

ON THE ORGANIZATIONAL PROPERTIES OF BANTU T/A SYSTEMS*

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Abstract: In complex Bantu tense systems, tense marking is commonly analyzed in terms of relative temporal distance from the deictic center, typically the time of utterance (UT). The author proposes that this kind of strict linear approach is not satisfactory. Rather, the organization of the tense systems depends on the time scale involved, on the time region (proximal or distal), and/or on the time scope (contemporal or dissociated worlds).

1. Introduction

Bantu languages are well-known for their complex tense/aspect systems in which there are often multiple pasts and/or futures. These may range in number from one marker in the past or future to as many as five (e.g., past in Mituku D13 or future in Lunda L52). Although conventionally thought of as denoting simple linear temporal order away from utterance time, these systems should, rather, be considered to be organized in terms of three different temporal properties. That is, Bantu tense systems do not typically organize time marking as a strict linear sequence, but rather, do so in terms of (1) time scale involved (i.e., relative levels, or scaled units, such as hours, days, months), (2) time span (i.e., current, proximal, or distal time regions), or (3) time scope (i.e., separate mental worlds or domains). The first two fall under what will be labeled TENOR, the latter TENSE. Since TENSE is the traditional category, we will consider it first.

2. Tense relations

A timeline can be construed cognitively as a series of worlds arrayed linearly from the past into the future (Figure 1). One of these worlds constitutes the actual contemporal world in which speaker is interacting discursively with hearer; that is, it is the privileged domain in which the utterance occurs. This particular world in which the time of utterance is situated

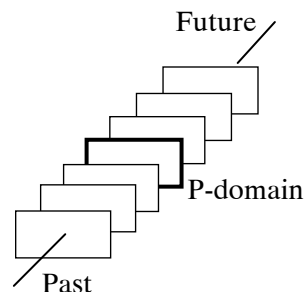


Figure 1. Possible worlds arrayed along a timeline

*I thank Myles Leitch (Dibole), David Odden (Kimatuumbi), and Kasombo Tshibanda (Kanincin) for discussion about tense marking in their languages of expertise.

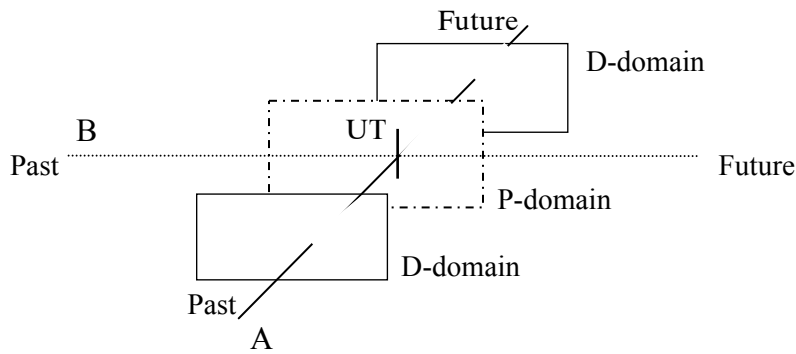


Figure 2. “Remote” D-domains

will be designated the P-domain, following Botne and Kershner (2008). Although there are an infinite number of worlds that could be described in the past and the future, each of which could be temporally situated via some adverbial expression, languages typically mark grammatically no more than a single world in the past and/or in the future.¹ This separate past or future world—the “expressed” world—denotes a disconnection of the discourse-narrated event from the speech context; that is, it is dissociated from the perceived “realis” of the speaker’s here-and-now at utterance time (UT). Hence, such a world will be referred to as a D-domain (Figure 2). The temporal relationship between UT in the P-domain and a situation in the D-domain is what is commonly labeled TENSE.

An example of Bantu tense-marking illustrating this type of organization is Kiswahili (G42). Each of the three domains has a distinct tense marker: *-Ø-* P-domain, *-li-* past D-domain, *-ta-* future D-domain (Fig. 3). It is not surprising that the tense marking for the P-domain is null, as the “here-and-now” is typically the default value. However, within the P-domain are marked two aspectual distinctions: *-me-* Perfect, *-na-* Imperfective. To express the same aspectual distinctions in a D-domain, a compound construction comprised of the verb *kuwa* ‘to be’ is necessary. Hence, to express the same aspectual distinctions in the past (with *-li-*), for example, one finds *SP-li-kuwa SP-me-B-a* ‘X had V-ed’ and *SP-li-kuwa SP-na-B-a* ‘X was V-ing’.

Grammatical marking of one or both D-domains constitutes one kind of remoteness. The critical point here is that a D-domain is temporally separate and isolated, i.e., dissociated, from the discourse context of utterance time, which is situated in the contemporaneous world of the P-domain. This organization in terms of tense relations, as illustrated by the case of Kiswahili, represents only one way in which Bantu languages are organized. A second is in terms of tenor relations.

¹ A few languages may mark a second D-domain in the past (or future), for example, Bamileke-Dschang (Botne & Kershner 2008).

Domain	Prefix
P-domain: Contemporaneous	-Ø- + Aspectual marking -me- Perfect -na- Imperfective
D-domain: Not Contemporaneous—Past	-li-
D-domain: Not Contemporaneous—Future	-ta-

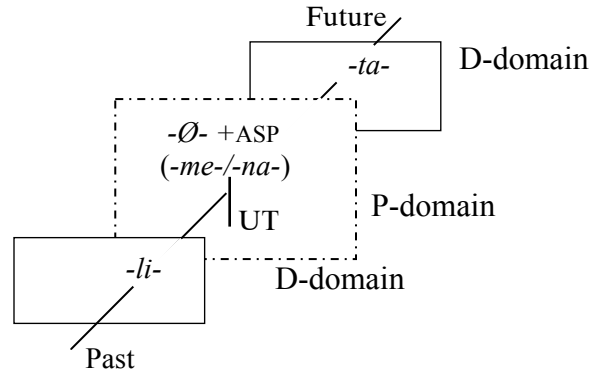


Figure 3. Tense marking and domains in Kiswahili

3. Tenor relations

Visualizing a timeline as a series of discrete worlds is one way of construing time; a second is to construe the timeline in terms of (adjoining) time regions. One language that illustrates this type of organization is Kimatuumbi (P13) (Figure 4). UT divides today into two sub-intervals, past (P1) and future (F1), designated Current Time Regions (CurTR). In contrast to these CurTRs are Distal Time Regions (DisTR), marked in Kimatuumbi by the prefix *-a-*. The past and future are indicated via suffix *-ite* and prefix *-luwa-*, respectively.

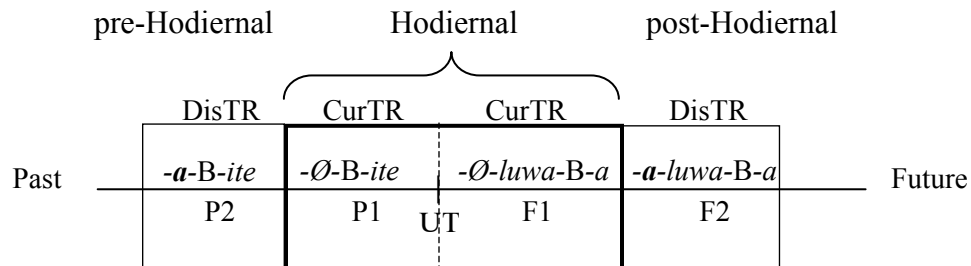


Figure 4. Kimatuumbi (P13) P-domain marking [Odden 1996, p.c.]

How does one determine whether a past such as P2 in Kimatuumbi is a tenor or tense relation? Consider the case of Kigiryama (E72) in this regard (Figure 5). There are two pasts and a future. However, the two pasts in Kigiryama can be analyzed differently from those in Kimatuumbi. P1, prefix *-dza-* (< ‘come’), “refers to events on the day of speaking but also to earlier events”, according to Nurse (2008a). In contrast, P2 *-á-* “refers to situations before today”. Hence, the two pasts overlap in their time spans. This, apparently is not the case in

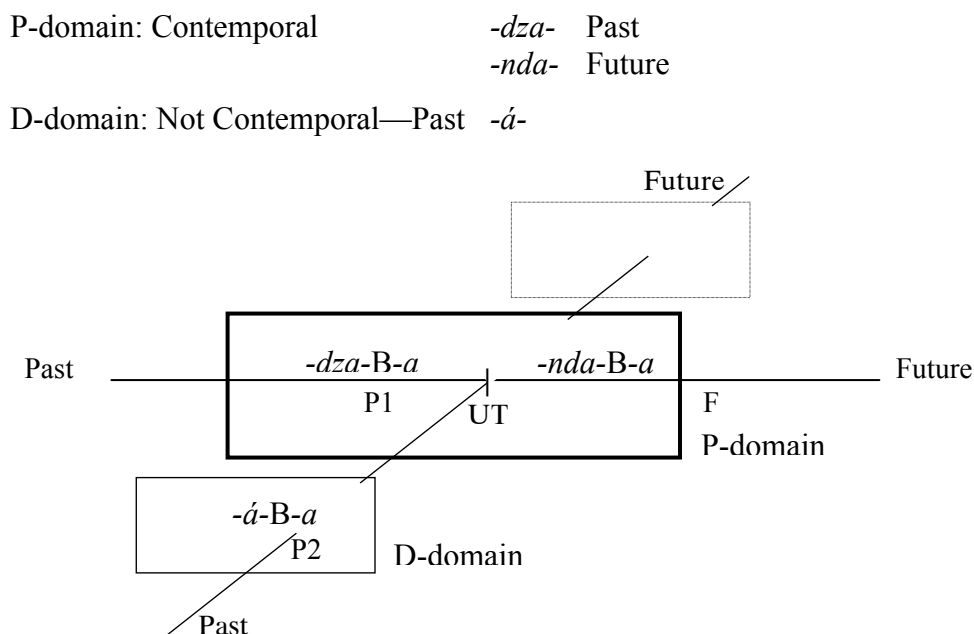


Figure 5. Kigiryama (E72) Tenor and tense marking [Nurse 2008a)]

Kimatuumbi. Thus, in Kigiryama, we can account for the overlap in ranges by designating *-dza-* as a past in the P-domain (implying more recent and current events), *-á-* as a past in the D-domain. Given an analysis of *-dza-* as a past in the P-domain, it seems reasonable to consider prefix *-nda-* (< ‘go’) to be its complementary counterpart in the P-domain. The D-domain future is, then, unmarked in Kigiryama.

A similar case is exemplified by Isizulu (S42), in which there are two futures, marked by the prefixes *-zo-* (F1) (< ‘come’) or *-yo-* (F2) (< ‘go’) These two overlap in their ranges of use, although F1 is typically considered more immediate and F2 more distal, F1 more certain, F2 less certain. These differences fall out naturally from an analysis of *-zo-* as denoting a future in the P-domain, *-yo-* a future in the D-domain (Figure 6). Assigning both to the P-domain does not account for these relative differences.

We can see, then, that the two perspectives on the timeline are complementary, and that both may be observed in the same language. This is further substantiated by the system in Kilangi (F33), which distinguishes three pasts and three futures (Figure 7). Stegen (2006) states that P1 is a perfective. This may very well be the case but it is, nevertheless, restricted, according to Stegen, to the immediate (Hodiernal) past; hence, it can be construed as marking a CurTR. P1 (hodiernal) and P2 (pre-hodiernal) share the *-a-* prefix and *-ire* perfective suffix, differing only in tone. In contrast, P3 differs formally in having suffix *-a* rather than the perfective suffix *-ire*.

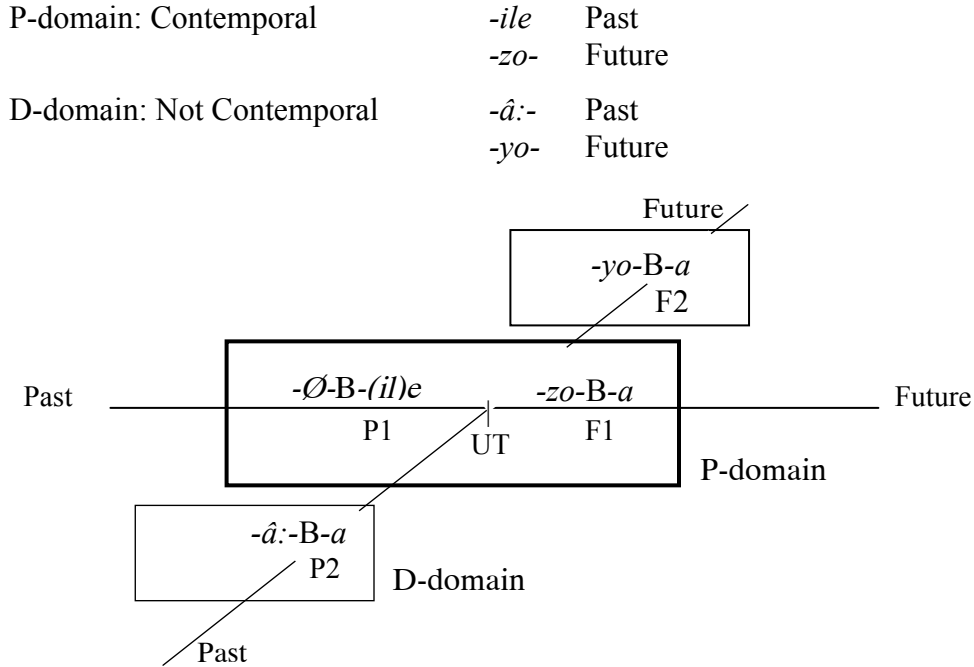


Figure 6. Isizulu (S42) Tenor and tense marking [Taljaard & Bosch 1988]

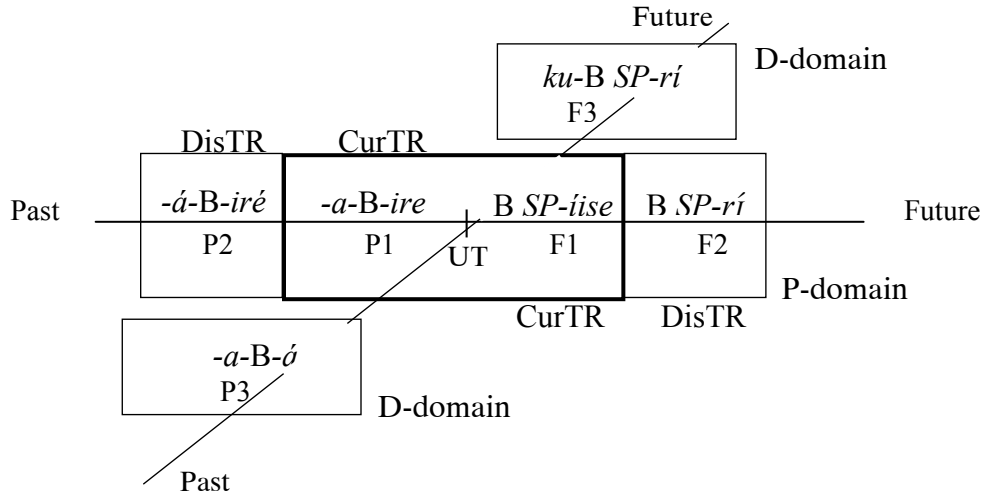


Figure 7. Kilangi (F33) Tenor and tense marking [Stegen 2006, Nurse 2008a]

The F1 and F2 futures—CurTR and DisTR, respectively—differ in final suffix, *-iise* vs. *-rí*. F3 differs from F2 in having prefix *ku-*. More significantly, they differ semantically: F2 is certain, F3 uncertain. This would be expected with P- vs D-domain distinctions; events situated in the P-domain are more certain to occur than are dissociated events in the D-domain, in the mind of the speaker. This distinction is reinforced by Stegen's examples contrasting the F2 and F3 futures with the verb *lólá* 'marry'. Use of F2 implies that a date has been set for the marriage, use of F3 that marriage may be in the future, but the subject does not yet even have a fiancée (Stegen Ibid.)

The significant point here is this: whereas TENSE designates temporal relations holding between UT and the time of the event across domains, i.e., when the event is situated in a D-domain, the complementary perspective of time regions denotes relations within a domain, which are designated TENOR relations. The latter are typically more certain, more concrete.

In sum, then, the P-domain is often organized in terms of time regions adjoining the deictic center, one or two in the past and one or two in the future. The parallel nature of this type of organization is often realized in parallel forms. However, this organization into current and distal time regions represents only one facet of how time can be construed in the P-domain; time can also be scaled.

4. Time scales

In the analysis of time regions in the P-domain, we have seen that they are typically divided into Current and Distal TRs. A similar, but more complex, organization arises when time scaling becomes a factor. In Kiyaka (H31), for example, we find the same kind of organization viewed in Kilangi, but the time scale is relative, not absolute. Consider just the past forms in the language. How P1 or P2 are interpreted temporally depends on the time scale involved. That is, the tenor markers do not have an absolute temporal value—today vs. before today, for example—but rather, depending on the time scale implied in context, a construal opposing “this current unit T” to “that preceding unit T”, such as “today” vs. “yesterday”, or “this year” vs. “last year” (Figure 8). One consequence of this is that an activity that occurred “last year” could be marked either with *-a-B-idi*, placing it in the contemporal P-domain, or with *-a-B-á*, situating it in the D-domain past, since these two overlap in their ranges. The speaker would have a nuanced option in time reference selected.

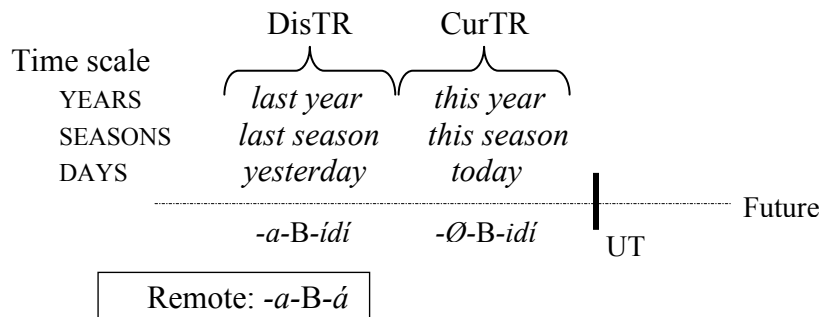


Figure 8. Levels of scaling of time units in Kiyaka (H31) (Van den Eynde 1968)

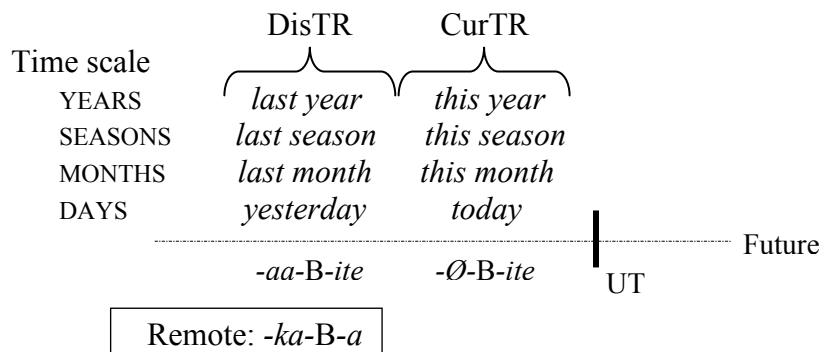


Figure 9. Levels of scaling of time units in Chindali (Botne 2007)

The same pattern is found in Chindali (M301) (Figure 9). Note, in particular, the similarity in forms for the CurTR and DisTR in the two languages, but the significant difference in D-domain marking, further supporting the claim that the D-domain represents a conceptually different entity from the P-domain.

Time scaling is found not only among past forms, but also among futures. Thus, a similar pattern of scaling can be observed in the futures of Ruwund (L53) (Figure 10). In this case, prefixes *-ku-* and *-ka-* refer to current and distal time regions, respectively. As with Kiyaka and Chindali, construal of time scale depends on the context of use. A periphrastic construction is employed to refer to a remote future D-domain.

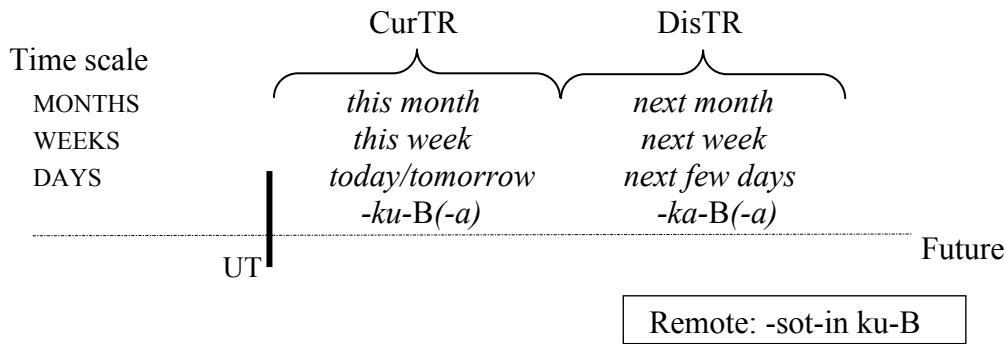


Figure 10. Ruwund (L53) futures (Nash 1992)

In Kiyaka, Chindali, and Ruwund, the time scales are subsumed morphologically under the same forms, making the interpretation of each form relative to the context in which it is used. In some languages, however, different time scales are marked with different forms. Consider the case of Kanincin (L53). There are five past constructions to account for, shown in Figure 11. The Current and Distal time regions are sub-divided into different time scales:

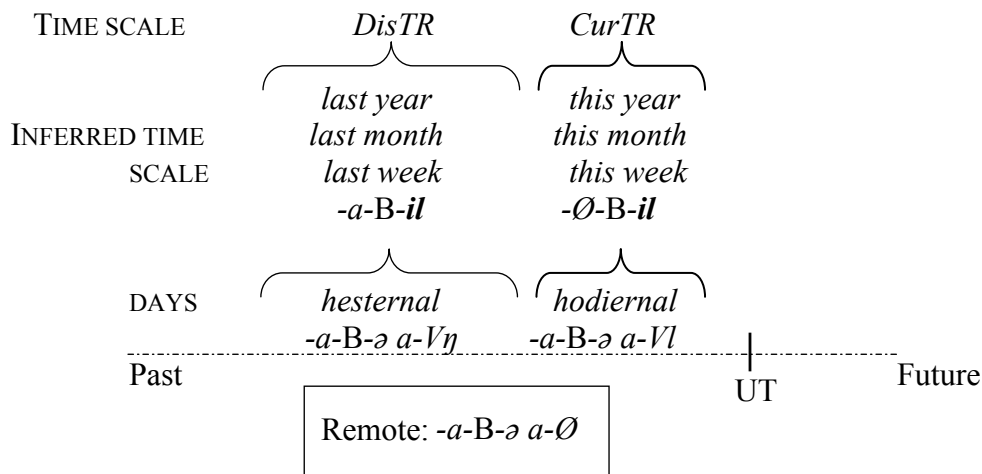


Figure 11. Kanincin (L53) pasts.[Kasombo Tshibanda 2009, p.c.]

DAYS VS. GREATER TIME UNITS. At the day level the two regions share the form *-a-B-a*, being differentiated by the final suffix of the periphrastic construction. Suffix *-il* on the verb base denotes the greater time scales, at which the particular time unit is contextually determined.

5. Scaling vs Dissociation

As we have seen above, there are two ways in which a past can be construed as “remote”, either as a DisTR at the greatest time scale in the P-domain, or as a marker of a past D-domain. Which analysis is appropriate for a given T/A system may not always be readily apparent. Dibole (C101) (Leitch 2003) presents such a case. Dibole has four forms that can refer to past situations. One form, *-Ø-B-í*, Leitch (2003:404) labels “Near past completive aspect”. This form indicates a time earlier in the day for activities, or a present state for psychological or experiential verbs (e.g., ‘see’, ‘know’, ‘want’, etc.). Its counterpart, *-Ø-B-ak-í*, indicates a time even earlier the same day. In contrast, *-á-B-á* situates an event yesterday or further back, its counterpart, *-á-B-ak-á*, even further back. Either a scaled analysis, as in Figure 12a, where *-ak-* denotes DisTR, or a dissociated analysis, as in Figure 12b, where *-ak-* denotes a more distal past within a domain, seems possible.

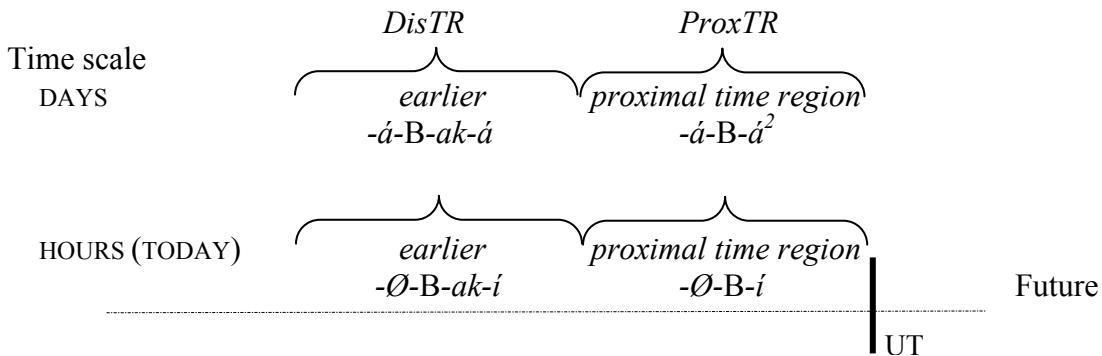


Figure 12a. Dibole (C101) scaled tenors, P-domain

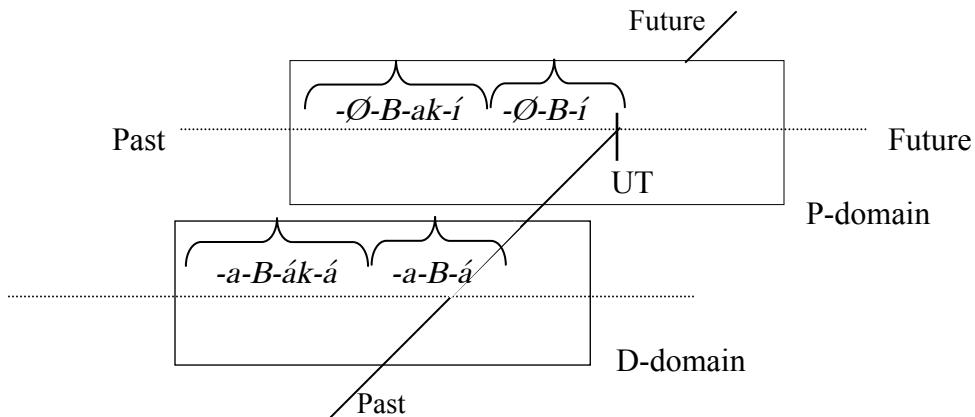


Figure 12b. Dibole (C101) tenors and tense; dissociated D-domain

² The final vowel in the pre-Hodiernal forms harmonizes with the preceding vowel.

Two factors lead me to conclude that the dissociated analysis is the appropriate one for Dibole. First, there is only one negative form for the pre-hodiernal forms, incorporating the distal suffix *-ak-* (Figure 13). Leitch provides no explanation for this. A dissociated domain analysis offers an explanation: When negating a situation in the D-domain there is less need to distinguish time intervals within that domain than there is in the contemporaneous domain. Rather, one is negating that a particular situation occurred at all in that domain. The distal form with *-ak-* is appropriate because, indeed, the D-domain is remote.

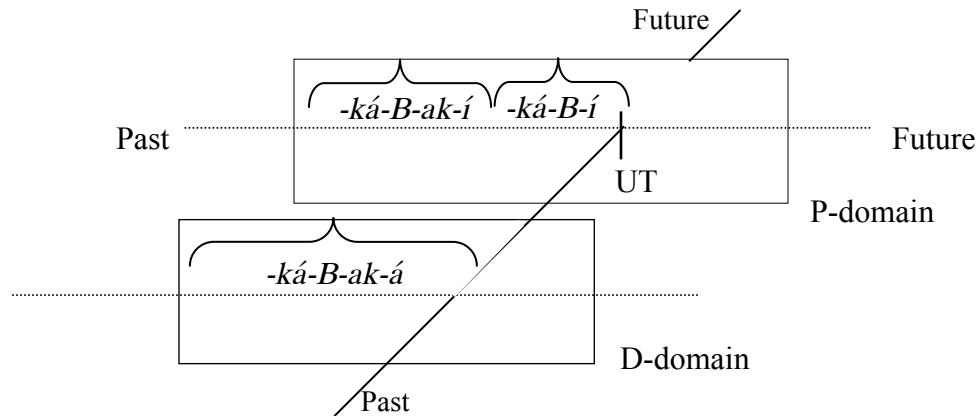


Figure 13. Dibole negated tenor/tense forms

Second, the verb ‘be’ occurs in only two forms, present and past. The former shows “no evidence of the presence of suffixal *-í*” (Leitch 2003:405); the latter includes a phonological variant of distal *-ak-* (*-ék-*) in addition to prefix *-á-* of the pre-hodiernal forms, as a comparison of forms in Table 1 shows. Again, this supports a division into two domains, rather than tenor or scaled time in the P-domain.

	Present	Past
1S	<i>ne</i>	<i>ná'éké</i>
2S	<i>we</i>	<i>wá'éké</i>
3S	<i>e</i>	<i>á'éké</i>

Table 1. Present and past forms of ‘be’ in Dibole [Leitch 2003]

The analysis of Dibole can be compared with that of Lingala (C36d), a closely related language with very similar past forms; they differ in that Lingala does not make a distinction via prefixes on the verb—hence, no prefixal *-á-*—as does Dibole. Although the forms are otherwise identical, they are organized differently. In Lingala, both *-Ø-B-í* and *-Ø-B-á* have “perfect” interpretations, according to Brisard and Meeuwis (2009), meaning they indicate some relevance at UT.³ The latter also indicates that the situation occurred at a significant temporal distance or its state has endured for a considerable time. This use suggests that they refer to time regions in the contemporaneous P-domain (Figure 14). In contrast, insertion of

³ Although data and general use are taken from Brisard and Meeuwis (2009), the analysis I propose here is not theirs, and is one they may not subscribe to.

suffixal *-ák-* (1) in both cases marks them as pasts, “entirely preceding the ground” (i.e., UT?) (Brisard & Meeuwis 2009:38).

- (1) a. *a-yéb-á ngái*
 3S-know-DIS 1S
 ‘s/he knows/has known me’ (since long ago)
- b. *a-yéb-ák-á ngái*
 3S-know-D-DIS 1S
 ‘s/he knew me’ (long ago)

Thus, in Lingala, one would have to argue that the suffix *-ák-* marks the past D-domain, which was marked by prefixal *-á-* in Dibole. Suffix *-ak-* in Dibole marks distal time regions, which are marked by suffix *-á* in Lingala. What is clear is that the semantics leads to the different analyses of very similar forms in the two languages.

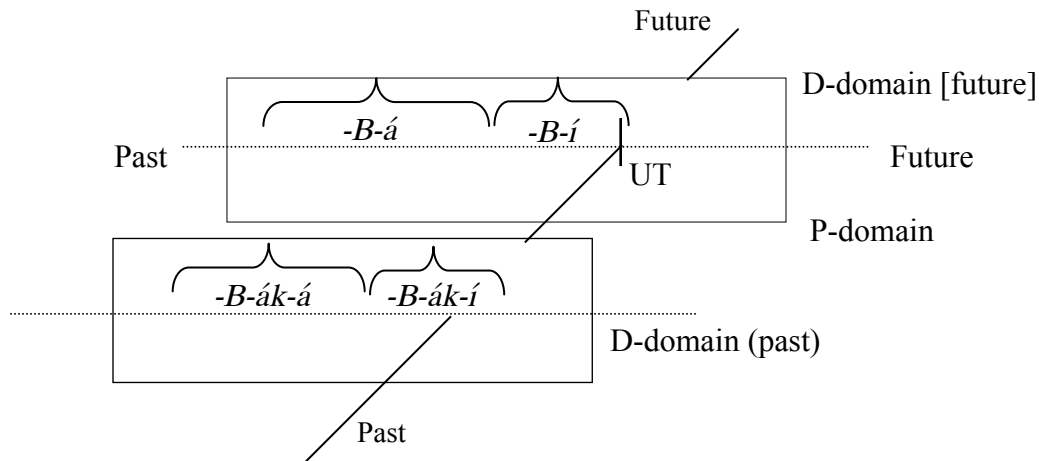


Figure 14. Lingala tense/aspect organization

6. Motivation for change

The dissociation model accounts not only for synchronic phenomena observed in Bantu languages, but also for (at least some) changes that have occurred in the T/A systems. The Nyambwa dialect of Chigogo (G11), for example, appears to be organized in terms of scaled regions (Figure 15), just as several languages examined above. There are five future forms in Chigogo (Nurse 2008, 1979). F1 refers to an immediate future today, F2 to tomorrow up to a few days. Nurse notes that F3 covers F1, F2, and beyond. This is what one would expect with time scaling. Each marker indicates the time region within which the event is to occur, hence, F1 indicates within the region TODAY, F2 within a few days after today (= within a week??). Assuming F3 at a higher time scale, say a month, it naturally includes within its scope both F1 and F2. What the speaker would be communicating is the larger time scale involved.

The morphology correlates with the semantics; *-o-* denotes a greater time scale, *-la-/-lo-* a more distal time region. Nurse’s (1979) informant told him that the *-a-lá-B-a* form, listed here under F4, was “old-fashioned and synonymous” with *o-ló-B-a*. This is not so surprising

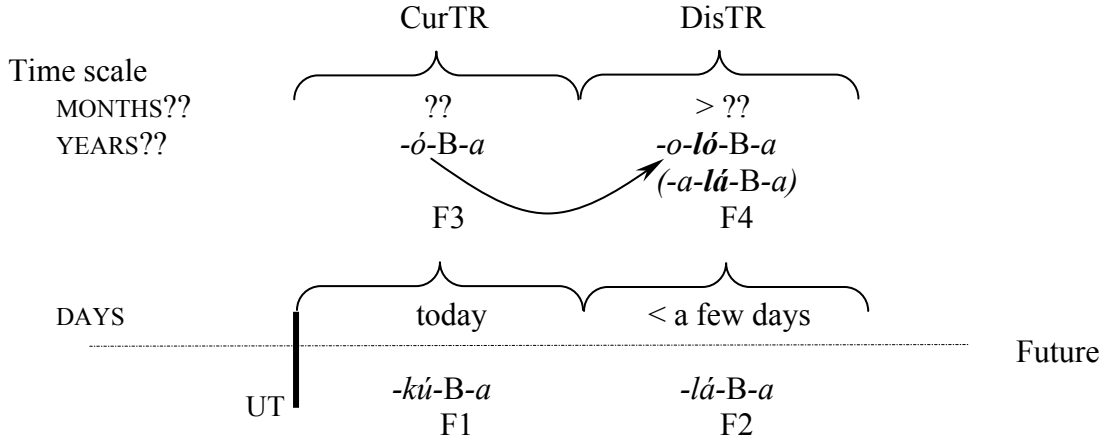


Figure 15. Chigogo (G11) scaled tenors [Nurse 2008a, 1979]

really; if time-scaling underlies the system cognitively, then *-a-* can be seen to have been replaced by *-o-*, which would then clearly mark the greater time scale, a change motivated by the organization of the system. That is, prefix *-o-*, marking F3 was (re-)interpreted as marking greater time scale and, hence, was imposed on the *-a-lá-B-a* form (i.e., *-o-* replaced *-a-*), a process of vowel harmonizing producing *o-ló-*.

A second, and similar, example of such change comes from Kiyombe (H16), in which we find competing forms in the past. Following de Clerq (1921) and Mertens (n.d.), it appears that Kiyombe had marked five distinct pasts, with P4 exhibiting competing forms (Table 2).

P1	$-\emptyset[B]^\emptyset -id]^\emptyset -i$	earlier today
P2	$-\emptyset[B]^{H2} -id]^\emptyset -i$	yesterday
P3	$-\emptyset[B]^\emptyset -X]^{H3} -a$	< few months
P4a	$^{-H1}[B]^{H2} -X]^{H3} -a$	> few months
b	$^{-H1}[B]^{H2} -id]^{H3} -i$	
P5	<i>-yika-B-a</i>	“longtemps”

Table 2. Kiyombe (H16) [Data: de Clerq 1921; Mertens n.d.]

Four of the pasts denote cross-cutting differences in current vs. distal time regions and different time scales (days vs. months) that contrast with a fifth, dissociated remote past that is markedly different in form (Figure 16). What stands out are the competing forms in the DisTR (P4) at the scale of months. There we see that one form— $^{-H1}[B]^{H2} -X]^{H3} -a$ —contrasts minimally with its CurTR counterpart in having a second H_2 on the base. The other form— $^{-H1}[B]^{H2} -id]^{H3} -i$ —contrasts minimally instead with the DisTR form P2 at the lesser DAY time-scale, again differing in tone, having an H_1 and H_3 that the other lacks. It seems likely that the latter is the innovated form, being motivated by the fact that both P2 and P4 are distal. Thus, the form used to express P4 depends on whether speakers are contrasting it with P3 or with P2. This change further supports the proposed hypothesis that this cognitive framework, based on cross-cutting time regions and time scales, invites speakers to align them formally, consequently, in some instances, leading to competing forms in one “cell”.

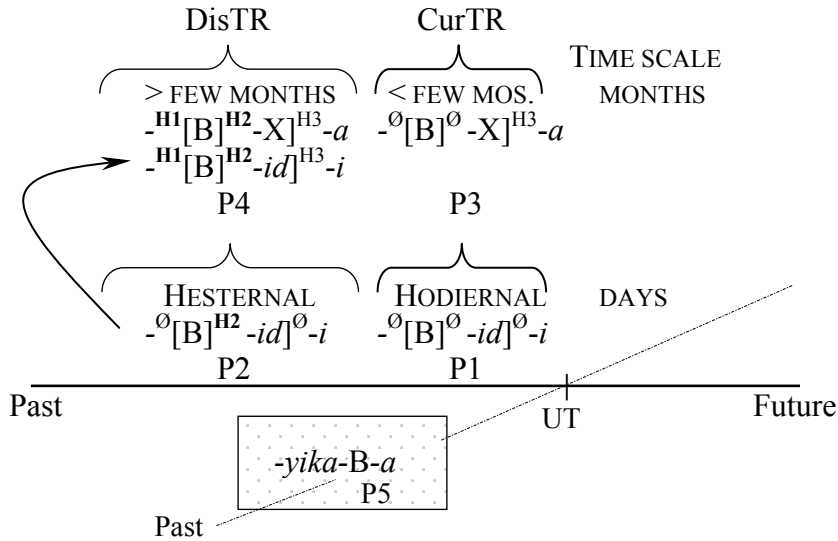


Figure 16. Kiyombe pasts scaled (de Clerq 1921; Mertens n.d.)

7. Conclusion

As stated in the introduction, tense/aspect systems in many Bantu languages, if not all, are organized only partly in linear fashion. One major parameter involved is perspective on time, whether or not the language marks a dissociated D-domain, either past or future or both. If so, the distinction may also have consequences for other grammatical forms, for example, negatives in the D-domains may differ from those in the P-domain.

Another factor in the organization is the division of the contemporal past or future into current (or proximal) and distal time regions. These regions potentially interact with time scales, a third factor. In some languages, the same two forms may be used for any time scale, contrasting current and distal temporal intervals (e.g., ‘this year’ vs. ‘last year’). In others, there may be different morphological marking at different levels.

The proposed model also provides motivated grounds for at least some changes in forms that we find. This may occur especially in the more distal/greater time scale “cell”, which contrasts in two ways, in temporal distance from the deictic center and in time scale. Furthermore, we have seen some languages that were comparable in P-domain time regions, but differed in D-domain marking, suggesting that this may innovate separately from the others.

Analysis of T/A systems in Bantu and perhaps all languages, then, needs to take into account the differences in temporal properties and explicitly determine the time scales at which various verb forms apply. Simply saying a tense is “recent” or “remote” is not sufficient; one needs to determine the domain, time region, and time scale to which it applies.

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