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THE ABSENCE OF THE LINKER IN DOUBLE OBJECT CONSTRUCTIONS IN N|UU[1]

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The linker in N|uu appears before various types of nominal expressions, but not before the second object in a double object construction. Linkers in Khoisan languages such as ǂHoan and Ju|'hoansi do appear in this position. I will show that this property of the linker in N|uu is related to the fact that N|uu has a dative Case marker *-a* which appears after the first object of a DOC, whereas ǂHoan and Ju|'hoansi do not.

1. Introduction[2]

The linker in N|uu, a southern Khoisan language of the !Ui branch, appears before various different types of nominal expressions, such as the locative in (1a) and the direct object of a causativized verb in (1b), but not before the second object in a double object construction, as show in (2a,b) (Decl stands for declarative, and Lk stands for linker).

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[2] I have recorded every sentence in this paper spoken by at least two speakers and in many cases by all five. In total, there are around 10 remaining speakers of N|uu in SA, and perhaps a few others in southern Botswana.

(1) a. ku -a si ɦoo ku aŋki ŋ g!ari
3sg Decl Fut find 3sg father Lk Upington
'He will find his father in Upington'

b. n -a kx'u |q'õa-a ku ŋ ǂqhee
1sg Decl make hunt-Asp[3] 3sg Lk duiker
'I made him hunt a duiker'

(2) a. Griet ke si ʔãa ku-a doŋki-si
Griet Decl Fut give 3sg-Dat donkey-Sg
'Griet will give him the donkey'

b. ku -a si kaɟama ŋ|angusi-a ʘoe
3sg Decl Fut show N|angusi-Dat meat
'He will show N|angusi the meat'

The fact that the linker does not appear before the second object of a DOC is surprising because linkers in other Khoisan languages such as ǂHoan and Ju|'hoansi do appear in this position. I will show that this difference in the syntax of the linker is related to the fact that N|uu has a dative Case marker *-a* which appears after the first object of a DOC, whereas ǂHoan and Ju|'hoansi do not.

In section 2, I will discuss structures of the form [V Lk X], where the linker appears between the verb and one post-verbal constituent. In section 3, I will discuss how-constructions, which also involve a linker. In section 4, I will propose that the linker is a Case checking head. In section 5, I will discuss structures of the form [V DP Lk X] where the linker appears between two post-verbal constituents. In section 6, I will discuss causatives. In section 7, I will explain the absence of the linker in DOCs. In section 8, I will give a table summarizing the properties of the linker and how they vary amongst the Khoisan languages.

All the data in this paper are from N|uu unless otherwise indicated. All the data from ǂHoan are from Collins (2003). All the data from Ju|'hoansi are from Collins (2003) and Dickens (1992). The N|uu sentences are written in the IPA alphabet.

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[3] I gloss the final *-a* (low tone) that appears on verbs as Asp. It is used in the present tense with a subset of stative verbs (e.g., want, know). On non-stative verbs it indicates past tense. We have not yet systematically investigated the past imperfective (progressive, habitual) nor the past tense of stative verbs.

2. V Lk X

In this section I will discuss some cases where the linker appears between the verb and a post-verbal constituent. Consider first the case where a locative expression follows an intransitive verb. An intransitive verb is a verb without a direct object. In this case, a linker must precede the locative.[4]

(3) a. ŋ !ũu ke xa |ʔaa ŋ g!ari
1sg grandfather Decl Past die Lk Upington
'My grandfather died in Upington'

b. |ãʔn-si ke ||ʔŋ-a ŋ !oo
snake-Sg Decl go.out-Asp Lk hole
'The snake went out of the hole'

c. ku -a |qhõˀ ŋ ku ŋ||ŋ ||ãʔẽ
3sg Decl dance Lk 3sg house in
'He is dancing in his house'

d. ku -a ǂqheke ŋ ku ŋ||ŋ ||ãʔẽ
3sg Decl sing Lk 3sg house in
'He is singing in his house'

Similar sentences involving a locative following an intransitive verb can be found in ǂHoan and Ju|'hoansi. Consider the following data from Collins (2003) (Trans stands for transitivity suffix).

(4) tsi a-kyxai ki !oa na (ǂHoan)
3pl Prog-dance Lk house in
'They are dancing in the house'

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[4] Note that I am not claiming that the verbs in (3) are always intransitive. For example, the verb 'dance' can be used transitively, and therefore the verb 'dance' has a transitive and an intransitive use.

ku-a si |qhõˀ !ʔui
3sg-Decl Fut dance !ʔui
'He will dance !ʔui'

(5) Lena koh djxani-a tju n!ang (Ju|'hoansi)
Lena Past dance-Trans house in
'Lena danced in the house'

In (4), *ki* is the linker in ǂHoan, and it appears preceding the locative. In (5), the transitivity suffix in Ju|'hoansi must be used on the verb preceding the locative. In Collins (2003), I analyze the transitivity suffix in Ju|'hoansi as a form of the linker (the other form being *ko*). Therefore, in both ǂHoan and Ju|'hoansi a linker must appear before a locative that follows an intransitive verb.

The following examples show that the linker also precedes various kinds of non-locative expressions. These examples show that the linker does not have a specific locative meaning (such as 'in' or 'at'). Furthermore, example (6a) shows that *!haeka* 'tomorrow' must be a DP, since the linker only appears before DPs (see section 3).

(6) a. ku -a si |qhõˀ ŋ !haeka
3sg Decl Fut dance Lk tomorrow
'He will dance tomorrow'

b. g|a ǂao-a a ǂhoa ŋ ku mari (!ʔama)
2sg want-Asp 2sg talk Lk 3sg money about
'Do you want to talk about his money?'

Temporal expressions, as opposed to locatives, can also appear in a preverbal position, in which case they are not preceded by a linker.[5]

(7) a. ku -a si !haeka |qhõˀ
3sg Decl Fut tomorrow dance
'He will dance tomorrow'

[5] Westphal p. 46 has other examples of preverbal temporal adverbs with no accompanying linker (see Güldemann's 2004a publication of Westphal's manuscript). In terms of the analysis presented in section 3, preverbal temporal adverbs have no Case feature, and post-verbal temporal adverbs have a Case feature (checked by the linker). I do not have independent evidence for this analysis of temporal adverbs.

b. *ku -a si g!ari |qhõˀ
3sg Decl Fut Upington dance
'He will dance in Upington'

A linker does not appear between a transitive verb and its direct object.

(8) a. n -a ǂhãu-a !qhaa
1sg Decl pour-Asp water
'I poured water'

b. n -a si ||ʔau -|ʔe ||aβa
1sg Decl Fut bury -put.in bone
'I will bury the bone'

c. ku -a si ||x'oo ʘoo-ke
3sg Decl Fut chop wood-pl
'He will chop wood'

d. ku -a si ɦoo ku aŋki
3sg Decl Fut find 3sg father
'He will find his father'

e. kunisi ke si ǂam !ao
wagon Decl Fut hit rock
'The wagon will hit the rock'

Inserting a linker between a transitive verb and its direct object results in ungrammaticality.

(9) ku -a si ɦoo (*ŋ) ku aŋki
3sg Decl Fut find Lk 3sg father
'He will find his father'

A similar constraint holds for ǂHoan and Ju|'hoansi (recall, I am assuming that the transitivity suffix *-a* in Ju|'hoansi is a form of the linker, as discussed in Collins 2003). The following sentences are from Collins (2003).

(10) *koloi g||on-a ki Jefo (ǂHoan)
car hit-Perf Lk Jeff

(11) *uto dchuun-a |Kaece (Ju|'hoansi)
car hit-Trans |Kaece

There are some verbs that take a locative complement without a linker.

(12) a. ku -a si ||ʔae g!ari
3sg Decl Fut go Upington
'He will go to Upington'

b. ŋǂhau ke |ʔee !oo
dungbeetle Decl enter hole
'The dungbeetle is entering the hole'

c. ku -a ŋ||a a ŋ||ŋ ||ãʔẽ
3sg Decl be.loc 2sg house in
'He is in your house'

d. caˤbakusi ke ŋ||a g!ari
caˤbakusi Decl be.loc g!ari
'Cabakusi is in Upington'

In the above example (12c), *ŋ||a* is the form of the verb 'be' that is used to express location. The simplest interpretation of these verbs is that they are transitive taking a locative direct object, just as 'enter' in English can be transitive ('John entered the room'). In terms of Case theory (see section 3), I assume that the verb checks the Case feature of its locative complement in these examples.

When a locative is extracted, the linker cannot be followed by a gap, instead the linker must be replaced by *ŋ||ã* 'be.loc'[6] (Q stands for question, Rel stands for relative complementizer).

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[6] ǂHoan and Ju|'hoansi do not have this strategy for avoiding a linker followed by a gap. I have also found *ŋ||ã* 'be.loc' used in when-questions, and in the following question.

cui !ʔama a ǂao-a a ǂhoa ŋ||ã
what about 2sg want-Asp 2sg talk be.loc
'What do you want to talk about?'

(13) a. kiɟa xe ku !ũu xŋ |ʔaa ŋ||ã
where Q 3sg grandfather Past die be.loc
'Where did his grandfather die?'

b. !hoe he ku !ũu xŋ |ʔaa ŋ||ã
place Rel 3sg grandfather Past die be.loc
'the place where his grandfather died'

(14) a. kiɟa xe ku |qhõˀ ŋ||ã
where Q 3sg dance be.loc
'Where is he dancing?'

b. !hoe he ku |qhõˀ ŋ||ã
place Rel 3sg dance be.loc
'the place where he is dancing'

In these cases, it is impossible to strand the linker at the end of the sentence.

(15) a. kiɟa xe ku !ũu xŋ |ʔaa ŋ||ã (*ŋ)
where Q 3sg grandfather Past die be.loc Lk

b. kiɟa xe ku |qhõˀ ŋ||ã (*ŋ)
where Q 3sg dance be.loc Lk

With verbs like 'go' (see (12)), which do not take a linker, *ŋ||ã* 'be.loc' is not used when the complement is extracted.

(16) a. ku -a si ||ʔae g!ari
3sg Decl Fut go Upington
'He will go to Upington'

b. kiɟa xe ku si ||ʔae
where Q 3sg Fut go
'Where will he go?'

c. !hoe he ku si ||ʔae
place Rel 3sg Fut go
'the place where he will go?'

ŋ||ã 'be.loc' can only replace the linker if there has been extraction.

(17) a. ku !ũu ke xŋ |ʔaa ŋ (*ŋ||ã) g!ari
3sg grandfather Decl Past die Lk be.loc Upington
'His grandfather died in Upington'

b. ku -a |qhõ^{ʕ} ŋ (*ŋ||ã) ku ŋ||ŋ ||ãʔẽ
3sg Decl dance Lk be.loc 3sg house in
'He is dancing in his house'

These extraction facts show that the system incorporates the following constraint.

(18) *Lk <XP>

This constraint says that the linker cannot be immediately followed by a gap (the notation <XP> means that the constituent XP has been displaced). In order to avoid (18), the linker *ŋ* is replaced by *ŋ||ã* 'be.loc' as a last resort.

3. How-Constructions

The only exceptions to the generalization that the linker cannot be placed between a transitive verb and its direct object come from causatives (see section 6) and how-questions. How-questions are illustrated below[7] (*Mann* in the gloss stands for 'manner').

(19) a. ku si ɟee ŋ ||x'oo ŋ ʘoo-ke
3sg Fut how Mann chop Lk wood-Pl
'How will he chop the wood?'

b. ku si ɟee ŋ ɦoo ŋ ku aŋki
3sg Fut how Mann find Lk 3sg father
'How will he find his father?'

[7] A tentative syntactic analysis of how-questions is that the *ɟee* 'how' originates in the immediate post-verbal position, and moves to Spec MannP. Since the direct object is no longer in the immediately post-verbal position, a linker is required. I do not have sufficient data as of yet to support this analysis.

c. ku si ɟee ŋ ||ʔae ŋ g!ari
3sg Fut how Mann go Lk Upington
'How will he go to Upington?'

d. Simon si ɟee ŋ ɦoo ŋ ku ŋ g!ari
Simon Fut how Mann find Lk 3sg Lk Upington
'How will Simon find him in Upington?'

A strong argument that the *ŋ* following the verb in (19a-d) is the linker is based on the distribution of strong pronouns. The full paradigm for strong and weak pronouns is given below.

(20) a. weak:
ʔŋ '1sg', ʔa '2sg', ku '3sg', ʔi, si '1pl', ʔu '2pl', kike '3pl'

b. strong:
ŋ|ŋ '1sg', g|a '2sg', ku '3sg', g|i '1pl', g|u '2pl', kike '3pl'

In these examples, the first and second person pronouns have a different form (which incorporates a dental click) after the linker. This form is the strong form (see Güldemann 2004b for a brief description of the distribution of the strong form). Weak pronouns can only appear as subject (Spec IP), as posessors (Spec DP), or objects adjacent to the verb. Since the position following the linker is none of these, the strong form is used. Note that weak forms can be used after the instrumental preposition 'with': *ŋ|a ʔŋ* 'with me'. Examples illustrating the syntactic distribution of weak pronouns are given below.

(21) a. Simon ke si ɦoo ʔŋ
Simon Decl Fut find 1sg
'Simon will find me'

b. ŋ ke si ||ʔae
1sg Decl Fut go
'I will go'

c. ŋ xaŋki
1sg mother
'my mother'

If a how-question is formed with a verb taking a pronominal object, then the strong form is used, just like with other uses of the linker (see (34) below).

(22) Simon si ɟee ŋ ɦoo ŋ ŋ|ŋ
Simon Fut how Mann find Lk 1sg.strong
'How will Simon find me?'

The fact that the linker can appear before a non-locative direct object in how-questions reinforces the claim made above (see the discussion above (6)) that the linker is not a locative preposition. This conclusion will be strengthened when we consider causatives in section 6. In fact, I claim that the linker is semantically vacuous. It is a purely grammatical morpheme. In terms of Minimalist syntax, the linker is non-interpretable at the LF-interface. The property of being semantically vacuous is common to the linker in ǂHoan, Ju|'hoansi and N|uu, and so can be taken as one of its defining properties.

Interestingly, in Ju|'hoansi, how-questions involve the presence of the transitivity suffix, which is one form of the linker (the other form is *ko*). This cross-linguistic evidence supports my claim that the post-verbal *ŋ* in how-questions in N|uu is the linker.

(23) Ju re naun kuru-a tchi (Ju|'hoansi)
person Q how make-Trans arrow
'How does a person make an arrow?' (Dickens 1992)

When the verb is intransitive, no linker appears following the verb in a how-construction.

(24) a. ku -a si ʘun
3sg Decl Fut sleep
'He will sleep'

b. ku si ɟee ŋ ʘun
3sg Fut how Mann sleep
'How will he sleep?'

This fact is consistent with the generalization that the linker always precedes a DP, which I account for in section 4.

I have glossed the preverbal *ŋ* in the above examples as 'Mann', which stands for manner. The preverbal *ŋ* is not a linker. It has none of the properties of a linker. First, linkers always precede DPs, which I will account for in the next section. The preverbal *ŋ* precedes a verb, not a DP. Second, the preverbal *ŋ* is restricted to how-questions and thus-constructions, illustrated below.[8]

(25) ku xa ŋ ||x'oo ŋ ʘoo-ke
3sg Past Mann chop Lk wood-Pl
'He chopped the wood thus'

This suggests that the preverbal *ŋ* is semantically restricted in a way unlike the linker, which appears in a wide variety of constructions (before locative, temporal and reason adjuncts, in causatives and in how-questions).

4. Case Analysis

I propose that the linker is a Case checking head. This analysis explains why the linker never appears before the direct object of a transitive verb (see (8,9)). Sentence (9) is ungrammatical because there are two Case checkers (the linker and the transitive verb), but only one DP. Second, the Case analysis predicts that the linker will only precede DPs. The prediction seems to hold true. First, in all the examples where the linker has appeared so far, it appears before a DP (*g!ari* 'Upington' in (1a), *ǂqhee* 'duiker' in (1b)).

The linker also appears before phrases headed by locative postpositions. Some examples of locative postpositions are given below.

(26) a. n-a ||hoo-a mari ŋ !ao |qhaa
1sg-Decl put-Asp money Lk rock next.to
'I put the money next to the rock'

b. a ke si ɦoo mari ŋ !ao tsʔĩ
2sg Decl Fut find money Lk rock behind
'You will find the money behind the rock'

[8] In the following example, I assume that there is a null constituent meaning 'way/manner' occupying Spec MannP.

c. |x'esi ||ʔa sui |oba xu
necklace go sit.down child front
'The necklace fell in front of the child'
(From Collins & Namaseb 2005a)

d. Ku-a |ʔe ŋ||ŋ ||ãʔẽ
3sg-Decl go.in house in
'He goes into the house'

As argued in Collins (2001, 2003), locative postpositions in ǂHoan and Ju|'hoansi are inalienable nouns. For example, locative postpositions in ǂHoan trigger genitive Case on the 1sg pronoun. There is some evidence that locative postpositions are nominal in N|uu as well. For example, the locative phrases can appear as subject.

(27) a. bekersi ||ãʔẽ ke |x'urixa
cup inside Decl dirty
'The inside of the cup is dirty'

b. ŋ xu ke |x'urixa
1sg face Decl dirty
'My face is dirty'

c. ŋ |qha ke |x'urixa
1sg side Decl dirty
'My side is dirty'

d. ŋ||ŋ tsʔi ke |x'urixa
house back Decl dirty
'The back (backyard) of the house is dirty'

The fact that locative phrases can appear as subjects implies that they are DPs, since normally only DPs can be subjects. Therefore, I conclude that locative postpositions are nominal in N|uu as well. Therefore, in the examples in (26a,b), the linkers appear before DPs (see Baker & Collins 2005 for a discussion of nominal locatives in Kinande). Therefore the generalization that the linker always appears before DPs holds up.

Third, in how-constructions, the linker precedes the direct object of a transitive verb. In terms of the Case analysis, the verb loses the ability to check Case in the how-construction. The linker never follows an intransitive verb (see (24b)). Since there is no DP following the intransitive verb, no linker is necessary.

Fourth, the linker does not appear before with-phrases (as we will see in section 5), which unlike DPs do not have a Case feature that needs to be checked. Other than the locative postpositions, and the instrumental prepositions, there are no other prepositions or postpositions in N|uu. In particular, there is no preposition such as "across". Most locative concepts are expressed with verbal compounds (see Collins & Namaseb 2005b for examples).

Similarly, the linker never appears before complement clauses. This is illustrated in the following examples. I indicate the embedded clause with bracketing.

(28) a. n -a ǂʔãi-a [Siso xŋ ||ʔai-a]
1sg Decl think-Asp Siso Past go-Asp
'I think Siso left'

b. n -a ǂao-a [kin ||ʔae]
1sg Decl want-Asp they leave
'I want that they leave'

c. g|a ǂʔii-a [!Q'oma si ||ʔae |q'õa]
2sg think-Asp !Q'oma Fut go hunting
'Do you think !Q'oma will go hunting?'

d. n -a ||hae-a [ku ki mari]
1sg Decl know-Asp 3sg have money
'I know he has money'

e. kinke ku-a ŋ ŋ|ŋ [ŋ ||ʔae]
3pl Decl say-Asp Lk 1sg.Strong 1sg go
'They told me to leave'

f. n -a xŋ ku-a [Siso xŋ ||ʔae-a]
1sg Decl Past say-Asp Siso Past go-Asp
'I said Siso left'

The fact that the linker does not appear before complement clauses can be explained in terms of the assumption (common in the Principles and Parameters/Minimalist theory) that clauses do not have a Case feature. This assumption is usually justified in Principles and Parameters on the basis of the syntactic distribution of clauses. For example, the clausal complement of an adjective does not require 'of', as shown by the phrase 'proud that John won'. On the other hand, a DP complement of an adjective does require 'of', as in the phrase 'proud of John'. This contrast can be accounted for by the assumption that 'of' checks Case, and that DPs but not clauses have a Case feature.

In conclusion, the linker has the following properties: (a) it is post-verbal, (b) it is semantically vacuous, and (c) it requires the presence of a following nominal expression.[9] I have analyzed the last property in terms of Case theory.

5. V DP Lk X

In this section, I will discuss some cases where the linker appears between two post-verbal constituents. When a locative appears following a verb with a direct object, a linker must precede the locative.

(29) a. ku -a si ɦoo ku aŋki ŋ g!ari
3sg Decl Fut find 3sg father Lk Upington
'He will find his father in Upington'

b. ku -a si ||x'oo ʘoo-ke ŋ !uu
2sg Decl Fut chop wood-pl Lk veld
'He will chop wood in the veld'

c. kunisi ke si ǂam !ao ŋ !an
wagon Decl Fut hit rock Lk road
'The wagon will hit the rock in the road'

Similar facts hold for ǂHoan and Ju|'hoansi (from Collins 2003:1).

[9] The passive preposition *by* in English has the same three properties as the linker: (a) it is post-verbal, (b) it is semantically vacuous and (c) it requires a following DP. However, I would not classify the passive preposition *by* as a linker. First, *by* is largely restricted to the passive. Second, it only occurs with the external argument of a verb. See Collins (2005) for a full analysis of the passive in English, where *by* is analyzed as a realization of the Voice head.

(30) koloi g||on-a ǂ'amkoe ki gyeo na (ǂHoan)
car hit-perf person Lk road in
'A car hit a person in the road'

(31) uto dchuun-a |Kaece ko n!ama n!ang (Ju|'hoansi)
car hit-trans |Kaece Lk road in
'A car hit |Kaece in the road'

This use of the linker is particularly frequent in locative compounds, which add a locative argument to a verb (see Collins 2002 on Khoisan compounds).

(32) a. n -a si ǂhãu !qhaa
1sg Decl Fut pour water
'I will pour water'

b. n -a si ǂhãu |ʔee !qhaa ŋ xaβasi ||ãʔẽ
1sg Decl Fut pour put.in water Lk cup in
'I will pour water into the cup'

The linker is also used between a direct object and various non-locative expressions (see (6)).

(33) a. n -a si ŋ̊!hoea mari ŋ ku
1sg Decl Fut ask money Lk 3sg
'I will ask him for money'

b. n -a si gaake mari ŋ ku
1sg Decl Fut steal money Lk 3sg
'I will steal money from him'

c. ku -a si !xama ʔãki ŋ !haeka
3sg Decl Fut cook food Lk tomorrow
'He will cook food tomorrow'

When a pronoun is used after the linker here, it is in the strong form (see also (22)) above.

(34) ku xa ŋ̈!hoea ʔãki ŋ ŋ|ŋ
3sg Past ask food Lk 1sg.Strong
'She asked him for food'

All the other strong pronouns can be used after the linker as well: *g|a* '2sg', *ku* '3sg', *g|i* '1pl', *g|u* '2pl', and *kike* '3pl'.

The order of the theme and the locative is necessarily [V Theme Lk Loc]. The inverted order [V Loc Lk Theme] is not allowed (compare to (29)).

(35) a. *ku -a si ɦoo g!ari ŋ ku aŋki
3sg Decl Fut find Upington Lk 3sg father
'He will find his father in Upington'

b. *ku -a si ||x'oo !uu ŋ ʘoo-ke
3sg Decl Fut chop veld Lk wood-pl
'He will chop wood in the veld'

c. *kunisi ke si ǂam !an ŋ !ao
wagon Decl Fut hit road Lk rock
'The wagon will hit the rock in the road'

Therefore, I conclude that N|uu disallows inversion in linker constructions. The lack of inversion in N|uu is interesting in that Afrikaans, which all of my informants (five all together) spoke fluently, has considerable freedom in the ordering of the theme and the locative.

As for the other Khoisan languages, Ju|'hoansi allows inversion, and ǂHoan disallows it. See Collins (2003) for a comparison between ǂHoan and Ju|'hoansi, and see Dickens (1992) who describes inversion in Ju|'hoansi. These facts are illustrated below.[10]

(36) a. ha ku ||ohm-a !aihn ko g|ui (Ju|'hoansi)
3sg Asp chop-Trans tree Lk forest
'He was chopping the tree in the forest' (Dickens 1992)

[10]Since only Ju|'hoansi has a transitivity suffix *-a* among the three languages in question, I conjecture that the presence of inversion in Ju|'hoansi is related to the transitivity suffix.

b. ha ku ||ohm-a g|ui ko !aihn (Ju|'hoansi)
3sg Asp chop-Trans forest Lk tree

(37) a. koloi g||on-a ǂ'amkoe ki gyeo na (ǂHoan)
car hit-Perf person Lk road in
'The car hit the person in the road' (Collins 2003)

b. *koloi g||on-a gyeo na ki ǂ'amkoe (ǂHoan)
car hit-Perf road in Lk person

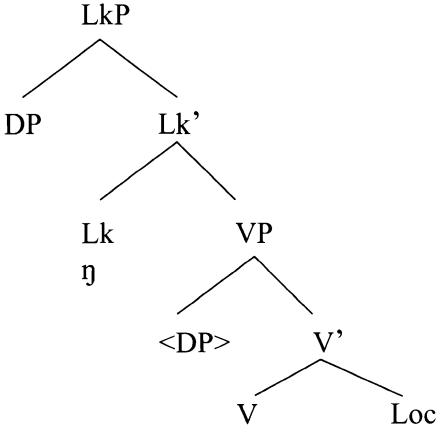
Other possible word orders of the theme, Lk, and locative in N|uu are ungrammatical (similar sentences are ungrammatical in ǂHoan and Ju|'hoansi as well, see Collins 2003).

(38) a. *ku -a si ɦoo ŋ ku aŋki g!ari
3sg Decl Fut find Lk 3sg father Upington

b. *ku -a si ɦoo ku aŋki g!ari ŋ
3sg Decl Fut find 3sg father Upington Lk

In (38a), the linker precedes both of the post-verbal constituents, and in (38b) the linker follows both of the post-verbal constituents. As I argued in Collins (2003), these ordering restrictions suggest that the linker is a functional head whose specifier is the theme and whose complement contains the locative (assuming the order Spec-Head-Complement).

(39)



In this structure, both the theme and the locative start out internal to the VP.[11] In ǂHoan, Ju|'hoansi and N|uu, the theme can be moved into the specifier of the LkP, giving rise to the order: [Theme Lk Loc]. Only in Ju|'hoansi can the Loc move into the specifier of Lk giving rise to the order: [Loc Lk Theme].

An important source of evidence for the structure in (39) is the linker in the Bantu language Kinande, discussed by Baker & Collins (2005). In Kinande (as opposed to the Khoisan languages), the linker agrees with the preceding DP indicating a Spec-Head relation. The discussion of the linker in Kinande brings up a general question of the relationship between the linker and the Bantu associative marker. Both the linker in Kinande and the associative marker agree with a preceding nominal constituent, and they have a similar pattern of agreement. The big difference between the linker and the associative marker is that the linker appears internal to the vP, whereas the associative marker appears internal to the DP. See Baker & Collins for much more detail on the linker in Kinande, and some brief remarks on the associative marker.

When the theme is extracted, the linker continues to precede the locative as in the relative clause in (40a) and the constituent question in (40b).[12]

(40) a. ʘoo-ke he Griet si ||x'oo ŋ !uu
wood-Pl Rel Griet Fut chop Lk veld
'The wood that Griet will chop in the veld'

b. cui xe Griet si ||ʔa ||x'oo ŋ !uu
what Q Griet Fut go chop Lk veld
'What will Griet go chop in the veld?'

When the locative is extracted, the verb *ŋ||ã* 'be.loc' must be used, just as with intransitives.[13]

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[11] See Chomsky (1995) and Collins (2003) for further discussion of the internal structure of the verb phrase. In these sources, it is assumed that the verb undergoes further movement to the head of vP (light verb phrase).

[12] ǂHoan has the same pattern. In Ju|'hoansi, the Lk drops, yielding V-a DP (See Collins 2003).

[13] When the locative is extracted in ǂHoan, the order becomes V Lk DP, as if there had been inversion (which is normally not allowed in ǂHoan). In Ju|'hoansi, the linker drops, yielding: V-a DP. These patterns indicate that constraints similar to (18) need to be postulated for ǂHoan and Ju|'hoansi as well (although there are a number of differences, see Collins (2003) for some discussion).

(41) a. !uu-a he Griet si ||x'oo ʘoo-ke ŋ||ã
veld-Dem Rel Griet Fut chop wood-Pl be.loc
'The veld where Griet will chop wood'

b. kiŋa xe Griet si ||x'oo ʘoo-ke ŋ||ã
where Q Griet Fut chop wood-Pl be.loc
'Where will Griet chop wood?'

Although the linker is used before locatives and non-locative expressions, it is not used before instruments. Rather, the instrumental preposition *ŋ|ã* 'with' is used.

(42) a. n -a si |aa ʘoe ŋ|ã ŋ≠ona
1sg Decl Fut cut meat with knife
'I will cut the meat with a knife'

b. n -a si ||x'oo ≠qhii ŋ|ã !ʔoo
1sg Decl Fut chop tree with axe
'I will chop the tree with an axe'

c. Griet ke kuru-a ŋ||ŋ ŋ|ã |qhe
Griet Decl make-Asp house with grass
'Griet built a house with grass'

In these examples, the linker is never found before *ŋ|ã* 'with'. As noted in section 3, this fact can be accounted for on the assumption that with-phrases do not have a Case feature that needs to be checked.

6. Causatives

Another example where a linker appears between two post-verbal constituents (V X Lk Y) is the causative. Consider first the following examples of causatives of intransitive verbs.

(43) a. n -a si kx'u ||ʔae ku
1sg Decl Fut make go 3sg
'I will make him go'

b. n -a kx'u ʘun-a |oeke
1sg Decl make sleep-Asp children
'I made the children sleep'

c. n -a kx'u |q'õa-a ku
1sg Decl make hunt-Asp 3sg
'I made him hunt'

d. n -a xŋ kx'u ʔã ku
1sg Decl Past make eat 3sg
'I made him eat'

These examples illustrate that the form of a causative of an intransitive verb is [kx'u-V DP], where the only argument of V follows V. *Kx'u* 'make' used as an independent verb is shown below.

(44) n -a si kx'u ŋ||ŋ
1sg Decl Fut build house
'I will build a house'

When a transitive verb is causativized, a linker must appear before the theme.

(45) a. n -a kx'u |q'õa-a ku ŋ ǂqhee
1sg Decl make hunt-Asp 3sg Lk duiker
'I made him hunt a duiker'

b. n -a xa kx'u ʔã ku ŋ ku ʔãki
1sg Decl Past make eat 3sg Lk 3sg food
'I made him eat his food'

I explain this use of the linker by assuming that the causativized verb can not check accusative Case (see Baker 1988: 173 for a theoretical account[14]). In the causative, *kx'u* 'make' itself checks the Case of the embedded external argu-

[14] In Baker's terminology (p. 164), N|uu has a Causative Rule 2, which is also found in Kiswahili and Chamorro (which appears to have a linker).

ment (e.g., *ku* 3sg in 43a,b), and the linker checks the Case of the embedded internal argument (ǂ*qhee* 'duiker' in (45a), and ʔ*ãki* 'food' in (45b)).

7. Double Object Constructions

One of the most striking aspects of the linker in N|uu is that it does not appear in double object constructions (DOCs). This is illustrated for 'give' in (46, 47), for 'show' in (48), 'send' in (49), and for benefactive arguments in (50, 51).

(46) a. ku -a si ʔãa ku aŋki-a kea mari
3sg Decl Fut give 3sg father-Dat that money
'He will give his father that money'

b. Griet ke si ʔãa ku-a doŋki-si
Griet Decl Fut give 3sg-Dat donkey-Sg
'Griet will give him the donkey'

(47) a. ʔãa ku-a ku xaŋki ka- ||hãi
Give 3sg-Dat 3sg mother Pl breasts
'Give her her mother's breasts'
(from Collins & Namaseb 2005a)

b. ʔãa ku-a mar ku xaŋki se ŋ|ã
give 3sg-Dat but 3sg mother Poss head
'But, give her her mother's head'
(from Collins & Namaseb 2005a)

(48) a. Griet ke si kaɻama ku-a si doŋki-si
Griet Decl Fut show 3sg-Dat 1pl donkey-Sg
'Griet will show him our donkey'

b. ku -a si kaɻama ŋ|angusi-a ʘoe
3sg Decl Fut show N|angusi-Dat meat
'He will show N|angusi the meat'

(49) n-a si |ee-a ku-a ki
1sg-Decl Fut send-Appl 3sg-Dat 3sg-NH
'I will send it to him' (NH stands for non-human)

(50) ku -a si kura-a n-a |x'ãike
3sg Decl Fut make-Appl 1sg-Dat beads
'He will make beads for me'

(51) kin ke ŋ!hau-a ku-a ʘoe
3pl Decl roast-Appl 3sg-Dat meat
'They are roasting him meat'

In these examples, Appl in the glosses stands for 'applicative', which is a verbal suffix that allows a verb to take a benefactive or goal argument. I will argue that the *-a* (glossed Dat) that follows the first object in a double object construction is a dative Case marker.

In all of the above examples, there is no linker between the first DP (immediately following the verb) and the second (theme) DP. A double object construction with a linker present is judged ungrammatical.

(52) n -a si kaɟama ku-a (*ŋ) ku mari
1sg Decl Fut show 3sg-Dat Lk 3sg money
'I will show him his money'

(53) n -a si ʔãa ku-a (*ŋ) ku mari
1sg Decl Fut give 3sg-Dat Lk 3sg money
'I will give him his money'

One informant said that (53) with the linker could mean that I will give him something out of his money, which is not the interpretation of a DOC. The lack of the linker in DOCs in N|uu is consistent with the little that is known about other southern Khoisan languages (see Güldemann forthcoming a,b, and Hastings 2001: 12 on |Xam).

The absence of the linker in DOCs is surprising for a number of reasons. First, we have already seen that the linker is used in a wide variety of environments, including preceding themes (how-questions and causatives), showing that there is no thematic restriction of the linker to locative expressions.

Second, in causatives (see (45)), two DPs follow the verb and the second DP is preceded by a linker. On analogy with causatives, we might expect to find such a linker before the second DP in a double object construction.

Third, other Khoisan languages (Ju|'hoansi and ǂHoan) have a linker that does appear before the second object in a double object construction. This is shown below (from Collins 2003).

(54) Gya''m-|a'a a-tsaxo-cu 'am gye ki ||a''e (ǂHoan)
child-Dim.pl Prog-cook-give 1sg mother Lk meat
'the children are cooking meat for my mother'

(55) Besa komm ||'ama -|'an Oba ko tcisi (Ju|'hoansi)
Besa Emph buy -give Oba Lk things
'Besa bought Oba some things'

I propose that the absence of a linker in DOCs in N|uu is related to another striking feature of DOCs. Note that the first object (the one immediately following the verb) is followed by Dat *-a* in N|uu in the examples in (46-51). In the rest of the section, I will justify an analysis of Dat *-a* as a Case checker, and show how the presence of the Dat *-a* gives rise to the absence of the linker in a DOC.

Dat *-a* can also appear when there is no following theme argument. The only condition is that the Dat *-a* can only mark a goal or a benefactive argument.

(56) a. n -a si g|uu-a ku-a
1sg Decl Fut lie-Appl 3sg-Dat
'I will lie to him'

b. n -a si sĩsən-a ku-a
1sg-Decl Fut work-Appl 3sg-Dat
'I will work for him'

c. n -a si |qhõˀ-a Griet-a
1sg Decl Fut dance-Appl Griet-Dat
'I will dance for Griet'

In these examples, I propose that the Case of the DP is not checked by the verb, but rather by the Dat *-a*. Evidence for this analysis is that the linker does not appear before a dative marked DP in a how-construction.

(57) a. Griet si ʝee ŋ |qhõˀ-a ku-a
Griet Fut how mann dance-Appl 3sg-Dat
'How will Griet dance for him?'

b. Griet si ʝee ŋ g|uu-a ku-a
Griet Fut how Mann lie-Appl 3sg-Dat
'How will Griet lie to him?'

Given that the linker checks the Case of the following DP, and that DP following the verb already has a dative Case marker, there is no need for the linker to be used. Predictably, Dat *-a* is impossible if the DP following the verb is not a goal or benefactive.

(58) n -a si ŋ|aa ku (*-a)
1sg Decl Fut see 3sg Dat
'I will see him'

Dat *-a* morphologically resembles the declarative *-a* found following the subject of declarative clauses (they both have the same high tone). I will compare the properties of declarative *-a* and dative *-a*, and I will show that although dative *-a* and declarative *-a* are similar, they can not be identified. I give the complete pronominal paradigm for dative *-a* in (59) and for declarative *-a* in (60).

(59) a. Andries ke xa ʔãa n-a ɦa mari
Andries Decl Past give 1sg-Dat 3sg money
'Andries gave me his money'

b. Andries ke xa ʔãa ʔa ɦa mari
Decl Past give 2sg-Dat 3sg money
c. Andries ke xa ʔãa ku-a ɦa mari
Decl Past give 3sg-Dat 3sg money
d. Andries ke xa ʔãa s-a ɦa mari
Decl Past give 1pl-Dat 3sg money

e.	Andries	ke	xa	ʔãa	b-a	fia	mari
		Decl	Past	give	2pl-Dat	3sg	money
f.	Andries	ke	xa	ʔãa	kik-a	fia	mari
		Decl	Past	give	3pl-Dat	3sg	money[15]

(60) a. n-a si ||ʔae
1sg Decl Fut go
'I will go'

b. a si ||ʔae
2sg Decl Fut go

c. ku a si ||ʔae
3sg Decl Fut go

d. s -a si ||ʔae
1pl Decl Fut go

e. b -a si ||ʔae
2pl Decl Fut go

f. kin ke si ||ʔae
3pl Decl Fut go

With the exception of third plural,[16] the dative pronouns and the declarative pronouns are identical. This series of pronouns is called the A-Form of the pronoun in Collins & Namaseb (2005b). I know of no other place in N|uu grammar where this particular combination of weak pronoun plus *-a* occurs. The parallelism between the subject *-a* pronouns and the dative pronouns suggests that Decl *-a* shares some properties with dative *-a*. While this may be true, there are some reasons for not identifying the two morphemes.

[15] The 3pl dative *-a* pronoun can be *kɨn-a* as in the following example:

cui	xe	Sini	xŋ	ʔãa	kɨn-a
what	Q	Sini	Past	give	3pl-Dat

'What did Sini give him?'

[16] The pronoun *kɨn-a* is not possible as the subject in (60f). While *ke* can appear following all subject types (pronouns, proper names, full DPs), the declarative *-a* seems restricted to pronouns for which the combination pronoun-a is monosyllabic (crucially, *kua* 3sg-decl is pronounced [kwa] and not [kuʔa]). In all my field notes, and all the sentences in Westphal (see his examples (34-36), (121), (231), (260)), I have found no clear counter-examples to this generalization. No similar restriction exists for dative *-a*. Much more work is needed on this prosodic restriction.

In a declarative sentence, declarative *-a* can be used following the subject. Alternatively, declarative *ke* can be used following the subject. Furthermore, the two can not be used simultaneously (see Güldemann 2004b). Declarative *ke* is illustrated below.

(61) ŋ ke xa soo kia
1sg Decl Past sit here
'I was sitting here'

The series of subject pronouns that can precede declarative ke is the following: ŋ '1sg', a '2sg', ku '3sg', i, si '1pl, u '2pl', kin '3pl'. The following example shows that in some cases either *-a* or *ke* can be used as the declarative head.

(62) a. n -a xŋ ||ʔae-a !gari
1sg Decl Past go-Asp Upington
'I went to Upington'

b. ŋ ke xŋ ||ʔae-a g!ari
1sg Decl Past go-Asp Upington
'I went to Upington'

The following examples show that declarative *-a* and declarative *ke* cannot appear simultaneously.

(63) a. n -a si ʘun
1sg Decl Fut sleep
'I will sleep'

b. ŋ ke si ʘun
1sg Decl Fut sleep
'I will sleep'

c. *n -a ke si ʘun
1sg Decl Decl Fut sleep

(64) a. n -a xŋ ||ʔae g!ari
1sg Decl Past go Upington
'I went to Upington'

b. n ke xŋ ||ʔae g!ari
1sg Decl Past go Upington
'I went to Upington'

c. *n -a ke ||ʔae g!ari
1sg Decl Decl go Upington

Furthermore, neither declarative *ke* nor declarative *-a* appears in questions or relative clauses (or embedded clauses more generally).

(65) a. kiɲa xe ku si ||ʔae
where Q 3sg Fut go
'Where will he go?'

b. gao he ku si ||ʔama
thing Rel 3sg Fut buy
'the thing that he will buy'

So it appears that *-a* and *ke* following the subject are two realizations of single morpheme, which I will identify as the functional category Decl. Dative *-a*, on the other hand, does not alternate with a *ke*. In fact, *ke* cannot appear following the first object of a DOC.

(66) a. Griet ke si ʔãa ku-a doŋki-si
Griet Decl Fut give 3sg-Dat donkey-Sg
'Griet will give him the donkey'

b. *Griet ke si ʔãa ku ke doŋki-si
Griet Decl Fut give 3sg Decl donkey-Sg

Furthermore, dative *-a*, unlike declarative *-a*, can appear in questions.

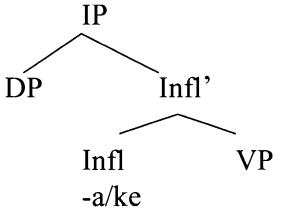
(67) a. ku -a si ʔãa ku-a mari
3sg Decl Fut give 3sg-Dat money
'He will give her the money'

b. ku si ʔãa ku-a mari
3sg Fut give 3sg-Dat money
'Will he give her the money?'

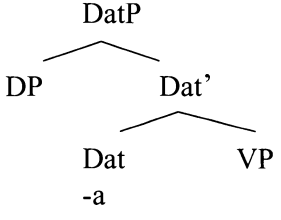
In (67a), both the declarative *-a* and the dative *-a* appear. In the yes-no question in (67b), the declarative *-a* disappears, but the dative *-a* remains.

For these reasons, I will not identify dative *-a* and declarative *-a*. However, I propose that they are partially similar, in that both the declarative *-a* and the dative *-a* head clausal functional projections. In the case of declarative *-a*, it is the head of IP.[17] In the case of dative *-a*, it is a functional projection which I will simply call DatP. In this way, dative *-a* resembles the linker as well, which heads a functional projection taking a VP complement. The two structures are given below (for more on the general framework for this kind of syntactic structure, see Chomsky 1995 and Collins 2003).

(68)



(69)



I will assume that (unlike the linker) the dative *-a* does not check the Case of a following DP, thus accounting for the fact that the dative *-a* does not have to be followed by a constituent in contrast to the linker, see section 4. Rather, it seems natural to analyze the dative *-a* as checking the Case of the DP in its specifier.

Consider now the lack of inversion in DOCs, given the analysis in (69).

[17] Or conceivably the head of a lower projection in the left periphery.

(70) a. n -a si ʔãa Griet-a mari
1sg Decl Fut give Griet-Dat money
'I will give Griet the money'

b. *n -a si ʔãa mari Griet-a
1sg Decl Fut give money Griet-Dat

c. *n -a si ʔãa mari-a Griet
1sg Decl Fut give money-Dat Griet

(71) a. n -a si kaɟama Simon-a ʘoe
1sg Decl Fut show Simon-Dat meat
'I will show Simon the meat'

b. *n -a si kaɟama ʘoe Simon-a
1sg Decl Fut show meat Simon-Dat

c. *n -a si kaɟama ʘoe-a Simon
1sg Decl Fut show meat-Dat Simon

Sentences (70b) and (71b) are unacceptable, since given the analysis in (69), the only way to derive them would be for DatP to have two DP specifiers (to the left of the head Dat), presumably not allowed. Sentences (70c) and (71c) are disallowed, since they would involve inversion. The only way to derive these word orders would be for the theme to move to Spec DatP. But as we saw in (35) above, inversion is not allowed in N|uu.

Consider the following extraction facts in light of the above analysis in (69).

(72) a. |eeki he Griet si ʔãa ɦa si doŋki-si
woman Rel Griet Fut give 3sg-Dat 1pl donkey-Sg
'the woman Griet will give our donkey to'

b. cu xe Griet si ʔãa ɦa si doŋki-si
who Q Griet Fut give 3sg-Dat 1pl donkey-Sg
'Who will Griet give our donkey to?'

(73) a. |eeki he Griet si kaɟama ɦa si doŋki-si
woman Rel Griet Fut show 3sg-Dat 1pl donkey-Sg
'the woman Griet will show our donkey to'

b. cu xe Griet si kaɟama ɦa si doŋki-si
who Q Griet Fut show 3sg-Dat 1pl donkey-Sg
'Who will Griet show our donkey to?'

These examples show that when the first object of a DOC is extracted, there is a resumptive pronoun. Furthermore, a resumptive pronoun is also left by extraction from the position following an intransitive verb with an applicative.

(74) a. cu xe ʔa si g|uu-a ɦa
who Q 2sg Fut lie-Appl 3sg-Dat
'Who will you lie to?'

b. cu xe ʔa si |qhõˀ-a ɦa
who Q 2sg Fut dance-Appl 3sg-Dat
'Who will you dance for?'

c. cu xe ʔa si sĩsən-a ɦa
who Q 2sg Fut work-Appl 3sg-Dat
'Who will you work for?'

Lastly, there is no resumptive pronoun when the second object of a DOC is extracted.

(75) a. doŋki-si he Griet si ʔãa ku-a
donkey-Sg Rel Griet Fut give 3sg-Dat
'The donkey that Griet will give him'

b. cui xe Griet si ʔãa ku-a
what Q Griet Fut give 3sg-Dat
'What will Griet give him?'

(76) a. doŋki-si he Griet si kaɟama ku-a
donkey-Sg Rel Griet Fut show 3sg-Dat
'The donkey Griet will show to him'

b. cui xe Griet si kaɻama ku-a
what Q Griet Fut show 3sg-Dat
'What will Griet show him?'

The fact that a resumptive pronoun needs to be left behind suggests that the dative *-a* is a clitic. As a clitic, dative *-a* must combine with a preceding DP. If the DP has been extracted, a resumptive pronoun needs to be left behind to satisfy the morphological property of dative *-a*.

How can we explain the lack of a linker in double object constructions? First note that there is a no general prohibition against a linker following an DP marked by Dat *-a*.

(77) a. Griet ke si ʔãa ku-a doŋki-si ŋ g!ari
Griet Decl Fut give 3sg-Dat donkey-Sg Lk Upington
'Griet will give him a donkey in Upington'

b. n -a si sĩsən-a ku-a ŋ g!ari
1sg Decl Fut work-Appl 3sg-Dat Lk Upington
'I will work for him in Upington'

c. n -a si g|uu-a ku-a ŋ mari (!ʔam)
1sg Decl Fut lie-Appl 3sg-Dat Lk money about
'I will lie to him about the money'

Given the presence of the linker in these sentences it is impossible to attribute the lack of a linker in DOCs to a general constraint prohibiting a linker from following a verb with a dative object. Rather, the following generalization seems to be true for N|uu, Ju|'hoansi and ǂHoan.[18]

(78) At most one unmarked DP can follow a verb

Unmarked here means a DP that is (a) not immediately preceded by the linker *ŋ* and (b) not immediately followed by a dative *-a*. In Minimalism, we can recast this as follows.

[18] Khoekhoe would have the following constraint: at most one unmarked DP can appear in a clause. Usually the unmarked DP is the subject, the rest are marked by the clitic *-a*.

(79) The verb can check the structural Case of at most one DP

The generalizations in (78) and (79) are satisfied by the DOC in N|uu, but we still have not answered why there is no linker in DOCs in N|uu. For example, the sentence in (53), repeated below, would satisfy (78) and (79), even if the linker were present.

(80) n -a si ʔãa ku-a (*ŋ) ku mari
1sg Decl Fut give 3sg-Dat Lk 3sg money
'I will give him his money'

I propose that this example should be ruled out in the same way that we ruled out the presence of a linker with a transitive verb in N|uu (see (9) above).

(81) ku -a si ɦoo (*ŋ) ku aŋki
3sg Decl Fut find Lk 3sg father
'He will find his father'

I claimed that this example is bad because there are two structural Case checkers (the verb and the linker) but only one DP. Similarly, in (80) the verb is a structural Case checker that does not need to check the Case of the first object (because of the presence of the dative *-a*). Therefore, the verb is free to check the Case of the direct object, thus blocking the presence of the linker.

An objection to this analysis is that when a DOC is put into a how-question, the second object is not preceded by a linker.

(82) g|a ɟee ŋ ʔaa Griet-a mari
2sg how mann give Griet-Dat money
'How did you give Griet the money?'

We have already seen that no linker is needed before the dative (see (57)) in a how-question. But what about the second object? If the verb is checking the Case of the second object in a DOC, and if a how-question makes it impossible for a verb to check the Case of a direct object (see section 3), then we would expect to find a linker in (82) as well. I leave this question for further research.

8. Conclusion

In this paper, I have given an overview of the syntactic distribution of the linker in N|uu. I have shown how the properties of the linker follow from the theory that it is a Case checking functional head, with no interpretable features (no semantic content).

I then showed the linker in N|uu does not appear before the second object of a double object construction. The absence of the linker in DOCs is surprising for a number of reasons. First, I showed that the linker is used in a wide variety of environments showing that there is no thematic restriction on the distribution of the linker. Second, in causatives, two DPs follow the verb and the second DP is preceded by a linker. On analogy with causatives, we might expect to find a linker before the second DP in a double object construction. The third, and most compelling, reason for expecting a linker in DOCs is that in other Khoisan languages (Ju|'hoansi and ǂHoan), a linker does appear before the second object in a double object construction.

I proposed that the absence of a linker in DOCs in N|uu is related to the presence of a dative marker following the first object of a DOC.

9. A Summary of Linkers in (Non-Central) Khoisan

In this section, I will present a brief summary of linker properties in the three Khoisan languages ǂHoan, Ju|'hoansi, and N|uu.[19]

	Property	**ǂHoan**	**Ju|'hoansi**	**N|uu**
1.	Lk	yes (ki)	yes (-a/ko)	yes (ŋ)
2.	Lk thematically unrestricted	yes	yes	yes
3.	V Lk X	yes	yes (-a)	yes
4.	V X Lk (Lk must precede X)	no	no	no
5.	V DP Lk X	yes	yes (ko)	yes
6.	V DP X Lk	no	no	no

[19] See Hastings (2001) for a preliminary survey of the linker in |Xam, and !Xóõ.

7.	V Lk DP X	no	no	no
8.	Subj Lk X V (see (7a))	no	no	no
9.	Lk in causative (V DP Lk DP)	yes	yes	yes
10.	Trans suffix	no	yes (-a)	no
11.	Inversion (V Loc Lk DP)	no	yes	no
12.	Lk in DOCs	yes	yes	no
13.	Dative	no	no	yes(-a)
14.	Declarative	no	no	yes (-a/ke)
15.	Lk-gap (see (18))	yes (sometimes)	no (for ko) yes (for -a)	no
16.	"be.in" as Last Resort	no	no	yes

Properties (1-9) define the core syntax of the linker, found in all three languages. Seen from the perspective of this chart, the linker in ǂHoan is defined by the core properties. Properties (10-11) define what is distinctive about Ju|'hoansi, which is basically the presence of the transitivity suffix and all the consequences that follow (see Collins 2003).

Properties (12-16) define what is distinctive about N|uu. I speculate that some of the syntactic features distinguishing N|uu from ǂHoan and Ju|'hoansi are the result of Khoekhoe influence. For example, Khoekhoe has a declarative *ke*, just like N|uu. Khoekhoe also has clitic *-a* as a general case marker (see Hagman 1977). It may be that this clitic influenced the development of dative *-a* and declarative *-a* in N|uu.

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