

THREE PROPERTIES OF TEMPORAL ORGANIZATION IN 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. The author shows that this kind of strict linear approach is not always satisfactory. Rather, the organization of the tense systems often depends on the time scale involved, on the time unit (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 D13¹ or future in Lunda L52). Although conventionally thought of as referring to temporal linear order away from utterance time, these systems are more often 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, adjoining, or distal time units), 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

Visualize a timeline as a series of worlds as one progresses from the past into the future. One of these worlds constitutes the actual contemporal world in which speaker is interacting discursively with hearer; that is, it is the privileged world in which the utterance occurs (Figure 1). This particular world in which the time of utterance is situated will be designated the P-domain, following Botne & Kershner (2008). Although there are an infinite number of worlds in the past and the future, each of which could be temporally situated via an adverbial element, languages typically mark grammatically no more than a single world in the past and/or in the future.² This past or future world is separate and isolated from the speaker's point in time; that is, it is dissociated from Utterance Time (UT). Hence, such a domain will be referred to as a D-domain (Figure 2). The temporal relationship between UT in the P-domain and a D-domain is what is to be labeled TENSE.

* I would like to thank Lee Bickmore (Cilungu), Nancy Kula (Chibemba), Myles Leitch (Dibole), and David Odden (Kimatuumbi) for discussion about tense marking in their languages of expertise.

¹ Letter+number are used by Bantuists as a reference system to designate geographical zone and specific language within a zone.

² A few languages mark a second D-domain in the past (or future), for example, French (the *surcomposée*) and Bamileke-Dschang (Botne & Kershner, 2008).

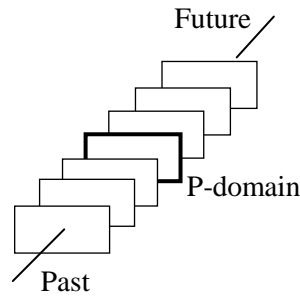


Figure 1. Possible worlds arrayed along a timeline

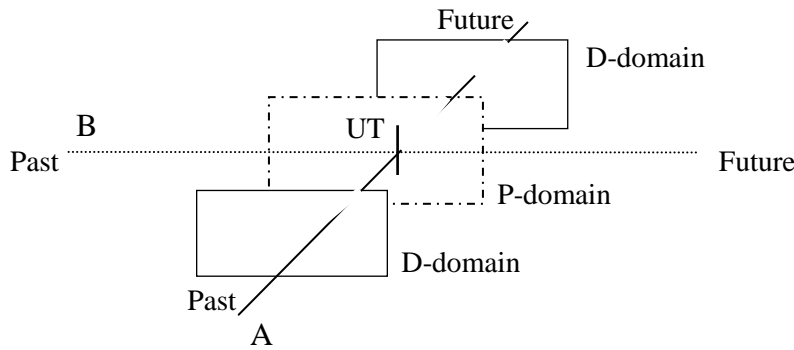


Figure 2. “Remote” D-domains

As the schema illustrates, time may be construed not only as extending across domains (Fig. 1), but also as extending through them (Fig. 2). Hence, there are two possible construals of “pasts” and “futures”, which will emerge as discussion progresses. As an example of Remote past domain marking, consider, briefly, the case of English *-D*. We can posit that it marks a past in the D-domain for two reasons. First, it marks two dissociated functions: past and unreal (e.g., *if Rob worked harder, he would finish on time*). In terms of the three basic deictic categories related to verb form—space, time, and realis—the default values are here, contemporal, and real, respectively, as in Table (1). Dissociated values are *not* here, *not* contemporal (either future or past), and *not* real (unreal or irrealis). English *-D* marks both not contemporal: past and not real: unreal (dotted box in Table 1), depending on context.

	<i>Default</i>	<i>Dissociated</i>
<i>Space</i>	Here	Not here
<i>Time</i>	Contemporal	Not contemporal: Future Not contemporal: Past
<i>Realis</i>	Real	Not real: unreal Not real: irrealis

Table 1. Deixis and dissociated domains [Botne & Kershner, 2008]

Second, the past in the P-domain is indicated by the null or bare form (but 3rd singular *-s*) of the verb, traditionally called the “historical present” (e.g., *yesterday, Rob works all morning, but doesn’t finish the job*), or by the present perfect (paralleled by the past perfect in the D-domain).

An example of Bantu tense-marking illustrating this type of organization is Kiswahili (G42). Each of the three domains has a distinct tense marker: $-\emptyset-$ P-domain, *-li-* past D-domain, *-ta-* future D-domain (Fig. 3). 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. In the past (with *-li-*), for example, there are *SP-li-kuwa SP-me-B-a* ‘X had V-ed’ and *SP-li-kuwa SP-na-B-a* ‘X was V-ing’.

Domain	Prefix
P-domain: Contemporaneous	$-\emptyset-$ + Aspectual marking <i>-me-</i> Perfect <i>-na-</i> Imperfective
D-domain: Not Contemporaneous—Past	<i>-li-</i>
D-domain: Not Contemporaneous—Future	<i>-ta-</i>

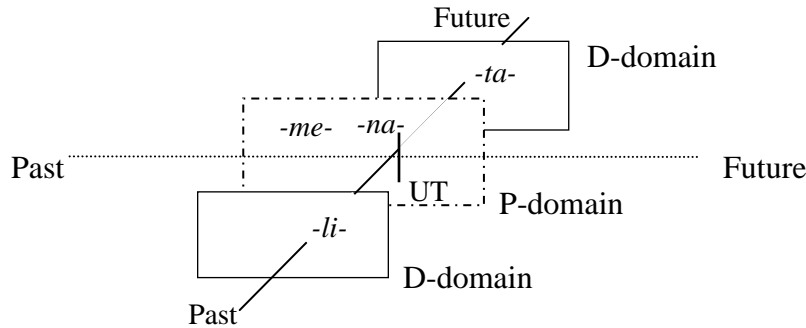


Figure 3. Tense marking and domains in Kiswahili

Like Kiswahili, Mokpwe (A22) also marks tense in remote D-domains (Figure 4). Of note in Mokpwe is that overt tense prefixes occur only in D-domains, opposed to a null prefix in P-domain constructions. Furthermore, the negative prefix in the D-domains is *-zi-*, but *-za-* in the P-domain. Time units (TU) in the P-domain will be discussed in the next section.³

Many other Bantu languages also mark both past and future D-domains. Some examples are listed in Table 2. A representative description is that describing the remote past in Kiyaka (H31). Van den Eynde (1968) states that the remote past “exprime une action qui a eu lieu ... dans une période qui est considérée comme n’ayant plus aucun lien avec l’actualité” (p. 50),

³ Abbreviations

AdjTU	adjoining time unit	F1, etc.	future one, ...	TU	time unit
B	verb base	P1, etc.	past one, ...	UT	utterance time
CurTU	current time unit	SP	subject prefix	V	harmonizing vowel
DisTU	distal time unit	TEN	tense or tenor		

P-domain: Contemporaneous	Prefix	Suffix	
	-Ø-	-éá-i	pre-Hodiernal
		-î	Perfective (Immediate)
		-a	Non-past
D-domain: Not Contemporaneous—Past	-ma-	-á	pre-Hodiernal
D-domain: Not Contemporaneous—Future	-oô-	-a	Indefinite future

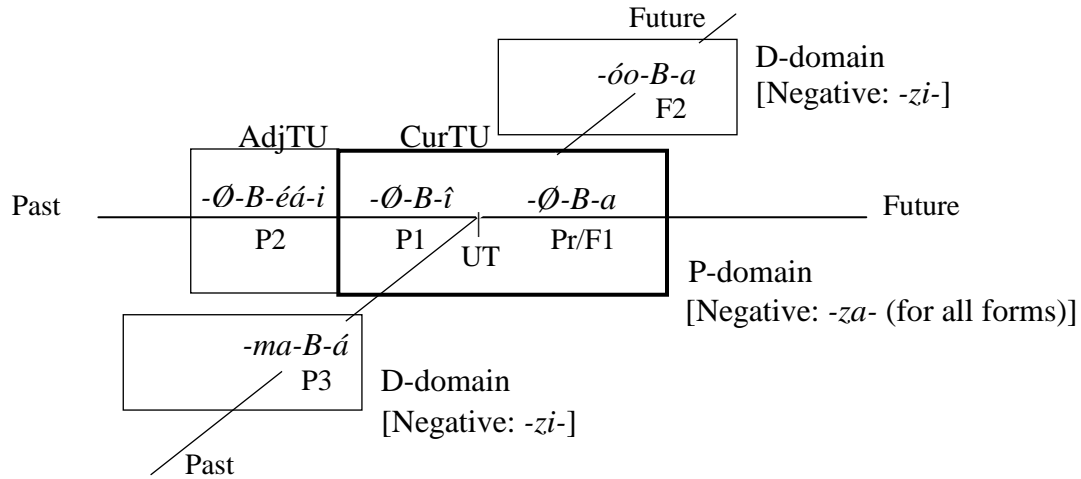


Figure 4. Mokpwe (Bakweri) (A22) Tenor and tense marking [Marlo & Odden, 2007; Marlo, p.c.; Kagaya, 1992; Hawkinson, 1986] ⁴

while the remote future “exprime que l’action est destinée à se réaliser dans un avenir non déterminé” (p. 54).

A few languages mark the past and future D-domains in the same or very similar manner, a sampling of which is provided in Table 3. For example, in Gimbala (H41), they both share the prefixal form *-ga-*, but differ in tone, High in the past, Low in the future, while in Chindali they share prefix *-ka-* but differ in final vowel, *-a* for the past, *-e* for the future.

However, not all languages mark both domains. Some mark one domain or the other, but not both. Some examples of these are shown in Table 4.

A representative example is Kigiryama (E72), which marks only the past D-domain (Fig. 5). Past and future in the P-domain are marked in parallel: past *-dza-* (< ‘come’), future *-nda-* (< ‘go’).

⁴ Data for this study have been taken from a variety of grammars and, in some instances, from personal communication with authors or speakers, and I gratefully acknowledge their contributions. One should not infer that any of the individuals whose work I consulted necessarily agree with the interpretation(s) I have accorded the data. The analyses, themselves, should be considered provisional and exploratory, as the discovery of more detailed data in any of the languages may lead to revised analysis.

Language	Past D-domain	Future D-domain	Source ⁵
Mokpwe (A22)	<i>-ma-B-á</i>	<i>-oô-B-a</i>	Marlo & Odden, 2007
Tunen (A44)	<i>lɛ</i>	<i>ɲɔ</i>	Dugast, 1971
Mpongwe (B11a)	<i>a-B-í</i>	<i>bé B-a</i>	*Tessieres, 1957
Nzebi (B52)	<i>-∅-B-V</i>	<i>ni-SP-∅-B-a</i>	*Marchal-Nasse, 1989
Ruhaya (JE22)	<i>-ka-B-a</i>	<i>-ri-B-a</i>	Muzale, 1998
Lubukusu (JE31c)	<i>-a-B-á</i>	<i>-li-B-a</i>	*Mutonyi, 1996
Bushoong (C83)	<i>-B-dy´</i>	<i>-B-ká-B</i>	Vansina, 1959
Kiyaka (H31)	<i>-a-B-á</i>	<i>B SP-B</i>	Van den Eynde, 1968
Kilangi (F33)	<i>-á-B-á</i>	<i>B SP- rí</i>	Stegen, 2006

Table 2. Some Bantu languages exhibiting tense marking of both D-domains

Language	Past D-domain	Future D-domain	Source
Ewondo (A72a)	<i>-ngá-</i>	<i>-ngá-</i>	Redden, 1979
Gimbala (H41)	<i>-gá-B-a</i>	<i>-ga-B-a</i>	Ndolo, 1972
Chindali (M301)	<i>-ka-B-a</i>	<i>-ka-B-e</i>	Botne, 2007
Ríkpa? (A53)	<i>-∅-B-ga</i>	<i>-∅-B-í-gǎ´</i>	Guarisma, 2003
Nugunu (A62)	<i>-m-ba-</i>	<i>-n-ga-</i>	Gerhardt, 1989
Kisuku (H32)	<i>-´a-B-í</i>	<i>-´a-B-a</i>	*Piper, 1977
Kota (B25)	<i>-á-B-á-sá</i>	<i>-é-B-ak-a-sá</i>	*Piron, 1990

Table 3. Languages marking past and future D-domains in similar manner

Language	Past D-domain	Future D-domain	Source
Mituku (D13)	<i>(-a-)B-ílí</i>	—	Stappers, 1973
Kõmɔ (D23)	<i>-tɔ-B-í</i>	—	Harries, 1958
Kigiryama (E72)	<i>-á-B-a</i>	—	Nurse, 2008a
Kidawida (E74a)	<i>-edé-B-a</i>	—	*Maynard, 1907
Kinyaturu (F32)	<i>-a-B-íé</i>	—	Olson, 1964
Shinkoya (L62)	<i>-á-B-ile</i>	—	Yukawa, 1987b
Bobangi (C32)	—	<i>-kó-B-á</i>	Whitehead, 1964
Kivunjo (E62b)	—	<i>-e-B-a</i>	Moshi, 1994
Kihehe (G62)	—	<i>sá:-SP-∅-B-a</i>	Nurse, 1979
Gikwezo (L13)	—	<i>ma-SP-∅-B-a</i>	Forges, 1983

Table 4. Languages marking only one D-domain

⁵ Sources listed provided the primary data. Those with asterisks I was unable to consult directly, instead relying on data from those sources as listed in Nurse (2008a).

In Sibhende, we find a similar division (Figure 7), although apparently they are restricted semantically to hodiernal and non-hodiernal readings (Nurse, 2008a). Past is marked by the prefix *-a-*, future by *-lo:-*. Pre- and post-hodiernal are both marked by *-ká-*. Because it apparently does not denote the comparable adjoining time unit, I have labeled the adjoining units Distal Time Units (DisTU). There are no forms marking remote D-domains. A similar situation appears to hold for Kimatuumbi (P13). Here, *-a-* marks the distal TU, *-Ø-* the current TU (Figure 8).

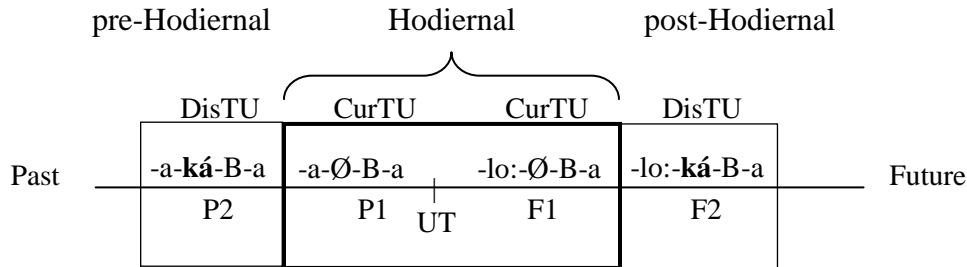


Figure 7. Sibhende (F12) P-domain marking [Nurse 2008]

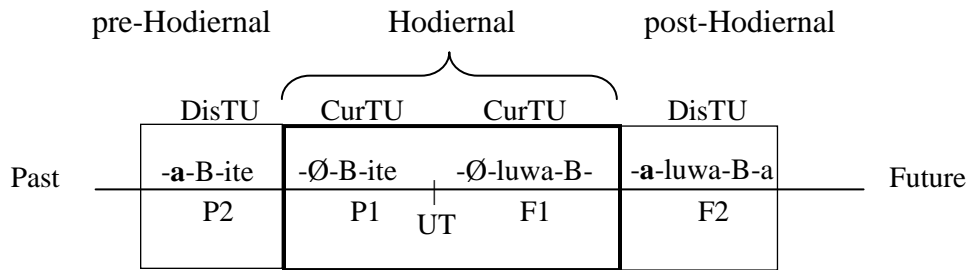


Figure 8. Kimatuumbi (P13) P-domain marking [Odden 1996, p.c.]

More complex cases are those of Shinkoya (L62) and Gikwezo (L13) (Figures 9 and 10, respectively), which mark both tense relations (D-domains) and tenor relations (CurTU and AdjTU/DisTU). Like Sibhende and Kimatuumbi, Shinkoya divides the P-domain into Current and Distal time units, current referring to today, distal to before or after today. In addition, Shinkoya has a remote past tense (P3) that marks the D-domain, though not a remote future marker. P2 and P3 overlap in range, as Yukawa (1987b:141) states that P2 can refer to situations long ago if they have some relevance at UT, while P3 typically refers to situations occurring more than a month ago. Thus, the same situation could be marked with either P2 or P3 depending on whether or not it is perceived by the speaker to be relevant or dissociated with respect to UT.

Gikwezo, though similar in many respects, exhibits some key differences. Future is not sub-divided in the P-domain as it is in Sibhende and Kimatuumbi. Rather, only the current time unit of now/later in the day is marked. In the past, Gikwezo distinguishes Current and Adjoining time units, rather than current and distal, as in Shinkoya, Kimatuumbi, and Sibhende. In contrast with Shinkoya, Gikwezo marks the future D-domain (*ma-*), and not the past D-domain. Past time reference is relative; the *-á-B-a* form indicates that a situation has occurred within the current time unit. The two forms *-á-B-i* and *-á-B-ile* both appear to refer

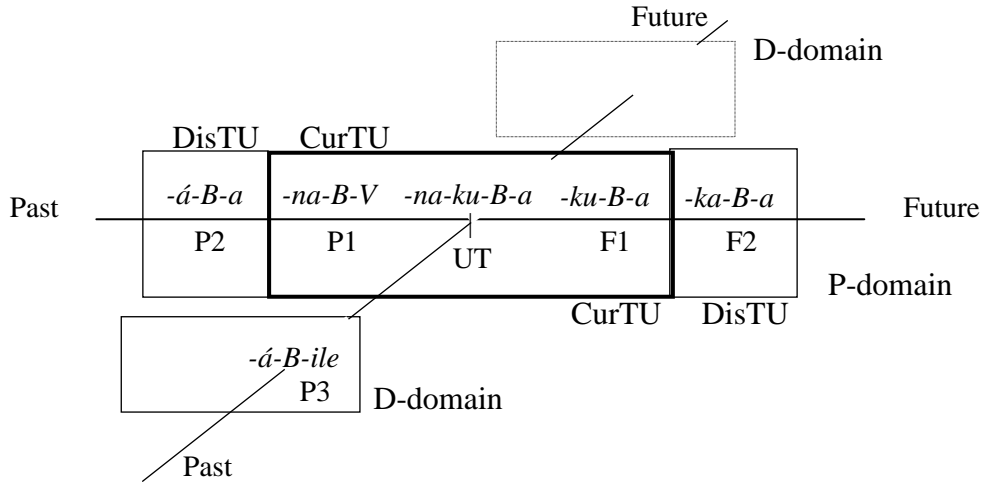


Figure 9. Shinkoya (L62) tenor and tense marking [Yukaya, 1987]

to an adjoining time unit, but at different time scales. Forges (1983:291) states that *-á-B-i* is used for situations occurring one day or one week away; in addition, she lists an example with “morning” (p. 429). What this suggests is that this form is used for situations occurring in the adjoining time unit, if it is earlier in the day, yesterday, or last week. This contrasts with *-á-B-ile*, which, Forges (Ibid. 293) states, refers to situations that occurred last month or last year. Thus, the two seem to differ in time scale at which they are appropriately used. This point will be addressed in greater detail in the next section on time scales.

More complex still is Kilangi (F33), which marks both past and future tenor relations in the P-domain and tense relations across domains (Figure 11). Stegen (2006) states that P1 is a perfective. Undoubtedly, this is the case, but it is restricted, according to Stegen, to the immediate (Hodiernal) past; hence, it can be construed as a Hodiernal past. P1 (hodiernal) and P2 (pre-hodiernal) share the *-a-* prefix and *-ire* perfective suffix, differing only in tone.

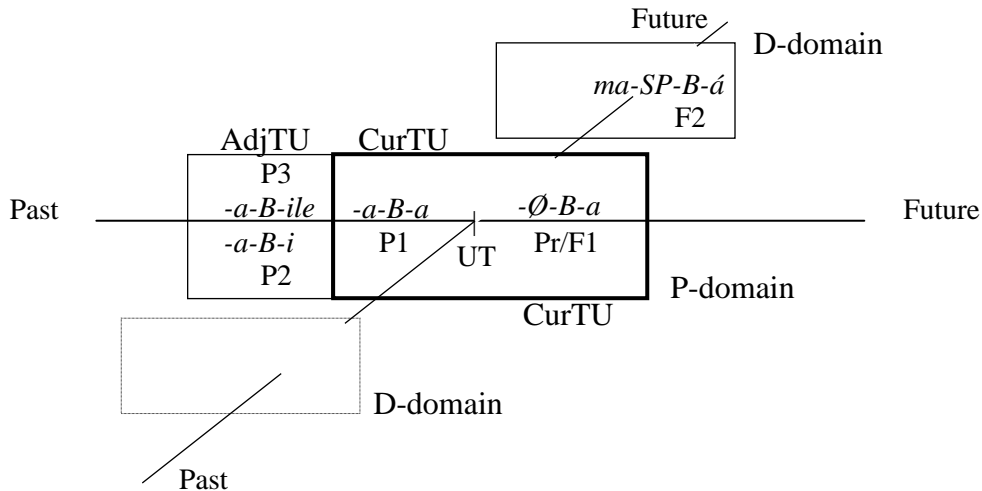


Figure 10. Gikwezo (L13) tenor and tense marking [Forges, 1983; Nurse, 2008a]

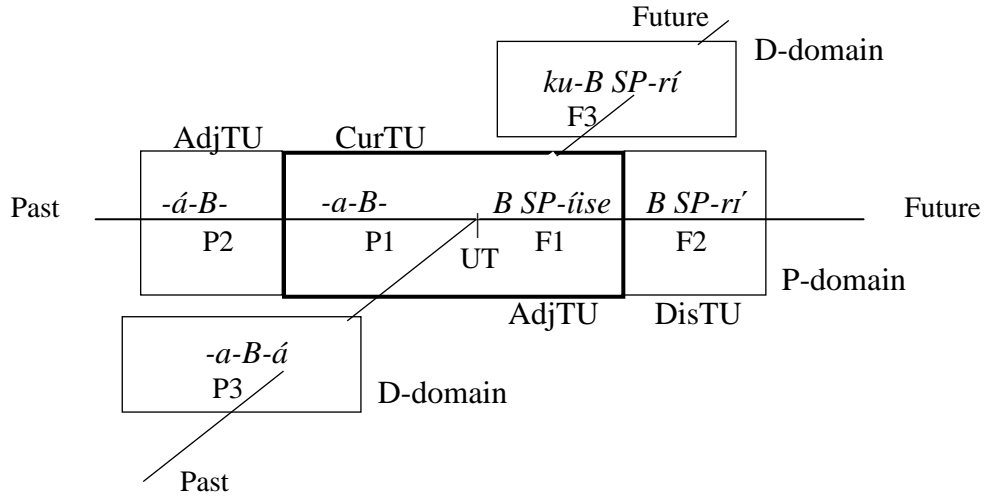


Figure 11. Kilangi (F33) tenor and tense marking [Stegen, 2006, Nurse, 2008a]

Remote D-domain past does not have the perfective suffix. The F2 and F3 futures—like the P2 and P3 pasts very similar in form—differ not in suffix but in prefix. More significantly, F2 is certain, F3 uncertain, to be expected with P- vs D-domain status. This distinction is reinforced by Stegen’s examples contrasting the F2 and F3 futures with the verb *l’óla* ‘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.*).

Another exemplar of tenor relations in the P-domain can be found in Ila (M63), which has three pasts and three futures, as in Table 5. Forms in parentheses are from Yukawa (1987a), who describes a variety somewhat different from that described by Smith (1907).⁶ While it is common practice to consider these forms to constitute a simple linear string of intervals extending into the past or future, such an analysis is unsatisfactory, failing to explain or motivate the fact that the same event could be expressed as either Remote or pre-Hodiernal past, or why there is such elegant symmetry in form and meaning.

Pasts				Futures	
P3	Remote	<i>ka-SP-Ø-B-ile</i> (<i>ka-SP-Ø-B-a</i>)	<i>-ka-la-B-a</i>	Remote	F3
P2	pre-Hodiernal	<i>-a-ká-B-a</i>	<i>-[l]a-ka-B-a</i>	post-Hodiernal	F2
P1	Hodiernal	<i>-a-Ø-B-a</i>	<i>-la-Ø-B-a</i>	Present/Hodiernal	Pr/F1

Table 5. Ila temporal marking [Smith, 1907; Yukawa, 1987a]

Two of the pasts (P1 and P2) and futures (Pr/F1 and F2) comprise a symmetrical set of markings, both formally and semantically. The most robust aspect of the semantics of temporal relations is the concept TODAY. Ila divides TODAY into two distinct time units: Hodier-

⁶ Smith gives both remote past forms, Yukawa only the *-ile* form. Yukawa also gives *-la-* for F2, where Smith has *-a-*. Whether these descriptions represent geographical or time-related differences is not clear. The differences do not affect the analysis; in fact, they support it.

nal past (that time unit encompassing earlier today up to the time of utterance (UT)) and Hodiernal future (that time interval including UT and later today) (see Figures 12 and 13). These two intervals can be considered Current relevant time units (CurTU) in opposition to intervals beyond today, Adjoining time units, the latter requiring prefix *-ka-*. These two intervals denote more distal time intervals.

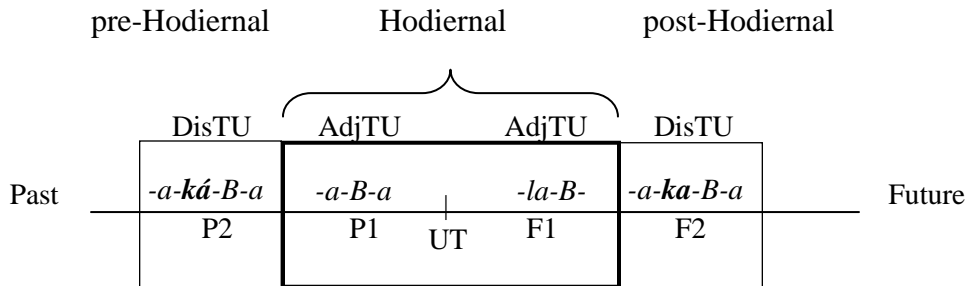


Figure 12. Ila (M63) P-domain marking [Smith, 1907]

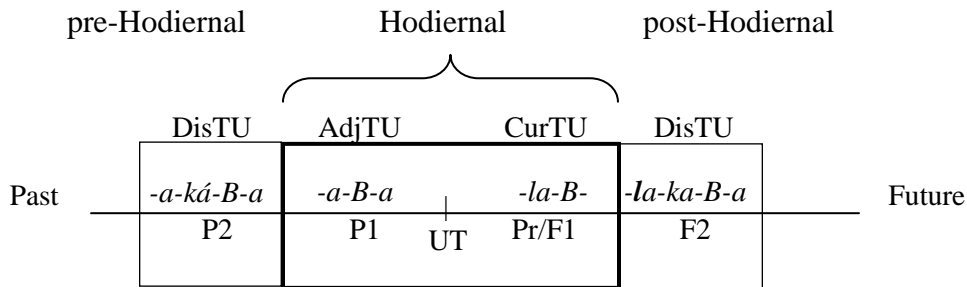


Figure 13. Ila (M63) P-domain marking [Yukawa, 1987a]

The difference between the two varieties here is relatively minor. In Smith’s variety, the DisTUs are identical except for the tone of the morpheme *-ka-*, the element that marks them as distal time units. In the Yukawa description, differences in *-ka-* still exist, but the F2 construction now stands in direct contrast with Pr/F1; that is, F2 is derived from F1, and P2 from P1, by addition of *-ka-*. The relevant point, regardless of variety, is that there is a strong correlation between forms, in each case *-ka-* determining a more distal time reference.

The Remote tenses also require a prefix (*-ka-*). The Remote past construction(s), in contrast with the pre-Hodiernal past, places the tense prefix before the subject prefix (SP) of the verb, not after it, as illustrated in Figure (14). Smith does not explain the difference between the two remote past forms,⁷ but it seems likely that the *-ile* form was in incipient stages of replacing the *-a* form, as we now only find the former in the more recent Yukawa description. Clearly, the initial prefixation of *ka-* and presence of suffix *-ile* separated this construction formally from the P1 and P2 pasts, correlating with the semantic difference.

The Remote future (which Yukawa calls the “Expectative” future) also places *-ka-* uniquely, preceding *-la-* (Figure 14). In Smith’s variety, it contrasts directly with F1, in Yukawa’s with F2.

⁷ The *-ile* form was most likely a perfective form that has developed into the remote past tense marker (see Botne, in press) for a discussion of perfectives.

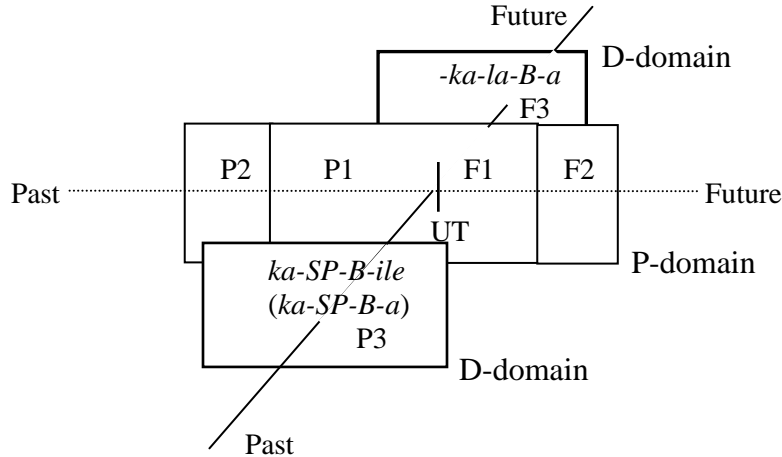


Figure 14. Remote past tense (D-domain) in Ila

P2 and P3 in Ila, then, denote different types of remoteness. P2 denotes a distal past tenor in the P-domain, i.e., an adjoining time unit more distal than the current relevant time unit TODAY. In contrast, P3 denotes a separate and isolated past—a Remote past—in the D-domain. Iconically, (-)ka- precedes other TEN markers in the D-domains—preceding SP in the past, following it in the future—but follows other TEN markers in marking P-domain relations.

The distinction in form and meaning is found not only in the affirmative constructions, but also in the negative (Figure 15). The two DisTUs in the P-domain require a complex periphrastic construction involving auxiliary ‘have’. The other constructions each employ a circumfixal (-)ta-...-i as the negation element, with remote past again placing the morpheme in a different position from the others.

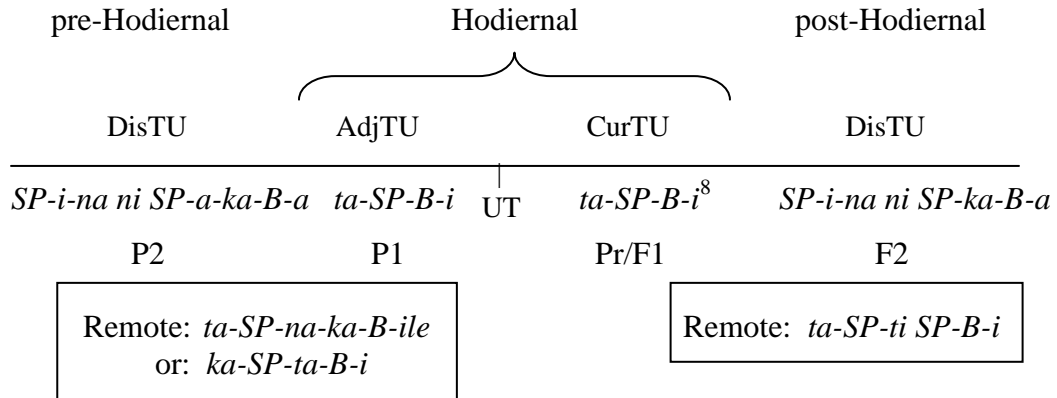


Figure 15. Negatives in Ila (Smith, 1907)

Kiholoholo (D28) is organized in a manner similar to Ila, but differs in an important way:

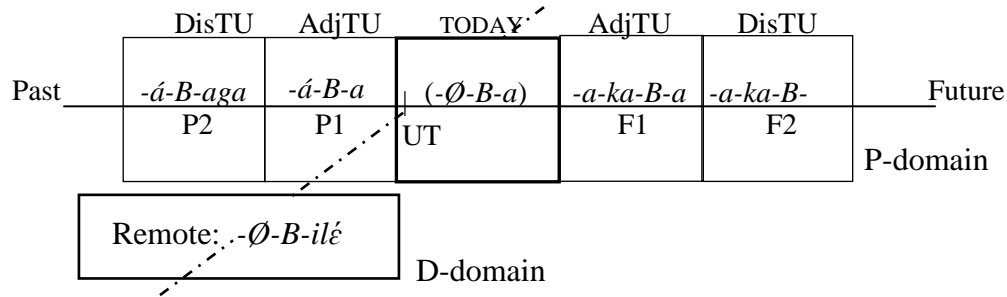
⁸ Smith (1903) lists this as the negative of the present. He gives no negative equivalent to F1. Presumably, the present negative was used here as well, as it is in the variety described by Yukawa (1987). According to Smith, the prefixes on P1 differ from those on F1, hence, 2nd person *u-* and *wa-*, respectively.

it takes as the deictic center not UT, but the interval UT plus later today (labeled here TODAY). Furthermore, unlike Ila, Kiholoholo does not have a simple remote past tense marker, but rather, a remote perfective form in *-ilé'* that is interpreted as remote past with activities, but as present state with achievements (yet note that the point at which the change of state occurred is construed as remote). The full set of verb forms related to temporal relations in Kiholoholo appears in Table (6) and is schematically represented in Figure (16).

Table 6. Kiholoholo verb forms

Pasts			Futures		
P3	Rem. Perfective	<i>-Ø-B-ilé'</i>			
P2	pre-Immediate	<i>-á-B-aga</i>	<i>-aka-B-aga</i>	post-Near	F2
P1	Immediate	<i>-á-B-a</i>	<i>-aka-B-a</i>	Near	F1

Figure 16. Kiholoholo (D28) P-domain marking



In sum, then, the P-domain is often organized in terms of time intervals abutting 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 time units represents only one facet of how time is construed in the P-domain. Time can also be scaled.

4. Time scales

In the analysis of time divisions in the P-domain, we have seen that they are typically divided into Current and Adjoining/Distal TUs. A more complex organization arises when time scaling becomes a factor. In Kiyaka (H31), for example, we find the same kind of organization viewed in the previous sections, 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 a concrete absolute temporal value, but a rather more abstract Current Time Unit versus Adjoining Time Unit (Figure 17). Thus, an activity that occurred, say, last year could be marked either with *-a-B-ídí*, placing it in the contemporal P-domain, or with *-a-B-á*, situating it in the D-domain past. The speaker would have a nuanced option in time reference selected. The same pattern is found in Chindali (M301) (Figure 18).

used. In some languages, however, different time scales are marked with different forms. Consider the case of Cilungu (M14). There are five past constructions to account for, shown in Figure 20 (following Bickmore 2008 and p.c.). There are two levels of scaled forms (in the P-domain) plus a remote tense construction. Forms with *-á-B-ʼá* denote a time scale of HOURS within the time unit TODAY, proclitic *ú-* differentiating earlier today from the immediate past. Constructions in *-ILE* denote a time interval greater than TODAY. At this greater time scale—DAYS—current and adjoining days are distinguished by the presence or absence of *-á-* and the tone of the suffix. The remote form (*-a-B-ílé*) indicates a perspective on time across domains, separate from that spanning the P-domain.

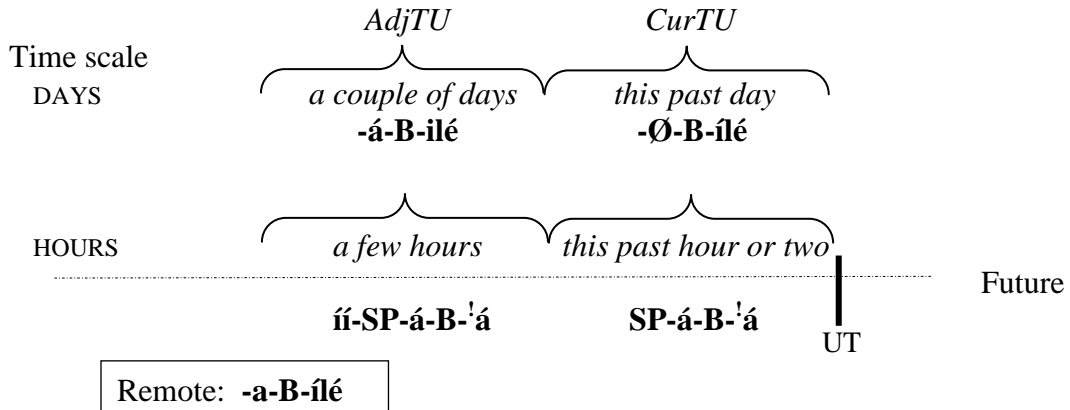


Figure 20. Cilungu (M14) scaled tenors and tense marking [Bickmore, 2008, p.c.]

Lunda (L52), on the other hand, marks different levels in the future with different morphology. The lowest time scale is Hodiernal (in terms of hours); this appears to be absolute. At higher time scales the interpretation is relative, depending on context. This scaling of future tenors contrasts with a remote tense marker.

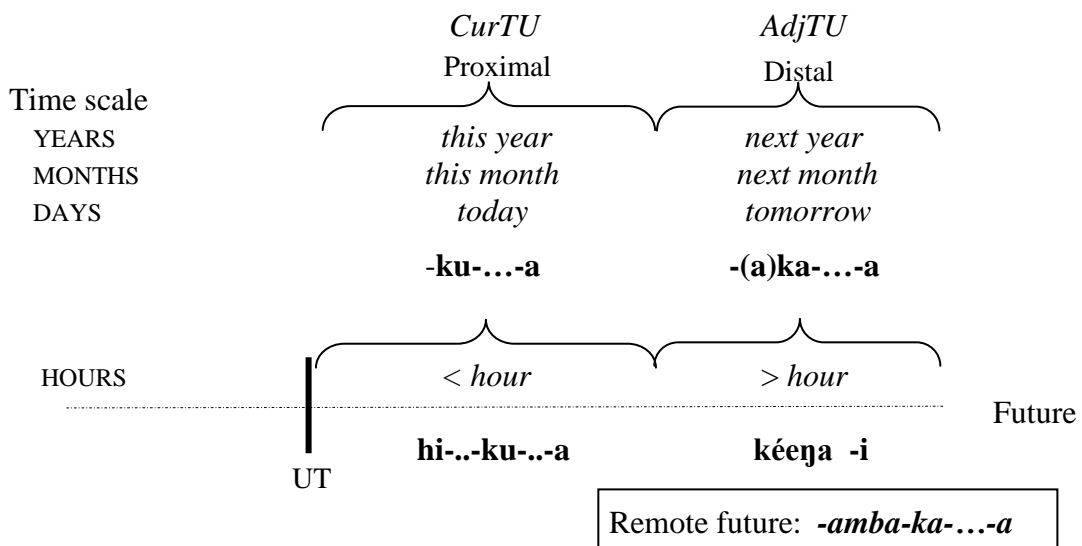


Figure 21. Scaling in Lunda (L52) futures [Kawasha, 2003; Botne, to appear]

The relevant time units observed so far have been Current and Adjoining time units. However, a pattern of Adjoining and Distal time units seems to be more common when time scales are individually marked. In Chibemba, for example, we find the same kind of organization as in the languages above, but the greater time scale—pre-Hodiernal—is relative to the context and, hence, can be interpreted in terms of days, months, years (Kula p.c.) (Figure 22). These pre-Hodiernal pasts are marked with suffixal *-ele*, differing in tone; the Hodiernal level is marked by final *-á*.

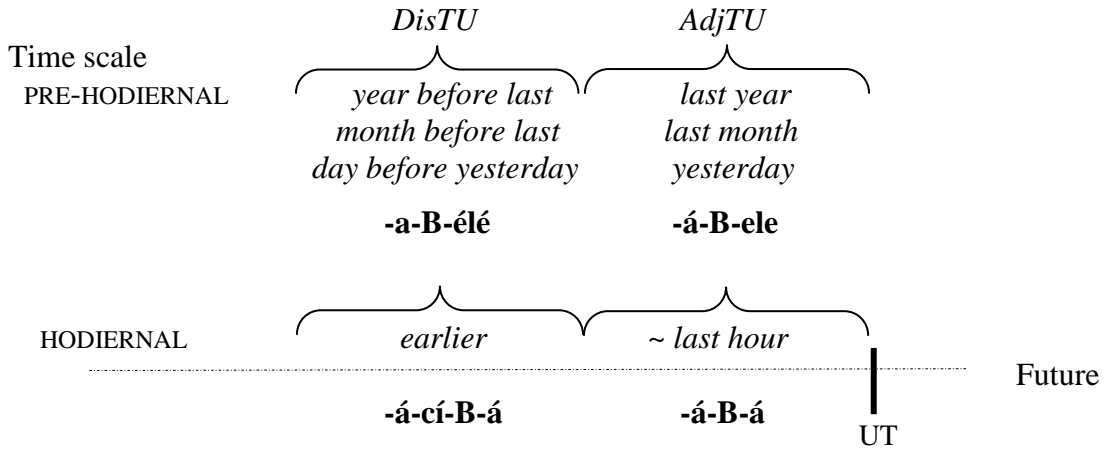


Figure 22. Chibemba (M42) past tenors scaled [N. Kula, p.c.; Nurse, 2008a]

Another case is Bushoŋ (C83), which has five past constructions to account for, shown in Figure 23 (following Vansina 1959). There are two levels of scaled forms (in the P-domain) plus a remote tense construction (“indiqu[ant] qu’une action s’est passée dont il ne reste aucune trace” p. 33) marking the D-domain. Two forms—*-a-B* and *-m-B*—refer to time units at the HODIERNAL level, the former referring to a situation that occurred “à l’instant ou depuis peu de temps”, the latter to “un passé très récent” (Vansina, 1959:31-32), presumably meaning earlier in the day (according to translations of examples). The other two forms constitute a higher level of the time scale, subsumed under the label PRE-HODIERNAL. Vansina doesn’t say anything more than that *-mâa-B* is more distant than *-m-B* and that *-mâa-B* is “assez éloigné”.

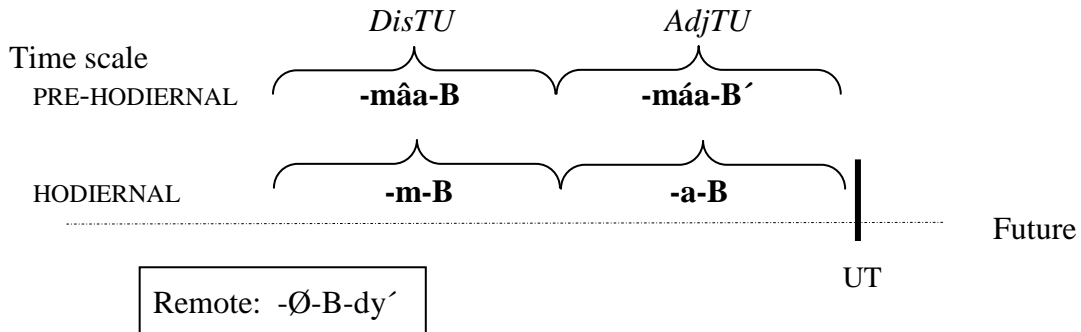


Figure 23. Bushoŋ (C83) scaled tenors [Vansina, 1959]

In Ekegusii (E42)⁹, as in Bushoŋ, there are five past constructions possible, as in Figure 24. However, the organization of the system is a bit different; there is no Remote past. In the P-domain, there are multiple levels to the time scales: hours, days/weeks, and months/years. The HOUR level is absolute, meaning that the forms associated with it are invariably interpreted as referring to today, either within an hour or so of UT (AdjTU) or in the few hours before that (DisTU). Note that *-á-B-eté* contrasts with either *iyɔ* form, in one case implying hours, in the other days/weeks. At each level, the DisTU is marked by the ending *-ete*, different levels distinguished by tone on the prefix and suffix.

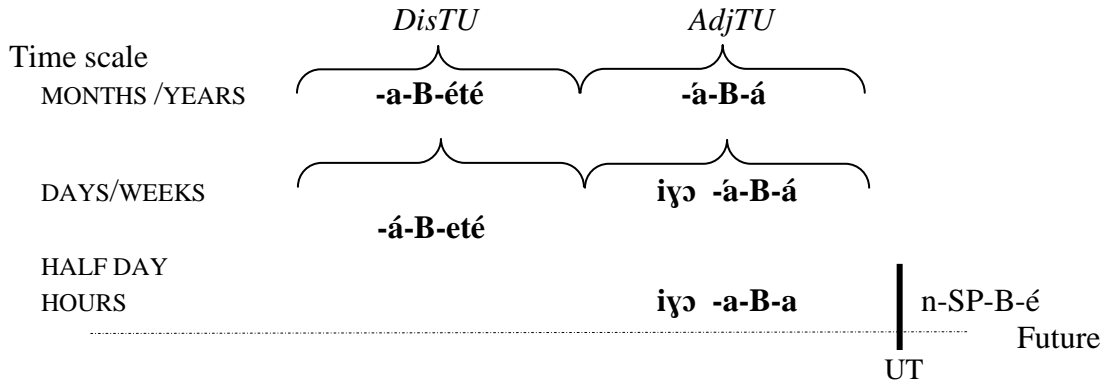


Figure 24. Ekegusii (E42) scaled tenors [based on Cammenga, 2002]

The general organization described for Ekegusii appears to be rather common. Several other languages exhibit the comparable patterns, among them Ruwund (L53) and Iyaa (B73c). In Figure (25) are the relevant past tenors in Ruwund, in Figure (26) those for Iyaa.

- a-B(-a) kal* Immediate past (< few hours)
- a-B-ang(á)* Diurnal past (earlier today or yesterday)
- á-B-il(á)* pre-Diurnal past (> 2 days ago, < few months)
- á-B-àà* Remote past (> year, but sometimes a few months)

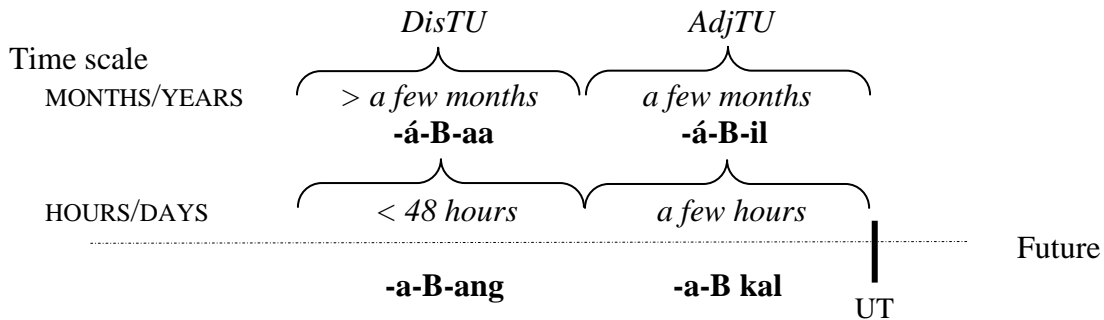


Figure 25. Ruwund (L53) past tenors scaled [Nash, 1992]

⁹ Cammenga (2002) updates Whiteley's (1960) extensive treatment of verb forms. His description is very similar, though exhibiting some minor tonal differences, but also a major one. Thus, he notes the possibility of two hodiernal forms, both with *iyɔ*. That at the HOUR level occurs invariably with *iyɔ*; the other form appears to have *iyɔ* when it is hodiernal in reference, but be without when referring to a greater time scale.

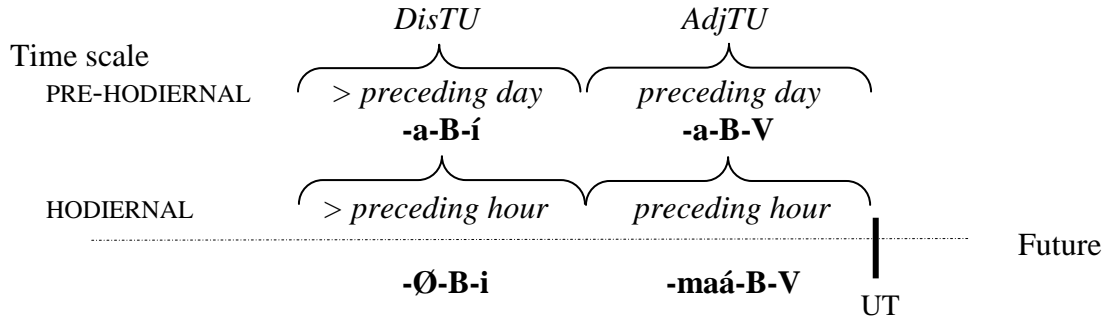


Figure 26. Iyaa (B73c) past tenors scaled [*Mouandza, 2002; Nurse, 2008a]

An interesting variation on this scaling theme can be observed in future forms in Chibemba. In this case, the present is included in a systematic manner. Thus, *-léé-* denotes earlier in the relevant time unit, in contrast to later in that time unit. Thus, within the “now” of the present/immediate future, *-léé-* refers to the present in contrast with immediate future *-á-láá-*. At greater time scales—days, weeks, months, years—*-léé-* indicates earlier in the time interval, *-ká-* later in the time interval; for example, *-léé-* ‘will V this/next TU’ versus *-ka-* ‘will V later this/next TU’.

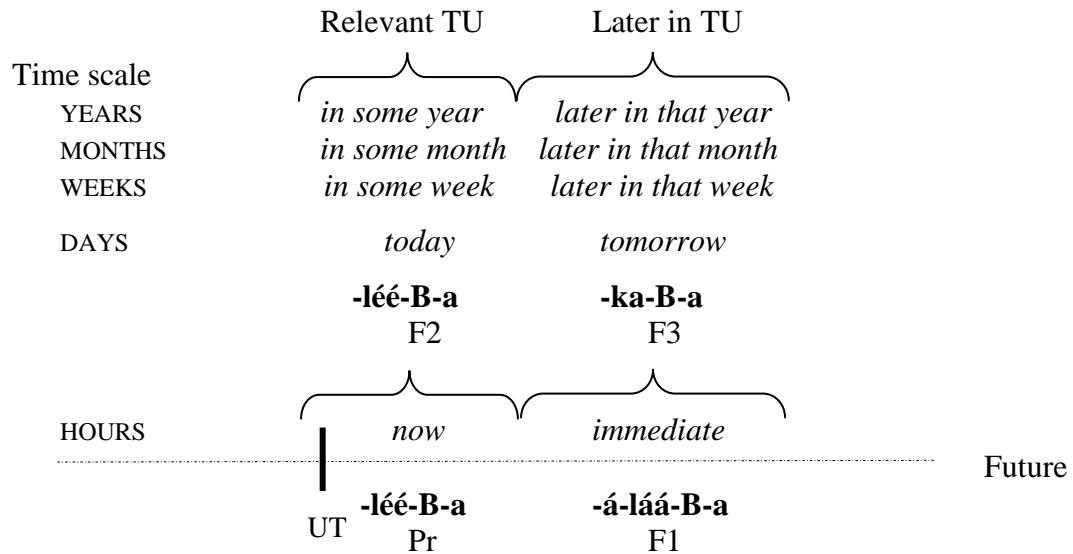


Figure 27. Chibemba (M42) present and future tenors scaled [Kula, p.c.; Nurse, 2008]

The Nyambwa dialect of Chigogo (G11) also appears to be organized in terms of scaled units. There are five future forms in Chigogo (Nurse, 1979, 2008). 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 unit within which the event is to occur, hence, F1 indicates within the unit 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.

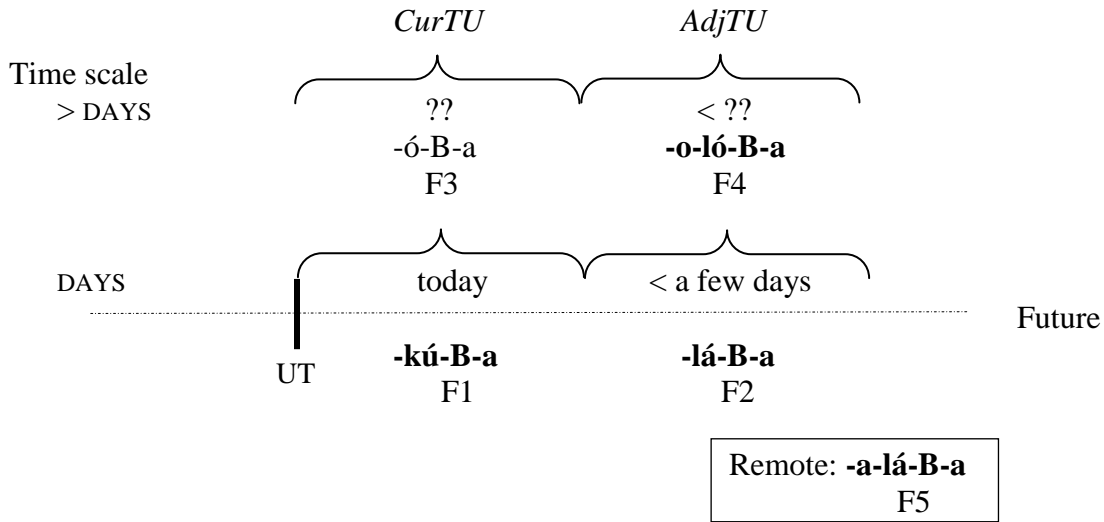


Figure 28. Chigogo (G11) scaled tenors and tense [Nurse, 1979, 2008a]

The morphology correlates with the semantics; *-o-* denotes a higher time scale, *-la-/-lo-* the adjoining time unit. Nurse’s (1979) informant told him the remote future F5 was “old-fashioned and synonymous” with F4. This is not surprising really; F5 (marking a dissociated D-domain) is very similar in both form and meaning to F4, both denoting intervals at a great remove from UT. Speakers could easily fail to distinguish the fine-grained distinctions between the two.

6. Scaling vs D-domain

As we have seen, there are two ways in which a past can be construed as “remote”, either as an AdjTU or DisTU at the highest 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) 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

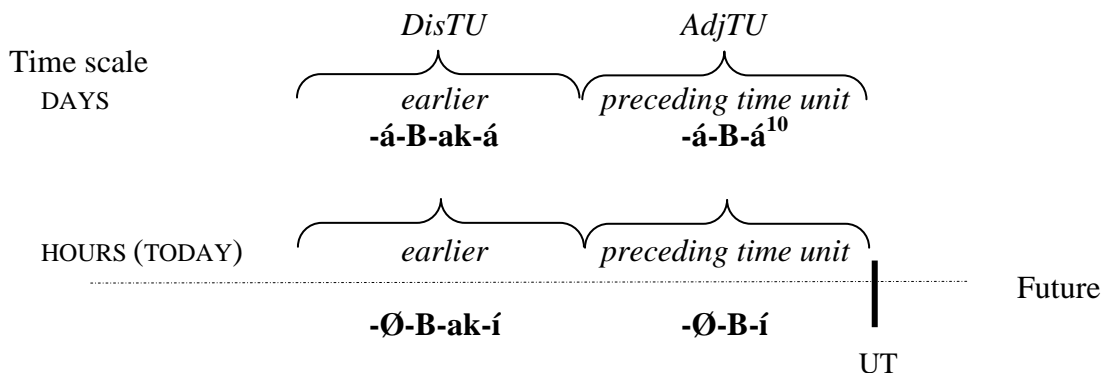


Figure 29. Dibole (C101) scaled tenors, P-domain

¹⁰ The final vowel in the pre-Hodiernal forms harmonizes with the preceding vowel.

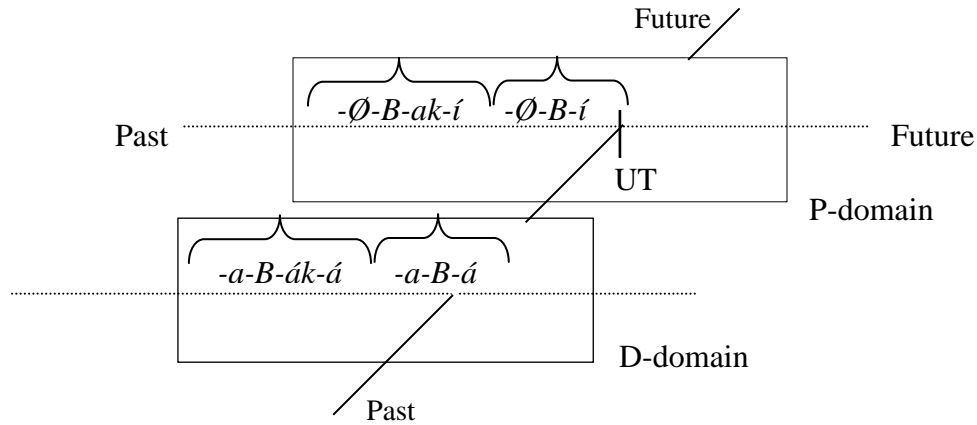


Figure 30. Dibole (C101) tenors and tense; dissociated D-domain

indicates a time earlier in the day for activities, or a present state for psychological or experiencer 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* places a situation yesterday or further back, its counterpart, *-á-B-ak-á*, even further back. Either a scaled analysis, as in Figure (31), or a dissociated analysis, as in Figure (32), seems possible.

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 31). Leitch has no explanation for this. A dissociated domain analysis does offer 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 the situation occurred at all in that domain. The distal form with *-ak-* is appropriate because, indeed, the D-domain is remote.

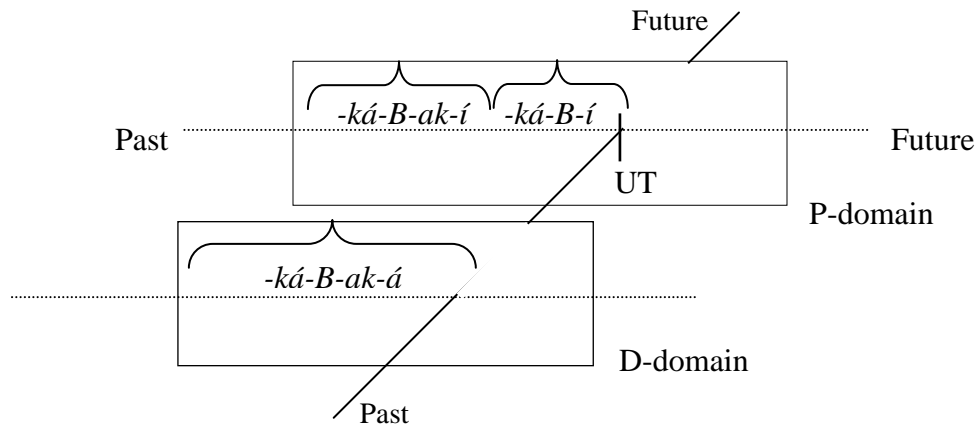


Figure 31. Dibole negated tenor/tense forms

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-* in addition to prefix *-á-* of the pre-hodiernal forms, as a comparison of forms in Table (7) shows. Again, this supports a division into two domains, rather than 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 7. Present and pat forms of ‘be’ in Dibole [Leitch, 2003]

A further bit of evidence comes from analysis of Lingala, a closely related language with very similar past forms; they differ in not making a distinction via prefixes on the verb, hence, no prefixal *-á-*, as in Dibole. Although the forms are otherwise identical, they are organized differently. In Lingala, both *-B-í* and *B-á* have “perfect” interpretations, meaning they indicate some relevance at UT.¹¹ 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 units in the contemporal P-domain (see Figure 32). In contrast, insertion of suffixal *-ák-* (1) in both cases marks them as pasts, “entirely preceding the ground” (i.e. UT?) (Brisard & Meeuwis, 2009:38).

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

Thus, in Lingala, it appears that the suffix *-ák-* marks the past D-domain, which was marked by prefixal *-á-* in Dibole. Suffix *-ak-* in Dibole marks distal time units, which are marked by suffix *-á* in Lingala. It is clear that Lingala exhibits a dissociated organization, indirectly supporting the same in Dibole.

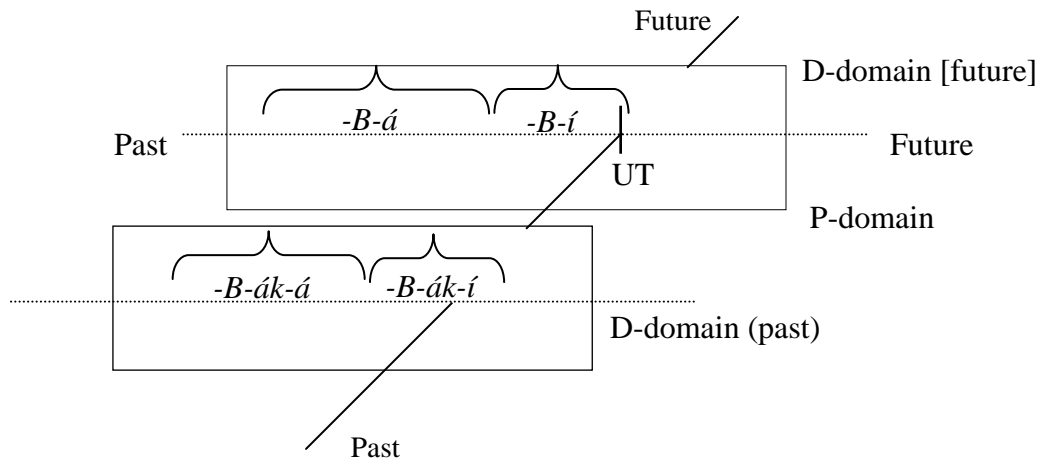


Figure 32. Lingala tense/aspect organization

¹¹ Although data and general use are taken from Brisard & Meeuwis (2009), the analysis I propose here is not theirs, and is one they may not subscribe to.

7. Conclusion

As stated in the introduction, tense/aspect systems in many Bantu languages, if not all, are organized in a non-linear fashion. One major parameter is the 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 contemporaneous past or future into proximal and distal time units. These units potentially interact with time scales, a third factor. In some languages, the same two forms may be used for any time scale, contrasting proximal and distal temporal intervals (e.g. ‘this year’ vs. ‘last year’). In others, there may be different morphological marking at different levels.

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 unit, and time scale to which it applies.

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