

The Effect of Prefixation on Syllable Structure in Najdi Arabic

Eisa S. Alrasheedi

Department of English Language, College of Arts, University of Ha'il, Ha'il, Saudi Arabia

Abstract—This study investigates the effect of prefixation on the syllable and syllabification in Najdi Arabic. It mainly addresses the role of prefixation on the syllable in this variety of Arabic, providing a prosodic representation of it within the context of rule-based phonology. The paper provides a review of the phonological processes that deal with prefixation phenomena in Najdi Arabic, whose domains of application are somewhat subject to syllabification processes and the syllable structure. To achieve this, the paper discusses the three types of prefixation in Najdi Arabic: (a) nominal prefixes, i.e., the definite article /ʔal/ and prepositional prefixes (predominantly *fi-* 'in', and *bi-* 'in/at'), (b) the agreement-related prefixes, i.e., verbal prefixes and (c) the adverbial prefix /ʔib-/ 'with', which is prefixed to the host noun and changes its grammatical category to an adverb. The results show that each type of prefixation has its own functions, which are essentially related to the type of the host it attaches to. For instance, the prefix /ʔib-/, which is the Najdi Arabic adverbial marker, is a stress-bearing morpheme, given that it is a heavy syllable on its own, which attaches to the initial position at the very beginning of its nominal host.

Index Terms—phonology, prefixation, syllable structure, syllabification, Najdi Arabic

I. INTRODUCTION

Since the (formal) recognition of the syllable role and its underlying significance in shaping contemporary phonological theory, many research papers and projects have attempted to reach a profoundly unified account of the actual syllable structure and aspects in world's languages (cf. Broselow, 1976; Selkirk, 1982; Kenstowicz, 1986; Clements, 1992; Ingham, 1994; Watson, 1999, 2002, 2007; Alfaifi, 2019; Zhang, 2023; to mention just a few). For many scholars, the syllable is virtually a salient breakthrough in contemporary phonological theory which in turn would be less accessible and even obfuscating without making reference to the syllable and related processes such as syllabification (Ziegler et al., 2004). In this regard, Blevins (1995) highlighted the notion that the prosodic representation and hierarchy depend heavily on syllable and its inner structure (i.e., division between onset and rhyme). That is because syllable is arguably connected with both segmental and super-segmental levels (i.e., stress, intonation, pitch, etc.) which are essential in prosodic structure. In the same vein, the studies related to the syllable emphasized the indispensable role of syllables in the word cognition and speech perception alike. For example, Segui and Ferrand (2002) stressed the notion that once syllable is taken into account, it is inevitably less difficult to understand how lexemes in particular and utterances in general are perceived and generated.

In general, syllabification and re-syllabification are of the syllable-related aspects which have attracted a wide array of attention (McCarthy, 1979; Kenstowicz, 1994). For instance, there has been a debate on the actual machinery and exact nature of syllabification: continuous syllabification versus staged syllabification (Kenstowicz, 1994, p. 274). In fact, such a debate gave rise to the interaction between phonology and other linguistic branches, most notably morphology where, for example, syllabification has been thought to be reduced to certain (morphological) template matching (McCarthy & Prince, 1990). Subsequent investigations dispense with such a morphologically-driven templatic syllabifications in favor of more valid approaches such as the prosodic mapping and then Optimality Theory (McCarthy & Prince, 1993). All in all, affixation (i.e., prefixation and suffixation) has been a prominent topic in syllabification, that is, whether prefixes and suffixes are subject to syllabification processes, and if so when and how they are placed within such syllabification processes (see Rowicka, 1999).

In relation to this, the current research aims at shedding light on the potential role of prefixation on syllabification and syllable structure in Najdi Arabic (henceforth, NA).¹ The paper primarily seeks to investigate whether prefixation processes play a role in re-syllabification of a given word. For instance, it sketches on the notions like whether the inserted prefixes are parsed (do they affect stress assignment?) and whether their insertion affects other existing syllables (e.g., vowel reduction, consonant deletion or gemination). In addition, this paper elaborates on the notions pertaining to the (canonical) syllable structure, including whether the insertion of prefixes might trigger consonant

¹ Najdi Arabic is a variety of Arabic spoken in the Najd region in the middle of Saudi Arabia with approximately ten million speakers (Alrasheedi 2019, p. 2; citing Lewis, 2013).

clusters in onset or coda positions or whether their insertion incurs a violation for Sonority Sequence Principle (SSP), and the like.²

The paper is organized as follows. Section II sheds some light on the significance of the study. Section III shows that prefixes in this Arabic dialect can be classified into three distinct types: nominal prefixes, verbal prefixes and the adverbial prefix /ʔib-/, which is the Najdi Arabic adverbial marker. This section also provides a phonological account of the three distinct types of prefixes in NA. Section IV draws the conclusions of the paper.

II. SIGNIFICANCE OF THE STUDY

Indeed, the current research is of paramount importance because it works out the effect of prefixation on the syllable structure and syllabification in an Arabic dialect, which has received little attention or investigation within Arabic literature. In spite of the several differences between NA and the other neighboring dialects, some researchers postulate that NA can be condensed as one variety of Saudi Arabic (cf. Prochazka, 1988). However, as a native speaker of NA, I can assert that this variety of Arabic exhibits several phonological and syntactic phenomena which have not been investigated before, to my knowledge (see Ingham, 1994; Alessa, 2008; Alrasheedi, 2015, 2019, 2022). Thus, the current research adds to the related literature by dealing with the role of prefixation on syllabification in a less-investigated language, NA.

III. ANALYSIS AND DISCUSSION

In NA, there are several prefixes which are different in terms of the categorical status of the word to which they are attached. Prefixes in NA can generally be classified into three distinct groups according to the speech type of the host word, as schematically shown in Figure 1 below:

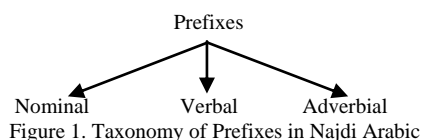


Figure 1. Taxonomy of Prefixes in Najdi Arabic

Nominal prefixes are those prefixes which are attached to nouns, verbal prefixes to verbs and adverbial prefixes to adverbs. Each type of prefixes has its own functions which are in principle related to the type of the word it attaches to. For instance, the adverbial marker /ʔib- 'with' makes the host noun to an adverb, thus, this prefix is a category-changing prefix. In what follows, each type of prefixes and their roles on syllabification and the syllable structure (once the prefix is attached to its respective host) will be investigated and analyzed in order to reach a generalization for the potential role, which prefixes may play on the syllable structure in NA.

A. Nominal Prefixation

In NA, there are two different nominal prefixes: the definite article (/ʔal-) and the prepositional prefixes (most notably /fi- 'in', and /bi- 'at'). Although the latter prefixes are predominantly subject to the syntactic adjacency between the given word and the preposition, such prepositional prefixes are attached to the host noun and function as real prefixes, given the fact that such prepositions are arguably considered as bound morphemes, i.e., cannot stand on their own without an appropriate host, as will be discussed in the next section. For this reason, such prepositions are regarded in this research as prefixes. This treatment of such prepositions as prefixes is significant in revealing whether there is any salient difference in their behaviour with the re-syllabification of a given word and its syllable structure.

(a). The Definite Article /ʔal-/

The definite article /ʔal/ in NA, and other varieties of Arabic, is used in conjunction with the nouns and nominal-like entities in order to make them definite. As is clearly evident in its segmental structure, the definite article is on its own a heavy syllable consisting of an onset, a nucleus and a coda, as shown in Figure 2:³

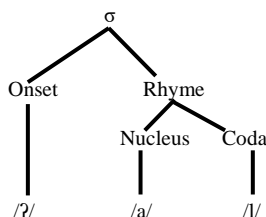


Figure 2. The Inner Structure of the Definite Article in NA

² According to Roca (1994), Sonority Sequence Principle is defined as follows: '[t]he sonority profile of the syllable must slope outwards from the peak'.

³ I follow the more conventional type in the inner structure of syllable Pike and Pike (1947) onwards, where the syllable consists of the constituents: onset and rhyme, and the rhyme is formed by nucleus and coda.

Thus, the definite article is a full syllable, adding to the existing syllables of a given word. Following Thelwall and Sa'Adeddin (1990), once the definite article is added to a given word, the coda of the definite article [l] is assimilated, becoming similar to the first segment of the host word if the first segment is a coronal sound, as shown in the following rule (Rule 1).⁴

Rule (1):

$$/l/ \longrightarrow \left[\begin{array}{c} \alpha + \text{coronal} \\ + \text{consonantal} \end{array} \right] / - \left[\begin{array}{c} \alpha + \text{coronal} \\ + \text{consonant} \end{array} \right]$$

It can be observed that the addition of the definite article might affect the stress placement in the given word. This observation can be accounted for because Standard Arabic (as well as most of its dialects including NA) is both position and quantity sensitive in terms of the stress assignment (Al-Ani, 1970). Thus, when adding any segment or syllable to the beginning of a given word, such a segment or a syllable might change the prominent syllable (stressed syllable) to another syllable based on the syllable structure of the host word. Consider Table 1:

TABLE 1
THE ADDITION OF THE DEFINITE ARTICLE AND STRESS PLACEMENT IN NA⁵

#	Input	Meaning	Output	Meaning
1.	/ʕanz/	'a goat'	[ʔal.ʕanz]	'The goat'
2.	/wa.lad/	'a boy'	[ʔal.wa.lad]	'The boy'
3.	/sai.ya:.rah/	'a car'	[ʔas.sai.ya:.rah]	'The car'
4.	/tʕa.reeg/	'a road'	[ʔatʕ.tʕa.reeg]	'The road'
5.	/jaw.wal/	'a mobile phone'	[ʔal.jaw.wal]	'The mobile phone'
6.	/sur.ʕah/	'speed'	[ʔas.sur.ʕah]	'The speed'
7.	/maʕ.had/	'an institute'	[ʔal.maʕ.had]	'The institute'
8.	/bag.ga.lah/	'a store'	[ʔal.bag.ga.lah]	'The store'
9.	/ki.taab/	'a book'	[ʔal.ki.taab]	'The book'
10.	/sa.ʕah/	'a watch'	[ʔas.saʕah]	'The watch'

As is clear by all tokens in Table 1, the definite article in NA attracts the main stress to lodge on it. NA is arguably similar to the Standard Arabic in terms of stress assignment. Hence, we can postulate that because the definite article *ʔal-* 'the' is on its own a heavy syllable, positioning at the very beginning of the host word, is a stress-bearing prefix in NA. This result entails the addition of the definite article in NA occurs before the stress assignment since the definite article is visible for stress assignment processes. Following Kiparsky (1982), we can assume that the addition of the definite article occurs at the lexical level (rather than the post-lexical level).

According to the data examined, it can be observed that the definite article affects the syllabification when the given word begins with a glottal stop. Consider the examples in (1):

- 1) a. /ʔib.ga.rah/ 'a cow' → [ʔal.bga.rah] 'the cow'
- b. /ʔib.sʕa.lah/ 'onion' → [ʔal.bsʕa.lah] 'the onion'
- c. /ʔih.ra.kah/ 'a movement' → [ʔal.hra.kah] 'the movement'
- d. /ʔiχ.baal/ 'stupidity' → [ʔal.χbaal] 'the stupidity'

Once the definite article is added to the beginning of the host word, the glottal stop (of the given word) and the following vowel are altogether deleted (i.e., syncopated). Then, the coda of the deleted syllable is adjoined to the onset of the following syllable, forming a consonant cluster as shown in the following rule (Rule 2).⁶

Rule (2): /ʔa/ → ∅ / # [ʔal] + —

To sum up, except for stress shift (and the deletion of the initial glottal stop and the following vowel), no change to the existing syllables is spotted when the definite article is added to the given word.

(b). *Prepositional Prefixes*

Like other Arabic varieties, the most common prepositions in NA are *fi-* 'in' and *ba-* 'in/at'. Such prepositions are considered as bound morphemes, attaching to the very beginning of a host word. It should be noted here that such prepositional prefixes must precede the definite article if the latter is used, according to the following configuration:

Prepositional prefixes > (the definite article) > the word stem

Consider the following examples in (2):

- 2) a. /maʕ.had/ 'an institute' → [ʔal.maʕ.had] 'the institute' → [fil.maʕ.had] 'in the institute'
- b. /beet/ 'a house' → [ʔal.beet] 'the house' → [bal.beet] 'in the house'
- c. /beet/ 'a house' → [ʔal.beet] 'the house' → *[ʔal.ba.beet] 'in the house'

⁴ This case of assimilation of the definite article in Arabic is well known as solar /l/ vs. lunar /l/.

⁵ The syllable hosting the primary stress appears in boldface. Dots inside words stand for syllables boundaries.

⁶ In general, it seems that this formula is blocked when the vowel following the glottal stop is not low like /i/.

When a prepositional prefix is attached to a given word, which is already defined by the definite article, the glottal stop of the definite article as well as the following vowel (as shown in (2a) and (2b) above), are deleted according to the following rule (Rule 3):

$$\text{Rule (3): } /ʔa/ \longrightarrow \emptyset \quad / \# \begin{bmatrix} ba \\ fi \end{bmatrix} + \text{---}$$

The /l/ sound of the definite article becomes a coda to the syllable whose onset and nucleus are the prepositional prefix. Furthermore, the same rule (Rule 3) is applied when the word stem begins with a glottal stop. Both the glottal stop and the following vowel are deleted. Consider the following data in (3):

- 3) a. /ʔih.ra.kah/ ‘a movement’ → [bih.ra.kah] ‘in movement’/ ‘in motion’
- b. /ʔiχ.baal/ ‘stupidity’ → [baχ.baal] ‘in stupidity’/ ‘stupidly’

What is important to mention at this point is that the (word stem) glottal stop and the following vowel are deleted, i.e., syncope, because the heavy syllable resulting from adjoining the prepositional prefix with the word stem attracts the primary stress of a given word. In all words where the prepositional prefixes are attached to them, the primary stress is shifted to reside on the first syllable of the resulting (combined word). Consider the following derivation (the stressed syllable is in bold): (Figure 3)

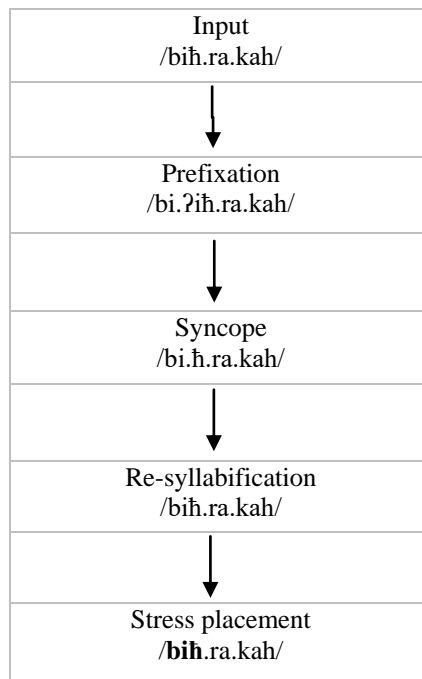


Figure 3. Derivation of the Word [bih.ra.kah] in NA

As shown in the derivation above, the prefixation is positioned prior to syncope which could not be triggered if there is no appropriate environment to. Thus, prefixation feeds syncope which in turn feeds re-syllabification because if there is no re-syllabification, the coda (of the deleted syllable) /ħ/ is left without hosting syllable, bearing in mind that single consonants cannot form a syllable. Then, the stress is assigned to the first heavy syllable (consisting of the prepositional prefix and the coda of the deleted syllable), given that NA is arguably position- and quantity-sensitive in terms of the stress placement.

Such a derivation supports our claim that bound prepositions such as *fi* and *ba* are prefixes because their existence contributes to the stress placement of the host word. Therefore, such prepositions are attached to a given word in pre-stress assignment operations. The prepositional prefixes are, we can generalize, significant part in the prosodic structure of the word at issue. If we assume that such prepositions are not prefixes and not part of the host word, how can we argue for the lack of primary stress in the host word once the prepositional prefixes are not taken into account? Consider the metrical representation of the word [bih.ra.kah] in Figure 4 (following Liberman, 1975):

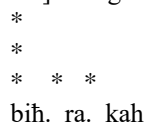


Figure 4. The Metrical Representation of the Word [bih.ra.kah]

Thus, it can be concluded that nominal prefixation affects the stress assignment of a given word and triggers re-syllabification as long as the host noun begins with a glottal stop.⁷

B. Verbal Prefixation

In NA, various prefixes can be attached to verbs. Such prefixes function as: agreement-related prefixes (person, number, and gender) or voice-related prefixes (passive vs. active).

(a). Agreement-Related Verbal Prefixes

Agreement-related prefixes are attached to the verb once the latter is used in present tense. Following the traditional Arabic grammar, such prefixes are attached to the past form which serves as a host for these prefixes. Thus, in order to generate the present form, an appropriate agreement-related verbal prefix must be attached to the past form. Consider the following Table.

TABLE 2
THE AGREEMENT-RELATED VERBAL PREFIXES IN NA

#	Past verb	Meaning	Prefix	Present	Meaning	Agreement
1.	/raah/	'went'	ya-	[ya.rooh]	'he goes'	3 rd person singular
2.	/ki.tab/	'wrote'		[yak.tib]	'he writes'	masculine
3.	/nidʒ.dʒaħ/	'succeeded'	ta-	[tan.dʒdʒaħ]	'she succeeds'	3 rd singular
4.	/ga.ra/	'read'		[tag.ra]	'she reads'	feminine/2 nd person
5.	/ki.ðab/	'lied'	na-	[nak.ðb]	'we lie'	1 st person plural
6.	/ʔiʃ.ta.ra/	'bought'		[naʃ.ta.ri]	'we buy'	
7.	/ma.radʕ/	'got sick'	ʔa-	[ʔam.radʕ]	'I sicken'	1 st person singular
8.	/bi.ka/	'cried'		[ʔab.ki]	'I cry'	

Indeed, once the agreement-related prefix is attached to the past form, re-syllabification (presumably to the whole word) is triggered. As shown in Table 2 above, all of the agreement-related prefixes are light syllables, consisting only of an onset and a short vowel. This re-syllabification is governed by the number of the syllables the host verb has. If the host verb consists of one syllable, no re-syllabification is triggered. That is because the verbal prefix is attached to the beginning of the mono-syllabic word without any effect on the syllable structure of the existing word, apart from the fact the vowel of the existing monosyllabic word is often changed to a high vowel (cf. example (1) above).⁸

On the other hand, if the existing word (past form) is di-syllabic or more, a re-syllabification occurs if the first syllable of the host verb is a light syllable, its coda is a half geminate (the second geminate is the onset of the syllable), or its onset is filled by a glottal stop. Thus, re-syllabification occurs if the following environments are met (X refers to any segment), as shown by the following data in (4).

- 4) [CV.CVX] /ki.tab/, /ma.radʕ/, /bi.ka/
 [CVGVX] /nidʒ.dʒaħ/
 [ʔVC.CV] /ʔiʃ.ta.ra/

In such cases, it seems that there is a systematic tendency to re-syllabify the first syllable: eliding its vowel and distributing its existing consonants to the verbal prefix attached to the second syllable of the existing word, as can be schematically represented by the figure given in (5):

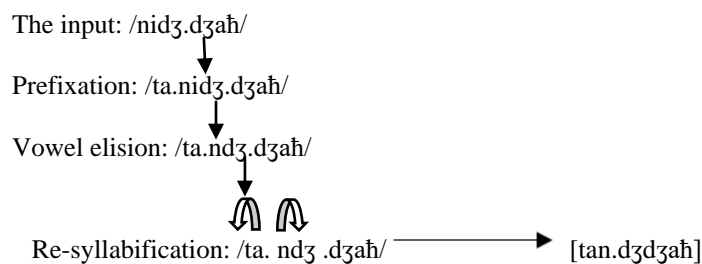


Figure 5 Derivation of the Word [tan.dʒdʒaħ] in NA

The added consonant to the verbal prefix fills its empty coda, whereas the second consonant is added to the onset of the second syllable. In cases where the first syllable of the existing word is codaless [CV.CVX], no consonant is added to onset of the second syllable, as shown by the examples in (5).

⁷ Following our claim that the nominal prefixation triggers re-syllabification of the host word if the latter begins with a glottal stop, it should be noted that if the host word is used in Standard Arabic with a glottal stop at the beginning, the glottal stop then is not syncopated, and the prepositional prefix is added as a separate syllable without a coda. In addition, in such cases, no shift to the stress placement occurs, as shown in the following rule:

a) /ʔim.ti.ħaan/ 'an exam' [bi.ʔim.ti.ħaan] 'in an exam'

So, it can be suggested that bound prepositions in Standard Arabic (unlike NA), are prefixes not contributing to the stress placement. Such bound prepositions do not have the same analysis in both languages.

⁸ The exact quality of the resulting high vowel (for examples, front high vs. back high) is definitely decided by other phonological processes, which are beyond the scope of the present study to investigate.

- (5) a) /ki.tab/ 'wrote' → [yak.tib] 'he writes'
 b) /ki.ðab/ 'lied' → [nak.ðib] 'we lie'

Furthermore, in cases where the onset of the first syllables is filled by a glottal stop, no consonant is added to onset of the second syllable even if the original syllable has a coda. In such cases, the glottal stop is deleted (together with the vowel) and the coda of the first syllable is made a coda to the first syllable resulting from prefixation of the verbal prefixes to the beginning of the host verb, as the examples in (6) demonstrate:

- (6) a) /ʔif.ta.ra/ 'bought' → [naf.ta.ri] 'we buy'
 b) /ʔih.ta.dʰan/ 'hugged' → [naħ.ta.dʰin] 'we hug'

Thus, it can be concluded that once the first syllable of the host verb is a light syllable, has a glottal stop in its onset, or has a geminate in its coda, this syllable is deleted. This behavior is to satisfy the requirements of the agreement-related prefix to have an appropriate coda and, thus, becomes a heavy syllable, attracting the main stress.⁹ Nonetheless, if the first syllable of the host verb is heavy or super-heavy whose onset is not a glottal stop, no re-syllabification is triggered. The verbal prefix is just attached to the beginning of the verb without any effect of the syllable structure or the stress assignment. Consider the examples in (7):

- (7) a) /ʕaf.ʕaf/ 'made a nest' → [ta.ʕaf.ʕaf] 'it makes a nest'
 b) /qah.qah/ 'cackled' → [ya.qah.qah] 'he cackles'

In such cases, the agreement-related verbal prefixes are not part of the prosodic structure of the host word.

(b). *Voice-Related Verbal Prefix:*

In NA, the prefix /ʔin-/ is utilized when verbs are changed from active to passive. So, this prefix is dubbed 'a passive voice prefix'. This prefix can be attached to both past and present forms alike. However, when this prefix is used in conjunction with the present form, it should follow the agreement-related verbal prefixes according to the following configurations:

- Passive voice prefix > the past form
- Agreement-related verbal prefixes > Passive voice prefix > the present form

Consider the following examples:

- 8) a) /ki.tab/ 'wrote' → [ʔin.ki.tab] 'was written'
 b) /yak.tib/ 'write' → [yin.ka.tib] 'is written'
 c) /yak.tib/ 'write' → *[ʔin.yak.tib] 'is written'

Based on the data surveyed, it can be observed that when the passive-voice prefix is attached to the beginning of the past form, no re-syllabification is triggered. The only change is that the main stress of the given word is lodged on this prefix. Thus, it can be argued that this prefix is a stress-bearing morpheme in the past form. Consider Table 3:

TABLE 3
 THE PASSIVE-VOICE PREFIX IN CONJUNCTION WITH THE PAST FORM IN NA

#	Past form	Meaning	Passive voice	Meaning
1.	/ka.sar/	'broke'	[ʔin.ki.sar]	'was broken'
2.	/xa.rab/	'destroyed'	[ʔin.xa.rab]	'was broken'
3.	/dar.ras/	'taught'	[ʔin.dar.ras]	'was taught'
4.	/fa.lag/	'cleaved'	[ʔin.fa.lag]	'was cleaved'
5.	/ra.ma/	'shot'	[ʔin.ra.ma]	'was shot'
6.	/jaal/	'carried'	[ʔin.jaal]	'was carried'

In the same vein, the quality of the vowel of the first syllable might be (rarely) changed once the passive-voice prefix is added (consider example 1 in Table 3). Apart from such observations, no changes occur either to the syllable structure and syllabification of the past form.

Put differently, when the passive-voice prefix is attached to the present form of a verb, it should be added to the right of the agreement-related verbal prefix (as noted above). In such cases, both the onset and the vowel of the passive-voice prefix are no longer used. Only its coda /n/ is utilized as a coda of the codaless agreement-related verbal prefixes (alternatively, it can be suggested that there are two passive-voice prefixes in NA: /ʔin/ and /n/ used for past and present, respectively). Consider the examples in Table 4.

⁹ The observation that the coda of the resulting syllable (derived by the prefixation of verbal prefixes) cannot be a glottal stop needs further investigation.

TABLE 4
THE PASSIVE-VOICE PREFIX IN CONJUNCTION WITH THE PRESENT FORM IN NA

#	Present	Meaning	Passive voice	Meaning
1.	/yak.tib/	'he writes'	['yan.ka.tib]	'It is written'
2.	/tag.ra/	'she reads'	['tan.ga.ra]	'It is read'
3.	/na[.ta.ri/	'we buy'	['nan.[a.ri]	= 'we are bribed'
4.	/tatʰ.tʰal.laq/	'she divorces'	['tan.tʰal.laq]	'She is divorced'
5.	/ya.tʰaf.fi/	'he switches off'	['yan.tʰa.fi]	'It is switched off'

So, /n/ is used as a coda of the verbal agreement prefix. In such cases, no re-syllabification affects the original (past) form to which the agreement-related verbal prefixes are arguably attached to.¹⁰ Since the coda of the syllable resulting from agreement-related verbal prefixes is satisfied by the passive-voice prefix, no change happens to the first syllable of the original word even if the environments in (4) are met. The agreement-related verbal prefixes and the passive-voice prefixes constitute on their own a heavy syllable attracting the main stress in the given word. So, we can conclude that the combined prefix (agreement+passive) is a stress bearing morpheme, where combination happens prior to stress assignment.

(c). Adverbial Prefixation

The last prefix /ʔib-/ is, in effect, a subtype of nominal prefixes, where it is attached to the very beginning of the host nouns. However, I opt to analyze it as an adverbial prefix because it changes the host noun into an adverb; hence, this affix is a category-changing prefix. This is illustrated by the data in (9):

- 9) a) /sur.ʃah/ 'hurry' → ['ʔib.sur.ʃah] 'hurriedly'
 b) /na.dʒaah/ 'success' → ['ʔib.na.dʒaah] 'successfully'
 c) /gu.wah/ 'strength' → ['ʔib.gu.wah] 'strongly'
 d) /la.baa.gah/ 'tact' → ['ʔib.la.baa.gah] 'tactfully'

Two remarks related to this prefix are in order. Firstly, this morpheme cannot co-occur with the definite article or any other prefixes (including the prepositional prefixes as discussed above). Secondly, the prefix /ʔib-/ is a stress-bearing morpheme owing to its internal syllabic structure (being a heavy syllable) and its initial position at the beginning of the nominal host. No re-syllabification occurs to the host noun when this prefix is attached to it.

IV. CONCLUSIONS AND REMARKS

In conclusion, we have seen that prefixation may affect the inner syllable structure of the host word, most notably the first syllable therein. Firstly, there are three types of prefixes in NA: nominal prefixes, verbal prefixes, and the adverbial prefix. It seems that all of these types of prefixes affect the placement of the primary stress in the given word. This is so because stress in NA, like other varieties of Arabic, is sensitive to both position and quality. If the inserted prefix is a heavy syllable, it automatically attracts the main stress such as the definite article /ʔal/ and the adverbial prefix /ʔib/. Additionally, if the inserted prefix is a light syllable, it might trigger re-syllabification of the first syllable in the host word so as to become a heavy syllable which can, in turn, be a suitable environment where the primary stress can be assigned to such agreement-related verbal prefixes. However, such re-syllabification might be blocked under certain circumstances (for example, when the first syllable is heavy with established-voice segments (not a glottal stop). In such cases, the prefix cannot attract the stress and might not be part of the prosodic structure of the host word.

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¹⁰ This observation validates the present form is generated through attaching the agreement verbal prefixes to the past form.

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Eisa Sneitan Alrasheedi is an Assistant Professor of Linguistics at the Department of English Language, University of Ha'il, Ha'il, Saudi Arabia. He's earned his PhD in theoretical Linguistics from Newcastle University, in the United Kingdom in 2019. Eisa's main research interests are generative syntax, comparative syntax, the syntax-semantics interface, the internal syntax of noun phrases, subject-verb agreement, nominal concord and morphosyntactic features (especially nominal features). His research topics include the study of the Determiner Phrase (DP), the expression of possessive noun phrases, the syntax of predicative possession, Phonology, Morphology, Semantics and Pragmatics. He also works on a number of research papers, which are interdisciplinary in nature such as dialectology, entrepreneurship and women empowerment in Saudi Arabia.