, 1981). Furthermore, Alotaibi (2013) indicated that Najdi Arabic has four sub-dialects: Badawi (or nomad) Najdi, Central Najdi, Qassimi Najdi and Southern Najdi.

Moreover, what distinguishes Najdi Arabic from other Arabic varieties is its pronominal system; there exist three kinds of pronouns: the first two are strong, whereas the third has weak personal pronouns (Alotaibi, 2013; Lewis, 2013). Alotaibi (2013) discussed the syntactic properties of Najdi Arabic pronouns and briefly mentioned the null subject. However, Alotaibi's (2013) analysis of the pro subject in Najdi Arabic is not based on Chomsky's minimalist framework and does not provide any convincing treatment of the null element in the language.

Furthermore, Najdi Arabic has a rich agreement system, which is a characteristic of a pro-drop language. The most common word order in Najdi Arabic is the SVO order, being the unmarked order. AlQahtani & AlZahrani (2019) illustrated that Najdi Arabic exhibits subject-verb agreement regardless of VSO or SVO order. Their findings highlighted the agreement features in Najdi Arabic and contrasted them with those in Standard Arabic. They maintained that in Najdi Arabic, unlike English and French, the subject movement to Spec-TP is not mandatory.

### **5. Introducing the Null Pro Subject in Najdi Arabic**

The present section introduces the null pro in Najdi Arabic and shows how the pronominal subject can be dropped without affecting the syntactic and semantic content of the construction. Najdi Arabic has a rich inflectional agreement system; it also exhibits SVO and VSO word orders. Similar to Standard Arabic, Najdi Arabic has the phenomenon of the null pro subject. The following examples (4–10) illustrate the point:

4. al-bint                    iktebat                    ad-dars                    **SVO**  
 det-girl                    write-past.3p.s.fem        det-lesson  
 ‘The girl wrote the lesson.’
5. iktebat                    al-bint                    ad-dars                    **VSO**  
 write-past.3p.s.fem        det-girl                    det-lesson  
 ‘The girl wrote the lesson.’
6. **pro**                    iktebat                    ad-dars  
                               write-past.3p.s.fem        det-lesson  
                               ‘She wrote the lesson.’
7. al-banaat                ikteban                    ad-dars  
 det-girls.pl                write-past.3p.pl.fem    det-lesson  
 ‘The girl wrote the lesson.’
8. **pro**                    ikteban                    ad-dars  
                               write-past.3p.pl.fem        det-lesson  
                               ‘They wrote the lesson.’
9. al-awlaad                iktebauu                    ad-dars  
 det-boys.pl                write-past.3p.pl.masc    det-lesson  
 ‘The boys wrote the lesson.’
10. **pro**                    iktebauu                    ad-dars  
                               write past.3p.pl.masc        det-lesson  
                               ‘They wrote the lesson.’

Sentences in (4), (7) and (9) unveil that the subject NP is overt in SVO order. The subject NP can also be used overtly in VSO order as demonstrated in (5). Meanwhile, Najdi Arabic permits the occurrence of the null *pro* subject as illustrated in (6), (8) and (10) above. Given that Najdi Arabic has a rich inflectional paradigm, the identity of the subject NP must be identified from the rich inflection on the verb. In Najdi Arabic, the verb morphology is rich and can recover the subject NP identity, whether it is singular or plural. Basically, the verb morphology bears the phi-features of the subject NP in the sense that the rich verbal inflection on the verb reflects agreement features that are required to reveal the subject features. The preceding examples (4–10) demonstrate that Najdi Arabic is a *pro*-drop in the sense that it allows the subject NP to be dropped without affecting the syntax and semantics of the construction. Thus, it can be concluded that Najdi Arabic is a *pro*-drop language and, hence is a consistent NSL.

Furthermore, Najdi Arabic has a rich agreement inflection concerning how pronominal subjects can be used before finite verbs, as illustrated in (11–12) below.

### 5.1 Singular pronouns

11. a. ?anaa ?agraa            ‘I read (1s.m/f)’  
 b. ?ant tagraa                ‘You read (2s.m)’  
 c. ?anti tagrein              ‘You read (2s.f)’  
 d. huu yagraa                ‘He reads (3m.s)’  
 e. hii tagraa                 ‘She reads (3s.f)’

5.2 *Plural pronouns*

- |        |                               |                     |
|--------|-------------------------------|---------------------|
| 12. a. | hinnaa nagraa                 | ‘We read (1pl.m/f)’ |
| b.     | ?antu tagruun                 | ‘You read (2pl.m)’  |
| c.     | ?antin tagrann/ ?antu tagruun | ‘You read (2pl.f)’  |
| d.     | hum yagruun                   | ‘They read (3pl.m)’ |
| e.     | hinn yagrann/ hum yagruun     | ‘They read (3pl.f)’ |

However, from the preceding pronominal paradigm in (11–12), similar to other Arabic dialects, no dual pronouns exist in Najdi Arabic, a property that does exist in Standard Arabic. Furthermore, the sentences in (11–12) reveal that the inflectional paradigm in Najdi Arabic is highly rich; this is illustrated by the large number of different affixal forms attached on finite verbs. Meanwhile, a closer look at the English glosses in (11–12) above shows that there exist only two forms in English used for the present tense paradigm displayed by the suffix ‘-s’ added to the verb (with the third person singular present tense). Given Najdi Arabic is a NSL, all overt subject pronouns in (11–12) can be dropped and yet the sentences remain semantically and grammatically acceptable, and convey the same meaning, as shown in (11’–12’) below.

5.3 *Singular pronouns*

- |        |                          |                    |
|--------|--------------------------|--------------------|
| 11’ a. | <del>?anaa</del> ?agraa  | ‘I read (1s.m/f)’  |
| b.     | <del>?ant</del> tagraa   | ‘You read (2s.m)’  |
| c.     | <del>?anti</del> tagrein | ‘You read (2s.f)’  |
| d.     | <del>huu</del> yagraa    | ‘He reads (3m.s)’  |
| e.     | <del>hi</del> tagraa     | ‘She reads (3s.f)’ |

5.4 *Plural pronouns*

- |        |   |                     |
|--------|---|---------------------|
| 12’ a. | <del>hinnaa</del> nagraa                            | ‘We read (1pl.m/f)’ |
| b.     | <del>?antu</del> tagruun                            | ‘You read (2pl.m)’  |
| c.     | <del>?antin</del> tagrann/ <del>?antu</del> tagruun | ‘You read (2pl.f)’  |
| d.     | <del>hum</del> yagruun                              | ‘They read (3pl.m)’ |
| e.     | <del>hinn</del> yagrann/ yagruun                    | ‘They read (3pl.f)’ |

Furthermore, our present analysis is in agreement with Fasih (2014b) in that the drop-pro can be recovered easily by the richness of agreement inflection on the verb morphology in Arabic. Ultimately, the null pro subject in Najdi Arabic can be identified from the agreement makers realised on the finite verb, as shown in (4–10) above.

This paper attempts to investigate the null pro subject in Najdi Arabic and show the interaction between Holmberg’s (2008) minimalist analysis and the Najdi Arabic data. Given that the null pro subject in Najdi Arabic has not been investigated yet in detail, the study aims to show how it can be derived and interpreted in the syntax. It also seeks to demonstrate how nominative case can be assigned and how agreement properties of the null pronominal subject can be valued in the syntax, following Holmberg’s (2008) minimalist theory, which is discussed in the next section.

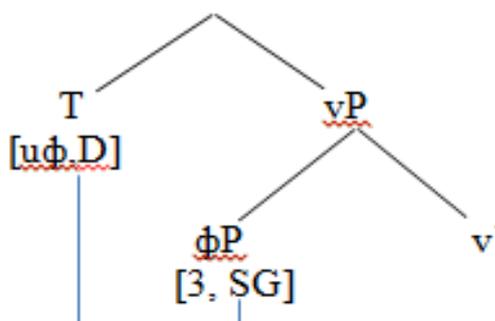
## 6. Introducing Holmberg's (2008) Null Subjects Theory

### 6.1. Null subject analysis in consistent NSLs

In his seminal analysis of NSLs, Holmberg (2008) indicated that null empty categories are used in consistent NSLs. Holmberg also observed that in non-NSLs, such as English, French and so on. The subject pronouns must be overtly used, whereas in consistent NSLs, such as Arabic, Italian, Greek, Turkish, Spanish and so on. The subject pronouns must be null. Moreover, in his analysis of the topic antecedent of such null elements, Holmberg (2008) suggested that consistent NSLs have a property in which "a D(efinite)- feature" is "part of the  $\phi$ -feature make up of finite T" (p. 10). Given this, Holmberg (2008) suggested the following proposal:

- i. "Pronouns are either DPs, with the structure  $[_{DP} D [_{\phi P} \phi [_{NP} N]]$  or  $\phi$ Ps;
- ii. Null pronouns are  $\phi$ Ps." (Holmberg, 2008, p. 10)

Holmberg stressed that when the head T probes a  $\phi$ P subject and when the subject values the unvalued  $\phi$ -features of T the created union of the  $\phi$ -features of the head T and the subject gives a definite pronominal in the syntax, as represented schematically in Figure (1) below.



**Figure 1.** Shows how the subject values the unvalued  $\phi$ -features of the head T in the syntax

Furthermore, Holmberg (2008) assumed that if a language is without a D(efinite)-feature in T, then the probe-goal configuration between the head T and a null  $\phi$ P subject will not provide a definiteness value, thus resulting in, what he calls, "a D-less, hence, indefinite, subject pronoun" (p. 11). When the  $\phi$ -features exhibit third singular, the expected reading will be of an inclusive generic pronoun similar to *one* in English language (Holmberg 2008). Meanwhile, Holmberg (2008) explained the reason as to why NSLs cannot have a null pronoun 'one' and attributed this to the fact that the pronoun (one) "is a bare  $\phi$ P which cannot value  $[uD]$ , which consequently remains unvalued, causing a crash of the derivation" (p. 14).

### 6.2. Incorporation of the head T in consistent NSLs

In his morpho-syntactic analysis of incorporation of T in consistent null-subject languages, Holmberg (2008) viewed incorporation of a  $\phi$ P in the head T position as result of Agree as advocated in Chomsky (2001). In explaining how it works in natural language, Holmberg indicated that finite T has a bundle of unvalued  $\phi$ -features; this T searches for a constituent goal that has corresponding features for valuation. It is the defective subject pronominal that has the necessary valued  $\phi$ -properties; hence, it is this subject pronoun that values the  $u\phi$ -features of T. Given this, Holmberg assumed that the subject pronoun  $\phi$ -feature values are copied by the head T in the syntax. What is interesting in Holmberg's (2008) analysis is that the head T licenses the unvalued feature of nominative case of the subject entity for the derived construction to converge in the course of derivation. In this connection,

Holmberg (2008) proposed that "NOM(inative) is encoded as a valued feature of T (not an entirely uncontroversial assumption)" (p.15). Let us quote Holmberg's examples in (13) to illustrate the point below.

13. a. "[T, D2, u $\phi$ , NOM] [vP [3SG, uCase] v ...]  $\rightarrow$   
 b. [T, D2, 3SG, NOM] [vP [3SG, NOM] v ...]  $\rightarrow$   
 c. [T, D2, 3SG, NOM] [vP [~~3SG, NOM~~] v ...]" (Holmberg, 2008, p. 15)

As all  $\phi$ -feature values are shared by the head T, Holmberg (2008) observed that "T's feature values are a superset of  $\phi$ 's values, since T also has uD (valued '2' by the A-topic) and a tense feature" (p. 15). Furthermore, based on Roberts's (2007) proposal that, in this situation, both the probe and the goal create a chain, Holmberg (2008, p. 15) suggested that "as such it is subject to chain reduction. Holmberg stressed the need to the following principal rules of chain reduction" in (14a, b):

14. a. "Pronounce the highest chain copy.  
 b. Pronounce only one chain copy." (Holmberg, 2008, p. 15)

Holmberg pointed out that the subject  $\phi$ P is not articulated as illustrated by the strikethrough in (13c) above. Holmberg (2008) further observed that "as the chain includes the feature [D], by virtue of T's D-feature, and since [D] is valued by the A-topic in spec CP, the result is a definite null subject construction, with the referential index of the A-topic" (p. 15). Moreover, Holmberg (2008) stressed that the chain is articulated only in the shape of a prefix or a suffix "on the finite verb or auxiliary once incorporation of V+v into T takes place in the syntax" (p.15). Moreover, Holmberg (2008) mentioned that if the subject of a sentence is a lexical DP or a D(efinite)-pronoun, then the uD-feature of T must be licensed by the D feature of the subject as a definite or indefinite entity. Consequently, Holmberg (2008) stated that "this will preclude the assignment of a referential index to T by a null A-topic in spec CP. Instead the subject, if specific-indefinite or definite, will typically be an A-topic" (p. 16). In exploring the syntax of lexical subject DPs and D-pronouns, Holmberg illustrated that they cannot be incorporated in the head T position given that the values of these lexical subject DPs and D-pronouns cannot be copied by T, because the head T does not have the requisite unvalued features. According to Holmberg (2008), these lexical DPs have roots, and these roots are not reproduced by the head T under the notion of Agree of Chomsky. Resultantly, Holmberg argued that despite that the head T and lexical subject DP have common  $\phi$ -feature properties via Agree in Spec-vP configuration, they cannot form a chain, which means that the lexical subject DP, being viewed by Holmberg as the highest member of a chain, gets articulated in the syntax.

Furthermore, Holmberg (2008) provided an example from Italian (15 below) and raised a question about how the subject of the sentence is incorporated and how the EPP is checked in the course of derivation.

15. "Verrá  
 He will come." (Holmberg, 2008, p. 17)

Given (15), Holmberg (2008) indicated three possible hypotheses. The first hypothesis is that T in consistent NSLs lacks an EPP feature. The second hypothesis states that the movement of the verb to the T position can check the EPP, as seen in the work of Alexiadou & Anagnostopoulou (1998). The third hypothesis is that the incorporation itself can satisfy the EPP, as illustrated by Platzack (2004). Given the Italian example in (15) above, Holmberg is with the view of incorporation of the subject in T, and hence Spec-CP is not projected. On the basis of this line of analysis, Holmberg (2008) proposed that the null A-topic checks the EPP and also values [uD] in T in the course of derivation. Holmberg

(2008) assumed that ‘a spec-TP-less’ (to use his term) is permitted if the null subject is definite only, and if an antecedent exists. Holmberg indicated that other cases also exist when the projection Spec-TP must be filled to license the EPP features, they are as follows:

- "(a) when the subject is a null indefinite pronoun;
- (b) when the subject is a lexical DP or a spelled out, non-incorporated pronoun and
- (c) existential and otherthetic sentences, which lack an A-topic" (Holmberg, 2008, p. 18).

As for the consistent null subject languages (NSLs) with verb initial languages with post-verbal subjects, lacking Spec-TP, Holmberg (2008, p. 19) indicated that they do not have either “a null locative or a null expletive in Spec-TP” configuration to value the EPP feature, as demonstrated in (16) below, using Holmberg’s example of Italian language for further illustration.

16. “Ha telefonato Gianni.

has telephoned Gianni

Gianni phoned.”

(Holmberg, 2008, p.19)

On the basis of the preceding analysis, Holmberg observed that the null A-topic checks the EPP in finite structures with a null subject definite feature, thus resulting in a well-formed construction.

## 7. Alternative Analysis and Discussion of Results

This section seeks to present an alternative account of the null pro subject in Najdi Arabic and provide a satisfactory answer to the questions raised in this study. It discusses how the null pro subject is derived and interpreted in Najdi Arabic. As the minimalist analysis of Najdi Arabic illustrates that a syntactic interaction exists between the rich inflection marked on verbs and the valuing of consistent null subjects, this study adopts Holmberg’s (2008) syntactic approach to null subjects to offer a satisfactory account of the null pro subject phenomenon in Najdi Arabic. We adopt Holmberg’s (2008) theory given its simplicity and economical characteristics; it can help provide the basis for a straightforward analysis and offer a suitable answer to the questions raised in the study systematically.

Moreover, what is interesting in Holmberg’s (2008) theory is that it distinguishes between two types of NSLs. The first type is termed as consistent NSLs represented in Italian, Arabic, Greek, Spanish and so on, where the pronoun subject must be null. The second type is called a partial NSL, found in Finnish, Portuguese, Brazilian and Marathi, where the subject pronoun is optional null.

### 7.1. Syntactic derivation of the null pro subject in Najdi Arabic as a consistent NSL

Section 3 presents how the null pro subject can be dropped and how the subject identity can be identified from verbal inflection in Najdi Arabic structures. This sub-section seeks to illustrate that Najdi Arabic is a consistent NSL. The objective is to show how the null pro subject in Najdi Arabic can be derived in the syntax. This can be illustrated in (17) and (18) below.

17. a. (hum) saagaw as-sayyarah.

they3mp drove.3mpl the- car

‘They drove the car.’

b. *pro* saagaw as-sayyarah

drove.3mpl the- car

‘They drove the car.’

- c.       \*hum               **saag**               as-sayyarah.  
          they               drove.3ms       the- car
18. a.    al-banaat       injahan       fi       l-ixtibaar  
          the-girls.fpl   passed.3fpl   in       the-exam  
          ‘The girls passed the exam.’
- b.       (hinn)           injahan       fi       l-ixtibaar  
          they.3fpl       passed.3fpl   in       the-exam  
          ‘They passed the exam.’
- c.       **pro**   injahan       fi       l-ixtibaar  
                  passed. 3 fpl   in       the-exam  
          ‘They passed the exam.’
- d.       \*hinn           **injahat**       fi       l-ixtibaar  
          they.3fpl       passed.3fs   in       the-exam

The examples in (4–10) and (17–18) above unveil that there must be full agreement between the pronominal entity/ lexical subject DP and the verb in the  $\phi$ -features (gender, number and person), as shown in (17a, b) and (18a, b, c). If no full agreement exists in the phi-features between the subject pronoun and the verb, then ungrammatical structures will be derived, as illustrated in (17c) and (18d), which further supports analysis; the plural subject cannot agree fully with the verb given that the agreement morphology on the finite verb shows third singular markers. The subject pronoun and the verb must agree in person, gender, and number for the derivation to show convergence.

Furthermore, SVO is the most commonly used word order in Najdi Arabic and it is considered to be the unmarked order, this is the case in almost all other Arabic dialects. The SVO order normally shows full agreement between the subject and the verb. This SVO order shows that morpho-syntactic agreement is needed if the subject of the sentence is a null pronoun occupying [Spec-vP] configuration dominated by a higher DP, functioning as the antecedent, be it an overt pronominal NP (17), (18b,c) or a full lexical NP (18a).

Moreover, the examples in (17b) and (18c) unveil that Najdi Arabic allows the subject pronoun to be dropped and the structure remains syntactically and semantically acceptable. This further signifies that Najdi Arabic is a consistent NSL, and that full agreement has a strong association with null subject pronouns.

Moreover, a careful look at the examples in (17) and (18) illustrates that Najdi Arabic exhibits the pro-drop phenomenon. These examples show that there is a strong association between the rich agreement marked on verbs and the valuing of consistent null subjects. Given Holmberg’s framework of null pro subjects, it can be argued that the null pro subject in Najdi Arabic is derived by the process of incorporating a subject pronoun in the head T as a consequence of Agree. This syntactic operation in Najdi Arabic can be demonstrated in the following manner. Finite T in Najdi Arabic has an uD-feature, a bundle of unvalued  $\phi$ -features: a D-feature,  $\phi$ -features, a nominative case feature and an EPP-feature. The finite T seeks to probe for a matching category that has corresponding valued properties. Given this, a defective pronominal subject is a suitable goal because this subject pronoun has the required valued  $\phi$ -properties; it is this pronominal subject that values the u $\phi$ -features of T and makes it have values copied by T. Consequently, the subject unvalued nominative case feature is valued by T, this results in a well-formed structure in Najdi Arabic syntax.

Based on Holmberg’s theory, when the D-feature,  $\phi$ -features and case feature are valued and copied successfully in the course of derivation, the goal features can be incorporated in the probe features, thus creating a chain, which is realised by establishing a union of the licensed features of the head T and its goal, being the subject. Ultimately, this chain is subject to Holmberg’s “Principal Rules of Chain Reduction” in (19).

- 19. a. “Pronounce the highest copy.
- b. Pronounce only one chain copy.” (Holmberg, 2008, p.15)

The interaction between Holmberg’s (2008) analysis and the preceding Najdi Arabic data reveals that the subject pronoun occupying Spec-vP is not articulated. The question is: what has to be pronounced instead? The answer is that the only candidate that has to be pronounced here is the highest chain copy that shows up as a verbal affix on the verb morphology in Najdi Arabic. Fundamentally, what must be pronounced of the subject chain is a verbal affix on the finite verb that shows up as a reflection of the deleted subject of the clause in Najdi Arabic syntax. The consequence is that the subject position in the Spec-vP projection is null because it is headed by the incorporated pronoun that is produced as an affix on the finite verb in Najdi Arabic clauses.

What distinguishes Holmberg’s framework from other minimalist approaches is that it proposes the presence of an established union resulting from the probe-goal relation. This union functions through the incorporation of a  $\phi$ P in T and makes T copy the  $\phi$ -feature properties of the subject pronominal. One more advantage of this created union of the feature valuation is that it forms a chain in the course of derivation of the construction.

### 7.2. Interpretation of the null pro subject in Najdi Arabic

Having already demonstrated the derivation of the empty pro subject in Najdi Arabic, how it is interpreted in the language must be explained. Based on Holmberg’s (2008) theory, the interpretation of the null pro relies on the antecedent of the null pronominal that is responsible for the valuation of T’s D-feature. According to Holmberg (2008), two points can be pointed out in Najdi Arabic: (i) when the D-feature is valued by a topic (A-topic), then a definite third person null subject structure results in the derived construction; the antecedent (being A-topic) is associated with a binding relation with this null pro subject, as shown in (17–18) above. (ii) However, when a speaker feature values the D-feature, a definite structure is then derived in the language. This can be demonstrated in the syntactic structure of Najdi Arabic clause illustrated in Figure (2) below.

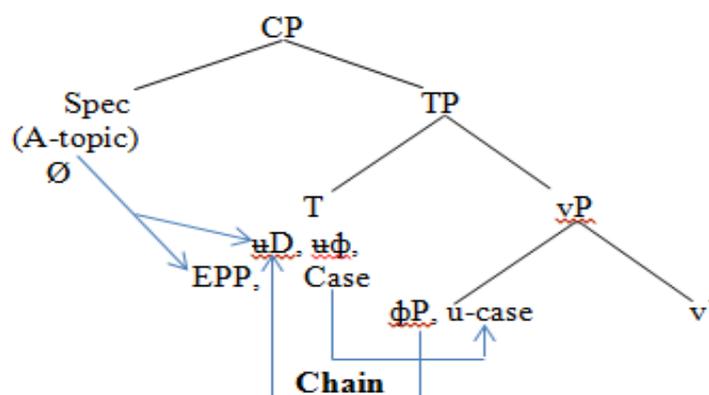


Figure 2. Illustrates the valuation of the D-feature by a topic (A-topic)

Based on the preceding analysis schematically represented on the tree diagram in Figure (2), the following point must be explained: it appears that the lexical DP occupying Spec-vP configuration will not be incorporated in the head T. Following Holmberg's (2008) minimalist approach, it can be argued that a lexical DP has features and the valuation of such features cannot be copied by T in Najdi Arabic given that T does not have the necessary unvalued properties. That is, a lexical DP has a root, but this root cannot be copied by T via Agree of Chomsky (2001). Although the lexical DP and T share  $\phi$ -feature values via Agree, the former cannot be incorporated in the latter. Furthermore, based on Holmberg's theory, two observations can be pointed out in this connection in the Najdi Arabic examples above. The subject's D values the uninterpretable D-feature of the head T as definite or indefinite. The other observation is that the head T and the lexical DP positioned in the Spec-vP projection cannot create a chain, thus this lexical DP has to be articulated and must stay in Spec-vP, as illustrated in the preceding data of Najdi Arabic.

## 8. Conclusion

The interaction between Najdi Arabic data and Holmberg's (2008) theory of null subject has provided a neat treatment of the pro element in Najdi Arabic. The study further supports the superiority of Holmberg's analysis in answering the questions of the study. Najdi Arabic is a pro-drop and hence a consistent NSL. Concerning how the null pro subject is derived and interpreted in Najdi Arabic, it has been demonstrated that the subject pronoun (being a  $\phi$ P, and a D-less pronoun) is incorporated in the head T position as a consequence of Agree. Furthermore, the study has shown that the head T can be viewed as the highest member of the subject chain and that it is articulated as an inflectional affix marked on the verb; the copy in Spec-vP configuration is not articulated in the syntax. Furthermore, the subject chain has an uninterpretable D-feature, which is supplied by the head T; it is this feature which gets a value that can be observed as a referential index from the null, being an indexed A-topic. It has been assumed in Najdi Arabic, the null A-topic checks the EPP and also values [uD] in T in the course of derivation, which results in a definite null subject entity. Moreover, the defective pronominal subject (being the goal) has the needed valued  $\phi$ -features; it also values the u $\phi$ -features of T, where the values of the latter are copied by T. Consequently, the subject unvalued nominative case feature is valued by T, thus resulting in a well-formed structure in Najdi Arabic. This study hopes to be an addition to the theoretical literature on null subjects and a valuable contribution to the syntax of the null pronominal subject in Arabic and other languages.

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#### **AUTHOR BIODATA**

**Aysha Muqbil Almineeai** is an Assistant Professor of English Linguistics at the English Department, College of Arts, University of Bisha, Saudi Arabia, where she teaches syntax and semantics for BA students. Her research interests include minimalist syntax, semantics, morphology, and contrastive linguistics.

**Abdul-Hafeed Ali Fakh** is a Full Professor of English Linguistics at the English Department, Najran University, KSA and Ibb University, Yemen. He has been teaching linguistics courses in several universities in Yemen and abroad. He authored and co-authored various research articles in different international journals.

## **Endnotes**

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<sup>i</sup> By the advent of the notion ‘Operation Agree’ in minimalist syntax, Chomsky (2001) dispensed with AgrP altogether from the minimalist analysis given that it was seen as a set of uninterpretable phi-features that require checking in order for the syntactic derivation to converge at LF.

<sup>ii</sup> For a more detailed analysis on this issue, see Al-Horais (2009).