Wh-in-situ in Najdi Arabic

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This paper investigates wh-in-situ in Najdi Arabic. It provides the distribution of the in-situ wh-phrases in Najdi Arabic and compares it to Lebanese Arabic studied by Aoun et al. (2010). It also discusses the two major analyses for wh-in-situ languages; LF movement and the unselective binding analysis. Islands insensitivity of the Najdi data supports the unselective binding analysis and rejects, along with data from other in-situ languages, the covert movement analysis. Further, the paper discusses selectional restriction and how each analysis works to satisfy it. Scope is also used to argue for the adopted analysis.
Keywords: wh-in-situ; Najdi Arabic; LF movement; unselective binding

1 Introduction

Najdi Arabic (henceforth, NA) is a dialect spoken in the central region of Saudi Arabia. The name "*najd*" means 'highland' in Arabic. In the modern time, Riyadh, Qassim, and Hail regions are generally called Najd. The city of Riyadh, which is in Riyadh region, is the capital of Saudi Arabia. According to Lewis (2013), the population of NA speakers is about eight million. The word order is interchangeably SVO or VSO (Ingham, 1994). NA has been studied in the literature by Abboud (1964), Ingham (1994), and Aldawyan (2008), among others. However, syntactic studies on wh-formation in NA are very limited. Therefore, this paper presents a discussion of wh-formation in NA and contributes to the study of NA in particular, and to the general work on in-situ languages.

NA forms wh-questions with a variety of strategies. It can form wh-questions by moving the wh-phrase to the specifier of CP, (1), or it can leave the wh-phrase in-situ, (2). In addition, NA also displays a strategy of resumption, (3). The following data display the three strategies:

(1) meen kalam Aħmad il-yum?
who called Ahmad the-day
'who(m) did Ahmad call today?' (wh-fronting)

(2) kalam -t ams meen?
called -you yesterday who
'who(m) did you call yesterday?' (wh-in-situ)

(3)	min	illi	kalam	-t	-h	ams
	called	*that*	*called*	*-you.2p*	*-him*	*yesterday*
	‘who(m) did you call yesterday?’					(resumption)

The goal of this paper is to investigate the wh-in-situ strategy illustrated by (2). The paper is organized as follows. Section 2 discusses the distribution of wh-in-situ in NA. Section 3 presents two analyses of wh-in-situ from the literature: the covert movement analysis and the unselective binding analysis. Section 4 presents data arguing that the unselective binding analysis is superior for NA. Next, in section 5, I show how the unselective binding analysis accounts for the scope, which takes over either an embedded clause or a matrix clause. Finally, in section 6, I end with a brief conclusion.

2 Distribution of wh-in-situ

It is relevant to introduce the wh-phrases in NA before proceeding to the discussion. Following the categories given to the variety of Arabic dialects by Aoun, Benamamoun, and Choueiri (2010), I categorize NA wh-phrases into two categories; nominal and adverbial.

	Nominal	*Translation*	*Adverbial*	*Translation*
a.	Meen	‘who’	ween	‘where’
b.	eiʃ /weiʃ	‘what’	mita	‘when’
c.	ʔey	‘which’	keef/ʃloon	‘how’
d.	Kam	‘howmany/ much’	leeʃ/warah	‘why’

The distribution of in-situ wh-phrases varies between the dialects of Arabic. Aoun et al. (2010) investigate wh-in-situ in Egyptian Arabic (EA) and Lebanese Arabic (LA). The former is quite different from NA because the in-situ strategy is the default to form a question (Wahba, 1984; Soltan, 2010), thus, its distribution is comprehensive, therefore, difficult to be discussed here. In contrast, LA shows relatively similar wh-formation strategies to NA but differs in different patterns; thus, I investigate some facts in LA to draw the differences with NA.

As far as in-situ strategy is concerned, NA, generally speaking, does not have a distinction between the nominal and adverbial wh-interrogatives while LA does (Aoun et al.). Further, there is a distinction between simplex clause and complex clause holds in LA that NA does not have. Accordingly, there are differences in the wh-in-situ distribution between NA and LA; the latter shows some restrictions that are not found in former.

First, in the nominal wh-phrases, both dialects generally allow them in-situ regardless of whether or not they appear in a simplex or complex clause. They are in as seen in (4) and (5) for LA and NA respectively. The only difference occurs between *ʃu* ‘what’ in LA and its corresponding wh-phrase in NA *eiʃ*

'what'. Aoun et al. (2010) posit that LA does not license *ʃu* in-situ, as sentence (6) below illustrates. Unlike LA, this fact does not hold in NA, as (7) illustrates:

(4) a. ftakaro ʔənno ħkiito maʕ miin l-yom (LA)
thought.2P that talked.2P with who the-day
'They thought that you talked with whom today?'
(Aoun et al., 2010: 155)

b. btiftikro ʔənno b-tibʕu Bayruut ʕan (LA)
thought.2P that be-far Beirut from
Traablus kam kilometer?
Tripoli how many kilometer
'How many kilometers do you think is the distance between Beirut and Tripoli?
(Aoun et al. 2010: 155)

(5) a. ʕbdullah y-aʕrif ʔən Aħmad raħ (NA)
Abdullah 3ms-know than Ahmad went
maʕ meen?
with who
'Abdullah knows that Ahmad went with who?'

b. (t)tawagaʕ ʔən al-RiyaD t-ibʕid ʕan
think.2ms that the-Riyadh be-far from
al-Qassim kam kilo?
the-Qassim how many kilometer
'How many kilometers do you think is the distance between Riyadh and Qassim?'

(6) *ʃtriito ʃu mn -l -maħall? (LA)
bough.2p what from the store
'You bought what from the store?' (Aoun et al., 2010: 156)

(7) eʃtrii -t eiʃ min el-maħall? (NA)
bought -2ms what from the-store
'You bought what from the store?'

On the other hand, the adverbial wh-phrases in the two dialects show a major difference in terms of distribution. NA allows adverbial wh-phrases to be in-situ while they are degraded in LA (Aount et al., 2010). Let the following sentences in (8) and (9) illustrate this distribution in LA[1] and NA respectively:

[1] All LA data in this paper are from Aoun, Benamamoun, and Choueiri (2010).

(8) a. ? raħ tnyamu -u ween el-maħall? (LA)
FUT sleep.2p him where the-store
'Where are you going to put him to sleep?'
(Aoun et al., 2010: 155)

b. ? fall lee? (LA)
left why
'Why did he leave?' (Aoun et al., 2010: 155)

(9) a. t(bi) nomun(u) -h ween (NA)
FUT sleep.2p -him where
'Where are you going to put him to sleep?'

b. (Aħmad) mʃa leeʃ? (NA)
Ahmad left.2p why
'Why did he leave?

Another difference in the distribution is carried out in the asymmetry observed in LA in terms of simplex and complex clauses; adverbial wh-in-situ in simplex clause is degraded as seen above in (8a-b), but it is ungrammatical in complex clauses (10a-b) except if it is a referential adverbial (10c) (Aoun et al.). In contrast, NA allows referential and non-referential adverbial wh-phrases remain in-situ in embedded clauses (11a-c).

(10) a. *ftakaro ʔənno [fall lee] ? (LA)
thought.2p that left.3ms why
'Why did you think he left? (Aoun et al., 2010: 155)

b. *ftakaro ʔənno [Sallahti -i kiif] ? (LA)
thought.2p that left.3ms -it how
'How did they think you fixed it? (Aoun et al., 2010: 155)

c. ftakaro ʔənno raħ ynaymu -u ween (LA)
thought.2p that FUT sleep.3p *-him where*
'Where did you think they were going to put him to sleep?'
(Aoun et al., 2010: 155)

(11) a. tawagaʕ ʔənno [mʃa leiʃ] ? leiʃ? (NA)
thought.2p that left.3P why
'Why did you think he left?'

b. tawagaʕ -to ʔənno [Sallahtu -h kiif? (NA)
thought.2p you.PL that fixed.3p *-it how*
'How did they think you fixed it?'

c. tawagaʕ ʔənno b- ynaumnu -h ween? (NA)
thought.2p that FUT sleep.3p *-him where*
'Where did you think they were going to put him to sleep?'

Having discussed the distribution and provided a general picture of it, I will discuss below in section 3 how the analysis accounts for in-situ interrogatives in NA.

3 Analysis for NA wh-in-situ

A considerable amount of literature has been published on in-situ languages. Fundamentally, there are two analyses; LF movement, namely the covert moment analysis (Huang, 1982) and the Unselective Binding (UB) analysis (Pesetesky, 1987; Aoun and Li, 1993; Cole and Hermon, 1994).

The covert analysis claims that the wh-phrase in in-situ languages undergoes movement after Spell Out, i.e., moves covertly. Huang (1982) adopts the covert analysis to account for Chinese wh-interrogatives. He posits that the interpretation of the questions in in-situ comes from the LF movement of the wh-phrase. However, the main argument of this analysis is concerned with syntactic constraints. Huang claims that LF movement does not obey Subjacency (Chomsky 1973), which is distinctly obeyed in the overt movement. Huang's claim about the violation of Subjacency in the covert movement received a considerable argument in literature. Pesetsky (1987), Aoun and Li (1993), Mathieu (1999), Bruening and Tran (2006) argue that since covert movement is a "movement", it should undergo the same constraints that hold in the overt movement. This comes from a variety of in-situ languages; Chinese, French, Vietnamese, and others. Let's consider a Vietnamese sentence that Bruening and Tran (2006: 327) use to argue against the covert movement:

(12) *Tan se thua cuoc [$_{CP}$ vi ai
Tan ASP lose event because who
lam hu xe cua anh ta] ?
make damage vehicle belong he
'Tan will lose the race because who will damage his car?'

Bruening and Tran argue that Huang's analysis will predict the above sentence as grammatical because it does allow violating Subjacency at LF. Thus, they state that the only way to account for the ungrammaticality of this sentence is to posit that LF movement obeys Subjacency. This problem with the covert movement analysis suggests that it is not compatible with all in-situ languages, and NA is no exception. Accordingly, I adopt the unselective binding for wh-in-situ in NA for several reasons discussed next, but I will first introduce the UB analysis.

The second analysis for wh-in-situ is proposed by Pesetesky (1987). He posits an analysis of Unselective Binding. The wh-phrase is in-situ, but is bound

by a null question operator in spec,CP. The scope of the in-situ wh-phrase is determined by the position of the null operator, which interprets the scope according to the configuration of the null question operator binding the variable. Three pieces of evidence from NA support unselective binding; island insensitivity, selectional restrictions, and scope interpretation. The first is discussed in section 4 below, while selectional restrictions and scope interpretation are discussed together since they are associated with each other.

4 Islands

The first evidence to argue against covert movement and to favor unselective binding is that wh-in-situ in NA is insensitive to islands; the following data reveal that the wh-phrases occur inside islands. I follow Soltan (2010) in the islands diagnosis.

(13) a. Aħmad iʃtaka [$_{CNPC}$il- reʒel illi Darab xaled]
Ahmad sued.2ms the man who hit Khaled
'Ahamd sued the man who hit Khaled'

b. Aħmad iʃtaka [$_{CNPC}$il- reʒel illi Darab meen?]
Ahmad sued.2ms the man who hit who
'Who$_i$ did Ahmad sue the man that hit him$_i$?

(14) a. ʔli twaDaf baʕadma Aħmad istigal
Ali hired after Ahmad resign
'Ali was hired after Ahamd retired'

b. ʔli twaDaf baʕadma meen istigal
Ali hired after who *resign*
'Who$_i$ was Ali hired after he$_i$ retired?'

(15) a. ʔli rakkab Aħmad wa fahad
Ali picked-up Ahmad and Fahad
'Ali gave a ride to Aħmad and Fahad.'

b. Aħmad iʃtaka [$_{CNPC}$il- reʒel illi Darab meen?]
Ahmad sued.2ms the man who hit who
'who$_i$ did Ali gave a ride to Ahmad and him$_i$?'

Adopting the argument that Soltan uses against covert analysis for Egyptian Arabic, I argue that the unselective binding analysis is superior to the covert analysis in NA as well due to the insensitivity to islands. In (13b), even though there is a violation of the complex noun phrase constraint (CNPC), this does not give rise to the ungrammaticality of the question which is a piece of evidence that NA is insensitive to CNPC. Additionally, (14b) illustrates that NA also violates the adjunct island; if the wh-expression is fronted to the specifier of the matrix clause forming a direct question with a gap strategy, the question will be grammatical. Finally, the sentence (15b) displays that NA also violates coordinate structure constraint.

Accordingly, due to the insensitivity of islands in NA, there is no covert movement operation occurring with wh-in-situ. Therefore, since covert movement does not account for NA wh-in-situ, I adopt the unselective binding analysis for NA wh-in-situ. In the next section, I discuss how the unselective binding analysis accounts for the selectional restrictions and the scope of in-situ wh-phrases in embedded clauses.

5 Selectional Restrictions and the wh-scope in NA

The second piece of evidence to support unselective binding comes from selectional restrictions and scope. It has been argued that wh-in-situ scope and lexical selection are related. Huang (1995) shows that the selectional requirement is met in 'English-like' languages where there is overt movement of the wh-phrase. In 'Chinese-like' languages, LF movement satisfies the selectional restrictions. Further, he posits that the scope is interpreted by the wh-phrase either by overt movement or covert movement.

Regardless of the constraint issue in the LF movement discussed above, selectional restrictions and scope interpretation hold the same importance in the unselective binding analysis that I adopt for wh-in-situ in NA. The difference between the unselective binding analysis and the LF movement analysis lies in the operator, found in the former analysis, but not in the latter. Matheiu (1999) states that the question operator in the unselective binding has three functions: "(a) to indicate the scope of a wh-phrase, (b) to provide a binder (an antecedent) for the wh-phrase, (c) to check the strong feature of C wh-phrases remain in situ and are variables rather than operator" (p. 460). Accordingly, I investigate three verbs to show the selection restrictions and scope in NA in order to show the function of the operator.

The selection and the scope in unselective binding distinguish the direct question from the embedded question. The three verbs I look at are *yas*ʔel *'*ask/wonder*', yaDun* 'think', and *yaʕrif* 'know'. First, let's consider the verb *yas*ʔel *'ask/wonder'* which selects [+wh], as illustrated below:

(16) a. Muħammed *yas*ʔel (ʔiða) xhaled tazawadʒ Fatimah
Muhammed wonder.3p if Khaled married Fatimah
'Muhammed wonders if Khaled got married to Fatimah.'

b. *Muħammed *yas*ʔel (ʔenn) xhaled tazawadʒ Fatimah
Muhammed wonder.3p that Khaled married Fatimah
'Muhammed wonders that Khaled got married to Fatimah.'

c. *Muħammed *yas*ʔel xhaled tazawadʒ meen.
Muhammed wonder.3p Khaled married who
'Muhammed wonders Khaled got married to who.'

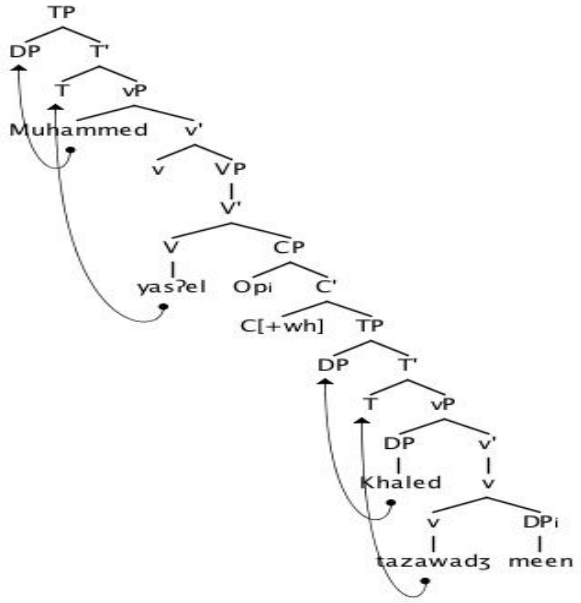
d. *Muħammed *yas*ʔel xhaled tazawadʒ meen.
Muhammed wonder.3p Khaled Married who
'Muhammed wonders who Khaled got married to.'

The verb *yas*ʔel 'ask' selects an interrogative, i.e., the embedded C bears a strong feature, [+wh]. Violating the lexical selection of the interrogatives [+wh] of the verb gives rise to the ungrammaticality of sentence (16b). Similarly, consider (16c-d) where the lexical entry is satisfied by the wh-phrase. The scope of the wh-phrase comes into play in this instance. The question that arises here is which clause does the wh-phrase takes over, does it take scope over the embedded clause or the matrix clause? If it takes scope over the embedded clause, it will be an indirect question, and if it takes scope over the matrix clause, it will be a direct question. The wh-expression in both (c) and (d) takes the scope over the embedded clause according to the selectional restrictions of the verb. The operator, which is base-generated in the specifier of the CP in the embedded clause, functions to indicate the scope and to check the strong feature of C. The interpretation for (16c), which is identical to (16d), is (17a), not (17b):

(17) a. Muhammed wonders, for which x, Khaled got married to x.
b. *For which x, Mohammed wonders whether Khaled got married to x?

The scope according to the unselective binding will be as follows:

(18)



Accordingly, the scope takes over the embedded clause due to the selectional restriction of the verb *yas*ʔel 'ask/wonder'. The reading (17b) is ruled out because the operator is required to be in spec,CP due to the C bearing a strong feature. Also, from the derivation above, V-to-T is a movement that occurs in Arabic for word order alternations of SVO and VSO; thus, the verbs in the sentence above moved to T. In addition, both the external arguments of the verbs, i.e., DPs, move to the specifier of the TPs to satisfy the EPP.

Next, I will consider the verb *yaDin* 'think/believe', which selects a non-interrogative clause, [-wh]. When an interrogative clause is selected for this verb, the sentence will be ungrammatical. Let this be illustrated by the following data:

(19) a. fahad *Dan* ʔin ʕli raħ li- ʒamʕah
Fahad thought. if Ali went the-university
'Fahad thought that Ali went to the campus'

b. *fahad *Dan* ʔiða ʕli raħ li- ʒamʕah
Fahad thought. if Ali went the-university
'*Fahad thought if Ali went to the campus'

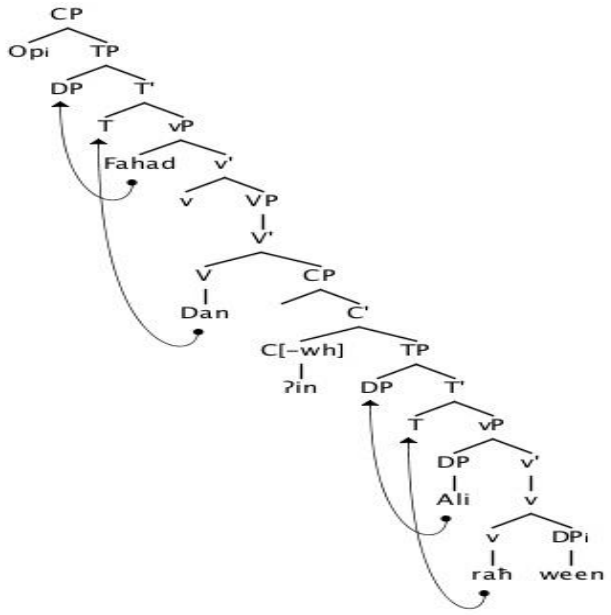
c. fahad *Dan* ʔin ʕli raħ li- ween?
Fahad thought. if Ali went to- where
'Where did Fahad think that Ali went to?'

Because there is no selectional restriction on the wh-expression in the embedded clause, the scope takes over the matrix clause to form a direct question as in (19c) having the interpretation (20a) not (20b):

(20) a. For what place x, Fahad thought, Ali went to x?
b. *Fahad thought, for what place x, Ali went to x.

The operator is base-generated in the specifier of the matrix CP because the selectional restriction does not require the operator to be base generated in the specifier of the embedded CP, as the following derivation illustrates:

(21)



The verb *Dan* does not select [+wh], therefore, the C does not bear [+wh] requiring the operator to be base generated to satisfy the selection. Instead, with this verb the C bears [-wh], which prevents the operator from occurring in the specifier of CP because it violates the selectional restriction and provides the wrong interpretation as well. Additionally, the DP *Ali* moves to the specifier of the TP to satisfy the EPP.

Unlike the two verbs discussed above, if a verb selects either [+wh] or [-wh], this would trigger a scope ambiguity. A verb such as *yaʕrif* 'know' in NA selects either an interrogative clause or a non-interrogative clause. Thus, there will be ambiguity in the scope of the wh-phrase due to the feature that C bears: if it bears [+wh], it will be an indirect question, while if it bears [-wh], it will be a direct question. The following data provide a good illustration of the selections of the verb *yaʕrif:*

(22) a. Fahad yaʕrif ʔin xaled raħ l-il-riyaD
Fahad knows.3p that Khaled went.3p to-the-Riyadh
'Fahad knows that Khaled went to Riyadh.'

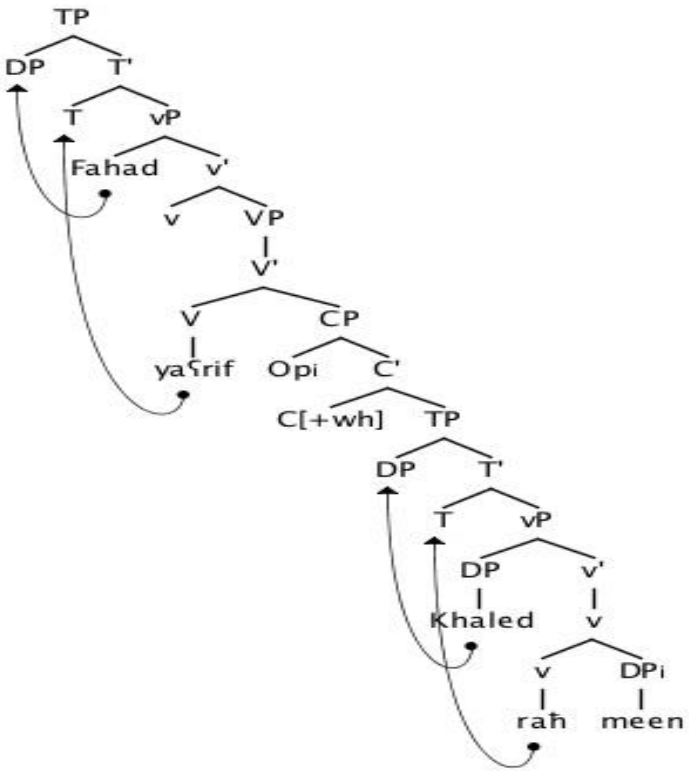
b. Fahad yaʕrif ʔiða xaled raħ l-il-riyaD
Fahad knows.3p if Khaled went.3p to-the-Riyadh
'Fahad knows if Khaled went to Riyadh.'

c. Fahad yaʕrif ʔin xaled raħ ween
Fahad knows.3p that Khaled went.3p where
'Fahad knows where Khaled went to.'

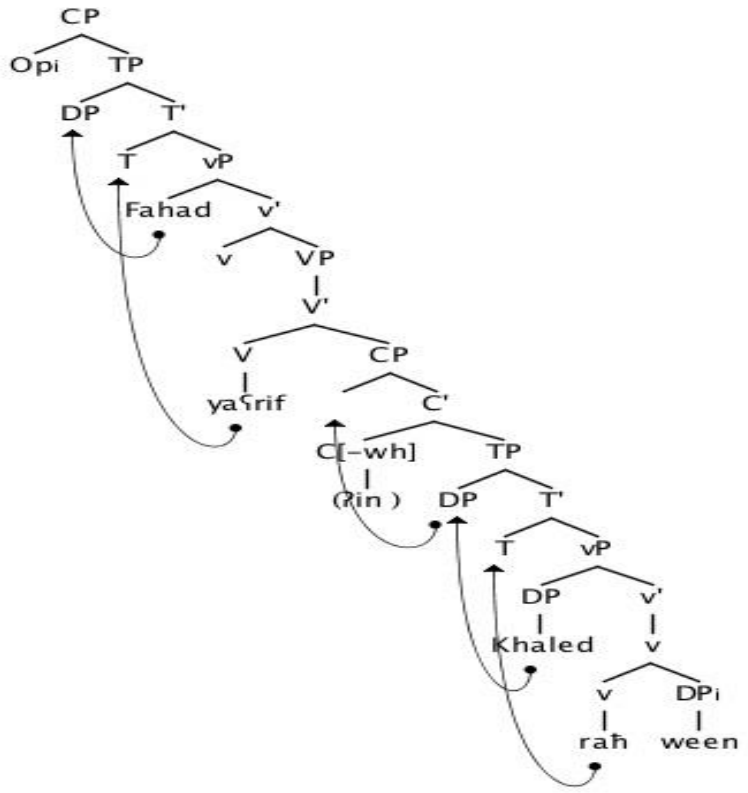
d. Fahad yaʕrif xaled raħ ween?
Fahad knows.3p Khaled went.3p where
'Where does Fahad know that Khaled went to?'

The ambiguity of the scope in (22c-d) is illustrated according to the unselective binding as follows:

(23)



(24)



In (23), the selectional requirement of [+wh] is met by having the operator base generated in the specifier of the embedded clause. That is, it is not a direct question, but an embedded question. Unlike (23), (24) shows that the selectional requirement of the [-wh] feature on C forces the scope not to take over the embedded clause, but to take over the matrix clause interpreted as a direct question.

6 Conclusion

In this paper, I provided data that demonstrated wh-in-situ in NA. I argued that the best analysis for wh-in-situ in NA is the unselective binding approach because NA is insensitive to islands, which means that there is no movement operation occurring. This suggests that the covert movement is not applicable for NA. Finally, I discussed the selectional restrictions of the verbs. Particularly, when a verb selects a non-interrogative clause, the scope will take over the matrix clause; however when a verb selects an interrogative clause, the scope will take over the embedded clause.

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