

## THE DEVELOPMENT OF FUTURE MARKERS IN ARABIC AND THE NILE NUBIAN LANGUAGES

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This paper deals with the rise of the grammatical elements of simple future in the Nile Nubian languages (i.e., Kenzi and Fadicca) and Arabic (i.e., Standard Arabic and Cairene Colloquial Arabic). Using grammaticalization as a frame of reference, I attempt to determine the sources, the mechanisms and processes involved in the development of the grammatical elements in these languages. In addition, the study sheds light on the points of similarity and difference between these languages as far as the rise of future expression is concerned.

### *1. Introduction*

Future markers place “the situation described by the verb at a time subsequent to the moment of speech” (Bybee 1985, 156). According to Bybee, future inflections are found in 44 % of the languages of the sample she studied (156). She goes on to claim that “the presence of a present/past inflection in a language implies the presence of a future inflection, while the converse implication does not hold”. Thus languages such as Diegueno, Gilyak, and Navaho “have a future inflection but no present/past inflection”. English is considered one of the languages which have future markers whose “primary function appeared to express mood, but could also be used to express future time” (157).

Nile Nubian languages, for example, Dongolese-Kenzi and Fadicca-Mahas, and Arabic, for example, Standard Arabic (SA) and Cairene Colloquial Arabic (CCA), have future elements. Nile Nubian languages, that are spoken in Egypt and the Sudan, have different types of future forms: future imperative forms such as Dongolese-Kenzi *-ka* (e.g., *jom-ka* “hit later”) and the simple future forms (e.g., Fadicca-Mahas *fa-/f-* [cf. Ayoub 1968; Werner 1987]). Both SA (cf. Alkhuli 1997; Khalil 1999) and CCA (cf. Mitchell 1956; Gary and Gamal Eldin 1981) have future markers: SA has such markers as *sawfa* and *sa-* whereas CCA has one future form, namely *ha-* (of which *ha-* is a variant). Note that few studies deal with the development of Nubian morphemes (cf. Abdel-Hafiz 1997). I have attempted to pinpoint the source from which the Kenzi Nubian benefactive morphemes derive (Abdel-Hafiz 1997). Similarly, few

scholars have conducted research on the development of grammatical elements in Arabic: the energetic suffixes (cf. Testen 1993), the subjunctive (Testen 1994), the subject agreement forms (cf. Abdel-Hafiz 1991), and the negation elements in Cairene Colloquial Arabic (Abdel-Hafiz 1999a).

This paper uses an approach to grammaticalization that focuses on the development of grammatical elements from lexical items (cf. section 2).<sup>1</sup> It aims at determining the sources of the simple future forms in the Nile Nubian languages (i.e., Kenzi and Fadicca) and Arabic (i.e., SA and CCA). Note that this work also focuses attention on the processes and mechanisms that are involved in the rise of the future elements in these languages. This study also attempts to identify the points of similarity and difference between these languages as far as the development of future expressions is concerned. Moreover, the analysis of the Arabic data investigates the claim that grammaticalization is unidirectional in nature. The paper is organized as follows. Section 2 presents the framework of grammaticalization. Section 3 handles the paths of development for the future morphemes in some languages. Section 4 deals with the future grammatical elements in the Nile Nubian and Arabic languages. It sheds light on the source of future forms, as well as the processes and the mechanisms of change that trigger their development.

## *2. The grammaticalization frame*

In this section, grammaticalization is defined. Also, the processes of grammaticalization (e.g., desemanticization, phonological processes and morphosyntactic processes) are pointed out. Moreover, the mechanisms of change (e.g., habituation and inference) are discussed.

### *2.1. Definition of grammaticalization*

Meillet (1912) claims that there are two processes through which new grammatical forms emerge: one is analogy, whereby new paradigms come into being through formal resemblance to already established paradigms. The second way in which new grammatical forms come into being is through grammaticalization. In the words of Harris (1997, 1), “Meillet’s sense of grammaticalization includes the process by which a word becomes a clitic, a clitic an affix”. Heine and Reh (1984, 15) define grammaticalization “as an evolution whereby linguistic units lose in semantic complexity, pragmatic significance, syntactic freedom, and

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<sup>1</sup> Grammaticalization can also be used in the broad sense, “referring to shifts in function of syntactic constructions. For example, shifts from paratactic to hypotactic structure” (Delancey 2001, 1).

phonetic substance, respectively”. Grammaticalization is also more simply characterized as “the processes whereby items become more grammatical through time” (Hopper and Traugott 1993, 2). Hopper and Traugott (50) regard grammaticalization as a subset of changes involved in reanalysis. However, Heine and Reh (1984) distinguish between grammaticalization and reanalysis: the former is concerned with the evolution of lexical or grammatical morphemes whereas the latter is concerned with the evolution of syntactic or pragmatic structures. Furthermore, researchers claim that grammaticalization is essentially unidirectional in nature (cf. Heine and Reh 1984; Croft 1990; Hopper and Traugott 1993; Bybee 2002); reanalysis is not necessarily so (Hopper and Traugott 1993, 95). More recently, researchers have come to realize that “grammaticalization of lexical items takes place within particular constructions and further that grammaticalization is the creation of new constructions” (Bybee 2002, 1).

## 2.2. *Some grammaticalization processes*

As has been previously pointed out, this study adopts an approach to grammaticalization whereby a lexical item becomes a grammatical element in the context of a particular construction. Grammaticalization involves the following processes:

A. Desemanticization (Heine and Reh 1984) or generalization (Bybee 2003): the semantic content of the lexical item undergoing grammaticalization is immensely reduced, that is, it is bleached of its lexical meaning. According to Bybee, “specific, concrete meanings entering into the process become generalized and more abstract, and as a result, become appropriate in a growing range of contexts” (2002, 1). Generalization or bleaching of the meaning of a lexical item is caused by frequency (2002, 3).

B. The words or phrases undergoing grammaticalization are also subject to phonological processes such as erosion (junctural or syllabic erosion), assimilation or loss. Bybee and Pagliuca (1985, 76) state that “as the meaning generalizes and the range of uses widens, the frequency increases and this leads automatically to phonological reduction and perhaps fusion”. All these processes lead to a drastic reduction in the phonological form of the grammaticalization words such that the produced forms “require less muscular effort” (Bybee et al. 1994; Bybee 2002).

C. After having its meaning generalized or bleached and its phonological form reduced, the word or phrase undergoing grammaticalization undergoes a morphosyntactic process, namely, decategorization.

Decategorization “is applied to the set of processes by which a noun or verb loses its morphosyntactic properties in the process of becoming a grammatical element” (Bybee 2003, 4). Sometimes both the grammatical morpheme and the lexical element from which it arose coexist in the language, but in some cases the lexical item disappears from the language.

### *2.3. Some mechanisms of change*

In this section, we will discuss two mechanisms of change that are instrumental in the development of grammatical elements: habituation and pragmatic inference. Habituation is an important mechanism of change in grammaticalization (Bybee 2002). The force of a word or phrase that is repeated over and over is diminished. In other words, the more frequently a word or phrase is used, the more likely that it will undergo grammaticalization. Thus habituation can cause a word or phrase to be bleached and, as a result, receive inferential meaning. Repetition can also trigger phonological reduction.

Another commonly cited mechanism that triggers grammaticalization is inference. In this type of change, if a particular pattern of inferences is realized in a grammatical construction, the hearer then comes to associate these inferences with the meaning of the construction. According to Bybee et al. (1994, 25), “a gram that often occurs in an environment in which a certain inference may be made can come to be associated with that inference to such an extent that the inference becomes part of the explicit meaning of the gram”. Thus in English the intention meaning leads to the development of the future meaning: since the intentions are often realized in a period subsequent to the moment of speech, the hearer infers the future meaning in such constructions.

### *3. The paths of development for future morphemes in some languages*

In this section I will discuss the paths of development for the future markers in some of the languages of the world. The fact that the future is marked in similar ways in most world languages and that it develops the same shades of meanings suggest that there is a limited number of sources out of which the future can develop. According to Bybee et al. (1994, 159), future in the languages of the world most often develops from “constructions expressing obligation or necessity, desire, and movement or intention”. Also, Trask (1996, 144) gives the verbs that develop into grammatical markers of futurity in the languages of the world: verbs meaning “go”, “come”, “want”, and “must”. In this section reference is made to two paths of development that have been identified for the rise of future morphemes in the languages of the world: the

movement path and the volition path.

Bybee et al. (1994, 159), relying on a stratified sample of languages, report that “the most frequent sources are movement verb constructions, with ten futures having their sources in constructions with *come* and similar verbs and ten in constructions with *go*. Thus in English the change of *be going to/be gonna* to future occurs only in purposive directional constructions. The change is made possible by the fact that there is an inference of futurity from purposiveness: If I am travelling in order to marry, the marriage will be in the future (cf. Hopper and Traugott 1993, 3; Trask 1996, 143).

Likewise, in African Languages, the most common source of future markers (cf. Heine and Reh 1984, 131) are verbs of motion (*come, go*, etc.), and volitive or desiderative verbs (e.g., *want*).<sup>2</sup> In Standard Ewe (Westerman 1907, 65, cited in Heine and Reh 1984, 131) the future marker *a-* is derived from the verb *va* “come”:

- (1) m-a-yi            (< \*me-va-yi)  
       I-fut-go  
       I shall go”

Also in Acholi and Lango (Heine and Reh 1984, 131) the verb *bino* “come” develops into a future marker:

- (2) Acholi:        an a-bi-camo  
                       I-fut-eat
- (3) Lango:        an a-bino-cammo  
                       I-fut-eat

In the Western Kru languages (e.g., Klæe, Bassa, Dewoin etc.) the verb *go* has developed into a near future marker (Heine and Reh 1984, 131), whereas in other Kru languages (e.g., Neyo, Godie, Koyo etc.) the verb *come* has been the source of a potential, or remote future marker. Thus this path of development for future markers is as follows (Bybee 2003):

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<sup>2</sup> Not all African languages conform to the aforementioned sources. In Sango, an adverb “quickly” is placed before the subject as a future marker (Heine and Reh 1984, 132).

- (i) fade lo kui biani  
       fut he die truly  
       “He will really die”

- (4) The Movement Path  
Movement towards a goal > intention > future

As Joseph (1983, 1) points out, the languages of the Balkan Peninsula (i.e., Greek, Albanian, Macedonian, Bulgarian, Serbo-Croatian, and Romanian) have formed a future tense from a verb of volition (e.g., Greek *tha figo* “I will leave” from earlier *thelei na phugo*: literally “it-will that I-leave”, Serbo-Croatian *ja cu zvati* “I will call”). In English, *will* earlier meant “to want” as in the Shakespearian form *what wilt thou?* “what do you want” (cf. Bybee and Pagliuca 1985, 67). Today, however, it has been reduced almost to a grammatical marker in contexts such as *She will be home soon* (Trask 1996, 144). In Swahili (Heine and Reh 1984, 131), the verb *-taka* “want” is the lexical source of the future marker, which is *-taka* in relative clauses and *-ta-* elsewhere:

- (5) ni-ta-kwenda  
I fut-go  
“I shall go”  
(6) a-taka-ye-kwenda  
he-fut-rel-go  
“He who will go”

Thus Bybee (2003, 603) identifies this path as follows:

- (7) The Volition Path  
Volition or desire > intention > future

#### 4. The future elements in Nile Nubian languages and Arabic

This section discusses the various properties of the future elements in the Nile Nubian languages and Arabic (SA and CCA), properties such as (a) their position with respect to the verb, (b) their paths of development, and (c) the processes and mechanisms involved in their development. We shall see here how these properties fit into the patterns discussed above.

##### 4.1. The future elements in Nile Nubian languages

All Nubian languages (Dongolese-Kenzi/Mahas-Fadicca) have the future tense. The future tense is realized in Kenzi by the prefix *bi-* or *b-* (before a vowel). Dongolese (Armbruster 1960, 199; Tucker and Bryan 1966, 325) expresses futurity with the prefix *bi-* or *bu-* (before stems with /u/):

- |      |              |                       |                   |
|------|--------------|-----------------------|-------------------|
|      | Kenzi        | Dongolese             |                   |
| (8)  | ay bi-niiri  | bi-niiri/ b ay niiri  | “I will drink”    |
| (9)  | er bi-ni     | bi-ni/ b er ni        | “You will drink”  |
| (10) | tir bi-niira | bi-niira/ b tir niira | “They will drink” |

The future form is a prefix in Kenzi, for it is associated or described with reference to a verb stem (e.g., *ay essi-g biniiri* “I will drink water”). In contrast, the Dongolese future form must be a clitic for it is not necessarily associated with a verb, rather it is described with reference to a phrasal constituent (e.g., *b-ay-niiri/ay bi-niiri* “I will drink”)

Mahas (Ayoub 1968, 52; Werner 1987, 151) and Fadicca (Abdel-Hafiz 1999b) have a future prefix *fa-* or *f-* (before a vowel); thus in the following examples from Mahas, the future marker is attached to the verb stem.

(11) *ay fa-kabir*  
I fut-eat  
“I will eat”

(12) *ay fa-tokkir*  
I fut-shake  
“I will shake”

The future marker can also be attached to an object noun (cf. Ayoub 1968, 58; Werner 1987, 151), as in

(13) *ay f-usman-ga tukk-ir*  
I fut-USman-acc beat  
“I will beat Usman”

(14) *aboo fa-shongirki idee*  
father fut-money send  
“My father will send money”

Like that of Mahas, the Fadicca future form seems to be a clitic: it is not restricted to the verb stem. It can occur with the verb stem or any phrasal constituent (cf. Abdel-Hafiz 1999, 48b):

(15) *ay tii-g fa-dakkir*  
I cow-acc milk  
“I will milk the cow”

(16) *ay fa-tiig dakkir*  
I fut-cow-acc milk  
“I will milk the cow”

Thus the future forms are not affixes in Mahas and Fadicca: these forms are not necessarily attached to the verb stem. Their host can be a direct object or a subject pronoun. It should be pointed out that both dialects have a variant of *f(a)-*, which is *ha-* (cf. Ayoub 1968, 28;

Werner 1987, 151):

- (17) a. ay noogi-la fa-juu-r      b. ay noog-la ha-juu-r  
       "I shall go home"        "I shall go home"

The Dongolese/Kenzi future marker is derived from a verb *birig* "want". Also the Fadicca/Mahas marker has developed from a cognate verb *firig* "want" (cf. Ayoub 1968, 49). Note that the source verbs in the two languages (Dongolese-Kenzi/Fadicca-Mahas) are reflexes of the proto-Nubian form (*\*birig*). It is the *f*-initial word that has undergone the change (*b > f*), which is a widespread type of lenition in Fadicca-Mahas (cf. Abdel-Hafiz 1999b, 51): e.g., *bassari/fassari* "tasteless"; *bagatti/fagatti* "half"; *bille/fille* "onion"; *bottir/fottir* "chop"; *baag/faag* "divide"; *dab/daf* "disappear"; etc.).

The development of the future markers in these languages has been realized via the channel of verb-verb compounding (e.g., *ay birig juuri* "I want-go"). In such a construction the second verb carries the markers of tense and person/number; the first verb carries no markers (cf. Abdel-Hafiz 1997): *ta-dii-s-u* (come-die-pst-3sg; "He came and died"). The following scenario might account for the way the Nubian future forms have arisen in a construction involving a verb-verb compound:

A. As a result of frequency of use (cf. Bybee, 2002), the verb *birig* or *firig* "want" is desemanticized or bleached such that its semantic content is radically reduced, whereas an intention meaning and a future meaning are developed.

B. This is accompanied by phonological reduction: syllabic erosion reduces the form by truncating the second syllable (e.g., *birig > bi/firig > fi*). These resultant forms were likewise exposed to junctural erosion such that the vowel is dropped before vowels (e.g., *bi > b/fi > f*).

C. As a result of phonological reduction, the remnant part clings to the verb in the case of Kenzi. In Fadicca-Mahas and Dongolese, the reduced form is not obligatorily prefixed to the verb: it may freely be attached to the object noun or pronoun.

D. The verbs *birig* and *firig* have lost their morphosyntactic properties: they are no longer independent verbs in the V-V compounding construction. But note that the source lexical items have not disappeared from the languages. They still exist as lexical verbs in all Nile Nubian languages. Thus both the grammaticalized elements and the lexical verbs coexist:

- Kenzi  
 (18) tir duguu-g abirg-r-a

they money-acc want-neu-3pl  
 “They want money”

Mahas

(19) ay kii-nnan-ga firg-ir  
 “I want to come”

#### 4.2. *The future markers in Standard Arabic and Cairene Colloquial Arabic*

In this section, the development of future elements in Arabic (SA and CCA) will be discussed.

##### 4.2.1. *The future markers in Standard Arabic*

In SA, futurity is expressed by the prefix *sa-* or the particle *sawfa* (cf. any standard textbook or grammar, e.g., Cowan 1958, 88; Hasan 1993, 60).

(20) sa-yaf<sup>ʿ</sup>alu ma yastatii<sup>ʿ</sup>  
 will-do what he-can  
 “He will do what he can”

(21) sawfa yaf<sup>ʿ</sup>alu ma yastatii<sup>ʿ</sup>  
 will do what he-can  
 “He will do what he can”

Some scholars of Arabic language (Wilkins 1980; Holes 1995) seem to have noted no difference in meaning between the sentences containing *sawfa* or *sa-* before the verb. Thus there is no difference between *sa-yaf<sup>ʿ</sup>alu* and *sawfa yaf<sup>ʿ</sup>alu* (“he will do”). In the words of Al-Khawaldā (2000, 75), “it seems that the selection of /sawfa yaf<sup>ʿ</sup>alu/ and /sayaf<sup>ʿ</sup>alu/ is arbitrary since ... it is difficult to find any semantic or syntactic reason for selecting one expression over the other to express futurity”. But other scholars (cf. Hasan 1993, 60; Alkhuli 1997, 46; Khalil 1999, 193) claim that Arabs use the particle *sawfa* plus the imperfect indicative form of the verb in order to express remote future:

(22) sawfa yusaafiruuna ʾila miṣra š-šahra l-qaadima.  
 will they-travel to Egypt next month  
 “They will travel to Egypt next month”

But the particle *sa-* plus the imperfect indicative form of the verb is used to express near future time (Khalil 1999, 194):

(23) sa-yusaafir ḡadan  
 will-travel tomorrow

“He will travel tomorrow”

The marker *sa-* seems to have developed from the word *sawfa*, which is an independent marker of futurity. These forms co-exist in Classical Arabic, as the following examples from the Qurʾān indicate (translation as given by King Fahd Holy Qurʾān Printing Complex):

- (24) *kallaa sawfa taʿlamuun* (102:3)  
 “But nay, ye soon shall know”
- (25) *tumma kallaa sawfa taʿlamuun* (102:4)  
 “Again, ye soon shall know!”
- (26) *sa-yaṣṣlaa naaran daat lahab* (111:3)  
 “burnt soon will he be in a fire of blazing flame”

The fact that *sa-* is attached to the beginning of the imperfective verb stems indicates more or less clearly that it is derived from the word *sawfa*, which is often placed before imperfective verb forms.

It seems that in some instances *sawfa* + the imperfective verb form has undergone a phonetic process and a morphosyntactic process (de-categorization): the phonetic processes (i.e., syllabic erosion and junctural erosion) have reduced the word to *sa-*:

- (27) [syllabic erosion] > [junctural erosion]  
*sawfa* > *saw* > *sa-*

I claim that such a phonological reduction of the particle is caused by the frequent use of the sequence *sawfa* + V. The particle *sawfa* has a high token frequency: it occurs 107 times in Abduh’s (1979) list of the most common 3025 words. Similar examples occur in English: the sequence *going to* + V is reduced to *gonna* as a result of the repeated use of this sequence of words. Note also that the grammaticalized word has been decategorized as a dependent element which has to be attached to a verb stem. According to Bybee (2003, 6), one important characteristic of grammaticalization is “a dramatic frequency increase. This increase comes about as a result of an increase in the number and types of contexts in which the grammatical morpheme is appropriate”. If this prediction is viable, the form *sa-* should be more frequent than the particle *sawfa* from which it has developed. That this prediction holds can be seen in the study conducted by Al-Khawalda (2000), who has examined the token frequency of each of the future forms in Classical Arabic. He reports that

the number of occurrences of futurity in the Quran is 209 times. Out of the total

209, /sawfa yafʿalu/ (“he will do”) is used 42 times, which represents 20% of total occurrences. ... /sayafʿalu/ (“he will do”) accounts for 114 future expressions, the most frequent construction of the total: 54.5%. (71–72)

The development of the future prefix *sa-* has, however, not significantly impacted the status of *sawfa*: both *sawfa* and *sa-* coexist, but they are used in different contexts as has been previously pointed out. According to Croft (1990, 240), “if the forms are related to each other, then the more grammaticalized form is the newer form because it represents a later stage in the evolution of the same morpheme”. If this is the case, we can claim that *sa-*, which is more grammaticalized than its cognate *sawfa*, must be the newer form and is probably going to outlive the source form. That this is in progress is shown in Al-Khawalda’s study of futurity in the speech of the Jordanian Prime Minister (2000, 72). He states that the form with the prefix *sa-* occurs 67 times per 73 words, making a total of 91.7%, whereas the form *sawfa* occurs four times, or 5.5% of the total. The statistics show that in speech *sa-* is much more common and widespread than *sawfa*, which indicates that *sa-*, the newer form, is on its way to replacing and outliving the older form *sawfa*.

The claim that the course of grammaticalization is unidirectional (cf. Heine and Reh 1984, 74; Croft 1990, 230; Hopper and Traugott 1993, 95; Bybee 2003) is not viable in such a situation. Bybee (2003, 7) views unidirectionality as a situation in which

nouns and verbs lose their categorial status and become prepositions, auxiliaries and other grammatical forms. Free elements become more restricted and fuse with other elements. ... The reverse directions are rarely attested.

Similarly, Hopper and Traugott (1993, 95) define unidirectionality as follows:

The lexical items that become grammaticalized must first serve commonly needed discourse functions. They then become syntactically fixed (they become constructions), and may eventually amalgamate morphologically, say, as stems and affix.

SA provides a counterexample to such claims. It has just been noted that the future element *sawfa* has become *sa-*, which is attached to a verb stem. But the particle *sawfa* has also been lexicalized as a verb *sawwafa* “to postpone”. SA is not the only language with counterexamples to unidirectionality. English and Basque also provide some counterexamples. English has “counterexamples involving the lexicalization of grammatical items, as in *to up the ante*” (Hopper and Traugott 1993, 127). Similarly, the Basque bound morpheme *-tasun*, which is used in the

formation of nouns, as in *eder* “beautiful” and *edertasun* “beauty”, has been turned into an independent word *tasun* “quality” (Trask 1996, 147).

#### 4.2.2. The future Markers in Cairene Colloquial Arabic

Cairene Colloquial Arabic (CCA) generally expresses futurity by prefixing the particle *ħa-* to the imperfective verb stem as in *ħa-ktiblak ba<sup>c</sup>di yomeen talaata* “I will write to you in a few days’ time” (cf. Robertson 1970, 213, Mitchell 1956, 36; Gary and Gamal Eldin 1981, 93). We have just noted that while the Nubian future markers derive from a verb meaning “want” or “desire” (the volition path), the Standard/Classical marker *sa-* derives from the particle *sawfa*. Colloquial Cairene, however, does not seem to have followed either of these paths. There is little reason to doubt that this form derives from the verb *raah* “to go” (Robertson 1970, 213), which means that CCA has opted for the movement path:

- (28) The Movement Path  
Movement verb > intention > future

It seems that the scenario for the development of this form is as follows:

A. The verb *raah*, which refers to a movement towards a goal as in *raah il-beet*, comes to acquire the intention meaning when it is placed before a verb as in such constructions as *raah yibii<sup>c</sup> huduum* “he went to sell clothes” where the verb *raah* is followed by an imperfective verb form. Mitchell (1956, 36) points out that “the imperfect with **ħa-** often has the sense of intention to do something or being about to do it”. Since the intention meaning described in this construction is to be realized in the future, the future meaning is inferred and thus has come to be associated with such constructions. However, Gary and Gamal Eldin (1981, 93) state that this intention meaning is no longer present in sentences containing the prefix *ħa-*; intention is expressed in CCA with an adverbial:

- (29) *ħa-yiigi bukra <sup>3</sup>akiid*  
he fut-come tomorrow certainly  
“He will certainly come tomorrow”

Thus the verb *raah* has been desemanticized or bleached, part of its meaning being lost: it now has nothing to do with movement or intention (e.g., *ħa-ynaam badri* “he will sleep early”; it is associated only with future meaning. According to Bybee (2003, 7), “the mechanism behind bleaching is habituation: a stimulus loses its impact if it occurs very

frequently.” But it is inference that is responsible for the rise of the future meaning in such constructions: the hearer infers that the intention is to be realized in the future. The repetition of this inference creates in the mind of the hearer a relationship between such constructions and the future meaning.

B. The frequent use of this form in this particular construction (before an imperfective verb form) also triggers phonological processes, namely, syllabic erosion: the initial syllable is completely eroded such that the form evolves as follows: [*raah* > *ħa-*]. Thus the eroded form, which has lost its original category as a verb in a particular construction, has come to be decategorized as a prefix. The mechanism of change that is operative here is frequency.

Note that the verb *raah* remains intact (i.e., is not exposed to bleaching or phonological reduction) in other constructions: in constructions where it is not followed by an imperfective verb form as in *ʿil-walad raah il-beet* “the boy went home”.

#### *4.3. The similarities and differences in the development of future markers in the Nile Nubian and Arabic languages*

Both Arabic (the two varieties under discussion) and the Nile Nubian languages have future markers. Both have a future prefix or particle that is preposed to the verb stem. SA has two future markers: *sawfa* and *sa-*, the first of which is employed, according to the argument of some, when reference is made to remote future time, while the second is used to denote near future time. Note that no distinctions are made as to the degree of remoteness in Nubian and Cairene Colloquial Arabic (cf. Gary and Gamal Eldin 1981, 94). Moreover, Nubian future forms have developed out of full lexical items (i.e., verbs of volition). Like the Nubian future forms, the Cairene Colloquial form is shown to have developed from a lexical verb. The Nubian form has selected the volition Path, whereas the Cairene Colloquial form has opted for the movement path. In contrast, the SA form (*sa-*) is derived from the larger future particle (*sawfa*).

As for the grammaticalization processes, the future forms in Nile Nubian languages and CCA have undergone three processes: desemantization or bleaching, phonological reduction and decategorization. In contrast, the SA form *sa-* has undergone only two processes: phonological reduction and decategorization.

The Nile Nubian and Arabic languages, as discussed in this paper, share mechanisms of change that are operative in the development of future elements: habituation and inference. Repetition has deprived a

lexical item from parts of its meaning. Also, the lexical item is subject to phonological reduction. Inference, as an important mechanism of change, is quite apparent and instrumental in the development of future forms in CCA and the Nile Nubian languages: the future meaning is inferred by the hearer from constructions in which intention is indicated. In the development of SA future forms, only habituation is involved. As the particle *sawfa* is repeated in constructions where it is followed by the imperfective verb form, it is therefore exposed to phonological reduction: syllabic erosion and junctural erosion (*sawfa* > *sa-*).

To recapitulate, it has been noted that the lexical items that develop into future elements in these languages (Arabic and Nubian) end up being attached to a verb stem. This has been attested in Kenzi and Arabic. However, it should be noted that at an earlier stage, these items may be attached to an element other than a verb, as it has been attested in Dongolese and Mahas (section 4.1). The fact that a lexical element is grammaticalized does not mean it has to disappear from the scene. Rather, the source lexical items remain intact in other constructions: the lexical items coexist with the grammatical elements. This can be summed up as:

	SA	CCA	Dongolese/ Kenzi	Fadicca/ Mahas
Lexical word	<i>sawfa</i>	<i>raah</i>	<i>birig</i>	<i>firig</i>
Gram	<i>sa-</i>	<i>ha-</i>	<i>b(i)-</i>	<i>f(a)-</i>

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