

Introduction

1. Introduction

The linker introduces (“links”) a variety of expressions into the verb phrase. These include locatives, the second object of a double object construction, the second object of a causative construction, instruments, subject matter arguments and adverbs of various types (locative, manner, temporal). In some non-Central Khoisan languages (see Heine and König 2015: 193), the linker even introduces the agent in the passive.

Consider the following example from #Hoã, a Khoisan language spoken in Botswana.

- (1) ma 'a šú Jefo kì setinkane (#Hoã)
1SG PROG give Jeff LK hand-harp
'I am giving Jeff the hand-harp.'

In (1), the particle *kì*, glossed LK for ‘linker’, appears between the goal DP and theme DP. The linker is present in all non-Central Khoisan languages (e.g., #Hoã, N!uu, Jul’hoan, !Xoõ and !Xam). The linker is also found outside of Khoisan in other African languages such as Yoruba, Baoule and Kinande. As far as I know, such a particle does not appear in any Indo-European language. For example, in an English double object construction parallel to (1), no particle appears between the goal DP and the theme DP.

In the descriptive Khoisan literature, the following labels have been given to linkers: transitivity particle (Dickens 2005: 38 for Jul’hoan), verbal (transitivizing) particle (Traill 2009: 170 for !Xoõ), oblique marker (Berthold and Gerlach 2017: 170 for N!aqriaxe), transitive preposition (Heine and König 2008: 39 for Northwestern !Xun), linker (Heine and König 2015: 5.2.3 for Northern Khoisan, following earlier work by Collins 2003 and Baker and Collins 2006), multipurpose oblique marker (Güldemann 2005: 14 for Tuu), objectival conjunction (Synman 1970: 181 for !Xũ) and preposition (Bleek 1928: 97 for !Xam).

Here are some recurring properties of the linker found in the Khoisan languages. First, it occurs with a wide variety of VP complements and adjuncts (as described in the first paragraph above). Second, it does not contribute semantically to the VP (it is “semantically vacuous”), and does not impose a theta-role or selectional restrictions on the following constituent. This property rules out a linker analysis of causative and applicative suffixes, since these are usually taken to contribute to interpretation (by adding an argument and specifying its semantic relation to the verb). Third, it does not occur with the direct object of a transitive verb. Fourth, it does not occur with prepositional phrases (e.g., instrumental phrases introduced by the preposition ‘with’). Fifth, it is not lexically restricted. For example, the pattern in (1) is not restricted to the verb ‘give’, but holds for all verbs taking two objects. This last criterion rules out a linker analysis for prepositions like ‘with’ in English in sentences like “They loaded the wagon with hay.”

Although I give (1) as an example of a linker, it is not criterial that the linker appears between the two objects in a double object construction, as chapter 5 on double object constructions in N!uu shows.

The purpose of this volume is to explore the linker in the non-Central Khoisan languages. In particular, I try to present a systematic description of the linker in several Khoisan languages (particularly #Hoã, Jul’hoan and N!uu and to a lesser extent !Xoõ, !Xam). This will make it

possible for researchers working in a wide variety of syntactic frameworks on different languages of the world to compare their results to those presented in the volume.

A question for further research is the relation between verbal linkers and copular constructions in non-Central Khoisan. For example, in Nluu the copula which is used with predicate nominals is the linker (see Collins and Namaseb 2011):

- (2) ku-a ŋ gla Ǿũu
 3SG-DECL LK 3SG son
 ‘He is your son.’

However, the copula used with predicate nominals in †Hoã is distinct from the linker (see Collins and Gruber 2016). I have not done a survey of copular constructions (locative, nominal, identificational) in the non-Central Khoisan languages. But clearly sentences such as (2) raise many issues for the analysis of the linker.

Every chapter except chapter 6 has been published in other venues. In order to make each chapter readable on its own, no attempt has been made to eliminate occasional redundancies. No changes have been made to the individual chapters. In particular, no attempt has been made to make the spellings of the language names or glossing conventions consistent across chapters.

2. Verbal versus Nominal Linkers

This book only discusses linkers in the verb phrase. One could ask if similar morphemes characterize the noun phrase in the Khoisan languages. In fact, in the Central Khoisan language Kua (see Collins and Chebanne 2016), one finds the following alternation:

- (3) a. ŋlĩĩ sì ŋìbĩ sàʔà cé kwà kíńĩ (Kua)
 this 3FS axe 3FSO 1SS PROG want
 ‘I want this axe.’
 b. ŋìbĩ kà ŋlĩĩ sàʔà cé kwà kíńĩ
 axe LK this 3FSO 1SS PROG want
 ‘I want this axe.’

When a demonstrative modifies a noun and the noun has a person-gender-number (PGN) marker, there are two strategies. (3a) illustrates the nominal concord strategy. Both the modifier and the noun take a third person feminine singular PGN marker. However, it is also possible to invert the word order, as in (3b). In this case, there is only one PGN marker and the noun is separated from the demonstrative by *kà*. I gloss *kà* as LK since it seems to link modifiers into the noun phrase in examples like (3b), in much the same way as the verbal linker links verbal dependents into the verb phrase in examples like (1).

Assuming that (3b) involves a LkP headed by *kà*, the word order alternation can be analyzed in terms of NP movement to Spec LkP in (3b). Such a derivation is sketched in (4):

- (4) a. Underlying:
 [DP ŋlĩĩ ŋìbĩ sàʔà]
 this axe 3FSO
 b. Merge in the linker:
 [Lk' kà [DP ŋlĩĩ ŋìbĩ sàʔà]]

- c. Raise NP to Spec LkP:
 [LkP $\eta\text{ib}\bar{\text{i}}$ [Lk' $k\grave{\text{a}}$ [DP $\eta\text{ib}\bar{\text{i}}$ < $\eta\text{ib}\bar{\text{i}}$ > $s\grave{\text{a}}\text{?}\grave{\text{a}}$]]]

In (3c), <...> means that the occurrence is unpronounced.

Therefore, it would be more precise to refer to *kì* in examples like (1) as a verbal linker and to *kà* in examples like (2) as a nominal linker. As far as I know, such nominal linkers are not found in any non-Central Khoisan languages. Furthermore, they are not found in Khoekhoe (another Central Khoisan language). However, I have not yet done a full survey of the Khoisan languages, so I do not know their precise distribution.

It is likely that nominal linkers share properties with the verbal linkers discussed in this volume. For example, if the analysis in (3) is correct, the nominal linker triggers inversion, just like the verbal linker does in several languages (Jul'hoan, Kinande). Furthermore, there are agreeing (Kinande, Baoule) and non-agreeing (Khoisan) verbal linkers, just like there are agreeing (Kurdish) and non-agreeing (Persian) nominal linkers. I hope that the research presented in this book will lay the groundwork for an eventual comparison of the two kinds of linkers. See den Dikken and Singhapreecha 2004 and Franco, Manzini and Savoia 2015 for surveys and analyses of nominal linkers.

3. The Khoisan Languages

The Khoisan languages are the non-Bantu, non-Cushitic click languages of Africa. Therefore, they exclude such languages as IsiZulu (Bantu) and Dahalo (Cushitic) which are spoken in Africa and have clicks. The Khoisan languages are mostly spoken in southern Africa with the exception of Hadza and Sandawe, both spoken in Tanzania.

Greenberg (1966) proposed that all the Khoisan languages form a single family of genetically/historically related languages. Most modern Khoisan scholars take a more conservative approach, justifying language groupings more carefully (in the spirit of Westphal (1971), see also Sands (1995)). The current most widely accepted model is based on Bleek's (1929) classification of the Khoisan languages into Northern (see Heine and Honken (2010)), Central (see Vossen (1998)) and Southern (see Güldemann (2005) and Hastings (2001)). See Güldemann (2014) for a recent overview.

The classification of the Khoisan languages and some example languages are given in (5):

- (5) Kx'a (Northern):
 Ju: Ju|'hoan
 #*Amkoe: #Hoã, Sasi
 Khoe-Kwadi (Central):
 Kwadi
 Khoe: Khoekhoe, Naro, G|ui, Kua
 Tuu (Southern):
 Taa: !Xoõ
 !Ui: !Xam, N|uu, !Xegwi
 Unclassified: Sandawe, Hadza (Tanzania)

From the point of view of the classification in (5), one question is whether Northern Khoisan is genetically/historically related to Southern Khoisan. As stated in chapter 2: "The

phonological form and the syntactic function of the linker establish a link between Northern Khoisan (Kx'a) and one group of Southern Khoisan (Taa).” This conclusion converges with that of Collins and Honken 2016 who claim that “...the plural prefix in Kx'a, !Ui, and Taa provides support for the existence of Proto-Kx'a-!Ui-Taa.” A goal of this book is to provide descriptions of one syntactic system, the linker, that might help in resolving these issues (see in particular the discussion at the end of chapter 2).

Putting aside Sandawe and Hadza, the Northern and Southern Khoisan languages pattern together syntactically, sharing properties distinct from those of the Central Khoisan languages. A list of some of the syntactic properties of the three groups of languages is given below:

- (6) a. Central (Khoekhoe, Tsua, G|ui, Kua, etc.):
 Subject Object Verb, Verb Negation,
 Possessor Noun, Adjective Noun, Numeral Noun,
 grammatical gender, no verbal linker
 b. Non-Central (N|uu, Ju|'hoan, Sasi, etc.)
 Subject Verb Object, Negation Verb,
 Possessor Noun, Noun Adjective, Noun Numeral,
 no grammatical gender, verbal linker in all languages

As can be seen from this list, the non-Central Khoisan languages share the same basic word order patterns, and lack grammatical gender marking (lacking the PGN markers of Central Khoisan). Crucially, all the non-Central Khoisan languages share the linker.

In general, the Central Khoisan languages lack linker constructions. However, as reported in Fehn 2014: 353, Ts'ixa has an oblique marker in the following example:

- (7) [Arnold]=mà ?à l?àò kà tí khaà-nà-tà (Ts'ixa)
 PN=SG.M:II ACC money MPO 1SG given-J-PST1
 'I gave money to Arnold.'

Fehn glosses *kà* as MPO (“multipurpose oblique”), and it seems to have a distribution similar to the distribution of the linker (see (1) for comparison). In (1), the linker *kì* introduces the theme, and similarly in (7) the MPO *kà* introduces the theme. The linker in #Hoã precedes the theme, and the MPO in Ts'ixa follows the theme, which seems to be consistent with the general SVO nature of #Hoã versus the general SOV nature of Ts'ixa.

Fehn notes that such a morpheme is rare in Central Khoisan: “While it appears to be more widespread to find the recipient marked by an ALLATIVE postposition (e.g., Ts'ixa, Khwe), only Ts'ixa and the Khwe dialect !Ani display a cross-linguistically rare phenomenon in having secondary object constructions, i.e., semantically ditransitive constructions in which the recipient and not the theme is treated like O of a transitive predication. This phenomenon is neither found in West Caprivi Khwe nor in any dialect of Shua, and also appears to be absent in the G|ana lect G|ui (H. Nakagawa & H. Ono, p.c.). We may therefore assume that it is not a genuine feature of Kalahari Khoe, much less of Khoe, as it is not found in Khoekhoe either ...” (pg. 324)

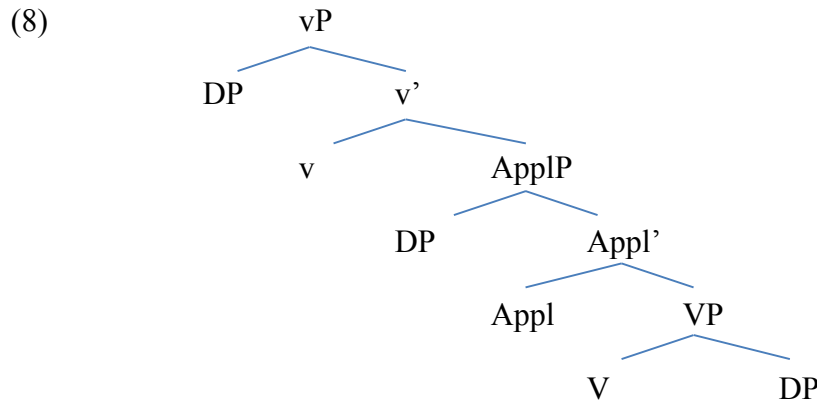
She goes on to say that: “As has already been established, no similar examples exist within the Khoe family, so contact may be assumed a possible explanation for this development in Ts'ixa and !Ani.” (pg. 324) In this quote, Fehn is referring to contact with the Northern Khoisan languages.

A systematic comparison of the MPO in Ts'ixa and !Ani to the linker in non-Central Khoisan is the next step in the research agenda. Hopefully, the material in this book will facilitate such a comparison.

4. Theoretical Framework

The papers in this book mostly concern the internal structure of the verb phrase (with the exception of chapter 6 which is mostly about the internal structure of pronouns). As such it touches on many topics of interest to syntacticians such as argument structure, arguments, adjuncts, case, applicative suffixes, double object constructions, causatives and adverbial modification.

The general theoretical framework is the Principles and Parameters/minimalist framework. In particular, I adopt the foundational assumption of Larson (1988) that the verb phrase is structured into shells. The particular shell structure that I adopt in these chapters is given below:



In this structure, each shell introduces a different DP argument. The lowest VP shell introduces the theme argument. The ApplP shell introduces the goal/recipient argument (see Pylkkänen 2008). The highest vP shell introduces external arguments such as agents and causers.

One of the main theoretical claims of this work is that the linker morpheme heads a functional projection LkP that is sandwiched between the vP shell and the lower shells (in a way made explicit in chapter 2).

I emphasize here that even researchers who do not adopt the assumptions illustrated in (8) (more descriptively oriented linguists and those adopting other frameworks) should find the data in this book useful.

5. Chapter Summaries

The chapters in this book were written over a span of more than 20 years, from the first time I studied #Hoã in Botswana in 1996 until the publication of chapter 2 in 2017. The chapters are not arranged in chronological order.

Chapter 2 “The Linker in the Khoisan Languages” (published 2017) presents an overview of the syntax of the linker in the Khoisan languages, discussing common properties and patterns of variation. The languages discussed are #Hoã, N!uu, Jul’hoan, !Xoã and !Xam. For each language, various uses of the linker are illustrated, drawing attention to cross-linguistic

generalizations as well as to differences between the languages. One such generalization is the Linker-Adverb Generalization:

(9) Linker-Adverb Generalization

If an adverb appears post-verbally, it is preceded by a linker. If an adverb appears pre-verbally (between the subject and the verb, or preceding the subject), no linker appears.

I argue that the generalization in (9) has theoretical consequences for the syntax of adverbs. In particular, (9) suggests that adverbs are not simply adjoined to a VP, since on the adjunction analysis, there is no reason why there should be a linker only for post-verbal adverbs.

In chapter 2, the basic theory of the linker is presented: the linker heads a vP internal functional projection LkP (linker phrase). This chapter also includes a discussion of the historical issues that the linker raises, in particular the issue of the connection between Southern and Northern Khoisan, and ends with a list of research questions that linguists could consider in looking at other languages.

Chapter 3 “The Internal Structure of the vP in Ju|’hoansi and #Hoan” (published 2003) is a detailed comparison of the syntax of the linker in these languages. In particular, this chapter addresses the issue of inversion in Ju|’hoan and the distribution of the linker *ko* in extraction contexts. It also offers an account of the transitivity suffix (a clitic form of the linker) in Ju|’hoan. A condition is introduced to limit the number of arguments in a VP (the Multiple Case Condition, henceforth, MCC), and it is shown how this condition plays a role in determining the distribution of the linker.

Chapter 4 “Linkers and the Internal Structure of vP” (published 2006, co-authored with Mark Baker) expands the range of coverage to Kinande, a Bantu language. In addition to providing detailed descriptive data on Kinande, this chapter shows that agreement with the linker in Kinande provides crucial support for the syntactic analysis of linkers presented in chapters 2 and 3. Basically, it is shown that the linker in Kinande agrees with the DP that precedes it, as expected under an analysis where the linker heads a LkP and the DP preceding it occupies its specifier.

Chapter 5 “The Absence of the Linker in Double Object Constructions in N|uu” (published 2004) presents an explanation of the fact that N|uu lacks a linker between the objects of a double object construction (see (1)). This fact is remarkable because N|uu has the linker in all the other contexts (including between the two objects of a causative construction) where the other non-Central Khoisan languages have linkers. I explain this fact in terms of the presence of a dative case marker in N|uu and its absence in the other non-Central Khoisan languages. A question raised by this chapter is whether other !Ui languages lack linkers between the objects in double object constructions.

Chapter 6 “Click Pronouns in N|uu” (unpublished) continues the discussion of N|uu with an in-depth look at click pronouns (a term for pronouns beginning with a dental click). The paper argues that the distribution of click pronouns is determined by the linker, according to the following generalization:

- (10) If a first or second person pronoun immediately follows a linker, the pronoun takes the click form.

I discuss the consequences of this principle for the analysis of questions and for the internal structure of pronouns in N|uu. It is argued that the dental click heads a PartP (participant phrase) internal to the pronoun.

6. Related Work

Alexiadou and Anagnostopoulou (2007) reviews the analysis of the linker in Jul'hoan from Collins 2003, and discusses the relationship between the MCC and their SGG (Subject-In-Situ Generalization) which regulates the movement of subjects and objects out of the vP. As they note: “The MCC is a version or a close relative of the SSG. Just as the SSG forces movement of either the subject or the object out of the vP when both have structural Case, the MCC forces movement of either the direct object or the adpositional phrase out of the VP when both have structural Case.” (pg. 45)

Richards (2010) adopts the basic framework of Baker and Collins 2006 for the linker in Kinande, where the linker heads a functional projection which agrees with its specifier. He makes use of a condition he calls Distinctness which “...rejects trees in which two nodes that are both of type A are to be linearized in the same Spell-Out domain...” (pg. 5). Distinctness plays the same role as the MCC in Collins 2003 and Baker and Collins 2006, motivating the presence of the linker so that some constituent moves to its specifier. Richards extends the database of Kinande linker data, and finds several differences between the data in Baker and Collins 2006 and his own data (from a different consultant). For example, Richards gives an example of the linker preceding the subject in the subject-object reversal construction, which Baker and Collins (2006: 318) claim is unacceptable.

Schneider-Zioga and Mutaka (2015) argue that the linker “...mediates predication relations, and in this sense, is like a copula.” (pg. 102) They also point out that the linker is morphologically identical to one form of the copula (cf. (2) above). They maintain some of the assumptions of Baker and Collins (2006). For example, they claim that the linker can head a functional projection whose specifier acts as the landing site for movement. Their paper includes examples of the linker with passive *by*-phrases (pg. 110), which Baker and Collins (2006: 321) claim are unacceptable.

The next step in the research program is to do a more comprehensive study of Kinande, working with more speakers to investigate the range of judgments and looking at texts of various kinds to get an overall picture of the distribution of the linker. Another important step is to look at languages closely related to Kinande, to see if they also have linkers with the same properties or whether there is syntactic variation. Lastly, a detailed (sentence by sentence) comparison of linkers in Baoule and Kinande would be useful, since these are the two languages so far that are known to have agreeing linkers.

7. Conclusion

This short introduction has raised the following research questions about the linker:

- (11) a. Can other languages in the world, outside of Africa, be identified as having verbal linkers? And what is the relation between the linker as a syntactic category and prepositions/oblique markers?
- b. Can languages other than Baoule and Kinande be found with agreeing verbal linkers? In particular, are there linkers in languages closely related to Baoule and Kinande?

- c. What are the synchronic and diachronic relations between linkers and copular constructions?
- d. Which non-Central Khoisan languages have a passive? Of those, in which ones is the agent introduced with the linker?
- e. What is the syntactic relation between the verbal linkers discussed in this volume and nominal linkers (in languages such as Persian)?
- f. What is the distribution of nominal linker constructions in Central Khoisan (e.g., Kua, Khoekhoe and related languages)? What are the syntactic properties of such nominal linkers?
- g. Are Northern (Kx'a) and Southern (Tuu) Khoisan genetically/historically related, and what does the linker tell us about this relation?
- h. What is the relation between the verbal MPO ("multipurpose oblique") described by Fehn for the Central Khoisan language Ts'ixa and !Ani and the verbal linker discussed in this volume for non-Central Khoisan? Was the MPO borrowed from non-Central Khoisan? Does it have the same properties as the linker?

I am hoping that this volume will help to address such questions.

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