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The relation between imperfective and simultaneous taxis in Bantu. Late stages of grammaticalization¹

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Abstract

Many Bantu languages possess a clause linkage strategy whereby the subordinate status of a clause is marked by grammatical features pertaining only to its predicate nucleus. These features can be segmental or suprasegmental in nature. In cases where the dependent predicate is segmentally distinct from main clause counterparts, one can observe a relative homogeneity across Savannah Bantu varieties as regards both the specific function of the dependent clause and the markers involved. The paper will treat a hypotactic clause type marking simultaneity (and related functions). It will, in particular, explore the situation for three cognate sets of markers as to how a marker is distributed across main and hypotactic clauses and how it is subject to meaning changes depending on the clause context. The arising regularity that a given grammatical item is associated with a marked type of imperfectivity in main clauses which is no longer present when occurring in a dependent clause is interpreted from a functional and grammaticalizational viewpoint.

¹ The paper is mainly a short version of chapter 4.1 in Güldemann (1996). I refer to this monograph for more empirical data, details of motivating various ideas bearing on the subject and a general embedding of the problems in a wider functional context across the Bantu family. Thanks are due to Gudrun Miehe who provided me with valuable information and comments on this particular topic. The research in general was made possible by grants from the Federal State of Nordrhein-Westfalen and the German Service for Academic Exchange (DAAD), which are herewith gratefully acknowledged. Later, the paper was orally presented on two occasions, i.e. at the Institute of African Studies, University of Leipzig and finally at the "12. Deutscher Afrikanistentag" held 1996 in Berlin. The discussions with both audiences also contributed to the present form of this article.

1. Asyndetic clause linkage and taxis in Bantu

Among the wealth of diverse clause linkage strategies in Bantu exists a device whereby a subordinate clause is marked in a quite economical way by nothing more than changing certain formal features of the verb form. From a functional point of view, such dependent verb forms are very similar to the linguistic category *converb*, which has recently been the focus of cross-linguistic comparison (cf. Haspelmath/König 1995). They serve, inter alia, as the predicate nucleus of adverbial clauses or dependent clauses governed by complement-taking perception verbs. However, with regard to formal characteristics, the subordination device of Bantu can be clearly distinguished from a converb on account of its finite status. As subordination is marked only by features of the predicate and not by properties of the dependent clause as a whole, the clause linkage type can be conveniently termed *asyndetic hypotaxis*.² The formal distinction which sets such a verb form apart from its main-clause counterpart can be a suprasegmental or a segmental one.

A prototypical example of the first subtype is the so-called *participial mood* in Shona (S10).³ Here, the majority of finite main-clause verb forms have hypotactic counterparts that are segmentally the morphological copies of the former, but receive a different prosodic pattern (except for one case, which is the topic of this paper). The suprasegmental features are usually the only formal signal of subordination in this clause linkage type indicating that the predicate is the nucleus of a background clause. The prosodically marked verb forms build up a whole conjugational subsystem which in line with the South African Bantuistic tradition is called the *participial mood*. The following examples demonstrate some of the main clause e-hypotaxis pairs in Shona. Note that in spite of the morpho-segmental identity within each pair, one can observe clear semantic alternations.

Initiative in main vs. coincidence taxis in dependent clause:

1a *cisara zako inl ndo -end -a kumusha*
Goodbye! I 1S:INIT-go -Ø home
Goodbye now, I'm now off home. (Fortune 1955:275)

1b *zuva ro -tsvuk -a aka -svik -a parukova*
5:sun 5:D:COINC-become red -Ø 1:RP -arrive -Ø at a river
At sunset - as the sun turned red - he reached a river. (Dale 1972:61)

² See Güldemann (1996, chapter 3) for a more extensive treatment of functional and formal aspects of this clause linkage device in Bantu.

³ See Güldemann (1997a, b) for a functionally oriented treatment of this linguistic phenomenon in Shona.

Remote past in main vs. stative taxis in dependent clause:

2a *aka -tang -a ku -teng -a no -ku -tenges -a huku*
1:RP -begin -Ø INF -buy -Ø COM -INF -sell -Ø chicken
He began to buy and sell fowls ... (ibid.:271)

2b *aka -taur -a zv -ose izvi aka -shatirw -a*
1:RP -say -Ø 8IA -all 8:DEM 1:D:STAT -be(come) angry -Ø
He said all these things in a state of anger. (ibid.:72)

Proximal past in main vs. anterior taxis in dependent clause:

3a *nda -mu -bvunz -a zvakanaka*
1S/S:PP-1/O -ask -Ø well
I asked him nicely and politely (ibid.:270)

3b *mu-rume a -end -a amai vaka -gadzirir -a chirariro*
1 -man 1:D:ANT -go -Ø 1a:woman 1a:RP-prepare -Ø supper
When the man had left, the woman prepared supper. (ibid.:295)⁴

Although the exclusively suprasegmental subordination type virtually runs through the whole affirmative conjugation of Shona, one can recognize a case, where the clause linkage is still asyndetic but the morphology between parallel main and dependent predicate differs.

⁴ Examples are presented in the following way: If emphasis lies on certain morphological elements, these are italicised in the vernacular line. All hypotactic clauses relevant for the discussion are indicated in the gloss line by shading. If this clause is only prosodically marked, the gloss D is attached to the subject concord. In the translation line, only information given in the data source is italicised; everything else is my addition. An arabic number in the gloss line indicates the noun class in the Comparative Bantu notation. Only if a number is immediately followed by S or P, is a person category intended (accordingly, it is only then that S and P indicate a number feature). If the verbal ending is glossed with the symbol Ø, it marks a category in combination with a grammeme in another morphotactic slot. The following abbreviations are used throughout the paper: ADE adessive, ANT anteriority, COINC coincidence, COM comitative, COND conditional, CONS consecutive, COP copula(tive), D dependent clause, DEM demonstrative, FUT future, HAB habitual, IA inanimate, IMP imperative, INF infinitive, INIT initiative, IPRF imperfective, LOC locative, MA manner, NEG negative, O object, P past or plural (see above), PF predication focus, POSS possessor, PP proximal past, PREC precedence, PRES present, PROG progressive, PRST persistent, RP remote past, S subject or singular (see above), SC subject concord, SIM simultaneity, STAT stative, SUBJ subjunctive, TAM tense-aspect-mode, T.G. following all my notes/comments, VR verbal radical.

Present in main vs. simultaneous taxis in dependent clause with segmental distinction:

4a *va-nhu* *va-no* *-rim* *-a ne* *-mombe*
 2 -person 2 -PRES -cultivate -Ø COM -cattle
People plough with cattle (Fortune 1955:285)

4b *seyi* *mu-ci* *-nyor-a* *Zezuru* *mu-ci* *-siy* *-a ci* *-Zezuru*
 COP:why 2P -D:SIM-write-Ø *Zezuru* 2P -D:SIM-leave-Ø 7MA -Zezuru
Why do you write Zezuru, omitting ciZezuru? (lit.: It is why ...?) (ibid.:297)

While the segmentally marked verb form in Shona is a minor pattern, many languages, especially those where prosodic features are hardly or not at all grammatically distinctive, have it as the only form of asyndetic hypotaxis. There, the TAM-paradigmaticity within the subordination strategy is usually very restricted, in that there exist only one or two hypotactic verb forms having a relatively specialized meaning. One such language is Swahili with its well-known *ki*-form marking simultaneous and conditional adverbial clauses.

Simultaneous taxis in Swahili (G42):

5 *a-ka* *-sem* *-a a-ki* *-l* *-a kwa haraka*
 1 -CONS -say -Ø 1 -D:SIM -eat -Ø hastily
 ... *sagte er, während er schnell aß.*
 (and said while eating hastily) (Brauner/Herms 1979:216)

In spite of their different status in the overall language category system, both suprasegmentally and segmentally marked dependent verb forms can be conveniently described in terms of the concept of a verbal category class that is called *taxis*. Maslov (1988:63f.) gives a brief definition and relates it to such widely established notions like tense and aspect:

„Aspect, tense, and taxis are all grammatical categories of the verb (and of predicates in general), and they all have to do with the idea of time, which, however, is regarded from different view-points in each of these categories.

Taxis is a category which defines the „action“ denoted by the predicate in terms of its relations with another „action“, named or implied in the given utterance, that is, the chronological relations between them (simultaneity, precedence, sequence), and also the oppositions of the secondary „action“ to the principal one ...

In practical use aspect, tense, and taxis often interact in different hybrid, contaminated combinations. For instance, aspectual oppositions often have

taxis functions (as in Russian). In other languages tense pairs up with taxis in the form of so-called relative tenses (doubly oriented tenses, like the pluperfect or future in the past).“

Noticable for taxis forms in many languages is the fact that they often make up a conjugational subsystem showing a clear bias towards the functional domain of interclausal relations within the organization of texts with a relatively clear-cut distinction to other verbal categories like tense or aspect.

2. Markers of simultaneous taxis and their relation to other grammemes

From the descriptive data given so far, I derive the problem to be discussed in this paper. When comparing the verb forms for simultaneous taxis in Shona (4b) and Swahili (5), one observes that the respective segmental markers - i.e. *chi* and *ki*, respectively - are strikingly similar. In fact, these two grammemes are with all probability cognates, if one takes the consideration of regular sound changes into account.

What may appear at this stage as an isolated parallel between two individual Bantu languages, becomes from a wider, comparative point of view at least in the Eastern area of the family a very frequent phenomenon. Both suprasegmentally and segmentally taxis-marking languages regularly show in the specific taxis category of *simultaneity* morphological elements which can be assigned to a restricted number of cognate sets across the family (that is, the *ki* exemplified above is only one of them).

Furthermore, one important aspect with regard to these verbal grammemes is the fact that they have apparently related counterparts in main-clause verb forms, the latter, however, having a distinctively different meaning. The following discussion tries to offer an explanation for this interesting phenomenon.

2.1. The different patterns of morpheme distribution and function

The best way to come to grips with the problem raised above seems to be an evaluation of the distributional and functional characteristics of the relevant grammatical elements. In this regard, one finds a limited number of generalizable patterns how one and the same morpheme behaves in an individual

language. The following three language types have been found. The morpheme occurs

- (1) exclusively in main clauses,
- (2) in main and dependent clauses
 - (2a) without a semantic alternation,
 - (2b) with a semantic alternation,
- (3) exclusively in dependent clauses.

The investigator is certainly hampered in such an analysis by the varying degree of specificity of the various references as to how a certain verbal morpheme behaves across different clause contexts. However, what emerges from the admittedly deficient data, still appears to be a picture that is regular enough to yield an interpretation. Individual languages having a relevant morpheme will probably have to be reassigned with respect to the above classification when more precise data is available. The generalizations to be given below will hardly be subject to major refinements, though.

2.2. The clause-type induced alternation *persistivity* vs. *simultaneous taxis*

2.2.1. The verbal prefix *ki*

The analysis proposed above is applied first to the element *ki*,⁵ as this verbal prefix has already been introduced as a simultaneous taxis marker and offers the most extensive comparative data because of its wide distribution in the family.

Bantuists working on comparative verbal morphology have for long been recognizing this element both in main and dependent clause predicates. Dammann (1956) offered a treatment where both occurrences are unified under his term *situatives Formans* (situative morpheme). While focusing only on main clause functions, Meeussen (1967:109) mentioned it as a member of a morpheme class called by him *limitative*.

Type (1): Both authors give for the context of main clauses a function of *ki* which I consider to be central, in the sense that all other functions can be grammaticalizationally related to it. Thus, *ki* is viewed here to be a *persistive* marker which can occur in pre-stem position with regular finite verbs, conju-

⁵ I will use this orthographic notation when the element is referred to as a Common Bantu morpheme, which is, inter alia, in accordance with Meeussen's reconstruction (see below).

gationally defective copulatives⁶ and even infinitives. In this respect, cf. the following examples.

Persistent in Mwenyi (K30):

6a ni -si -b -a
1S-PRST -give -PRES
I am still giving (Yukawa 1987a:41)

Negative persistent in Subiya (K42):

6b ka -chi -mu-sak -i
NEG:1/S -PRST -1/O-love -PRES
il ne l'aime plus (Jacottet 1896:60)

Persistent with copulative base in Nkoya (L62):

6c ni -shi -ji ku -mon -a
1S-PRST -COP INF -see -Ø
I am still looking (Yukawa 1987b:147)

As the following example shows, in some languages, a copulative followed by a nonfinite complement does not always have a progressive meaning as in (6c) but can be used instead as a proximative. If such a form is accompanied by a persistent *ki*, the resulting „persistent proximative“ can be reanalyzed by inference to a *negative*.⁷

Proximative vs. persistent proximative (with a negative reading) in Masaba (J31):

7	ba-li	ku	-bon -a	vs.	ba-ki	-ri	ku	-tek -a
	2 -COP	INF	-see -Ø		2 -PRST -COP	INF	-cook -Ø	
	<i>they are about to see</i>				<i>they are still (about) to cook, and so they have not yet cooked.</i> (Purvis 1907:71)			
	(Blois 1975:118)							

A third meaning falling into the functional range of *ki* which appears predominantly with modal or, more generally, irrealis verb forms is labeled here in accordance with Dammann (1956:428) *precedence*.⁸

Precedence in Lwena (K14):

8 imana ngu -ci -tal -e muzuvo
wait:IMP 1S -PREC -look -SUBJ in the house
Wait, let me look in the house yet; i.e., before anything else is done
(Horton 1949:126)

⁶ I distinguish these terminologically from a bare copula on account of their characteristic of having a cross-reference subject prefix.

⁷ This negative reading can be conventionalized to a category in its own right (cf. Güldemann 1996, chapters 4.1.1.1 and 4.1.1.2 for further examples).

⁸ Without having the space to functionally motivate this phenomenon, I only mention the fact that there are parallel effects in totally unrelated languages. Cf., e.g., the German focus particle *noch* which also functions both as a persistent and a precedence marker.

Type (2a): After giving examples of languages that presumably have *ki* only as a persistive marker (and/or related functions) in main clauses, I continue with cases where the element is evident in both clause types considered without a meaning change - that is as a persistive.

Persistive in main and dependent clause in Rwanda (J61):

- 9 nti -ba -gi -hiling -a and baa-j -e tu -gi -kor -a
 NEG-2 -PRST-cultivate -Ø 2:P -come -PRFV 1P:D -PRST-work -Ø
(ils) ne cultivent plus. ils sont venus pendant que nous travaillions encore. (Overdulse 1975:190f.)

Negative initiative (< persistive) in main and dependent clause in Bemba (M42):

- 10a ba-ci III -bomb-a
 2 -NEG.INIT -work -Ø
they're not yet working, they're (still) about to work (Givón 1969:175)
- 10b n -a -ci III -is -a elyo J a-lee -bomb-a
 1S -? -NEG.INIT-come -Ø then J 1-PROG-work -PRES
As I have not yet come, J. is now working (< I (still) being about to come ...)
(ibid.:201)

Type (2b): However, in relation to languages of other types, type (2a) is relatively rare. Even Bemba, which I have given above as having a type (2a)- pattern, only partially belongs to this type. The persistive meaning is present in both main and dependent clause only in a more abstract sense, that is, in a derived function of a negative. When *ci* appears with its original affirmative reading, one observes a semantic alternation depending on the clause type. In a main clause, it functions as a plain persistive; in a dependent clause, it marks nothing but simultaneous taxis.

Persistive in main vs. simultaneous taxis in dependent clause in Bemba (M42):

- 11a n -ci -li m -bomb-a saana
 1S-PRST -COP 1S -work -PRES much
I still work a lot (ibid.:208)
- 11b n -ci -is -a elyo nao a-a -li -y -a
 1S -D:SIM -come -Ø then already 1-RP -PF -go -Ø
(When) I came he had already left (long before) (= I coming ...) (ibid.:234)

This pattern can be found in a number of Bantu languages. Shona also belongs here.

Persistive in main vs. simultaneous taxis in dependent clause in Shona (S10):

- 12a ndi -ci -ri ku -tor -a ndi -ci -gere
 1S -PRST -COP INF -take -Ø 1S -PRST-sit:STAT
I am still taking I am still seated (Fortune 1955:259)
- 12b aka -rev -a so -mu -nhu a-ci -rwir -a rupenyu rwake
 1-RP -speak -Ø like -1 -person 1-D:SIM -fight for -Ø life his
He spoke like a person fighting for his life (ibid.:297)

On account of the limited evidence given so far, one may argue that the different function of *ki* as a persistive marker in main vs. simultaneous-taxis marker in dependent clauses is not determined by the clause type but instead by its differing morphological environment - as e.g. a morphological structure SC-*ki*-COP+INF/SC-VR-*a* serves as a persistive in a main clause and the more simpler SC-*ki*-VR-*a* is used in simultaneous-taxis dependent clauses. Apart from the fact that this assumption is not supported by comparative data (note, i.a., example (6a), where a structure SC-*ki*-VR-*a* is used as a main-clause persistive), the following examples demonstrate that the clause-type induced semantic alternation is evident in one and the same verb form.

Plain stative in main vs. persistive stative in main vs. plain stative in dependent clause in the Korekore variety of Shona (S11):

- 13 ndi -gere vs. ° ndi -chi -gere vs. ndi -chi -gere
 1S -sit:STAT 1S -PRST-sit:STAT S:D -SIM -sit:STAT
I am seated I am still seated being seated
(Borland 1970:139) (constructed - cf. 12a above) (Borland 1970:139)

Type (3): Finally, examples for languages that have *ki* only as a verbal morpheme in dependent clauses are given. One such language is Venda.

Hypotaxis in Venda (S21):

	TA-category	main clause	dependent clause
1	present	SC-VR- <i>a</i>	SC- <i>tshi</i> -VR- <i>a</i>
2	present continuous	SC- <i>khou</i> -VR- <i>a</i>	SC- <i>tshi-khou</i> -VR- <i>a</i>
3	future	SC- <i>do</i> -VR- <i>a</i>	SC- <i>tshi-do</i> -VR- <i>a</i>

Table 1: Affirmative *tshi*-participials with main clause counterparts in Venda
 (Poulos 1990:254ff., 263f.)

As can be observed in Table 1, the marker *tshi* shows relatively great paradigmaticity in that it is an indicator of the dependent *participial* status of the predicate with three different verb forms. This situation can emerge, if the taxis marker is generalized to semantically compatible categories. Note first that the future form in row 3 can be shown to derive from a verbal structure SC- *do*-a+INF-VR-*a* in which the auxiliary verb *uḁa* 'come' conforms to the morpheme structure of the present of row 1 and is followed by an infinitival complement and second that the present continuous form of row 2 must by definition be a simultaneous form when used in the domain of taxis. Thus, participial forms that are in one way or another compatible with a marker of simultaneity are encoded accordingly.

Another typical type-3 language as regards verbal *ki* is also Swahili. Here, we can observe another phenomenon which bears on the way comparative Bantu data has to be evaluated in this marking complex. As *ki* does in Swahili,

simultaneous-taxis markers in general can receive a particular conditional reading, if the dependent clause is preposed to its matrix and the latter has the feature *irrealis*. In Swahili, the *ki* in this environment can safely be called a marker of the protasis of *open conditionals*.⁹

Simultaneous taxis in post- vs. conditional in preposed dependent clause in Swahili (G42):

14a *ni -li -wa -on -a wa-toto wa-ki -chez -a*
 1S/S -P -2/O -see -Ø 2 -child 2 -D:SIM -play -Ø
Ich sah die Kinder, wie sie spielten (die spielenden Kinder).
 (I saw the children playing (the playing children).) (Brauner/Herms 1979:216)

14b *a -ki -j -a mw -ambi -e a -ni -ngo-j-e*
 1 -COND -come -Ø 1/O -tell -SUBJ 1/S-1S/O -wait -SUBJ
Wenn er kommt, sage ihm, daß er auf mich wartet.
 (If he comes, tell him to wait for me.) (ibid.:214)

This observation is mainly delt with in order to motivate, why it is necessary to take also conditional markers into account, when comparative data on the domain of simultaneous taxis must be assessed. To functionally explain the change from a simultaneous-taxis to a conditional protasis marker is an interesting undertaking in its own right and will not be pursued here.

2.2.2. The verbal prefix *ka*

The phenomenon that a persistive marker receives in dependent clauses a function of plain simultaneity and later one of conditionality is not restricted to Common Bantu *ki*. This section shows that there exists a functionally very similar morpheme *ka*.¹⁰ I present the findings concerning this verbal prefix in the same way as I have done for *ki* above.

⁹ Cf. also the Swahili conditional conjunction *i-ki-w-a*, which is a grammaticalized instance of the morphological structure SC-*ki*-VR-*a* whereby the SC is the class-9 concord with impersonal reading and the verb root means *to be*.

¹⁰ The sound shape of this element in certain languages appears to show traces of prenasalization which points to the possibility of using a cross-family notation (*n*)*ka*. As I will not discuss the relevant evidence, I will stick to the preliminary notation *ka*. That this element has in spite of its apparent similarity to *ki* heretofore not been associated with the relevant marking complex is due to various factors. One reason is certainly its restricted distribution within the family. What, however, especially skews the overall picture is the fact that there exist other verbal markers with a very similar sound shape and morphotactic behavior, which do not always appear to be functionally akin to the marking complex treated in this paper and which are from a comparative point of view

Type (1): The North Swahili varieties as documented in older sources present the type where *ka* exists only as a persistive marker in main clauses.

Persistive in Old North Swahili (G42):

15 *hata sasa ni -nga -kom -a ni -ka -li ku -m -tumiki -a*
 even now 1S-POT -end -Ø 1S/S-PRST -COP INF -1/O -serve -Ø
obwohl ich jetzt am Ende bin, bin ich ihm noch dienstbar
 (although I may be finished now, I am still at his disposal) (Miehe 1979:236)

Type (2a): In the context of a plain copulative, the morpheme *ka* in Chewa is a persistive marker in main and prosodically marked dependent clauses, which counts as an instance of pattern 2a.

Persistive copulative in main and dependent clause in Chewa (N31b):

16 *ba -ka -li ku -tá.li and a -balé bánu bá -ká -li. -po*
 2 -PRST -COP 17LOC -far 2-brother 2:2P/POSS 2:D-PRST -COP-ADE
They are still far away. While your brothers are still living.
 (Watkins 1937:99)

Type (2b): Again, type-2b languages, where *ka* marks persistivity in a main, but plain simultaneous or conditional hypotaxis in a dependent clause, seem to be more frequent. I give examples from three languages.

Persistive in main vs. simultaneous taxis/conditional in dependent clause in Zigula (G31):

17 *ni -ke¹¹ ivyo vs. a -ka -ung -a*
 1S -PRST:COP like this 1 -D:SIM-want-Ø
I continue thus, or in the same state he wanting (Woodward 1902:35, 28)

Persistive in main vs. simultaneous taxis/conditional in dependent clause in Zaramo (G33):

18 *tu -ha -li tu -gul -a vs. ni -ha -j -a*
 1P -PRST -COP 1P -buy-PRES 1S -CON -eat-Ø
we are still buying (Nurse 1979:89) if/when I eat (Worms 1897:306)

much more salient than the persistive-taxis *ka*. Most problematic in this respect are the conditional *ka*, the motional *ka* and the consecutive-taxis *ka*, the latter two of which were already reconstructed by Meeussen (1967:109). While the conditional *ka* can be easily integrated in the persistive-taxis complex on account of the above information, the other two cannot. I will only mention here that promising indications from both formal and functional facts have led me to pursue the possibility that the *ka*'s marking persistivity, simultaneous taxis, conditional and consecutive taxis are cognates and can be shown to be different from the motional *ka*. A separate paper on this very complex topic is planned for the future. For the sake of this necessarily limited discussion, I will mainly confine myself here to presenting only the clear evidence showing the parallel behavior of *ki* and *ka*.

¹¹ The element *ke* was with high probability originally a morpheme complex **ka-li* comprising the persistive marker and a copulative stem.

Persistent in main vs. simultaneous taxis/conditional in dependent clause in Nyanja (N31a):

- 19 a -ka -li ku -dwal -a vs. mu-ka -cok -a pano
 1 -PRST -COP INF -be ill -Ø 2P -COND-leave -Ø here
he is still ill *If/when you leave here ...*
 (Bulley 1925:33) (Stevick (ed.) 1965:141)

Type (3): The search and identification of languages that have *ka* only as a marker of adverbial hypotaxis is more problematic because of the above mentioned existence of verbal markers, whose relation to the *ka* discussed here can not yet be conclusively ascertained. From the data available, some South Swahili varieties seem to have *ka* only as a hypotaxis marker, but not as a main-clause persistent marker.

Hypotaxis in Vumba (G43):

- 20 ni -ka -fung-a
 1S -D:SIM -tie -Ø
I tying, if I tie, when I tie (Lambert 1957:48)

In Shona, a *ka*-form is used in clauses functioning as the protasis of open conditionals and also in a few cases, where a dependent verb form is grammatically controlled by auxiliary verbs or conjunctive elements.¹²

Open conditional and grammatically controlled dependent predicate in Shona (S10):

- 21 u -ka -uy -a kwandiri ku -dzimar -a ndi -ka -tor -a
 2S -COND -come -Ø to me INF -end by -Ø 1S -D -take-Ø
If you come to me ... until I took (lit.: ending up taking)
 (Fortune 1955:316, 311)

¹² The latter function is also typical for hypotactic verb forms in other languages (cf. Brauner/Herms (1979:238f.) for the use of the *ki*-form in Standard Swahili after the auxiliary *kuwa* 'be' as only one relevant example). Inter alia on account of this evidence, I consider the Shona phenomenon to pertain to the marking complex discussed here. Note that this stands in contradiction to the philological approach which derives all instances of a verbal morpheme *ka* from the Common Bantu motional *ka* (cf. Fortune 1955:256, 315f.). As already mentioned above, the problems of the entire marking complex can not be tackled here.

2.3. The verbal imperfective suffix¹³

In the following section, I demonstrate that the more general correlation between the function of a grammatical element and the clause context it occurs in is not only associated with a pair *persistent vs. simultaneous taxis/conditional*. A widespread verbal suffix that is known in Bantuist terminology as the *prefinal* can be shown to occasionally behave similarly to the verbal prefixes *ki* and *ka* described in section 2.2.

Type (1)/(2a): As the element in question is comparatively well established, it suffices to cite a short characterization of the function of the suffix from the comparative treatment in Sebasoni (1967).

„1. La préfinale (-ag-, -ak-, -ang-) comporte, dans la grande majorité des cas, l'idée de durée, de répétition et d'intensité. ...

Elle peut ainsi exprimer la continuité, la permanence, l'habitude et la fréquence, l'action qui se fait toujours, souvent ou occasionnellement. La préfinale est souvent liée aux actions à caractère inachevé ou dont la réalisation continue. ...

4. La préfinale peut se rencontrer à tous les temps, à tous les modes, à l'affirmatif comme au négatif.“ (Sebasoni 1967:134)

A distribution pattern such as outlined above where the element is found in all clause contexts with an imperfective function appears to be the most frequent one across the family.

Type (2b): However, in some languages, the specific feature of imperfectivity is occasionally weakened to a mere taxis-marking function when the element appears in hypotaxis.

This seems to hold for the Kongo variety of San Salvador. At first, I give an example pair that shows that the suffix *ang* marks *continuity* in main clauses.

Present vs. marked imperfectivity in main clause in Kongo of San Salvador (H16h):

- 22 o-*sumb* -a vs. n -*sumb* -ang -a
 1-buy -PRES 1S-buy -PROG -PRES
he buys. *I am buying.* (Bentley 1887:649)

¹³ The term *imperfective* is not used here in the most narrow linguistic sense of a grammaticalized aspect category that stands in overt formal opposition to its perfective counterpart. Instead, it focuses on the semantic feature of *non-punctuality*, which is common to such diverse categories like habitual, durative, progressive, stative, or persistent.

This situation is slightly changed when it comes to verb forms of dependent clauses. These are described as follows:

„The Participles are verbal adjectives, and are identical in form with their corresponding tenses; that is to say, the Present, Perfect, and Past Participles are the same in form, prefix, and suffix, as the Present, Perfect, and Past Tenses. ... *The Present Participle generally wears the Continuous form.*“ (ibid.:652, italics T.G.)

What the citation makes clear, is the fact that the simultaneous taxis form (i.e. the *present participle* in the terminology of the author) is obligatorily marked for the feature *continuity*. Insofar as there is no longer a distinction between an unmarked and a continuous verb form, it seems to me vacuous to call the suffix *ang* in this type of dependent clause a continuous marker. Whatever the best description of the suffix *ang* in Kongo may be, the parallel to the phenomena described for the verbal elements *ki* and *ka* will have become obvious: As soon as all these elements are used with dependent verb forms, they show a clear tendency towards acquiring a more abstract function of hypotaxis marking instead of giving information about internal features of a state of affairs like persistivity or non-punctuality.

A description of Makua reveals that the behavior of the imperfective suffix in Kongo is not unique in Bantu. Makua main clauses also offer an option between the lack and the presence of an explicit expression of non-punctuality with the help of the suffix under discussion:

„Este partícula dá ao verbo a significação da continuidade da acção, costume ou hábito“ (This element [i.e. the suffix *ak*] gives the verb a sense of continued, customary or habitual action. T.G.) (Prata 1960:347)

Parallel to Kongo, this possible choice seems to be absent in dependent clauses. This can be concluded from the fact that the author gives only simultaneous hypotactic verb forms with the suffix *ak* but none without. Cf. the following examples.

Imperfectivity in main vs. simultaneous taxis in dependent clause in Makua (P31):

- 23a *miyo ki -ni -liv -ak -a*
 I 1S -PRES -pay-IPRF -Ø
eu pago sempre, eu costume pagar, eu continuo a pagar
 (I always pay, I habitually pay, I continue to pay) (ibid.)
- 23b *ki -liv -ak -a and ka -liv -ak -a*
 1S -pay -D:SIM-Ø 1S:P-pay -D:SIM-Ø
pagando eu (when I pay) estando eu pagar (quando eu pagava) (when I paid)
 (ibid.:225)

Finally, I can mention a language where there exists a functional opposition associated with *ang* between habitual and open conditional, which is only triggered by a clause type dependent prosodic pattern of the predicate.

Imperfectivity in main vs. conditional in dependent clause in Kete (L21):

- 24 *in -tand-ang* vs. *in -tánd-ang*
 1S -burn -PRES.HAB 1S-burn -COND
je brûle d'habitude si je brûle (Kamba Muzenga 1980:147, 150)

Type (3): Mwera can be viewed as a type-3 language as regards the functional behavior of the imperfective suffix. According to the source, the marker *ag* no longer occurs in indicative main clauses but marks conditionality within a mainly prosodically marked conjugational subsystem that is similar to the Shona *participial mood*.

Conditional in Mwera (P22):

- 25 *tu -wuj -ag -a* *cj -twa -won -e*
 1P -return -COND -Ø FUT -1P/S:2/O -see -Ø
if we return we shall see them (Harries 1950:108)

3. The correlation of imperfectivity and background in hypotaxis

In order to account for the similar developments, which verbal grammemes like *ki*, *ka*, and *a(n)g* have been subject to, it seems appropriate to search for a common denominator that could explain their behavior in a uniform way. In view of their function, this is indeed possible. What the persistives *ki* and *ka* and the semantically more general *a(n)g* have in common, is that they all encode a state of affairs which is viewed from its internal consistency as an unbounded state or change of state - that is, more generally, as *imperfective*. On the basis of this observation one can make the following generalization:

Verbal forms marking simultaneous taxis (and/or derived functions) show a strong tendency to have additional verbal grammemes, which can be at least historically associated with a feature of imperfectivity.

How can this tendency be explained? It may have become apparent in the course of the above discussion that the feature *imperfectivity* could sometimes hardly be conceptualized as being independent of the specific functionality of the clause type treated above, i.e. simultaneous hypotaxis. That a correlation between the two may be intuitively obvious, should not entice one to take it for granted, though. One can easily find evidence that the correlation is not an absolute one. Therefore, I try to give a functional motivation that relates to a more general, independently verified cognitive principle.

It may have become clear that one of the most central functions of the clause linkage type I call *asyndetic hypotaxis* is to encode information that serves as the background for the state of affairs presented in the main clause. As soon as the well-known figure-ground distinction is applied to the domain of clause linkage, the correlation of *temporal extension* and *background* becomes evident. Croft (1992) puts it the following way:

„The preference of punctual events as foreground is due to the Gestalt preference to treat a *small object (the punctual event)* as the figure against a *large object (the durative event or state)*." (ibid.:43, italics T.G.)

In order to bring out clearer the relevance of this generalization for the present topic, one can state conversely, that the preference of non-punctual events as background is due to the Gestalt preference to treat „a large object (the durative event or state)“ as the ground behind „a small object (the punctual event)“. This observation, which is in principle independent of linguistic form, now leads to an explanation of the *formal* properties which have been shown above to be regularly associated with taxis marking in Bantu:

The overt marking of a simultaneous hypotactic verb as imperfective (i.e. temporally extended) is a reflex of the grammaticalization of a cognitively based principle, whereby two concepts that are linked to each other in an asymmetric figure-ground relation also tend to be formally encoded in a way that matches their different cognitive „dimension“.

That this principle can operate also in an individual language without an overt formal correlate, is nicely evidenced by a phenomenon described for Nkore-Kiga (J11). I give the relevant information in full length.

„In sentences using participles an English translation using 'when' may sometimes be preferred. This can be detected from typical errors made by Nkore-Kiga speakers when using English, such as: 'He came when he was drunk.' This reflects a preferred construction with sentences relating to conditions obtaining at a specified time. The meaning intended by the speaker would be: 'He was drunk when he came,' or 'When he came, he was drunk.' The preferred arrangement in the language is the following,

26 a-ka -ij -a a -sinz -ire
 1-RP -come -Ø 1:D -become drunk -STAT

He was drunk when he came. (i.e., having become drunk)

This could also be translated 'He came in a drunken state' etc., but a form following the English pattern 'He was drunk when he came' does not exist. It is clear that the use of this participial form must be included in any survey of 'when' clauses. Thus sentences of the type: 'When they left...', 'When my

parcel arrived...' etc. are expressed with *the action clause superordinate and the state clause participial*." (Taylor 1985:28, italics and glosses T.G.)

4. A grammaticalization scenario for simultaneous-taxis markers in Bantu

On the basis of the above discussion, I try to clarify the question of how the different patterns of distribution and function of relevant markers are historically related to each other and offer a possible scenario how a language may change from one type to another.

A type-1 language, where certain grammatical elements explicitly mark in one way or another the imperfectivity of the encoded state of affairs, can be viewed as the starting point of the whole development. The distinction between a type-1 and a type-2a language lies only in the difference of whether or not the asyndetic clause linkage is relevant for a marker under discussion - the function of the latter is not concerned in this case.

In principle, the asyndetic dependent clause type can be available for all types of grammemes to the same degree, regardless of their specific meaning. However, because of the discussed cognitive correlation between background on the one hand and temporal extension on the other, a language may exploit in the respective dependent clause only a subset of the paradigmatic options found in main clauses. An instructive case for such a situation is obviously Nkore-Kiga, in that this language favors in a background clause imperfective verb forms vis-a-vis non-imperfective ones. The preference for certain verb forms in the hypotactic context of simultaneity may eventually become conventionalized. Such an incipient type-2b pattern seems to be discernable in Kongo and Makua. As I have argued above, the more the marker in the dependent clause becomes functionally detached from its imperfective counterpart in the main clause, the more it becomes questionable to call it in the respective context imperfective, if there no longer exists an opposition to a non-imperfective.

Such a successively increasing separation between two instantiations of one and the same morpheme can be fostered by developments in both main and dependent clause. In main clauses, one can imagine the respective verb form to be subject to a meaning change that has no parallel in the dependent

clause.¹⁴ In the type of dependent clause discussed here, a development restricted to this context seems to be latent in principle. One can often observe that the relevant grammemes in the dependent clause eventually tend to give more information about the clause type than about some semantic characteristic of the state of affairs encoded in the dependent clause. As the latter is characterized as having an inherent bias toward imperfectivity, one can speak of the amalgamation of corresponding features existing in both the nuclear *predicate* and the higher-order *clause* constituent having the effect that the verb form is viewed as hypotactic by virtue of the erstwhile imperfective marker. If the taxis marker is subsequently subject to further changes as, e.g., an increasingly conventionalized association with a conditional function, the chance of becoming detached from its main-clause counterpart and of surviving in this context independently from processes in other clause domains again rises considerably. Thus, with an increasing specialization of a grammatical form in a given clause context, a pure type-2b language may arise.

If the cognate morpheme becomes lost in the main clause, the dependent clause counterpart can be completely reanalyzed as a predicate-internal subordinator or - in its specialized form - as a conditional marker. In this case, we have finally arrived at a pure type-3 language.

From a historical perspective, the exclusively hypotaxis-marking function found for a relevant grammeme in a type-3 language is a late developmental stage as regards the grammaticalization processes it has undergone. In particular, it is evidence for the general observation that was made, *inter alia*, in Bybee/Perkins/Pagliuca (1994:295f.):

„Since grammaticization is a continuous process and new grams are always developing along the major grammaticization paths, it is often the case that certain functions of older grams are being replaced by newly developed ones. ... What effects does this replacement process have on the meaning of the older grams?

In some cases the older grams are completely replaced and thereby lost from the language. In other cases they are restricted to special contexts, but their meaning remains unchanged. ...

More interesting from our perspective, however, are the cases ... of grams whose meaning appears to change due to the linguistic contexts to which

¹⁴ Given possibilities like this, it is not necessary to assume that the synchronic function of a relevant main clause morpheme (e.g. persistivity) must also have been the function of the marker at the stage when its taxis pendant developed.

they are restricted by newer developing grams. ... since new grammaticizations of tense and aspect tend to arise in main, asserted clauses, pre-existing tense and aspect forms tend to be preserved longer in subordinate clauses, especially those that are not asserted ... Since these old forms have so little semantic content of their own, if they survive, they are available to absorb the ... content of their context. ... Note that such cases differ from the more usual change by inference in that the meaning they are absorbing comes from the LINGUISTIC context, the context of the clause and its function in the sentence, more than from the general pragmatic context.

Even changes of this sort are highly constrained and in principle predictable. One constraint is that such radical meaning shifts will occur only in the very late stages of grammaticization, when the original meaning of the gram has so weakened as to be unable to resist infusion from the outside."

What the above authors have stated with respect to modal verb forms, can obviously be transferred to other categories as well - *inter alia* the imperfectives as treated in this paper. The more these elements digress from their erstwhile central meaning/function, the less original features (often stemming from their ultimate lexical source) will determine the grammatical behavior of a form and the more factors of the linguistic context may become relevant in further functional changes.

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Afrikanische Sprachen im Brennpunkt der Forschung

Linguistische Beiträge zum 12. Afrikanistentag
Berlin, 3. – 6. Oktober 1996

herausgegeben von

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1998c

RÜDIGER KÖPPE VERLAG · KÖLN