

# Binding in Najdi Arabic: Types of Reflexives, the Argument Structure of Reflexive Constructions and Possessive Reflexives\*

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**Abstract**—The present paper investigates reflexives in Najdi Arabic (NA). We start by examining how the encoding of reflexivity in NA can be attained lexically, morphologically, and syntactically. We also investigate the argument structure of reflexive constructions in NA in accordance with Reinhart and Siloni's (2005) bundling approach. Finally, possessive reflexives and their cross-linguistic distribution with definiteness marking are examined, providing empirical coverage to this area in NA.

**Index Terms**—reflexives, locality, argument structure, theoretical study, Arabic syntax

## I. INTRODUCTION

The present paper examines reflexives in Najdi Arabic (henceforth, NA), a dialect spoken by about ten million people in central Saudi Arabia (Lewis, 2013). NA has various dialects, one of which is the Qassimi dialect, which is the focus of this research.

Reflexives are a subset of anaphors which are “referentially defective elements that must depend on a linguistically expressed antecedent for their interpretation” (Reuland, 2017). Cross-linguistically, languages differ on how to treat reflexives. In this paper, we intend to investigate reflexives in NA by answering the following questions: a) how they are encoded; lexically, morphologically, and syntactically, b) what is their argument structure, and c) whether or not they are permitted in possessive constructions.

The linguistic theory over the last fifty years has paid close attention to the study of anaphoric relationships, which has in turn influenced syntactic theorizing. Not only is this work relevant to general theories of anaphors cross-linguistically, but it may also enrich the literature on reflexives in various Arabic dialects. This, in turn, can help to make broader generalizations about the consistency and inconsistency of reflexive properties specifically across Arabic dialects. This work serves to fill this gap by investigating reflexives in NA, a dialect which to my knowledge has not yet been investigated in this regard.

The present paper is structured as follows. Section 2 gives an overview of previous studied related to the topic. Section 3 discusses in detail the three strategies of encoding reflexivity in NA. Section 4 investigates the argument structure of reflexive constructions. Section 5 discusses possessive reflexives in NA. Finally, section 6 provides a final summary of the paper.

## II. LITERATURE REVIEW

### A. A Typology of Reflexives

The term *anaphor* is used to refer to reflexives and reciprocals, two different and yet related linguistic concepts. As demonstrated in (1a), a reflexive is typically used to refer to an action that has been carried out on oneself. Conversely, a reciprocal can be described as “one in which there are two participants, A and B, and where the relation in which A stands to B is the same as that in B stands to A” (Lichtenberk, 1985, p. 21). This is shown in (1b).

1)

a. Mark<sub>i</sub> hit himself<sub>i</sub>.

b. The boys<sub>i</sub> hit each other<sub>i</sub>.

According to Reuland (2006), world's languages use two types of reflexives: simplex reflexives (SE-reflexives) and complex reflexives. A SE-reflexive is defined as “a non-clitic pronoun that lacks a gender and number specification and

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is thus deficient in phi-features” (Reuland, 2006, p. 271). According to Reinhart and Reuland (1993), SE-reflexives are exempt from principle A of the BT, and if the predicate is not intrinsically reflexive, they cannot grant a verb a reflexive interpretation on their own. Among other languages, SE-reflexives are found in Dutch such as *zich* ‘himself’, and in Scandinavian such as *seg* ‘themselves’ (Volkova & Reuland, 2014). Complex reflexives on the other hand consist of two parts; a pronoun or simplex reflexive, and another element. One type of complex reflexive is SELF-reflexives such as *himself* in English, *zichzelf* ‘himself’ in Dutch, or *sjalfan sig* ‘yourself’ in Icelandic, etc. Arabic language uses SELF-complex reflexives (*næfs*-pronoun) as shown in (2). Consequently, NA also uses SELF-complex reflexives as shown in (3).

- 2) Nourah<sub>i</sub> t<sub>0</sub>ħeb<sub>0</sub> **næfsæħæ**  
Nourah loves herself  
‘Nourah loves herself.’
- 3) Nourah t<sub>1</sub>ħib næfsæħ  
Nourah loves herself  
‘Nourah loves herself.’

Haspelmath (2019) describes reflexive constructions as a grammatical structure employed when two clause participants share a coreference that must be conveyed by a “reflexivizer”. He then divides reflexivizers into three types that are found in many languages around the world: reflexive nominals (or pronouns), reflexive voice markers (verbal affixes), and reflexive argument markers, which are “very similar to object person indexes in that they occur in the same paradigmatic slot as the person index and cannot cooccur with a person index of the same role” (p. 8).

Reflexivity can be encoded lexically in addition to being represented syntactically (that is, one of the predicate arguments is a SELF-anaphor) or by morphologically marking the predicate. Certain verbs may be intrinsically reflexive; these verbs are also known as lexical reflexives or intrinsically reflexive verbs. This type of reflexivity occurs when a verb, like *behave*, *disgrace*, or *betake* in English, is syntactically transitive yet semantically intransitive, as Büring (2005) noted. Other naturally reflexive verbs, such as English grooming verbs like *wash* and *shave* are syntactically intransitive but semantically transitive. Usually, this kind of verb indicates self-directed actions.

### B. Argument Structure of Reflexives

A long-going debate in the literature has been about whether to treat reflexive verbs (lexical and morphological reflexives) as intransitive or not. One treatment of reflexive verbs is that of Reinhart and Siloni’s (2005) where they argue against the unaccusative approach of reflexives, instead, they offer to treat such verbs as being detransitivized through the *Bundling* operation developed by Reinhart (2002) and Reinhart and Siloni (2005). Through this operation, they assume that the  $\theta$ -role of the verb’s internal argument is bundled with the  $\theta$ -role of the verb’s external argument.

Against the bundling approach, Doron and Hovav (2007) argue that the complex  $\theta$ -role assigned to the verb’s internal argument should not allow an independent focus on one of the two  $\theta$ -roles, however, they argue that this is not the case.<sup>2</sup> For instance, in the German example in (4) an independent focus on the agent or the theme can be achieved in a reflexive context.

- 4) Morgens wäscht sie sich immer/erst mal selber.  
at.morning washes she REFL always/first-of-all self  
(i) agent focus: She washes herself, no-one else washes her. (context: She is a disabled patient.)  
(ii) theme focus: She washes herself, she washes no-one else. (context: She is a nurse.)

(Schäfer, 2012, p. 17)

While Reinhart and Siloni’s (2005) approach does not treat SE-reflexives and clitics as anaphors, Doron and Hovav (2007) conclude that as in German (and French) verbs have a transitive derivation where the pronoun/clitic serve as an anaphor argument that bears the internal  $\theta$ -role.

### C. Possessive Reflexives

Some languages allow reflexive possessives, whereas others do not. Reuland (2007, 2011) attributes such difference to definiteness. He argues that reflexive possessives are only possible in languages that lack definiteness marking or encode definiteness postnominally. For instance, English encodes definiteness prenominally as in (5a), whereas languages that lack definiteness marking such as Swedish allow possessive reflexives, as illustrated in (5b).

- 5)  
a. \*Mike likes himself’s boss.  
b. John<sub>i</sub> angrep **sina**/**\*hans**<sub>i</sub> vänner. (Swedish)  
John attacked self’s/his friends  
‘John attacked his friends.’

(Kiparsky, 2002, p. 16)

<sup>2</sup> Here, Doron and Hovav’s (2007) argument is against the bundling approach in ‘syntax-languages’.

### III. REFLEXIVE TYPES IN NA

This section investigates the strategies used in Najdi Arabic (NA) to encode reflexivity: lexical, morphological, and syntactic. In lexical reflexivization, the reflexive reading is inherent in the verb, whereas in morphological reflexivization, reflexivity is obtained through attaching special reflexive morphemes to the verb. In syntactic reflexivization, complex reflexives are used to encode reflexivity. In addition to these three strategies, cross-linguistically, reflexivity can be encoded through numerous and varying strategies (see Faltz, 1977; Geniušienė, 1987; Heine & Miyashita, 2008; Reinhart & Reuland, 1993; Schladt, 2000). For instance, Schladt (2000) offered an overview of 147 languages, all of which require special marking of reflexivity through techniques such as clitics, verbal affixes, duplication of the bound element, or even the embedding of the bound element within a PP.

The following three sub-sections show how reflexivity in NA is encoded lexically, morphologically, and syntactically.

#### A. Reflexive Types in NA

Reflexivity can be encoded lexically when a verb inherently encodes a semantic reflexive reading. This way of reflexivizing involves no overt encoding of the verb except that of the inherent semantic argument. This mode is found in English, as demonstrated by examples (6):

- 6)
- a. The man behaved.
  - b. The man shaved.
  - c. The man bathed.

As shown above, no additional marking of the verb was added to indicate reflexivity. All the examples in (6) imply only one reading, that *the man* performed the action to himself (e.g., *The man behaved himself*). NA permits lexical reflexivization in a few cases, as illustrated in (7):

- 7)
- a. Omar ḥællæg.  
Omar shaved.  
'Omar shaved.'
  - b. Omar γæssæl  
Omar washed  
'Omar washed.'

As shown in the examples in (7), each sentence can be read reflexively with no overt encoding. In other words, both verbs may take *himself* as an uninterpreted internal argument. Note that the verbs here are used as semantically transitive but syntactically intransitive, which has been described by Reinhard and Siloni (2005) as *lexical bundling*. Nonetheless, these verbs may also be used as two-place predicates when a direct object is used overtly, which in turn may or may not reflect a reflexive reading (e.g., it may take an independent NP or a referential NP 'SELF-reflexive' as an object), as shown, respectively, in (8).

- 8)
- a. Omar<sub>i</sub> ḥællæg næfsuh<sub>i</sub>.  
Omar shaved himself  
'Omar shaved himself.'
  - b. Omar γæssæl Muhammad.  
Omar washed Muhammad  
'Omar washed Muhammad.'

Sportiche (2023) has argued that lexical reflexives are not transformed into intransitive verbs. In English, for example, the verb *wash*—as in *Charles washed*—is not a transitive verb that is turned into the intransitive reflexive verb *wash<sub>R</sub>*, according to Sportiche. Instead, Sportiche (2023, p. 25) suggested that verbs, when used reflexively, involve a canonical body part and that this body part denoting the noun joins and remains (recoverably) silent. However, Sportiche did not discuss verbs such as *behave*, where the verb clearly denotes only a reflexive reading and yet cannot take a canonical body part, covertly or overtly. This situation is illustrated in (9).

- 9)
- a. The man behaved.
  - b. The man behaved himself.
  - c. \*The man behaved his body.

As shown in (9), *behave* can only imply a reflexive reading, either by using the lexical reflexive verb alone, as in (9a), or by adding a SELF-reflexive, as in (9b). It cannot, however, either covertly or overtly take a body part as an argument.

To sum up, NA uses lexical reflexives that denote an inherent reflexive reading with no additional markers on the verb. Nonetheless, NA does not have solely lexical reflexive verbs (such as *behave* in English) but instead uses transitive verbs that can bear a reflexive interpretation (such as *washed* in English). Such verbs are typically grooming verbs that occur without complex reflexives unless needed for clarification (i.e., to avoid confusion if there is a contrastive situation in which the act might have been performed on someone else).

### B. Morphological Reflexives

Reflexivity can be obtained by marking a verb morphologically. The Arabic language allows reflexivization through the attachment of reflexive morphemes to verbs (see Al-Raba'a, 2017; Glanville, 2018; Holes, 2004; Ryding, 2005; Wright & Caspari, 1896). Building upon Haspelmath (1990), Glanville (2018) introduced a likely path for the development of the two Arabic reflexive morphemes /t/ and /n/, proposing that these two morphemes were once full reflexives appearing in conjunction with unmarked verbs; over time, they became phonetically reduced and attached to verbs (probably derived from *šiat* 'self' and *nafs* 'spirit, self') (p. 52). In contrast, whereas Glanville (2018) considered reflexive morphemes in Arabic to comprise only /t/ and /n/, Al-Raba'a (2017) asserted that Arabic has four reflexive morphemes: the prefix /ta/ and the infixes /t/, /n/, and /st/. In this section, we adopt Al-Raba'a's classification of the Arabic reflexive morphemes, as it is more precise and will thus allow for a more detailed investigation.

First, NA employs the morphological encoding of reflexivity by attaching the morpheme /tæ/ to the verb, which could also be changed to /t/ due to phonological changes in NA. Consider the examples in (10):

10)

- a. Nourah **tæ**rawwæfæt.  
Nourah<sub>REFL</sub>.bathed  
'Nourah bathed herself.'
- b. Omar **t**læbbæs  
Omar<sub>REFL</sub>.dressed  
'Omar dressed himself.'
- c. Nourah **t**ʔddæbæt  
Nourah<sub>REFL</sub>.behaved  
'Nourah behaved herself.'

The morphemes /tæ/ and /t/ in (10) assign a reflexive reading to the verb. Those reflexive marked verbs indicate an action done to oneself (i.e., the subject) in which the morpheme takes the role of the object of the unmarked verb and assigns it to the subject. Therefore, all reflexive marked verbs are intransitive verbs (for additional discussion on this matter see Section 4). As reported in Ryding (2005) and Wright and Caspari (1896) for MSA and CA, in NA the verbs in (10) carry the reflexive reading from the verb form 5 in Arabic '*taCIVC2C2VC3*', which is derived from form 2 '*CIVC2C2VC3V*'.

Second, verbs in NA can also be reflexively marked via the morpheme /t/. The examples in (11) illustrate this process:

11)

- a. Omar ʔirttæz  
Omar<sub>REFL</sub>.postured  
'Omar postured himself.'
- b. Nourah ʔintæhræt  
Nourah<sub>REFL</sub>.killed  
'Nourah killed herself.'
- c. Omar ʔyrtisæl  
Omar<sub>REFL</sub>.showered  
'Omar showered.'

In (11), the morpheme /t/ is used to mark the object role of the unmarked verb. Moreover, as reported in Ryding (2005) and Wright and Caspari (1896) for MSA and CA, in NA the verbs in (11) are form 8 in Arabic, '*ʔiC1tVC2VC3V*'. The prefixation of 'ʔi' in the verb form 8 is due to the infixation of 't', as it separates the first radical from its vowel (Wright & Caspari, 1896, p. 41).

Third, reflexivization may occur in NA via the incorporation of the morpheme /n/. This process is exemplified in (12):

12)

- a. Nourah ʔinsæhbæt  
Nourah<sub>REFL</sub>.withdrew  
'Nourah withdrew.'
- b. Omar ʔinzæwæ  
Omar<sub>REFL</sub>.set aside  
'Omar set himself aside.'

The morpheme /n/ can also assign a reflexive reading to the verb, as it takes the object role of the unmarked verb and assigns it to the subject. Also, as reported in Ryding (2005) and Wright and Caspari (1896) for MSA and CA, in NA the verbs in (12) are form 7 in Arabic, '*ʔmC1VC2VC3V*'. The 'ʔ' is added to form 7 after the infixation of *n*- as consonant clusters are not allowed to ease its pronunciation (Wright & Caspari, 1896, p. 40).

Last, verbs in NA can be reflexively marked via the morpheme /st/. Consider the examples provided in (13):

13)

- a. Nourah ʔistæslæmæt  
Nourah<sub>REFL</sub>.surrendered  
'Nourah surrendered herself.'

- b. Omar ʔistæʃæd  
 Omar<sub>REFL</sub>prepared  
 ‘Omar prepared himself.’

The morpheme /st/ inserted into the verbs in (13) entails a reflexive interpretation. The verbs in (13) are form 10 in Arabic, ‘ʔistVC1C2VC3V’ as reported in Ryding (2005) and Wright and Caspari (1896) for MSA and CA. In (13a), the form 10 verb is considered to be the reflexive of the form 2 verb, ‘CIVC2C2VC3V’, whereas the form 10 in (13b) is considered to be the reflexive of form 4, ‘ʔaC1C2VC3V’ (Ryding, 2005; Wright & Caspari, 1896).

Note that reflexive morphemes cannot be treated as distinct objects; however, they do express an inherent reflexive semantic that they assign to the verb. To support this argument, Doron (2003) performed the linguistic test illustrated in (14) on the reflexive morpheme *hit-* in Hebrew:

- 14)  
 a. *dani raxac et ackmo*  
 Dani washed ACC himself  
 b. *dani hitraxac*  
 Dani washed-MID

(Doron, 2003, p. 58)

According to Doron, (14a) can be used to describe a situation in which *Dani* washed a wax figure of himself, whereas the morphologically reflexive verb in (14b) cannot denote the same reading. Therefore, reflexive morphemes cannot be used as arguments, and hence, they do not denote an object role. Accordingly, a distinction must be drawn between reflexivization within a clause using a complex reflexive and that within a verb using a reflexive morpheme. Such conclusion applies to NA as the example in (15a) can describe a situation where Omar bathed a wax figure of himself, whereas the morphologically reflexive verb in (15b) cannot describe the same situation.

- 15)  
 a. Omar rawwæʃ næfsuh  
 Omar bathed himself  
 ‘Omar bathed himself.’  
 b. Omar tærawwæʃ  
 Omar<sub>REFL</sub>bathed  
 ‘Omar bathed himself.’

In addition to the reflexive interpretations they assign to verbs, reflexive morphemes can also appear with other verb constructions. Cross-linguistically, the same reflexive morphology (verbal affixes and clitics) can appear with unaccusatives, subject-Experiencer verbs, middles, impersonals, or passives (see, e.g., Chierchia, 2004; Koontz-Garboden, 2007, 2009; Reinhart & Siloni, 2005). To illustrate such possibilities, consider the examples in (16):

- 16)  
 a. baagil-u muchi-koND-itu (Kannada)  
*door-NOM close-PP-REFL.PST-3SN*  
 The door closed. (Lidz, 2001, p. 2)  
 b. Si mangia le mele. (Italian)  
*SI* eats the apples  
 ‘One eats the apples’

(Reinhart & Siloni, 2005, p. 2)

In Kannada, the reflexive morpheme *koND* is used with decausatives, as in (16a). Moreover, in Italian, the reflexive clitic *si* is used with impersonals, as in (16b). The same occurs in NA, which is demonstrated by the examples in (17).

- 17)  
 a. Al-bæ:b ʔmʃæk  
 The-door closed  
 ‘The door closed.’  
 b. Omar ʔixtʃæ  
 Omar disappeared  
 ‘Omar disappeared.’

In (17a), the reflexive morpheme *n* is used with an unaccusative verb. In (17b), the reflexive morpheme *t* is used with a mediopassive verb.<sup>3</sup>

In conclusion, NA allows reflexivization via the four reflexive morphemes /tæ/, /t/, /n/, and /st/, although these reflexive morphemes do not seem to be limited solely to assigning the reflexive interpretation to the verb.

### C. Syntactic Reflexives

A third strategy to encode reflexivity in NA is the use of SELF-reflexives. Arabic uses several different forms of reflexives, such as *næfs* ‘self’, *ðæ:t* ‘spirit’, *ʃaien* ‘eye’, and *ru:h* ‘soul’, although *næfs* ‘self’ and *ru:h* ‘soul’ are the most

<sup>3</sup> For further discussion on reflexives and unaccusatives, see Chierchia (2004).

frequently used forms in NA.<sup>4</sup> The use of SELF-reflexives allows the verb to have two coreferential arguments, one of them being the SELF-reflexive. Consider the examples in (18) for illustration:

- 18)
- a. Omar<sub>i</sub> rawwæf **næfsub<sub>i</sub>**.  
Omar bathed himself  
'Omar bathed himself.'
  - b. Nourah<sub>i</sub> tihb **næfsæh<sub>i</sub>**.  
Nourah loves herself  
'Nourah loves herself.'
  - c. al-ŷyæ:l<sub>i</sub> fæ:fæw **anfushum<sub>i</sub>** bæ-l-mræjæh.  
The boys saw themselves in the-mirror  
'The boys saw themselves in the mirror.'

Each sentence in (18) has a predicate with two coreferential arguments, one of which is the complex SELF-reflexive as indicated by the indices, and each of these arguments bears a semantic role. SELF-reflexives are dependent on another NP for their interpretation and can never be referentially independent.

So far, we have discussed the different strategies for encoding reflexivity in NA. One point remaining is how such strategies may be combined. It is allowed to combine lexical and syntactic encoding while constructing a sentence, but this is not the case with reflexively encoded verbs. As examples, consider the sentences in (19):

- 19)
- a. Omar<sub>i</sub> hællæg (**næfsub<sub>i</sub>**).  
Omar shaved himself.  
'Omar shaved himself.'
  - b. \*Nourah<sub>i</sub> **tærawwæfæt næfsæh<sub>i</sub>**.  
Nourah<sub>REFL</sub> bathed herself  
'Nourah bathed herself.'

As shown in (19), lexical and syntactic combination is allowed, as in (19a). However, the combination of the syntactic and morphological encoding of reflexivity is not allowed, as shown in (19b).

#### IV. THE ARGUMENT STRUCTURE OF REFLEXIVE CONSTRUCTIONS IN NA

In this section, we discuss the argument structure associated with the three reflexive constructions used in NA: syntactical, morphological, and lexical. The term *argument structure* here refers to the syntactic configurations that are projected by a lexical entry—in other words, the lexical representation of the syntactic properties of a predicate (Grimshaw, 1990; Hale & Keyser, 1998). The arguments of a predicate can be external or internal, depending on their position relative to the scope of the predicate. In other words, internal arguments are within the scope of the predicate, whereas external arguments are not. Moreover, external arguments occupy a higher position within the argument structure, as they are the most prominent; in contrast, the prominence of internal arguments depends on their relationship to one another. Universally, the organization of the argument array is determined by the semantics of the arguments. Thus, argument structures are constructed correspondingly to the thematic hierarchy, where Agent is the highest argument, followed by Experiencer, then Goal/Source/Location, and, lastly, Theme (Grimshaw, 1990).

The argument structure of syntactic complex reflexives is generally straightforward, as it is the most productive way to produce reflexivity. A syntactic reflexive is an internal argument of a transitive verb, where its subject—the external argument—is the binder of the reflexive. Consider the example in (20):

- 20) Nourah<sub>i</sub> tihb **næfsæh<sub>i</sub>**.  
Nourah loves herself  
'Nourah loves herself.'

The verb *teheb* 'loves' is a transitive verb that requires two arguments: the subject *Nourah* as its external argument and the object *næfsæh* 'herself' as its internal argument.

For morphological and lexical reflexives, however, this is not the case.<sup>5</sup> Consider the sentences from NA given in (21):

- 21)
- a. Al-ŷjæl yæssælæw  
The-boys cleaned  
'The boys cleaned themselves.'
  - b. Al-ŷjæl tarawwæfæw  
The-boys<sub>REFL</sub> showered  
'The boys showered themselves.'

<sup>4</sup> Note that *næfs* 'self' can also mean 'the same'.

<sup>5</sup> In the literature, lexical and morphological reflexives are often referred to as *natural* reflexives (Reinhart & Siloni 2005; Alexiadou et al., 2014 among others).

In (21), the examples project a reflexive interpretation without the use of argument binding, hence making them SELF-reflexive. Consequently, the question arises of how to account for the reflexive interpretation. Moreover, is the syntactically unrealized argument available semantically or eliminated altogether? The literature includes numerous proposals seeking to explain how reflexivity is encoded without the use of reflexive pronouns (i.e., SELF-reflexives).

Reinhart and Siloni (2005) established a theory in which valence changes under a lex(icon)-syn(tactic) parameter, where operations on the syntactic valence of the verb can be applied in the syntax or the lexicon. The lex-syn parameter is presented in (22).

22) The Lex-Syn Parameter

UG allows thematic arity operations to apply in the lexicon or in the syntax.

(Reinhart & Siloni, 2005, p. 10)

According to Reinhart and Siloni (2005), Romance languages are syntactic languages, whereas Semitic languages are lexicon languages; thus, in Arabic—a Semitic language—the reflexivization operation takes place in the lexicon. They have argued that in the reflexivization operation, no  $\theta$ -role is eliminated, unlike the case with decausativization. In decausativization, an entry is derived by an arity operation from a basic transitive entry, with its external role fully eliminated. To support this conclusion, it has been widely assumed that an unaccusative entry, such as that in (23a), is derived from the basic transitive entry *melt* by an arity operation, yet its external role is fully eliminated (Burzio, 1986; Chierchia, 2004; Levin & Rappaport, 1994; Reinhart, 1996, 2002). In contrast to (23a), (23b) shows a passive entry that is derived by an arity operation from a transitive entry, where its blocked argument is still available semantically (Reinhart & Siloni, 2005):

23)

- a. The ice<sub>i</sub> melted  $t_i$  (\*with a candle).
- b. The ice<sub>i</sub> was melted  $t_i$  (with a candle).

(Reinhart & Siloni, 2005, p. 10)

To test this assumption, an instrument can be licensed only with the passive derivation, where the Agent role is available semantically. In contrast, with the unaccusative derivation, no instrument can be licensed, as the external role of the transitive entry is completely eliminated, as illustrated in (23) (Reinhart & Siloni, 2005). Given this situation, it becomes clear that an argument can be eliminated syntactically and semantically. The reflexivization operation, however, does not eliminate a  $\theta$ -role; instead, it only disables the argument assigned to this role syntactically, while it is still realized semantically.

Chierchia (2004) presented a different view of the reflexivization operation. According to Chierchia, the external remaining role of lexical and morphological reflexives is not a simple Agent but an Agent that operates on itself—that is, an Agent that is also a Theme, while eliminating the internal role altogether. Nonetheless, under Chierchia's view, the Theme role is not actually fully eliminated. Accordingly, Reinhart and Siloni's (2005) view of the reflexivization operation appears to be more explicit.

Reinhart and Siloni (2005) referred to an operation called *bundling*, arguing that under reflexivization, two  $\theta$ -roles are taken to form one complex  $\theta$ -role, the external  $\theta$ -role, as defined in (24).

24) Reflexivization Bundling

$[\theta_i] [\theta_j] \rightarrow [\theta_i-\theta_j]$ , where  $\theta_i$  is an external  $\theta$ -role.

(Reinhart & Siloni, 2005, p. 12)

Given that the bundling operation enables two  $\theta$ -roles to be assigned to one syntactic argument, Reinhart and Siloni (2005) summarized the reflexivization operation as stated in (25):

25) Reflexivization in the Lexicon

- a. Bundling: Reflexivization bundling applies to the verb's  $\theta$ -grid.
- b. Case: The accusative Case feature of the verb is reduced.

(Reinhart & Siloni, 2005, p. 13)

As an example of this reflexivization operation, Reinhart and Siloni (2005) presented its effect on the verb entry *wash*, given in (26):

26)

- a. Verb entry: wash<sub>ACC</sub> [Agent] [Theme]
- b. Reflexivization output: wash [Agent-Theme]
- c. Syntactic output: Max<sub>[Agent-Theme]</sub> washed.

(Reinhart & Siloni, 2005, p. 13)

In accordance with this view, in NA, lexical and morphological reflexives do not eliminate their internal argument, and the reflexive reading is applied through a reflexivization operation where the  $\theta$ -role of the syntactically unrealized internal argument is bundled with the  $\theta$ -role of the external argument to form one complex external  $\theta$ -role, this is illustrated in (27). Finally, the presence of the verbal morphology is a sign that an arity operation is applied to the verb's  $\theta$ -grid.

27)

- a. Omar    yæssæl  
Omar    washed

- ‘Omar washed.’
- b. Verb entry: *yasi:l* [Agent] [Theme]
  - c. Reflexivization output: *yasi:l* [Agent-Theme]
  - d. Syntactic output: Omar<sub>[Agent-Theme]</sub> *yæssæɫ*.

#### V. POSSESSIVE REFLEXIVES IN NA

In some languages, contrast is drawn between direct objects and direct object adnominal possessors (Haspelmath, 2008). Consider the examples in (28) and (29):<sup>6</sup>

28)

- a. Bob<sub>1</sub> admires (himself<sub>i</sub>/ \*him<sub>1</sub>).
- b. Bob<sub>1</sub> admires (his<sub>1</sub>/ \*himself’s) boss.

(Haspelmath, 2008, p. 40)

29)

- a. Ali-diz (*wič<sub>1</sub>/ \*am<sub>1</sub>*) akuna. (Lezgian)  
 Ali-DAT self him saw  
 ‘Ali saw himself.’
- b. Ali-diz (*wič-in<sub>1</sub>/ \*adan<sub>1</sub>*) ruš akuna.  
 Ali-DAT self-GEN him girl saw  
 ‘Ali<sub>1</sub> saw his<sub>1</sub> daughter.’

(Haspelmath, 1993, pp. 408–414)

As illustrated by (28a), English uses reflexive pronouns as direct objects when a coreference relation with the subject is projected. However, when the object is an adnominal possessor, a reflexive pronoun is not licensed, as shown in (28b). In contrast, other languages such as Lezgian require reflexive pronouns in both constructions—direct object and adnominal possessor—as shown in (29) (Haspelmath, 2008). Reuland (2007, 2011) attributed such distinctions between languages to definiteness, asserting that languages that lack definiteness marking or encode definiteness postnominally allow reflexive possessives, whereas languages with prenominal definiteness marking do not allow reflexive possessives. Reuland (2011) observed this phenomenon in a subset of several Indo-European languages, including Dutch, English, German, Italian, Modern Greek, and Spanish, which lack reflexive possessives and mark definiteness prenominally. Other languages, such as Bulgarian, Icelandic, Romanian, Latin, and Russian, allow reflexive possessives but either lack definiteness marking or mark it postnominally. Supporting Reuland’s observation, Despić (2011, 2015) conducted a survey of languages outside of the Indo-European family in which the same distinction has been found. For instance, languages such as Afrikaans, Frisian, and Misantra do not allow reflexive possessives because they mark definiteness prenominally, whereas languages such as Danish, Chinese, Malayalam, and Turkish allow possessive reflexives since they either lack definiteness marking or mark it postnominally.

Given this cross-linguistic distinction of reflexive possessives, Arabic—and, by extension, NA—falls within the group of languages that lack reflexive possessives because they mark definiteness prenominally. As an illustration, consider the example in (30), where al- ‘the’ is used to mark definiteness prenominally in NA:

- 30) Al-bmt qiræt al-ktæb  
 The-girl<sub>Def</sub> read the-book<sub>Def</sub>  
 ‘The girl read the book.’

NA also draws a distinction between direct objects and direct object adnominal possessors, as suggested by the examples in (31):

31)

- a. Omar<sub>i</sub> jħīb(\*-uh<sub>i</sub>/ næfsuh<sub>i</sub>).  
 Omar loves -him\ himself  
 ‘Omar<sub>i</sub> loves himself<sub>i</sub>.’
- b. Omar<sub>i</sub> jħīb s<sup>ç</sup>idi:g(-uh<sub>i</sub>/ \*næfsuh<sub>i</sub>).  
 Omar loves friend-his / himself  
 ‘Omar<sub>i</sub> loves his<sub>i</sub> friend.’

As shown in (31), NA follows Reuland’s (2007, 2011) cross-linguistic classification of possessive reflexives, as it distinguishes between direct objects and direct object adnominal possessors, where a reflexive pronoun is not permitted in possessive constructions. Nonetheless, there are situations in NA in which this distinction is not applied. Consider the examples in (32):

- 32) Allah jækfi:k<sub>i</sub> ʃʃær næfsik<sub>i</sub>  
 Allah protect-you evil yourself  
 ‘May Allah protect you from the evil of yourself.’

In (32), a reflexive is used in a possessive construction even though NA does not allow possessive reflexives because it marks definiteness prenominally. To the best of my knowledge, similar cases have not been observed in other

<sup>6</sup> The original arrangement of the examples has been changed for consistency.

languages that do not permit reflexive possessives. Nonetheless, we assume that the reflexive ‘*næfs*’ in (32) is not treated as a reflexive pronoun but as a separate spiritual entity—that is, it is treated the same as any other part of the body. Consider the examples in (33):

33)

- a. Hæ:ðæ: xæ:tæm ʔsʰbʰi-i: a-sʰiʔi:r  
This ring finger-my the-little  
‘This is my little finger ring.’
- b. felt ʃæʃær ʔi:d-i:  
removed hair arm-my  
‘I removed my arm hair.’

In (33a), the body part ‘ʔsʰbʰi’ ‘finger’ is the possessor and ‘*xætæm*’ ‘ring’ is the possessee, while in (33b) ‘ʔi:d’ ‘arm’ is the possessor and ‘*ʃæʃær*’ ‘hair’ is the possessee. The same, we argue, applies to ‘*næfs*’ ‘self’ in (32), where it is the possessor and ‘*ʃʃær*’ is the possessee. Moreover, ‘*næfs*’ possessive constructions are only permitted with intangibles. Consider the examples in (34) for illustrations of this restriction:

34)

- a. Omar<sub>i</sub> tʰim-uh ʃizzæt næfsuh<sub>i</sub>  
Omar care-he esteem himself  
‘Omar cares about his self-esteem.’
- b. \*Nourah<sub>i</sub> tæqræ ktæ:b næfsæh<sub>i</sub>  
Nourah read book herself  
‘Nourah is reading her book.’

In (34a), the possessee is an incorporeal entity, and a reflexive possessive is thus permitted. In (34b), however, the possessee is a tangible object, and, consequently, a reflexive possessive is not permitted.

## VI. CONCLUSION

In this paper, we concluded that there are three strategies to encode reflexivity in NA: (a) lexically, showing that reflexivity can be inherent in the verb without the need to express reflexivity overtly; (b) morphologically, showing that reflexivity in NA can be expressed through attaching special reflexive morphemes to the verb; and (c) syntactically, in which reflexivity is encoded through the use of the complex SELF-reflexives. In addition, the paper investigated the argument structure of reflexives in NA in accordance with Reinhart and Siloni’s (2005) reflexivization bundling process, showing that NA falls under their classification. In other words, in NA, the internal  $\theta$ -role of lexical and morphological reflexives is not eliminated but is instead bundled with the external  $\theta$ -role, thereby generating one complex external  $\theta$ -role. Finally, we examined the availability of reflexive possessives in NA, showing that reflexives are not allowed in possessive constructions, lending further support to Reuland’s (2007, 2011) argument that languages with prenominal definiteness marking do not allow reflexive possessives. We also showed that the available reflexives in possessive constructions in NA are treated not as reflexive.

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