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ADPOSICIONES

*Artículo*

The grammaticalization path

DEICTIC SPATIAL ADVERB > ADPOSITION

*La ruta de gramaticalización adverbio deíctico*

ESPACIAL > ADPOSICIÓN

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## Abstract

In addition to the grammaticalization of nouns and verbs into adpositions, which has been widely discussed in the grammaticalization literature, this paper identifies and describes a much less well known grammaticalization path, by which deictic spatial adverbs (i.e., words such as English *here* or *there*) are converted into adpositions. Based on data from two sub-Saharan languages (Tswana, Bantu, and Jóola Fóoñi, Atlantic), this study proposes that in this grammaticalization process, the source construction is the

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LOCATIVE APPOSITION CONSTRUCTION, defined as a construction consisting of the juxtaposition of two coreferential spatial expressions, a deictic spatial adverb and a spatial expression whose nucleus is a noun (as in English *here in the village* or *there on the table*). Also considering some other languages, such as Hooçak (Siouan), Baule (Kwa), Beng (Mande), and Classical Nahuatl, the study defends the idea that the initial stage of the grammaticalization path DEICTIC LOCATIVES > SPATIAL ADPOSITIONS is the routinization of the locative apposition construction, eventually leading to its reanalysis as an adpositional phrase in which the role of adposition is fulfilled by the former deictic spatial adverb.

**Keywords:** locative apposition construction, deictic locatives, spatial adpositions, routinization, grammaticalization path

## Resumen

Además de la gramaticalización de sustantivos y verbos en adposiciones, que ha sido ampliamente discutida en la literatura sobre gramaticalización, este trabajo identifica y describe una vía de gramaticalización mucho menos conocida, en la que los adverbios espaciales déicticos (es decir, palabras como *here* o *there* en inglés) se convierten en adposiciones. Basándose en datos de dos lenguas subsaharianas (el tswana, bantú y el jóola fóoñi, atlántico), se propone que en este proceso de gramaticalización, la construcción fuente es la CONSTRUCCIÓN DE APOSICIÓN LOCATIVA, definida como una construcción que consiste en la yuxtaposición de dos expresiones espaciales coreferenciales, un adverbio espacial déictico y una expresión espacial cuyo núcleo es un sustantivo (como en el inglés *here in the village* o *there on the table*). Considerando también algunas otras lenguas, como las lenguas hooçak (siouan), baule (kwa), beng (mande) y el náhuatl clásico, el estudio defiende la idea de que la etapa inicial de la ruta de gramaticalización LOCATIVOS DÉICTICOS > ADPOSICIONES ESPACIALES es la rutinización de la construcción de aposición locativa, que eventualmente conduce a su rea-

nálisis como frase adposicional en la que el papel de adposición lo cumple el antiguo adverbio espacial deíctico.

**Palabras clave:** construcción de aposición locativa, locativos deícticos, adposiciones espaciales, rutinización, ruta de gramaticalización

## 1. INTRODUCTION

The grammaticalization of nouns and verbs into adpositions has been widely discussed in the grammaticalization literature. This paper is about a much less well known grammaticalization path, by which deictic spatial adverbs (i.e., words such as English *here* or *there*) are converted into adpositions. In this grammaticalization process, the source construction is the LOCATIVE APPOSITION CONSTRUCTION, defined as a construction consisting of the juxtaposition of two coreferential spatial expressions, a deictic spatial adverb, and a spatial expression whose nucleus is a noun (as in English *here in the village* or *there on the table*).

In section 2, I discuss evidence for this grammaticalization path in Tswana (Bantu). In Tswana, three words that were originally deictic spatial adverbs, and still have the ability to act as deictic spatial adverbs (*fa* [fá] ‘here’, *ko* [kó] ‘there’, and *mo* [mó] ‘in this/that’), are also found in constructions in which they can be analyzed as emerging prepositions.<sup>1</sup> Moreover, *mo* [mó] also has non-spatial uses in which its behavior is that of a full-fledged preposition.

<sup>1</sup> *ko* [kó] has a variant *kwa* [kwá]. These two forms are entirely equivalent, and the choice is just a matter of dialectal or individual preference.

In section 3, I propose that this grammaticalization process is the consequence of the routinization of the locative apposition construction (*here in the village, there on the table*), i.e., the tendency toward extending its use to contexts where the precision added by the deictic spatial adverb has no communicative relevance.

In section 4, I show that Jóola Fóoñi (Atlantic) also has spatial prepositions showing evidence of resulting from the grammaticalization of deictic spatial adverbs in the locative apposition construction.

In section 5, I evoke the case of other languages showing an unusual frequency of constructions combining a deictic spatial adverb and a non-deictic locative expression referring to the same place, which constitutes the initial stage of the grammaticalization path DEICTIC LOCATIVES > SPATIAL ADPOSITIONS.

Section 6 summarizes the main conclusions.

## 2. PREPOSITION-LIKE USES OF DEICTIC SPATIAL ADVERBS IN TSWANA<sup>2</sup>

### *2.1. General remarks on locative marking in Sotho-Tswana varieties*

Tswana (aka Setswana) is a Bantu language belonging to the Sotho-Tswana dialect cluster. It is spoken by approximately 5 million speakers in Botswana and South Africa.

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<sup>2</sup> The data presented in this section were first discussed in Creissels (1997), and are also briefly mentioned in Creissels (2020).

A remarkable characteristic of Sotho-Tswana, shared by the other Southern Bantu languages, is the loss of the distinction between several locative genders,<sup>3</sup> and a system of locative marking that, contrary to the situation found in other groups of Bantu languages, does not interfere with gender agreement.<sup>4</sup>

Tswana, like the other Sotho-Tswana varieties, has a single locative gender including very few nouns (in Tswana, the only nouns belonging to the locative gender are *golo* [χòlò] and *felo* [fìlò], both meaning ‘place’), and two locative markers that convert noun phrases into locatives, i.e., expressions fulfilling the role of ground in spatial relationships.

As illustrated in (1), the locative markers attach to the first word of the noun phrase they convert into a locative. One of them (-*ng* [-ŋ]) is a suffix, the other (*go* [χó-]) is a prefix.<sup>5</sup>

- (1) a. *lokwalo*    *lole*            *lo*            *lotona*  
           lòkwálò    lólé            ló            lòtóná  
           book(11)    that(11)    LK(11)    big(11)  
           ‘that big book’

<sup>3</sup> In Bantu languages, the locative genders have the following two characteristics: they include a small number of nouns with spatial semantics (including hypernymous nouns glossable as ‘place’), and words that are basically adnominals expressing locative class agreement are also used as spatial adverbs.

<sup>4</sup> For a general overview of Bantu locatives, see Grégoire (1975). On the changes in the locative systems of Southern Bantu languages, see Marten (2010), Creissels (2011).

<sup>5</sup> Note that, in the standard orthography of Tswana (first line of the examples), many grammatical elements that meet all criteria to be analyzed as prefixes (in particular, in terms of tonal interaction with the stem to which they attach) are written as if they were separate words.

b. *lokwalong*      *lole*      *lo*      *lotona*  
 l̀òkwálo-ŋ      lólé      ló      l̀òtóná  
 book(11)-LOC    that(11)    LK(11)    big(11)  
 ‘on/in that big book’

c. *go lole*      *lo*      *lotona*  
 χó-lólé      ló      l̀òtóná  
 LOC-that(11)    LK(11)    big(11)  
 ‘on/in that big one’

The choice between the two locative markers is entirely determined by the grammatical nature of the first word of the noun phrase they attach to, without any semantic implication. If the first word of the noun phrase is a common noun, with a few exceptions, the suffix *-ng* [-ŋ] is selected. In all the other cases (including pronouns and proper names), the conversion of a noun phrase into a locative is marked by the prefix *go* [χó-].

Spatial adverbs, toponyms, and a few common nouns (including *golo* [χòlò] and *felo* [fílò] ‘place’) fulfill the role of ground in spatial relationships without taking locative marking – example (2).

(2) *Ke ba bonye*      *Gaborone*      *maabane*.  
 k̀ìbábónì      χàbóronì      mààbà:nì.  
 I.saw.them(2)    Gaborone      yesterday  
 ‘I saw them in Gaborone yesterday.’

Locative marking does not occur in complex locatives either. Complex locatives are head-modifiers constructions in which the noun phrase in the role of ground modifies a word that can also be used by itself as a non-deictic spatial adverb, such as *morago* [mòràχò] ‘behind’ or *godimo* [χòdí mó] ‘up’. The adverbs in question are former locative gender nouns that have lost the ability to act as the nucleus of noun phrases, and this explains why, in complex locatives, the noun phrase in ground role is flagged by the same genitival linker as nouns in the role of adnominal possessor, and the genitive linker in complex locatives expresses locative gender agreement (or ‘class 17 agreement’ according to the terminology traditionally used in Bantu studies) – example (3).

- (3) a. *lobota*      *lwa ntlo*  
       lòbòtà      lwá-ńtló  
       wall(11)      GEN(11)-house(9)  
       ‘the wall of the house’
- b. *morago*      *ga ntlo*  
       mòràχò      χá-ńtló  
       behind      GEN(17)-house(9)  
       ‘behind the house’

As illustrated in (4), locative marking is not sensitive to the distinction between static location, source of motion, and destination of motion. With motion verbs, the assignment of the role of source of motion or destination of motion to locatives is a lexical property of verbs.

- (4) a. *O ile nokeng.*  
 óilé                      nòkê:-ŋ̀  
 (s)he(1).has.gone    river(9)-LOC  
 ‘(S)he has gone to the river.’
- b. *Ba tswa nokeng.*  
 bátswá                      nòkê:-ŋ̀  
 they(2).come.from    river(9)-LOC  
 ‘They come from the river.’
- c. *Re tlaa šapa nokeng.*  
 rítlǎǎšǎpá                      nòkê:-ŋ̀  
 we.shall.swim        river(9)-LOC  
 ‘We shall swim in the river.’

However, applicative derivation can modify the role assigned to locatives by motion verbs. For example, a locative complement of *huduga* [húdúχá] ‘change residence’ (5a) can only be interpreted as referring to the source, whereas with the applicative derivate *hudugela* [húdúχélà], destination is the only possible interpretation.

- (5) a. *Ba tlaa huduga Kanye*  
 bátlǎǎhúdúχá                      kǎ:ŋ̀é  
 they(2).will.change.residence    Kanye  
 ‘They will move from Kanye.’



b. *Ba tlaa hudugela Kanye.*

bátláàhúdúχélà	kà:ǰé
they(2).will.change.residence.APPL	Kanye
‘They will move to Kanye.’	

## 2.2. *The locative prepositions of Tswana*

One of the properties that distinguish Tswana from the other Sotho-Tswana varieties is that, in Tswana, in addition to the locative markers mentioned in §2.1, locatives are usually also flagged by one of the three prepositions *fa* [fá], *ko* [kó], or *mo* [mó]. As illustrated in (6), this equally concerns locatives marked by the suffix *-ng* [-ŋ], as in (6a), locatives marked by the prefix *go* [χó-], as in (6b), unmarked locatives (i.e., noun phrases having the ability to fulfill the role of ground in spatial relationships without locative marking), as in (6c), and complex locatives, as in (6d).

(6) a. *Ke ile (ko) motseng.*

kìilé	(kó)	mòtsí-ŋ̀
I.went	LOC	village(3)-LOC
‘I went to the village.’		

b. *Ke ile (ko) go rre.*

kìilé	(kó)	χó-r`ré
I.went	LOC	LOC-my.father(1)
‘I went to my father’s.’		

c. *Ke ile (ko) Gaborone.*

kìlè (kó) χàbùrô:nì  
 I.went LOC Gaborone  
 ‘I went to Gaborone.’

d. *Lenong le tshela (ko) godimo ga dithaba.*

lìnòṅ lĩts<sup>h</sup>ilà (kó) χò dímhà:bà  
 vulture(5) it(5).lives LOC up GEN(17)-mountains(10)  
 ‘Vultures live on the top of mountains.’

As a rule, the locative prepositions are optional, but in spontaneous discourse, locatives preceded by prepositions are much more frequent than prepositionless locatives.<sup>6</sup> To take just an example, of the 49 locative expressions found in the first two pages of the entry *tshimo* (‘field’) of the Tswana-English Glosbe Online Dictionary,<sup>7</sup> 42 are introduced by one of the three locative prepositions, whereas only 7 are prepositionless.

It is also symptomatic that, in elicitation sessions, consultants tend to use the locative prepositions systematically, but if asked about their obligatoriness / optionality, they almost always answer that the construction is still grammatical if the preposition is deleted.

Contrary to the locative markers, which are in complementary distribution and give no precision about the nature of the spatial

<sup>6</sup> Cole (1955: 340-358) mentions a few cases where the preposition is obligatory, and also some others where the preposition is rarely used.

<sup>7</sup> <https://www.google.com/search?client=firefox-b-d&q=tswana+english+tlhola>, accessed February 10, 2023.

relationships, the locative prepositions are sensitive to some semantic distinctions. Cole (1955: 341) describes their meaning as follows:

- *ko* [kó] “implies relative remoteness, and therefore indicates that the specified locality *at, to* or *from* which the action is effected or directed is relatively distant”;
- *fa* [fá] “implies relative proximity, and therefore indicates that the specified locality *at, to* or *from* which the action is effected or directed is relatively nearby”;
- *mo* [mó] “indicates that the action is effected *in, on* or *round*, or directed *into* or *out of*, the specified locality, without reference to the distance involved”.

### *2.3. The locative prepositions of Tswana as reflexes of the Proto-Bantu demonstratives of locative genders*

Demuth & Mmusi (1997) erroneously analyzed the locative prepositions of Tswana as noun prefixes that, according to their analysis, would be the reflexes of the Proto-Bantu prefixes of nouns belonging to one of the reconstructed locative genders 16, 17, and 18. As discussed in detail in Creissels (2011), this analysis must be rejected, both from the point of view of the synchronic status of *fa* [fá], *ko* [kó] and *mo* [mó], and from the point of view of their etymology:

- synchronically, *fa* [fá], *ko* [kó] and *mo* [mó] do not have the tonal behavior of prefixes, but of words; for example the downstep in *ko go bontšhe* [kó 'χó bójtʰé] 'on the ostriches' should not occur if *ko* [kó] were a prefix (Creissels 2011: 40);
- historically, as already acknowledged by Cole (1955: 341), *fa* [fá], *ko* [kó] and *mo* [mó] can only be the reflexes of the Proto-Bantu demonstratives of locative genders.

In present-day Tswana, *fa* [fá], *ko* [kó] and *mo* [mó] are still used as demonstrative determiners with the two nouns that constitute the sole locative gender of Tswana. In this use, they all behave synchronically as belonging to sole locative gender of Tswana, but carry the same semantic implications as when they act as prepositions: (7a) implies distant location, (7b) implies nearby location, and (7c) implies reference to interiority. In (7a-b-c), the subject phrase is invariably resumed in the verb form by the subject index of the sole locative gender of Tswana *go* [χó-], regardless of the choice of the demonstrative.

(7) a. *Golo ko ga go a siama.*

χòlò	kó	χàχó àsíâ:mà
place(17)	DEM(17)	it(17).is.not.good
‘That place is not good.’		

b. *Golo fa ga go a siama.*

χòlò            fá                    χàχó àsíâ:mà  
 place(17)    DEM(17)            it(17).is.not.good  
 ‘That place is not good.’

c. *Golo mo ga go a siama.*

χòlò            mó                    χàχó àsíâ^:mà  
 place(17)    DEM(17)            it(17).is.not.good  
 ‘That place is not good.’

In Bantu languages, the demonstratives of locative genders are also used as deictic spatial adverbs, *i.e.*, as the equivalents of English *here* and *there*. Consequently, it comes as no surprise that in Tswana, *fa* [fá], *ko* [kó] and *mo* [mó] are also found in contexts such as those illustrated in (8), in which they can only be analyzed as deictic spatial adverbs that can be glossed ‘here’, ‘there’ and ‘in this/that’, respectively.

(8) a. *Ba tswa ko.*

bá-tswà:                                    kó  
 they(2).are.coming.from    there  
 ‘They are coming from there.’

b. *Ba tla fa.*

bá-tlà:                                    fá  
 they(2).are.coming            here  
 ‘They are coming here.’

- c. *Peba e tsenye mo.*  
 pèbà            itsèni:            mó  
 mouse(9)    it(9).entered    in.this/that  
 ‘The mouse entered there.’

The possibility of using *fa* [fá], *ko* [kó] and *mo* [mó] as locative deictic adverbs raises the question of whether the constructions in which they act as prepositions (as in example (6) above) should not be rather analyzed as constructions in which a deictic spatial adverb is in apposition to a non-deictic locative (‘there in the village’, ‘there at my father’s’, ‘there in Gaborone’, ‘there on the top of the mountains’). The reason for rejecting this analysis is that, as illustrated in (9), *fa* [fá], *ko* [kó] and *mo* [mó] as deictic spatial adverbs can be used in apposition to locatives, but then, they are postposed, and their presence has no incidence on the optional use of the corresponding preposition. Semantically, the difference between (9a) and (9b) is that (9b) insists on the communicative relevance of the deictic meaning carried by *ko* [kó] as an adverb.

- (9) a. (*ko*) *motseng*  
 (kó)    mòtsi-ŋ̀  
 LOC    village(3)-LOC  
 ‘in the village’

- b. *(ko) motseng ko*  
 (kó) m̀òtsí-ŋ kó  
 LOC village(3)-LOC there  
 ‘in the village there’

Moreover, the loss of the original deictic semantics of the locative prepositions is evidenced both by bilingual texts and the reaction of consultants in elicitation. In bilingual texts such as the Tswana-English Glosbe Online Dictionary, in the majority of cases, the English equivalents of Tswana sentences including locative expressions introduced by prepositions are devoid of any indication of spatial deixis. Similarly, in elicitation sessions, consultants tend to systematically use the locative prepositions, even when asked to give the Tswana equivalents of English sentences including no indication of spatial deixis.

To conclude, historical and synchronic data converge in supporting the conclusion that Tswana has spatial prepositions resulting from the grammaticalization of words that originally were demonstratives of locative genders also used as deictic spatial adverbs.

#### 2.4. *The particular case of the preposition mo [mó]*

Given the optionality of the spatial prepositions of Tswana as described in §2.2., it may be argued that they should be characterized as emerging prepositions, rather than full-fledged prepositions. In this perspective, it is interesting to mention that a property distinguishing the preposition *mo* [mó] from the other two spatial prepositions is that it also has

non-spatial uses in which it is obligatory, and consequently behaves as a full-fledged preposition assigning locative marking to its complement. For example, in (10), *mo legodung* [mó líχòdù-ŋ] does not answer the question *kae* [kái] ‘where?’, but rather *mo go mang* [mó ‘χó-mánj] ‘from whom?’, and in this construction, the preposition is obligatory.

(10) *Ga ke reke dikgomo mo legodung.*

χàkírékí	díq <sup>h</sup> òmó	!mó	líχòdù-ŋ
I.don't.buy	cows(10)	LOC	thief(5)-LOC

‘I don’t buy cows from a thief.’

This is also the case when *mo* [mó] is used to flag a noun phrase in the role of standard of comparison, as in (11).

(11) *Pitse e tona mo tonking.*

pìtsí	!itóná	!mó	!tónkî:-ŋ
horse(9)	it(9).is.big	LOC	donkey(9)-LOC

‘Horses are bigger than donkeys.’

Interestingly, in this use, *mo* [mó] requires locative marking even for the nouns (for example, toponyms) that have the ability of fulfilling the role of ground in spatial relationships without overt locative marking. For example, the addition of a locative affix to the toponym *Kanye* in (12a) would result in ungrammaticality, whereas in (12b), the locative prefix is obligatory.



(12) a. *Kitso o agile (ko) Kanye.*

kítsó      'ʊ́áχílè      (kó)      kà:ɲé.  
 Kitso      he(1).has.built      LOC      Kanye  
 'Kitso has built a house in Kanye.'

b. *Gaborone o motona mo go Kanye.*

χàbʊ́rónì      ʊ́mòtóná      'mó      χʊ́-kà:ɲé.  
 Gaborone      it(1).is.big      LOC      LOC-Kanye  
 'Gaborone is bigger than Kanye.'

This observation confirms that, in its non-spatial uses, *mo* [mó] has gone a step further in the grammaticalization process.

### 3. ANALYSIS: THE GRAMMATICALIZATION PROCESS

As observed by Hopper & Traugott (1993: 201), a crucial aspect of grammaticalization is the process of routinization of language, by which “a form or a combination of forms occurs in discourse with increasing frequency, and from being an “unusual” way of making or reinforcing a discourse point comes to be the “usual” and unremarkable way to do so”.

The literature on grammaticalization abounds in examples of grammaticalization processes whose starting point is an increasingly frequent use of a given construction, which implies an increasing tendency to extend the use of the construction in question to contexts in which it has

little communicative relevance. This routinization of the use of a construction initially motivated by the desire to express a precise semantic or pragmatic value, results in a weakening of the semantic or pragmatic value carried by the construction, which paves the way for further evolutions.

The reasons why a process of routinization affects a particular construction at a particular point in the evolution of a given language are poorly understood. I have nothing to propose about the reasons why the grammaticalization process I hypothesize for Tswana did not occur in the other Sotho-Tswana languages. However, this does not alter the fact that the importance of routinization processes in language evolution is hardly debatable.

In the present case, the lack of historical documentation precludes an analysis whose details could be supported by empirical data. It is, however, reasonable to hypothesize that the acquisition of the status of preposition by words that were initially demonstratives of locative genders also used as deictic spatial adverbs results from the routinization of a source construction I propose to designate as **LOCATIVE APPOSITION CONSTRUCTION**, in which two locative expressions referring to the same place are juxtaposed to each other: a locative expression whose nucleus is a noun and a deictic spatial adverb (*here in the house, there at the river*).

The locative apposition construction is certainly available in a great number of languages. The reason why it is rarely mentioned in descriptive grammars is that, in its literal interpretation, it cannot be expected to be very frequent in discourse, since it normally implies that, for reasons of emphasis, the speaker decides to express the description of a

place and a deictic specification or the same place separately (*here in the house*), rather than by inserting a demonstrative modifier (*in this house*).

With this background, it is reasonable to assume that the initial stage in the grammaticalization process that resulted in the situation described in §2 was the routinization of the locative apposition construction, i.e., the extension of its use to contexts in which there is no need to insist on the precision added by the deictic spatial adverb. The generalization of this use of deictic spatial adverbs results in that deictic spatial adverbs accompanying non-deictic locative expressions tend to lose their marked deictic value and to act as prepositions whose presence is required regardless of questions of communicative relevance. In other words, the locative apposition construction tends to be reanalyzed as a prepositional phrase with the former deictic spatial adverb in the role of preposition. However, in Tswana, of the three deictic spatial adverbs engaged in this evolution, *mo* [mó] is the only one for which the process has been completed, at least in its non-spatial uses. For the time being, the other two spatial prepositions, as well as *mo* [mó] in its locative uses, can only be characterized as emergent prepositions.

#### 4. PREPOSITIONS ORIGINATING FROM DEICTIC SPATIAL ADVERBS IN JÓOLA FÓOÑI (ATLANTIC)

Jóola Fóoñi, an Atlantic language spoken in South Western Senegal by approximately half a million speakers, is another language showing compelling evidence that the routinization of the locative apposition

construction may result in the grammaticalization of deictic spatial adverbs into full-fledged adpositions. The details are slightly different, since in Jóola Fóoñi, the conversion of deictic spatial adverbs into prepositions was accompanied by a reduction of their form, and by the deletion of the preposition that flagged the non-deictic locative expression in the source construction.

Jóola Fóoñi has a multifunction preposition *di* which, in addition to being used as a comitative preposition, is widely used as a spatial preposition. In its spatial use, illustrated in (13), *di* implies no further specification of the relationship between the figure and the ground.

- (13) a. *kupupur di esukey.*  
 they.went.out.from LOC the.village  
 ‘They left the village.’
- b. *nirembenremben katɔjak di kəkubeerək.*  
 I.put the.leaf LOC the.cover  
 ‘I put the leaf on the cover.’
- c. *najajaw di ɛmoori.*  
 (s)he.went LOC soothsayer  
 ‘(S)he went to a soothsayer.’
- d. *nitɔkɔtɔk di ɛlɔpɛy.*  
 I.found.him/her LOC the.house  
 ‘I found him/her at home.’

In the corpus of naturalistic texts analyzed by Alain Christian Bassène and myself for the purposes of our project of writing a reference grammar of Jóola Fóoñi, three other spatial prepositions occur with a very high frequency in contexts in which *dɪ* could equally be used: *baa*, *taa*, and *dɛv*.<sup>8</sup> The first two specify the location as relatively vague (*baa*) or relatively precise (*taa*), whereas *dɛv* can be glossed as ‘in’.

- (14) a. *nɪtɔkɔtɔk*      *baa*    *butab*.  
 I.found.him/her    LOC    the.rice.field  
 ‘I found him/her at the rice-field.’
- b. *eyeny*      *ɛñɔñɔb*                      *taa*      *fulimetɛf*.  
 the.dog    it.crouched.down    LOC      the.door  
 ‘The dog crouched down at the door.’
- c. *kɔrembenremben*    *ɛmaanaay*    *dɛv*      *buntunɛb*.  
 they.put                      the.rice      LOC      the.granary  
 ‘They put the rice in the granary.’

*Dɪ* and *baa* / *taa* / *dɛv* are largely interchangeable, with, however, an interesting difference in their distribution: toponyms can occur in the role of ground either unmarked or combined with *baa* / *taa* / *dɛv*, but not in combination with *dɪ*. Another interesting observation is that our corpus includes a few occurrences of *baa* / *taa* / *dɛv* followed by *dɪ*.

<sup>8</sup> This corpus consists of more than 12 hours of recorded naturalistic texts of various genres: traditional stories, historical narratives, interviews, discussions on social topics, and procedural texts.

Given the high frequency of *baa* / *taa* / *dæv* in our corpus, it is remarkable that none of the available descriptions of Jóola Fóoñi (Weiss 1939, Sapir 1965, Hopkins 1995) acknowledges their existence. They are not mentioned in Sapir *et al.* (1993) dictionary either. However, the fact that Sapir (1965) explicitly mentions the existence of the locative apposition construction suggests that this construction, which is quite rare in our own corpus, prominently featured in the data he analyzed.

The deictic spatial adverbs of Jóola Fóoñi are given in Table 1. Their first syllable coincides with the three prepositions illustrated in (14), and they express the same distinction between vague location, precise location, and interiority.

**Table 1. The deictic spatial adverbs of Jóola Fóoñi**

	PROXIMAL	UNSPECIFIED FOR DISTANCE	DISTAL
vague location	<i>baabe</i>	<i>baabσ</i>	<i>baaba</i>
precise location	<i>taate</i>	<i>taatσ</i>	<i>taata</i>
interiority	<i>dævre</i>	<i>dævru</i>	<i>dævre</i>

The examples of the locative apposition construction given by Sapir (1965) and Sapir *et al.* (1993) are quoted in (15). Although Sapir does not comment on this point, it is interesting to observe that the preposition *di*, which would have been obligatory in the absence of the deictic spatial adverb, becomes optional in the locative apposition construction (15f), which paves the way to the reanalysis of the deictic spatial adverb as a preposition.

- (15) a. *baabe di esukey*  
 here LOC the.village  
 ‘here in the village’
- b. *taata di fankaf*  
 there LOC the.courtyard  
 ‘there on the courtyard’
- c. *baaba di falaf*  
 there LOC the.river  
 ‘there by the river’
- d. *dæɾɾɾ di kalimbisak*  
 there LOC the.room  
 ‘there in the room’
- e. *baabɔ Dakaar*  
 there Dakar  
 ‘in Dakar’
- f. *baabe elɔɔpey*  
 here the.house  
 ‘here at the house’

This suggests that the spatial prepositions occurring with a high frequency in our corpus result from the reduction and reanalysis of

the locative apposition construction. At some point in the evolution of the locative apposition construction, the deictic spatial adverb lost its second syllable (and consequently, the indication it provided about deixis), and the preposition *di* became optional, so that what was initially the reduced form of a deictic spatial adverb in the locative apposition construction was eventually reanalyzed as a preposition:

**Table 2. Evolution of the locative apposition**

ADVERB	PREP							PREP	
<i>baabe/ɔ/a</i>	<i>di</i>	NP	>	<i>baa(bɛ/ɔ/a)</i>	( <i>di</i> )	NP	>	<i>baa</i>	NP
<i>taate/ɔ/a</i>	<i>di</i>	NP	>	<i>taa(tɛ/ɔ/a)</i>	( <i>di</i> )	NP	>	<i>taa</i>	NP
<i>dɛɛre/u/ɐ</i>	<i>di</i>	NP	>	<i>dɛɛ(re/u/ɐ)</i>	( <i>di</i> )	NP	>	<i>dɛɛ</i>	NP

## 5. OTHER LANGUAGES SHOWING EVIDENCE OF THE GRAMMATICALIZATION PATH DEICTIC SPATIAL ADVERB > ADPOSITION

### 5.1. 'Eeja 'there' as an incipient postposition in Hooc̣ak

In his account of grammaticalization in Hooc̣ak (Siouan), Helmbrecht (2020: 920-921) describes a construction in which the deictic spatial adverb 'eeja 'there' can be viewed as an "incipient postposition". Contrary to the neighboring Siouan languages, Hooc̣ak does not have postpositions. As illustrated in (16), spatial expressions can be formed by combining the noun in the role of ground (here *xee* 'hill') with a



relational noun specifying the kind of spatial relation that holds between the figure and the ground (here *hihak* ‘top’), plus *’eeja* ‘there’, as in (16).

- (16) *xee*    *hihak*    *’eeja*  
       hill    top        there  
       ‘on top of a hill’

The Hooc̣ak locative constructions with a relational noun “obligatorily require a general locative marker *’eeja* ‘there’, which is on the way to become a postposition. This rule applies also for toponyms. *’Eeja* ‘there’ is originally a local adverb which contrasts deictically with *’eegi* ‘here’ and is still frequently used adverbially. The deictic contrast disappears in constructions like the one in (16)” (Helmbrecht 2020: 921).

## 5.2. Languages with an unusual frequency of the locative apposition construction

An unusual frequency of the locative apposition construction in discourse is mentioned in descriptions of the following languages: Baule (Kwa), Beng (Mande),<sup>9</sup> and Classical Nahuatl.

Example (17), from Creissels & Kouadio’s (1977: 364-365) grammar, illustrates the tendency toward routinization of the locative apposition construction in Baule.

<sup>9</sup> Baule and Beng are spoken in the same area (the central part of Ivory Coast), but belong to two distinct language families.

- (17) a.  $\dot{\text{s}}$     *fɪn*    *Ábijân*    (*l\dot{\text{s}}*).  
           (s)he comes Abidjan (there)  
           ‘(S)he is coming from Abidjan.’
- b.  $\dot{\text{s}}$     *bòlì*    *í*            *kòfí*    *í*    *nyrún*    (*l\dot{\text{s}}*).  
           (s)he hit him/her Kofi his face (here)  
           ‘(S)he hit him/her in the presence of Kofi.’

As regards Beng, Paperno (2014: 55) observes that “A locative phrase consists of either a locative noun, which may or may not have syntactic dependents on the left, or a noun phrase with a locative postposition. On top of that, LOCATIVE PHRASES ALSO USUALLY HAVE A DEICTIC MARKER ON THE RIGHT EDGE” (emphasis mine). Example (18) is from Paperno (2014: 56).

- (18)  $\acute{\text{O}}$             *d\acute{\text{o}}*    *l\acute{\text{ó}}*            *w\acute{\text{o}}*    *w\bar{e}*.  
           (s)he.CPL stop market in there  
           ‘(S)he stopped at the market.’

Similarly, Launey (1981: 55-56) emphasizes the frequency of the locative apposition construction in Classical Nahuatl. In this construction, non-deictic locatives are accompanied by *nican̄* ‘here’ or *om̄pa* ‘there’.

The routinization of the locative apposition construction observed in such languages is precisely the situation which, according to the analysis put forward in §3, creates the conditions for a possible reanalysis of deictic spatial adverbs as adpositions.

## 6. CONCLUSION

In this paper, I have analyzed data from two sub-Saharan languages (Tswana and Jóola Fóoñi) that support the hypothesis according to which, in addition to the grammaticalization scenarios already discussed in the general literature on grammaticalization, the creation of adpositions may also result from a scenario whose initial stage is the routinization of the locative apposition construction, eventually leading to its reanalysis as an adpositional phrase in which the role of adposition is fulfilled by the former deictic spatial adverb. In §5, after mentioning Hoocąk (Siouan) as another language in which the possibility of this grammaticalization path has been recognized, I have shown that a situation that could constitute the initial stage in the grammaticalization process converting deictic spatial adverbs into postpositions can be observed in some other languages.

## ABBREVIATIONS

The following abbreviations are used in the glosses of the examples:

**APPL:** applicative

**GEN:** genitive,

**CPL:** completive

**LK:** linker,

**DEM:** demonstrative,

**LOC:** locative.

Numbers between parentheses in the glosses of the Tswana examples refer to classes (*i.e.*, gender-number agreement patterns).

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