

THERE IS NO FUTURE

Diachronic Verbal Morphology in Fante Twi

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Abstract

The analysis of the future tense in Akan has long proved difficult. This thesis, based on original fieldwork conducted in the summer of 2010¹, will attempt to use a Minimalist framework to capture the complexities of this tense in the Fante dialect. It will be shown that the future tense in Fante is epiphenomenal, and that in fact the language has only a binary past/non-past tense system. Diachronic and synchronic accounts of Fante tense and aspect will be developed, shedding new light on the possibilities available for morphosyntactic development cross-linguistically.

The Akan future tense shows an extremely limited distribution: It may not co-occur with any aspectual marker or with either of the motional prefixes. In the negative, however, it seemingly undergoes a surface morphological alternation with the progressive aspect and also becomes compatible with the Motion prefixes. The combination of progressive aspect and future tense does appear possible in the affirmative, and yet it unexpectedly carries immediate future meaning. Traditionally, all this complexity has been dismissed as allomorphy: Dolphyne (1988, 1996), Boadi (2008), and Osam (2008) have all proposed different descriptions of the tense/aspect system, each without analysis of the underlying syntactic mechanisms creating the complex distribution of the future tense.

Osam (2008) previously noted that the similarity in form between the COME motion prefix *bɛ̀-* and the future tense *bɛ́-*. This, combined with the incompatibility of the future tense and the motion prefixes, points towards a diachronic origin. It will be argued that they also share a synchronic syntactic origin in Mot^0 . Kandybowicz (2010) provides the first proof that V-to-T raising does occur in Akan. Once this is established, motional sentences without aspect marking necessarily allow the motion prefix to raise to T^0 . The presence of this functional head in a $\text{T}_{\text{NON-PAST}}$ head creates an epiphenomenal future reading, now in the process of being reinterpreted as a true future tense. The analogical pressure of an epiphenomenal future tense in the affirmative causes the adoption of a similar strategy for forming the future tense in the negative, namely by reinterpreting the presence of the progressive aspect in $\text{T}_{\text{NON-PAST}}$.

An analysis of the Fante future tense as epiphenomenal provides insight into the nature of morphosyntactic change cross-linguistically. In Asante Twi, a larger dialect of Akan, the development of the future tense seems to have gone a step farther, creating a fully-developed *bɛ́-* T_{FUTURE} . This may be characterized as an example of syntactically-driven morphological change, in which existing syntactic processes create the opportunity for epiphenomenal semantic shift, which in turn drives true morphological change.

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o. INTRODUCTION

Akan is a dialect family of the Kwa branch of the Niger-Congo stock, spoken in Ghana. It comprises about 2.8 million speakers and multiple dialects, of which Twi and Fante are the most common. (Lewis (2009)) This thesis will present an analysis of the verbal morphology of Akan, based on new data collected by the author in fieldwork on Fante in the summer of 2010, with some comparison to Twi. A full analysis of the Akan verbal domain will be presented, couched in the framework of the Minimalist Program (Chomsky (1999)) and drawing on the work of Kandybowicz (2010). This will lay the background for a new analysis of the development of the Akan future tense.

i. THE PROBLEM

Akan is an SVO language with prefixing verbal morphology. Several aspect heads, negation in the form of a homorganic nasal, and the Motion affixes all appear to prefix to the verb. It is also a tonal language with two level tones; at least one aspect (the habitual) is instantiated as a floating tonal segment. The past tense is most often marked by a lengthening of the root vowel, occasionally with one of the allomorphic suffixes *-i/-e/-ye²*. This may not occur in the negative; instead, an *a-* prefix is used.

i.1 A Future Tense

Students of Akan may be puzzled by a discrepancy in the forms of the future tense. In the affirmative, the progressive aspect and the future tense are expressed distinctly:

- (1) a. Kofi bε- sa
 K. FUT- dance
 “Kofi will dance.”
- b. Kofi re- sa
 K. PROG- dance
 “Kofi is dancing.”

²All examples in this thesis will be presented in the standard unified Akan orthography, except where tone is explicitly relevant. In these cases, High and Low tones will be marked by acute and grave accents, respectively. Accordingly, this morpheme will always be written as *ye*, which follows the Asante standard pronunciation. Fante typically uses *-i/-e* (with the specific form determined by ATR harmony) both phonemically and orthographically.

But in the negative polarity, they appear to merge:

- (2) a. *Kofi bε- n- sa.
Kofi FUT- NEG- dance
b. Kofi re- n- sa.
Kofi PROG- NEG- dance
“Kofi will not dance.” (*“Kofi is not dancing.”)

The apparent future prefix *bε-* does not seem to be permitted in the negative; its meaning is adopted by the progressive aspect prefix *re-*, which is no longer interpreted as carrying progressive meaning. Indeed, while some speakers allow *ren-* to denote the negative present tense progressive when pressed, most have no form with this meaning at all!

Furthermore, the co-occurrence of aspectual markers and the future tense is extremely limited:

- (3) a. *Ama a- bε- kɔ
A. PERF- FUT- go
“Ama will have gone.”
b. *Ama bé- kɔ
A. FUT- go.HAB
“Ama will go (habitually).”
(4) Ama re- bε- kɔ
A. PROG- FUT- go
“Ama will go soon.” (*“Ama will be going.”)

In the affirmative, the future marker may only co-occur with the progressive marker *re-*, in which case the sentence takes on immediate future meaning, rather than future-progressive. In the negative, however, even this possibility is disallowed:

- (5) a. *Kofi re- bε- n- didi.
K. PROG- FUT- NEG- eat
b. *Kofi re- re- n- didi.
K. PROG- PROG- NEG- eat
“Kofi will not be eating.”

These puzzling facts about the distribution and representation of the future tense have typically been swept under the rug and treated as unexplained variation (cf. Dolphyne (1988); Boadi (2008)); considering other aspects of Akan verbal morphology, however, suggests a more complete answer.

1.2 Future as Epiphenomenal

In addition to Tense, Aspect, Mood, and Polarity, Akan verbs may optionally take motional morphology:

- (6) a. Yaa bε- to nwom.
Y. COME- throw song
“Yaa comes to sing.”
- b. Kofi kɔ- sa.
K. GO- dance
“Kofi goes to dance.”
- (7) a. Yaa m- bε- to nwom.
Y. NEG- COME- throw song
“Yaa does not come to sing.”
- b. Kofi n- kɔ- sa.
K. NEG- GO- dance
“Kofi does not go to dance.”

The two motion prefixes *bε-* and *kɔ-* are both clear analogues of the verbs *ba* “come” and *kɔ* “go”; however, as shown in (7), the negation facts prove that they form true prefixes to the verb: Under normal circumstances, the negation prefix would attach only to the edge of the verb stem, assimilating in place of articulation; but here, it attaches to the edge of the motion prefix.

Moreover, the prefix *bε-* is nearly homophonous with the future tense prefix, differing only in tone:

- (8) a. Kofi bé- sà.
K. FUT- dance
“Kofi will dance.”
- b. Kofi bè- sá.
K. COME- dance.HAB
“Kofi comes to dance.”

On this basis, Osam (2008) and others (Boadi (2008)) have proposed that the future tense is a recent descendent of the *bε-* motion prefix. This is supported by the surprising fact that, in the affirmative, the future tense may not co-occur with either motion prefix:

- (9) a. *Kofi bɛ́- bɛ̀- sa.
K. FUT- COME- dance
“Kofi will come dance.”
- b. *Kofi bɛ́- kɔ̀- sa.
K. FUT- GO- dance
“Kofi will go dance.”

The distribution of the motion prefixes and the future tense with respect to negation and aspect suggests a common origin in the syntax. Together with the as-yet-unexplained alternation of the future tense and progressive aspect in the negative, this requires a deeper account of Akan verbal morphology than any yet offered. Following the work of Kandybowicz (2010) on V-to-T raising in Twi, it will be argued that future tense meaning occurs when certain heads semantically compatible with it come to occupy the $T_{\text{NON-PAST}}$ head, creating an epiphenomenal future tense in Akan.³

1.3 Structure of Thesis

Section 2 presents a review of the literature on Akan verbal morphology. The relative strengths and weaknesses of the standard four tense category analysis (due to Dolphyne and Boadi) are weighed, followed by a comparison to Osam’s primarily aspectual analysis. Evidence from Kandybowicz for the necessity of V-to-T movement in Akan is then presented, in support of V-to-T raising and the existence of at least T_{PAST} .

The structure of the Akan extended verbal projection assumed in this thesis is presented and justified in section 3. The semantic and syntactic roles of the various aspectual heads will be discussed. This will be followed by a presentation of the Motion prefixes, including a discussion of their diachronic development from Serial Verb Constructions. Negation plays an interesting role as a partial barrier to movement in Akan, and so its syntactic position needs justification. Finally, the past tense is discussed, drawing evidence from Kandybowicz (2010).

In section 4, the distribution of the future tense is presented in more detail, beginning with the interactions between the future tense and various aspectual markers. An argument for the common syntactic origin of the motion prefixes and the future *bɛ́-* is then developed. Finally, the interactions between the Motion prefixes, the future tense, and negative polarity are presented, by way of arguing for the identity of negative future *re-* with non-negative progressive *re-*.

Section 5 then presents a movement account of the development of the future tense as epiphenomenal, drawing on the syntactic analysis already discussed. Finally, section 6 gives an overview of diachronic verbal morphology in Akan, including evidence from Asante Twi indicating that it has developed the future tense one stage further than Fante, and concludes with a discussion of the processes of diachronic morphosyntactic change more generally.

³Evidence from Twi indicates that, for some speakers, the future tense has become fully instantiated, cf. section 6. The analysis presented here holds true at least for Fante, but its full distribution is not known.

2. PRIOR APPROACHES TO AKAN

This section will survey the modern descriptive and analytical literature on Akan, as pertaining to the morphosyntax of tense and aspect. Dolphyne (1988, 1996) represents the traditional analysis, seeing Akan as being primarily tense-based; Boadi (2008) follows a similar track. Osam (2008) argues convincingly for an analysis of Akan as an aspectual language, focusing primarily on the semantics of aspect and arguing for a simple past / non-past tense distinction. Kandybowicz (2010) has developed an analysis of do-insertion in Asante Twi which provides strong evidence of V-to-T movement, thus supporting Osam's binary tense model, though requiring a different view of past tense morphology.

2.1 Akan as Tense-Marking

Over several volumes, Dolphyne has consistently analyzed Akan as a tense-marking language displaying three (or four, counting the immediate future construction as a tense proper) tenses: Past, unmarked present, future, and immediate future. She also notes four aspects – habitual, perfect, continuous, and consecutive⁴.

Dolphyne's analysis of the past tense focuses on the alternation between forms ending in *-i/-e/-yε* and forms displaying only vowel lengthening. This alternation, in her analysis, depends entirely on linear order – the suffix appears exactly when V_{PAST} would otherwise be linearly last in a clause:⁵

- (10) a. Afua dii *(yε).
 A. eat.PAST do
 “Afua ate.”
- b. Afua dii *(yε) bayεre *(yε).
 A. eat.PAST (*do) yam (*do)
 “Afua ate yam.”

Dolphyne also notes an alternation between the perfect and the past in the negative. In the affirmative, the past is marked by vowel lengthening, and the perfect by the prefix *a-*. According to Dolphyne, however,

[the] affixes of the Past and Perfect forms of the verb switch over between the positive and negative forms of the verb.

Negative Past: Prefix *a-* plus the negative prefix.

Negative Perfect: Suffix *-e/-i* plus the negative prefix.

(Dolphyne, 1996, pg. 93)

⁴The nature of this unusual aspect marker is contested by Boadi (2008), and will be further explored below.

⁵However, Kandybowicz (2010), discussed below, has convincingly argued that the *-i/-e/-yε* form is actually a form of do-insertion (where *yε* is a default verb “do” or “make”).

She gives only one example of a Negative Perfect form with a complement; this shows the dropping of *-i/-e/-ye* as well.⁶

Dolphyne never overtly mentions the present tense, leaving it entirely unmarked and usually expressed by the Habitual (marked by high tone on the verb).

Dolphyne (1988) notes a future tense prefix *bɛ-* which alternates with *re-* in the negative, though interestingly she claims that Fante may possibly mark the negative future as *nkɔ-*, corresponding to the negative followed by the “go” Motion prefix (discussed in greater detail in section 3).⁷ Dolphyne (1996), however, abandons this analysis of the future/negative interaction. Here, she analyzes the habitual, progressive, simple, and immediate future forms as all being negated by a simple negative form, with no overt marking for tense or aspect in any way. She notes one exception, which is subject-pronouns in the negative habitual take the low-tone, but take high-tone in all other cases.⁸

Dolphyne (1988) sees the immediate future *rebɛ-* as a compound prefix, while her work in 1996 treats it as a unitary affix. Dolphyne also refers to the *a-* morpheme which occurs on verbs after V_1 in Serial Verb Constructions as a “Consecutive” aspect (CONS, below). This prefix occurs in any SVC in which V_1 is in any form except the past or habitual:

- (11) a. Ama bɛ- bɔ bayere no a- di.
 A. FUT- pound yam DET CONS- eat
 “Ama will pound the yam and eat it.”
- b. Ama re- bɔ bayere no a- di.
 Ama PROG- pound yam DET CONS- eat
 “Ama is pounding yam and then eating it.”

Boadi (2008) provides a much fuller account of the verbal morphology of Akan, identifying four primary inflectional systems: Deictic (Motional), Modal, Aspectual, and Tense. He finds a three-way Tense distinction, glossing over the alternation between Future *bɛ-* and *re-*, and ignoring the immediate future construction entirely. Furthermore, he finds that the independent Tense morpheme *ná* may also be merged into T_{FUTURE} , creating a strange bivalency in meaning in sentences such as the following⁹:

⁶The data on which this thesis is based shows no particular evidence of the alternation between past and perfect – the negative perfect seems to be homophonous with the negative past, and thus a clear distinction between the two cannot be drawn.

⁷The data on which this thesis is based contains no evidence for this construction carrying primary future meaning; it’s possible that Dolphyne is responding to secondary future meaning inherent in the Motion prefix (see section 3), or possibly to the English translation of such sentences using “going to” as parallel to colloquial English future tense (“gonna”).

⁸This thesis will take no position on the validity of this claim about the habitual, in particular as it will argue that the negative future is denoted by the *re-* prefix.

⁹Example taken from Boadi (2008). This phenomenon has not been noted by this (or any other) author. As such, this thesis will assume the impossibility of the future-tense reading of (12).

- (12) a. ná ɔ ba / re- ba / a- ba
 PAST he come / PROG- come / PERF- come
 “He used to visit/was visiting/had visited.”
- b. ná ɔ ba / re- ba / a- ba
 FUT he come / PROG- come / PERF- come
 “He will be visiting regularly/will be in the process of visiting/will have visited.”

Boadi, furthermore, fails to comment upon the alternation in the past tense between the vowel-lengthened form and the *-i/-e/-yɛ* form, and repeats Dolphyne (1996) and others in finding a perfect aspect alternating with the past tense with respect to polarity. This author has not found enough data to either support or contradict this claim.

Boadi only briefly mentions the Deictic and Modal systems, focusing primarily on the exponents of aspect in the language. In this system, he differs from other authors primarily on two counts. First, he finds that the progressive aspect has a negative form identical to the negative of the future¹⁰:

- (13) ?Kofi re- n- sa.
 K. PROG- NEG- dance
 “Kofi is not dancing.”

On the other hand, however, Boadi is the first to note that the *a-* prefix, called the consecutive aspect by Dolphyne (1988, 1996), also occurs in (overtly) subordinated clauses. He proposes that it may be better analyzed as an infinitive prefix; this seems the most coherent account of this prefix offered thus far, and will be adopted throughout this thesis.

2.2 Akan as Aspect-Marking

Osam (2008) argues, based on Comrie (1976), that Akan is a primarily aspectual language. He continues to identify two tenses, past and non-past. He notes that the past is often marked by the independent morpheme *ná* appearing in T⁰¹¹, but argues that this is the only instantiation of T_{PAST} and thus has extremely limited distribution. He then identifies four aspects: Completive, perfect, progressive, and habitual.

Osam uses the diachronic evidence for the development of the future tense *bɛ-* from the Motion prefixes (see section 4) to dismiss the future tense as being entirely a secondary meaning of the motional prefixes. While similar in spirit to the hypothesis pro-

¹⁰This possibility was denied by many of this author’s consultants, and has not been noted by any other author.

¹¹Note that Osam’s analysis is purely semantic/morphological, with no reference to syntax; he makes no argument as to the origin of *ná* in the syntax, and indeed seems to waffle as to whether it is in T or C. Kandybowicz (2010) proves conclusively that it is in T, not C; see below.

posed in this thesis, this dismissal is really nothing more than an avoidance of the issue, and represents one of the weaker points of his analysis. Furthermore, he does not deal at all with the negative polarity, and thus fails to note many of the complex alternations that turn up there.

Osam identifies the completive aspect as being marked by vowel lengthening plus the *-i/-e/-yε* suffix, as discussed by Dolphyne, with the same unexplained deletion when the verb is not leftmost within its clause. On the grounds that this form cannot co-occur with any other aspect markers, however, he objects to Dolphyne and Boadi’s characterization of this as a past-tense marker, arguing instead that it represents completive (i.e., perfective) aspect, bearing past-tense secondary meaning. This is a reasonable argument, but it is unfortunately hard to differentiate such an aspect from true past tense; Akan does not seem to allow clear instances of a present or future completive, and so identifying this as aspect rather than tense amounts to a change in nomenclature and nothing more. As is shown below, the analysis developed by Kandybowicz explains the incompatibility of this form with other aspects, without resorting to such hand-waving.

2.3 Do-insertion in Akan

Kandybowicz (2010) has proposed a deeper explanation for the distribution of the past-tense *-i/-e/-yε* suffix, treating it as a form of do-insertion resulting from an underlying prosodic mismatch at PF. His model correctly explains the puzzling facts of the distribution of this morpheme, including the following surprising result, illustrated in (14): While post-verbal manner adverbs obviate the *-i/-e/-yε* suffix, sentential adverbs do not, proving for the first time that this phenomenon is sensitive to more than just linear order.

- (14) a. Kofi saa (*yε) ntεm (*yε).
 K. dance.PAST do quickly do
 “Kofi danced quickly.”
- b. Kofi saa *(yε) amparampara.
 K. dance.PAST do truly
 “‘Its truly the case that Kofi danced.”

Kandybowicz takes the lengthened vowel of the past tense as evidence that V-to-T movement has occurred — i.e. the lengthening, rather than being a distinct morpheme, is rather the direct result of the verb surfacing in the otherwise phonetically-null T_{PAST}. This is consistent with the incompatibility of this form of the past tense with any overt aspectual marking, which would form a barrier to verb raising due to the Head Movement Constraint. Such an assumption reveals an interesting generalization: the *-i/-e/-yε* suffix occurs exactly when the complement vP would be entirely empty at spell-out. If sentential adverbs attach higher in the syntax, as is commonly assumed, then their

failure to obviate *-i/-e/-ye* is consistent with this generalization.

Kandybowicz assumes a model in which PF requires an isomorphism between syntactic phrases and prosodic phrases. This isomorphism is defined by the alignment of edges, with $\text{Edge}(\alpha)$ defined (per Chomsky (1999)) as $\{\alpha, \text{Spec}, \alpha, \text{Adj}, \alpha\}$. Kandybowicz also makes the assumption of inner aspect – that at certain aspect is instantiated in a head Asp^0 projecting a phrase below vP . Under the standard Minimalist assumption that vP is phase-defining, this means that $\text{Asp}P$ will be sent to PF at the merger of v^0 , and thus must be mapped to a prosodic phrase. The presence of a contentful Asp^0 , DP_{obj} ¹², or manner adverb would normally provide a contentful $\text{Edge}(\text{Asp}^0)$, thus allowing the isomorphism; if none of these items are present, however, then an impoverished copy of the verb root¹³ (i.e. *ye*) is spelled out in Asp^0 to allow alignment. See Kandybowicz (2010) for details.

This account has the benefit of explaining the idiosyncrasy of the past tense *-i/-e/-ye* form in a general manner. This generalization requires at least the presence of T_{PAST} in the lexicon, thus forcing the analysis of Akan as tense-marking. Furthermore, it provides evidence for V-to-T movement in Akan, something which had previously been difficult to establish due to the unavailability of standard tests for verb raising in the language (Kandybowicz (2010)). In the context of Osam’s binary tense system, this would imply the possibility (and perhaps necessity) of verb raising in the non-past, as well; this analysis will be developed further in section 5.1.

2.4 Conclusions

In summary, the extant literature on Akan mostly ignores the problems of the future tense and its connection to the Motional prefixes. The traditional analysis of Dolphyne fails to generalize over the many tenses (and the many forms of the future tense). Osam (2008) argues for a binary tense system, but fails to satisfactorily explain where future tense semantics and morphology arise. Kandybowicz provides the first deep explanation of the problems of the past tense, and in doing so paves the way for a movement analysis of the future tense.

¹² DP_{obj} is assumed to move to occupy $\text{Spec}, \text{Asp}^0$, per the usual analysis of inner aspect. Travis (2010)

¹³A copy of the verb root presumably remains in Asp^0 ; however, a full spell out of the root here would create linearization problems when the verb later surfaced in T^0 , and so an impoverished copy is spelled out instead.

3. THE VERBAL SHELL

In this section, the structure of the Akan extended verbal projection is presented. First, the aspectual heads of Akan and their relevant semantics are discussed, along with the issues of infinitive *a-*. Next, the Motion prefixes are discussed, including their interaction with aspect and with Serial Verb Constructions. Kandybowicz's analysis of the affirmative past tense is discussed in relation to the issue of negation ordering. Finally, a movement analysis of the complete verbal projection will be presented.

3.1 Aspectual Heads

In this analysis, Asp⁰ may be occupied by any of three aspectual heads: The habitual (marked by a high tone on the verb root), the progressive *re-*, and the perfect *a-*.

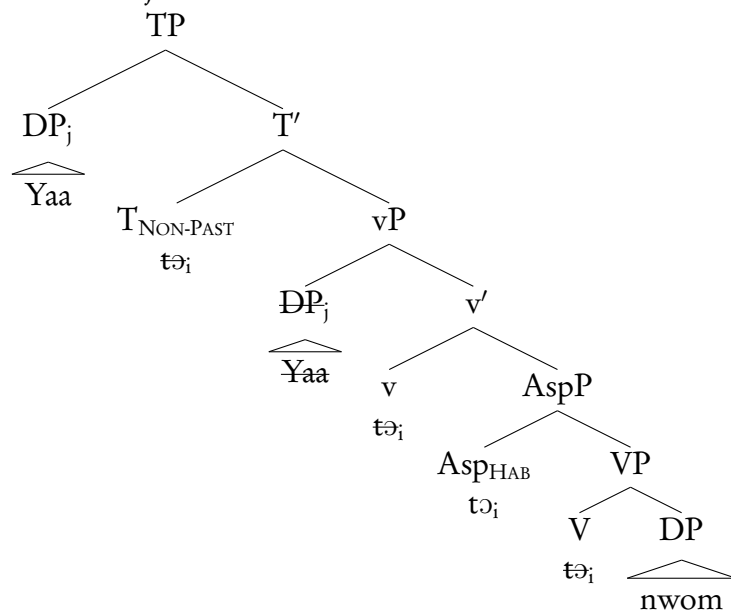
Other authors have found both a stative aspect and an iterative; reasons for treating these separately will be presented below.

3.1.1 *The Habitual*

The habitual aspect is one of Akan's two imperfective aspects (cf. Comrie (1976)), contrasting with the progressive. Comrie defines the habitual as marking that an event is extended over a period of time so far as to be viewed "not as an incidental property of the moment but, precisely, as a characteristic feature of the whole period." (Comrie, 1976, pg. 28) This may be understood as a de-emphasis of the temporal boundaries of an event, thus effectively predicating it of (rather than locating it in) a period of time. The habitual in Akan is instantiated only as an unlinked high tone, which must surface on the verb:

- (15) a. Yaa tó nwom.
 Y. throw.HAB song
 "Yaa sings."
 b. Na Yaa tó nwom.
 PAST Y. throw.HAB song
 "Yaa sang."

Some care must be taken with the treatment of the habitual with respect to V-to-T movement. Assume that both Asp^0 and $T_{\text{NON-PAST}}$ have [+EPP], and thus require phonetic content to be present at PF to be felicitous. Anagnostopoulou & Alexiadou (1998) have argued successfully that phonetic content in either α or Spec, α satisfies the EPP on α . By this model, the EPP requirement of $T_{\text{NON-PAST}}$ may be satisfied not by V-to-T raising (as normal), but also by subject DP raising to Spec, T. Presumably, then, the instantiation of the unmarked habitual as an unlinked high tone creates added pressure to pronounce V in Asp^0 – perhaps through a PF requirement that suprasegmental morphemes have underlying segmental content pronounced at their position. Nunes (2004) describes the linearization constraint on copy-movement chains, and notes that the pronounced copy is not always the head of the chain. This appears to be the case here: Having already been satisfied by the subject DP, the [+EPP] of $T_{\text{NON-PAST}}$ gives way and allows the lower verb copy to be pronounced with the high tone. This is illustrated below:

(16) *Verbal Projections in the Habitual*3.1.2 *The Progressive*

The progressive aspect *re-* is commonly employed in a wide variety of constructions; consult Boadi (2008) for further details. It is the second of Akan's imperfective aspects, contrasting with the habitual in preserving the temporal boundaries of the event. (Comrie (1976))

It typically surfaces immediately preverbally, but (as with the perfect) may be separated from the verb by either the Motion prefixes or negation. In the negative, however, it loses its progressive meaning and takes on a future tense reading:

- (17) a. Kofi re- kasa.
K. PROG- speak
“Kofi is speaking”
- b. Kofi re- kɔ- kasa.
K. PROG- GO- speak
“Kofi is going to speak.”
- c. Kofi re- n- kasa.
K. PROG- NEG- speak
“Kofi will not speak.”

When combined with the COME Motional prefix, the progressive seems to take on an immediate future reading:

- (18) Kofi rebe- kasa.
K. IMFUT- speak
“Kofi is about to speak.”

This has traditionally been analyzed as a single, unitary prefix; see section 5.4 for further discussion.

3.1.3 *The Perfect*

The perfect aspect is Akan’s sole perfective aspect (Comrie, 1976), indicating a focus on the temporal boundaries of the event, i.e. the event as unitary. The distribution of the perfect *a-* is considerably more limited. Its use is primarily restricted to the past tense. Non-past perfect usage is highly marked, generally only used contrastively.

- (19) Na Ama a- twa dua no a- tɔ fom.
PAST A. PERF- cut tree DET INF- fall ground
“Ama had chopped down the tree.”

For the purposes of this thesis, the perfect will be assumed to negate normally, contra Dolphyne (1996) and Boadi (2008), as the *-i/-e/-yɛ* perfect form noted by those researches was not observed in any context by this author. The negative perfect is thus homophonous with the negative past – the former taking the usual *a-* perfect marker followed by homorganic nasal negation, while the latter takes a special fused negative-past *an-* form (with similar assimilation of the nasal).

3.1.4 *The Stative and the Iterative*

Previous researchers have found both a stative aspect and an iterative aspect in both Asante and Fante, exemplified below:

- (20) a. Ama dá há!
A. sleep.HAB here
“Ama sleeps here!”
- b. Ama dà há.
A. sleep.STAT here
“Ama is lying down here.”
- (21) a. Kofi re- hwε buuku no.
K. PROG- look book DET
“Kofi is looking at a book.”
- b. Kofi re- hwehwε buukwu no.
K. PROG- look.ITER book DET
“Kofi is searching for a book.”

Regarding the stative, it seems clear from the examples offered by Boadi (2008) and others that this does not represent a true Asp⁰, but rather is a lexically-determined unmarked form – Asp⁰ is optionally merged with stative verbs, in which case the verb is interpreted as a simple stative. This explains the inconsistency of the tonal representation for the stative noted by Dolphyne (1988) – she describes it as being marked by either high or low tone depending on unspecified circumstances – and also its extremely limited distribution.

The iterative can be dismissed as derivational rather an inflectional largely on the grounds that it may co-occur with other aspects (unique among Akan aspects).

- (22) a. Kofi re- didi.
K. PROG – eat.ITER
“Kofi is eating (in multiple discrete actions).”
- b. Kofi a- didi.
K PERF – eat.ITER
“Kofi ate (in multiple discrete actions).”

As seen in (22), it is formed via reduplication, also a rare morphological process in the language.¹⁴ In addition, its usage is highly dependent on the complement of the verb, something which should not be true of true Asp⁰ heads. Several of the author’s consultants noted that, when the direct object of the verb was a count noun, the iterative could be used exactly when the object was plural:

- (23) a. Na Afua pám atadie.
 PAST A. sew.HAB dress
 “Afua sewed a dress.”
- b. ?*Na Afua pɛpam atadie.
 PAST A. sew.ITER dress
 “Afua repeatedly sewed a dress.”
- (24) a. ?*Na Afua pam ntadie.
 PAST A. sew dress.PL
 “Afua sewed dresses.”
- b. Na Afua pɛpam ntadie.
 PAST A. sew.ITER dress.PL
 “Afua sewed dresses.”

Thus, this account will ignore both the stative and the iterative as not taking place in the syntax.

3.2 The Motional Prefixes

The motional prefixes *bɛ-* and *kɔ-*, traditionally referred to as “deictic” or “gressive” affixes, are used to indicate that the action occurred subsequent to motion towards or away from a discourse-defined point of reference. Contra Boadi (2008), they do not

¹⁴The only other productive use of reduplication in the language occurs in adjectives and adverbs, and though its distribution is unclear it seems to mark the distinction between attributive and predicative uses of the lexemes in question:

- (i) a. Kofi dii ntɛm.
 K. eat.PAST fast
 “Kofi ate quickly.”
- b. Kofi ntɛmtɛm!
 K. fast
 “Kofi is fast!”

seem to denote that the action of the verb was done along the path indicated; rather, they carry sequential meaning similar to Akan Serial Verb Constructions¹⁵:

- (25) a. Yaa kɔ- tɔ bayere.
Y. GO- buy yam
"Yaa goes to buy yams."
- b. Yaa bɛ- sa.
Y. COME- dance
"Yaa comes to dance."
- c. Kɔ- bra!
GO- come.IMP
"Return!" (lit. "Go, then come!")

This sequential meaning is further evidence that the motion prefixes are diachronically related to Akan SVCs. The Akan verbs "come" and "go" are respectively *ba* and *kɔ*, both formally similar to the Motion prefixes. Following Osam (2008) and contra Boadi (2008), this analysis will assume that the motion affixes developed directly from SVCs with the motion verbs as V_1 . These motion verbs do not commonly take objects (though they may when acting as main verbs), and thus would be similar on the surface to affixes; presumably, at some point, they became reinterpreted as optional inflectional heads in the functional layer of the vP. The vowel in *ba* later transitioned to the more medial *bɛ-*, obscuring its relation to the original verb – probably an instance of vowel centralization due to the frequent use of this prefix.

This analysis suggests that the Motion prefixes should only be available in immediate pre-root position, which indeed is true:

- (26) a. Kofi kɔ- (*re- / *a- / *n-) tɔ bayere.
K. GO- *PROG / PERF / NEG buy yam
"Kofi is going to buy / went to buy / doesn't go to buy yams."
- b. Kofi bɛ- (*re- / *a- / *n-) tɔ bayere.
K. GO- *PROG / PERF / NEG buy yam
"Kofi is coming to buy / came to buy / does not come to buy yams."

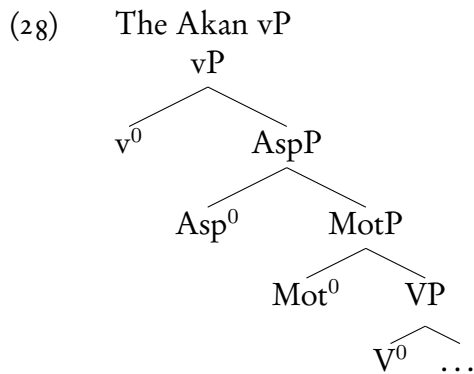
Furthermore, it suggests that they remain in some sense more "verbal" than the aspectual heads, having quite recently been verb roots and remaining lower in the verbal shell; this will be discussed further in section 5.2.

¹⁵As will be discussed in section 3.4, evidence discussed by Martin (2010) shows that Akan SVCs actually involve subordination, though they may still be analyzed as SVCs.

The motion prefixes may co-occur with any of the aspectual heads described above.

- (27) a. Kofi re- / a- / n- kɔ- tɔ bayere.
 K. PROG / PERF / NEG GO- buy yam
 "Kofi is going to buy / went to buy / doesn't go to buy yams."
- b. Kofi re- / a- bɛ- tɔ bayere.
 K. PROG / PERF / NEG GO- buy yam
 "Kofi is coming to buy / came to buy to buy yams."
- c. Kofi m- bɛ- tɔ bayere.
 K. NEG- COME- buy yam
 "Kofi doesn't come to buy yams."

This ordering clearly indicates that the motion prefix originates lower in the verbal shell than Asp^0 . As it is clearly functionally and distributionally independent of both the verb root and aspectual marking, it will be assumed to head its own phrase, $MotP$, merged as a sister to VP . This gives the following preliminary structure for the Akan verbal shell:



3.3 The Past Tense

As mentioned in section 2, the simple affirmative past tense in Akan typically takes the form of lengthening of the root vowel, with a *-i/-e/-yɛ* suffix if the verb occurs clause finally (see Kandybowicz (2010) for details on the exact distribution of this suffix):

- (29) Kofi sàa- yɛ
 K. sing.PAST- do
 "Kofi sang."

Following Kandybowicz, this analysis will assume that this lengthening is the result of the root surfacing in T_{PAST} , and that the *-i/-e/-ye* suffix is actually a form of do-insertion which occurs when Asp^0 would otherwise be unpronounced at spell-out.

Note, however, that this form of the past tense is incompatible with any aspect markers:

- (30) a. *Ama re- / a- bàa.
 A. PROG / PERF come.PAST
 “Ama was coming / had come.”
- b. *Ama báa.
 A. come.HAB.PAST
 “Ama came (regularly)”

This fits with the V-raising analysis, as the presence of an overt Asp^0 would prevent V-to-T movement, by the Head Movement Constraint.

In order to achieve past-tense meaning with overt aspectual marking, the *ná* form must be used, merged directly into T^0 and thus satisfying its [+EPP] feature:

- (31) a. Na Ama re- / a- ba.
 PAST A. PROG / PERF come
 “Ama was coming / had come.”
- b. Na Ama bá.
 PAST A. come.HAB
 “Ama came (regularly).”

3.4 The Infinitive

One of the more puzzling aspects of Akan verbal morphology has always been the *a-* prefix which occurs on non-initial verbs in Serial Verb Constructions in tenses and aspects other than the simple past and the habitual:

- (32) Kofi re- tɔ nwom a- sa.
 K. PROG- throw song INF- dance
 “Kofi is singing and then dancing.”
- (33) Kofi tɔɔ nwom (*a)- saa ye.
 K. throw.PAST song (*INF)- dance.PAST
 “Kofi sang and danced.”

As shown by the previous two examples, the use of any aspectual marking on the first verb in an SVC seems to require a prefix *a-* on the second verb, with no other marking for tense or aspect present. However, if the first verb is marked for past tense through lengthening (and thus has no overt aspect marking), then this *a-* prefix is unavailable on the second verb, which is also required to surface marked with vowel length for the past tense.

This prefix is entirely unavailable on the main verb of independent clauses, contradicting the standard analysis (Dolphyne, 1988, 1996; Osam, 2008) that it represents a "consecutive aspect" – *Kofi asa* can only ever mean “Kofi has danced (perfect)”, and never “Kofi dances next”. As noted in section 2, Boadi cites the use of this *a-* prefix in subordinated clauses (cf. (34)), combined with its inability to co-occur with any other tense or aspect marking, as evidence that it is an infinitive marker.

- (34) Yε me apɛde, nà me a- dɔ wo daa.
 do.IMP my wishes, in.order.that I INF- love you forever
 “Do my wishes so that I love you forever.”
 (Boadi (2008))

Such an analysis fits well with the confusing fact that the infinitive prefix and the vowel-lengthened past tense form of the verb never co-occur. More explicitly, the infinitive and the past tense are both forms of T^0 , and thus only one may occur in a clause. Under an analysis developed by Martin (2010), this is an indication that the constructions typically analyzed as serializing are actually subordinating structures, with the embedded T^0 constrained to be either identical to the matrix T^0 or infinitive for semantic reasons. This model matches the situation described above, in which the vowel-lengthened past tense necessarily occurs on all verbs in an SVC.

This model also explains the occurrence of sentences such as (35) in contrastive pragmatic contexts, first noted by this author:

- (35) a. Kofi re- tɔ nwom a- sa.
 K. PROG- throw song INF- dance
 “Kofi is singing and then dancing.”
 b. Kofi re- tɔ nwom re- sa.
 K. PROG- throw song PROG- dance
 “Kofi is singing and dancing (simultaneously).”

Under a serialization analysis, the duplication of aspect as a means to contrastively mark simultaneity would be unexpected. Under an embedding analysis, however, the events would be construed to be simultaneous exactly when the lower T^0 was finite, and thus constrained to be a duplicate of the matrix T^0 . That is, simultaneous events by definition have identical tense features (semantically speaking), and thus would be

signaled by identical T^0 s; consecutive events necessarily have differing underlying tense features, and so the embedded T^0 must differ, and thus must be infinitive due to syntactic constraints on embedded TPs. The limited semantic availability of sentences of this type explain how they have thus far gone unnoticed in the literature.

The analysis of *a-* as an infinitive marker also provides an easy explanation for its ordering with respect to negation, as it would naturally surface in T^0 above NegP:

- (36) Kofi re- n- tɔ nwom a- n- sa.
K. FUT- NEG- throw song INF- NEG- dance
“Kofi will not sing and then dance.”

Interestingly, the motional prefixes remain available in the infinitive, again indicating that they are, in some sense, more verbal than aspect, which may not co-occur with an infinitive T^0 :

- (37) Kofi re- kɔ- tɔ nwom a- kɔ- sa.
K. PROG- GO- throw song INF- GO- dance
“Kofi is going to sing and then to dance.”

3.5 Negation

Negation in Akan most simply takes the form of a nasal prefixed to the verb root, with assimilation to the place of articulation of the verb’s initial consonant:

- (38) a. Yaa n- kasa.
Y. NEG- speak
“Yaa doesn’t speak.”
- b. Kofi m- bɔɔ Afua.
K. NEG- hit.PAST A.
“Kofi didn’t hit Afua.”

In the presence of Motion prefixes, the negation occurs just before the prefix; however, negation always obligatorily follows all aspectual markers. Kandybowicz (2010) and others have argued that Akan, similar to other languages, merges Neg^0 as sister to vP. Given that negation seems to form a barrier to verb raising (cf. Kandybowicz (2010)), this gives the following structure:

- (39) [$NegP$ Neg^0 [vP v^0 [$AspP$ Asp^0 [$MotP$ Mot^0 [VP V^0 [...

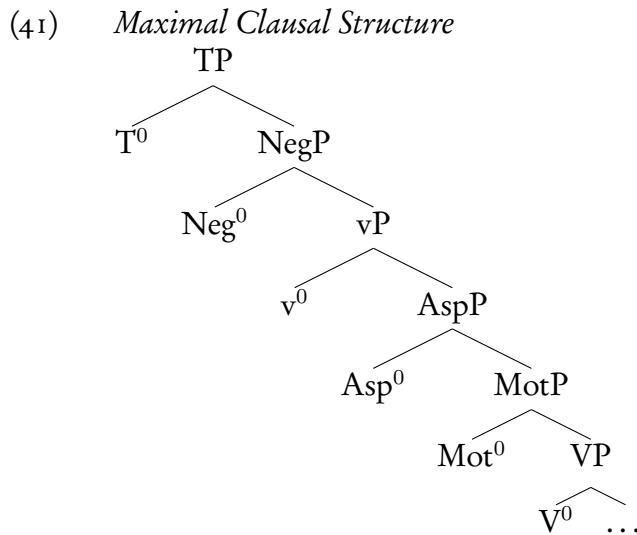
However, this presents an issue with regards to the ordering of negation and aspect:

- (40) a. Kofi a- n- sa.
 K. PERF- NEG- dance.
 b. *Kofi n- a- sa.
 K. NEG- PERF- dance.
 “Kofi is going to dance.”

Aspect always surfaces linearly before negation. Kandybowicz (2010) solves this by allowing Neg^0 and Asp^0 to undergo morphological merger immediately after spell-out, followed by the prosodic inversion of the negation/aspect pieces. This analysis will be questioned in section 5 – a more general account may be achieved by assuming that Asp^0 may raise past Neg^0 into T^0 . Despite this, negation does appear to form a barrier to V-to-T movement, as is evident from the vowel lengthening facts on V. The commonly cited form for the negative past (i.e. *Kofi ansa*), accordingly, does not show vowel lengthening. Note, however, that this form appears homophonous with the expected negative perfect.¹⁶ This will be further discussed in section 5.2.

3.6 The Complete Verb Phrase

The clause structure assumed in this thesis for Akan is thus:



¹⁶This ignores claims by Dolphyne (1996) and Boadi (2008) that the negative perfect has the form:

- (i) Kofi n- sa- e.
 K. NEG- dance- PERF
 “Kofi didn’t dance.”

As was mentioned in section 2, no support for this claim was found in this author’s fieldwork.

4. THE DISTRIBUTION OF THE FUTURE

This section will present the complicated distribution of the future tense in Fante, beginning with its interactions with overt aspectual marking. The incompatibility of the future tense with motion prefixes will then be discussed, followed by a brief presentation of the complications introduced by the negative polarity.

4.1 Aspects in the Future Tense

Surprisingly, the future tense in Fante does not make any aspectual distinctions. While the past tense may co-occur with any aspect (using the overt form *na* merged directly into T), there is no equivalent form for the future tense. When an aspectual marker occurs *bɛ-*, it invariably takes on the motional meaning, while the other ordering is judged impossible:

- (42) a. Kofi a- bɛ- sa.
K. PERF- COME- dance
“Kofi had come to dance.” (Cannot mean: “Kofi will have danced.”)
- b. *Kofi bé- sá.
K. FUT- dance.HAB
“Kofi will generally dance.” (Note the tone.)
- c. Kofi bè- sá.
K. COME- dance.HAB
“Kofi comes to dance.”

(42) illustrates the ungrammaticality of the future perfect and future habitual. The progressive aspect represents a special case. Somewhat surprisingly, the future marker *re-* may precede future *bɛ-*, but in doing so creates a different meaning. Rather than the expected future progressive, the verb receives an immediate future interpretation:

- (43) Afua re- bɛ- kasa kyere.
A. PROG- COME- speak thing
“Afua is about to say something.”

As outlined in section 2, the immediate future *rebɛ-* has often been regarded as a single, unanalyzable morpheme. The motion markers, however, suggest another interpretation: The immediate future meaning is a secondary meaning, with the primary meaning being either “is (now) coming to V” or “will come to V” (with the *re-* acting as a negative future marker). This will be discussed in greater detail in section 5.4.

4.2 Motion in the Future Tense

Many languages restrict the use of aspects in particular tenses; perhaps more surprising, at first, is that the Fante future tense may not occur on either of the Motion prefixes in the affirmative¹⁷:

- (44) a. *Kofi bé- bɛ- didi.
 K. FUT- COME- eat.ITER
 “Kofi will come eat.”¹⁸
- b. *Yaa bé- kɔ- to bayere.
 Y. FUT- GO- buy yam
 “Yaa will go buy yam.”

When a future meaning is required for an affirmative motional verb, a Serial Verb Construction workaround is employed:

- (45) a. Kofi bé- ba a- bɛ- didi.
 K. FUT- come INF- COME- eat
 “Kofi will come eat.”
- b. Yaa bé- kɔ a- kɔ- to bayere.
 Y. FUT- go INF- GO- buy yam
 “Yaa will go buy yam.”

Rather than overload the *bɛ-* prefix with both future and motional meaning, Akan apparently requires the introduction of an explicit verb of motion, used in an SVC with the primary verb. Note, however, that the *bɛ-* prefix continues to occur: On the first verb, with future tense meaning, and on the second, with motional meaning.

The complementary distribution of future *bɛ-* with motion *bɛ-* might conceivably be explained through recourse to phonetic constraints, given their similarity. However, the necessity of the above workaround even for *bɛkɔ-* sequences points very strongly to a common syntactic origin for the future and Motion prefixes.

¹⁷This has previously been noted by Osam (2008), though he only uses it as support for a diachronic argument, without reference to synchronic syntax.

¹⁸Note the difference between prefixal *bɛ-* and verbal *ba* “come”. The prefixal form is assumed to have undergone vowel centralization due to common usage sometime during its grammaticalization process.

4.3 Negative Future and Motionals

As discussed above, one of the most surprising facts about the future is its alternation with the progressive aspect in the negative:

- (46) a. Kofi bɛ- sa.
K. FUT- dance
“Kofi will dance.”
- b. Kofi re- sa.
K. PROG- dance
“Kofi is dancing.”
- (47) a. *Kofi bɛ- n- sa.
K. FUT- NEG- dance
“Kofi will not dance.”
- b. Kofi re- n- sa.
K. FUT- NEG- dance
“Kofi will not dance.” (Cannot mean: “Kofi is not dancing.”)

However, the motional prefixes are not incompatible with negative polarity. They obligatorily attach after negation, closest to the verb root:

- (48) a. Kofi m- bɛ- didi.
K. NEG- COME- eat.ITER
“Kofi does not come to eat.”
- b. Yaa n- kɔ- to bayere.
Y. NEG- GO- buy yam
“Yaa does not go buy yam.”

Contrasting with the affirmative, the negative does allow motion prefixes to co-occur with the future tense:

- (49) a. Kofi re- m- bè- didi.
K. FUT- NEG- COME- eat
“Kofi will not come eat.”
- b. Yaa re- n- kɔ- to bayere.
Y. FUT- NEG- GO- buy yam
“Yaa will not go buy yam.”

Note that future tense meaning is now apparently carried by the prefix *re-*, which is separated from the motional prefix by the negation prefix. This compatibility provides a strong indication that negative future *re-* begins in a syntactically distinct location from future tense *bɛ-* and the motion prefixes – i.e., in the negative the future tense and motional prefixes are not in competition for a single merge location. Note the surface similarity between negative future *re-* and progressive aspect *re-*. It was argued above that the incompatibility of future *bɛ-* with the Motion prefixes and its similarity in form to one of those heads provide strong evidence for a common origin in the syntax. Here, the fact that negative future *re-* surfaces higher in the syntax than MotP, is compatible with the motion prefixes, and is similar in form to the progressive aspectual head (which is known to originate above the Motion prefixes) makes a strong case that it originates in Asp⁰ rather than Mot⁰.

As this model would predict, the negative future *re-* may not co-occur with any aspectual markers:

- (50) a. *Afua a- re- n- sa.
 A. PERF- FUT- NEG- dance
 “Afua will not have danced.”
- b. *Afua re- a- n- sa.
 A. PROG- PERF- NEG- dance
 “Afua will not have danced.”
- c. *Afua re- n- sá.
 A. PROG- NEG- dance.HAB
 “Afua will not dance (often).”
- d. *Afua re- re- n- sa.
 A. FUT- FUT- NEG- dance
 “Afua will not be dancing.”
- e. *Afua re- re- n- sa.
 A. FUT- PROG- NEG- dance
 “Afua will not be dancing.”

It is also worth noting that *ren-* does not form a compound negative future morpheme capable of combining with aspect markers:

- (51) a. *Afua ren- a- sa.
 A. FUT.NEG- PERF- dance
- b. *Afua a- ren- sa.
 A. PERF- FUT.NEG- dance.
 “Afua will not have danced.”

4.4 Conclusions

In summary, the distributional facts provide strong evidence for “future tense” *bɛ-* starting out in Mot^0 . Its complementary distribution with the Motion prefixes implies a common origin in the syntax. Interestingly, this is not true of the negative future *re-*, which clearly has an origin above MotP in Asp^0 : It is not in complementary distribution with the motion prefixes, but rather with the aspect markers.

The distribution of aspect markers in the future tense lends further support to this hypothesis: progressive *re-* is the only aspect morpheme which may co-occur with future tense meaning at all, but in the negative it seems to lose any distinct sense of “progressiveness”. The complementary distribution of negative future *re-* with other aspects confirms that it does, indeed, start out in Asp^0 . The similar competition of affirmative future *bɛ-* with other aspects suggests a raising analysis: In order for Mot^0 to gain future meaning, it must raise to T^0 . The incompatibility of future tense marking with any over aspectual marking is explained by the fact that this movement to T^0 would be blocked by contentful Asp^0 due to the Head Movement Constraint.

As discussed in section 3, the progressive aspect is the only aspect in Fante compatible with future tense secondary meaning: Comrie (1976) notes that the habitual focuses on the event as extended over a long period of time, making it an unlikely candidate for denoting events which specifically have not yet begun; the perfect, on the other hand, typically implies past tense. The progressive, carries no past tense meaning, but also does not so de-emphasize the temporal boundaries of an event as to be incompatible with the task of locating the start of an event in time. It is thus unsurprising that the progressive aspect marker forms the future tense in at least one, potentially two constructions. Similar arguments may be made for the motional prefixes: Bybee & Pagliuca (1985) describes “come” and “go” as the two most common verbs, cross-linguistically, from which to derive a future tense: These verbs already have fairly low semantic content, and are already often used in SVC (or SVC-like) constructions which carry an inherent implication of consecutivity, i.e. that the event denoted by the main verb has not yet occurred (but will occur later) – future tense meaning. Thus, it seems that Fante has constructed a future tense out of common morphosyntactic building blocks; section 5 provides a more detailed description of how this is hypothesized to take place in the syntax.

5. FUTURE TENSE AS EPIPHENOMENAL

Based on the data presented in section 4, it is hypothesized that the future tense, far from being a single functional item merged in T^0 , is rather a reinterpretation of future-compatible functional items occupying the $\text{T}_{\text{NON-PAST}}$ head. The introduction of $\text{T}_{\text{NON-PAST}}$ is first justified, followed by a discussion of V-to-T movement in Akan. The semantic and syntactic derivation of the future tense in the affirmative is then outlined, followed by a discussion of the complications introduced by the negative. In total, this section will detail both the diachronic and synchronic development of the future tense in Fante.

5.1 The Non-Past Tense

Comrie (1985) notes that tense-marking languages commonly make only a binary distinction, grouping either the future or the past with the present into a single tense. Of these, the past/non-past split seems to be the most common cross-linguistically. It thus seems unproblematic to propose that Akan originally made only this basic distinction, instantiating both tenses with separate elements. $T_{\text{Non-Past}}$ would have been phonetically null, while T_{Past} would have had the suprasegmental form that it has now.

Kandybowicz (2010) argues that T^0 and Asp^0 are [+EPP], requiring some phonetically-contentful head to fill them. In the case of T_{Past} , this requirement may be satisfied either by merging the overt past marker *na*, by raising V-to-T, or by subject raising to Spec, TP. The second option, for Kandybowicz, is only available when no aspectual or negative head is merged, which would otherwise block raising.

$T_{\text{NON-PAST}}$ is hypothesized to be similar to T_{Past} in that it carries no segmental material and is [+EPP]. No overt equivalent to *na* exists for the non-past in Akan, consistent with its being the unmarked tense variant (Comrie, 1985). Thus, $T_{\text{NON-PAST}}$ will always trigger raising.

5.2 V-to-T Movement

If both the T_{Past} and $T_{\text{NON-PAST}}$ heads are [+EPP], then they should trigger movement of the closest eligible material to fill them. The EPP on Asp^0 is satisfied by merger of overt material, but this would block V^0 head-movement into T. At the merger of T^0 , then, contentful Asp^0 will be the only available head for V-to-T movement: the Head Movement Constraint prevents V^0 from moving past contentful Asp^0 .¹⁹ Thus, a key difference between T_{Past} and $T_{\text{NON-PAST}}$ seems to be that $T_{\text{NON-PAST}}$ is compatible with Asp^0 at spell-out, while the [+length] prosodic features of T_{Past} seem to be incompatible with non-verbal material, and thus may not apply to Asp^0 . That is, T_{Past} necessarily triggers vowel lengthening, but vowel-lengthened forms of the aspectual markers never occur:

- (52) a. *Kofi ree- sa.
 K. PROG.PAST- dance.
 “Kofi was dancing.”
- b. *Kofi aa- sa.
 K. PERF.PAST- dance.
 “Kofi had danced.”

¹⁹Technically, overt Asp^0 prevents V^0 raising to v^0 ; as v^0 is phase-defining, at the merger of T^0 only Edge, Asp^0 and higher and available for movement — i.e. nothing within VP.

The unavailability of vowel-lengthened aspect markers may explain the requirement that the *na* overt past tense marker be merged in cases of the co-occurrence of tense and aspect. As $T_{\text{NON-PAST}}$ has no such suprasegmental material, there is nothing to prevent aspect markers from surfacing in it.

5.2.1 *Movement Past Negation*

In the negative, such an analysis would provide an alternative explanation of the ordering of aspect before negation, so long as Asp^0 is allowed to jump the negation head into T^0 . Note that Kandybowicz's 2010 analysis of do-insertion requires negation to block V-to-T, a seeming contradiction. The conclusion, then, must be that negation, as in other languages, inconsistently forms a barrier to head movement. Presumably, in the case of Akan, heads which are sufficiently verbal (verb roots and motion prefixes) may not cross the boundary posed by negation, while others (i.e. non-verbal ones) may. This explains the correct ordering of Aspect — Negation in Akan verbal morphology.

5.2.2 *The Form of the Negative Past*

Such an analysis has the benefit of potentially explaining the idiosyncratic form usually cited as the negative past: Based on the forms of the past tense available in the affirmative, one of two possible negative forms might be predicted: Either (a) the application of a negative prefix, followed by lengthening of the vowel on the verb root (possibly with the *-i/-e/-yε* do-insertion), or (b) the use of the analytic past tense *na*. These are illustrated below.

- (53) a. *Yaa n- saa (yε).
 Y. NEG- dance.PAST (do)
 “Yaa didn’t dance.” (Ungrammatical with or without *yε*.)
- b. *Na Yaa n- sa.
 PAST Y. NEG- dance.
 “Yaa didn’t dance.”

The first option, however, would require the verb root to raise into T_{PAST} past Neg^0 , Kandybowicz (2010) shows forms a barrier to movement. The second form follows the same pattern as the past tense with aspectual marking: As the verb may not move to T^0 past an overt Asp^0 , an independent morpheme is merged to satisfy the EPP requirement of T^0 . However, this does not seem possible with the negative unless an overt Asp^0 is merged as well:

- (54) Na Yaa re- n- sa.
 PAST Y. PROG- NEG- dance.
 “Kofi was not dancing.”

It seems that the merger of *na* is constrained by the merger of a non-null Asp⁰.

Instead of either of these forms, the unexpected prefix *an-* occurs, traditionally analyzed as a unitary negative past prefix.

- (55) Yaa a- n- kasa.
 Y. PERF- NEG- speak
 “Yaa didn’t speak.”

If the analysis proposed here is correct, one might interpret this form as being negative (non-past) perfect rather than negative past, where the perfect (as outlined in section 3.1) carries strong past-tense secondary meaning. This form seems to be an idiosyncratic workaround for the unavailability of normal past tense marking in the negative due to the issues described above: Assuming that both forms of T⁰ are equally available after the merger of perfect Asp⁰, the T_{NON-PAST} form combines with perfect aspect to substitute for negative T_{PAST}.

5.2.3 *Raising and Mot⁰*

Surprisingly, neither motion prefix is directly available in the past tense. When past motional meaning is intended, a serial verb workaround is employed (similar to future motional meaning).

- (56) a. *Kofi bε- saa yε.
 K. COME- dance.PAST do
 b. *Kofi bεε- saa yε.
 K. COME.PAST- dance.PAST do
 c. Kofi baa saa yε.
 K. come.PAST dance.PAST do
 “Kofi came to dance.”
 d. *Kofi kɔ- saa yε.
 K. GO- dance.PAST do
 e. Kofi kɔɔ saa yε.
 K. go.PAST dance.PAST do
 “Kofi went to dance.”

Note that (c) is undoubtedly instances of a separate verbal root, rather than the functional head Mot⁰, as shown by the vowel change from *bε-* to *ba*; the hypothetical lengthened form of the prefix, *bεε-*, is unavailable; furthermore, if the *ba* form is used in the non-past, the second verb is typically infinitive (as discussed above):

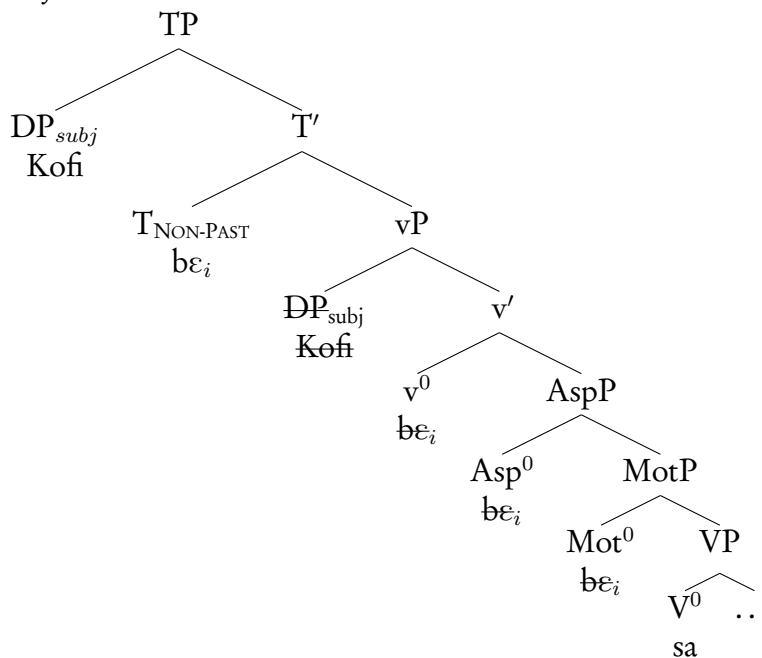
- (57) Kofi ba *(a-) sa.
 K. come INF- dance.
 “Kofi comes to dance.”

While there is no vowel change to demonstrate this distinction for *kɔ-* and *kɔ*, it seems highly unlikely that the two motion prefixes would behave differently in this respect. Thus, examples

LLast (c) and (e) are demonstrably SVC workarounds, showing that the vowel-lengthened form of the past tense of the verb is incompatible with the Motion prefixes.

This implies that, first and foremost, that overt Mot^0 blocks movement of the verb to T^0 . As Mot^0 is thus the closest eligible head at the merger of tense, presumably it must move there to satisfy the EPP requirement of T^0 . However, like aspectual heads, they are apparently incompatible with the [+length] verbal marking of T_{PAST} , and thus may not surface there. As a result, past tense motional sentences resort to the SVC form.²⁰ The facts are thus consistent with Mot^0 raising to T^0 whenever no intervening head would prevent such movement: Whenever Mot^0 is merged without overt aspect, it will be the closest eligible head to T^0 ; and indeed it seems that the surfacing of Mot^0 in T^0 obeys similar constraints to the surfacing of Asp^0 there. Under such an analysis, Mot^0 will always raise to T^0 in simple non-past motional sentences, and will surface there:

- (58) *Kofi bɛsa.*



²⁰As described in section 3.4, these forms have some of the properties of subordinating structures; that (c) and (e) in (56) show past tense lengthening on both verbs points to the merger of two tense heads, in two full clauses. This fundamentally separates the motion prefix construction from the above, and perhaps suggests a diachronic reason why the motion verbs have become afixal in the non-past (where there is no surface lengthening to mark them as verbs) but not in the past.

However, it does appear that negation blocks the raising of Mot^0 to T^0 , as the surface order of Motion — Negation is never available (i.e. the Motion prefix always occurs closest to the root of all verbal affixes):

- (59) *Kofi kɔ- n- sa.
K. GO- NEG- sa.
“Kofi doesn’t go.”

This is unsurprising: As discussed in detail in Kandybowicz (2010), negation does form a barrier to V-to-T movement. Thus, movement of those heads which are “more verbal” (i.e. Mot^0 and V^0) is blocked by negation, while movement of those heads which are “less verbal” (i.e. Asp^0) is not. This fits with both the hypothesized ordering of these elements within the verbal shell and the recent origin of Mot^0 from SVCs.

5.3 Reinterpretation

This, then, provides the opportunity for the reinterpretation of the [$\text{Mot}^0 + \text{T}^0$] complex as the future tense. According to Bybee & Pagliuca (1985), the verbs “come” and “go” provide, cross-linguistically, the most common sources for future tense innovation; this combined with the inherent consecutive sense of the Motion prefixes (i.e. of movement occurring before the event denoted by the verb) seems already to suggest a strong future-tense meaning.

Diachronically, this analysis proposes that speakers of Akan began first to reanalyze *bɛ-* as bearing future tense meaning only when it would normally occupy the structural position of T^0 .

As noted above, negation blocks the movement of Mot^0 to T^0 , thus apparently making future tense meaning unavailable in the negative. Once the possibility for an explicit future tense was present, however, the pressure to extend this possibility to negative polarity sentences would have been quite high. As such, future tense meaning began to be applied to another compatible head specifically when it occupied $\text{T}_{\text{NON-PAST}}$.

The only heads available in this position in the negative are the aspectual heads; the typical linear order of these elements (with negation closer to the verb) shows that negation is transparent to movement of the aspect heads though, as described above, not to Mot^0 . The unmarked habitual, being a floating tone, would be unavailable for this purpose, as it would have no segmental material to attach to. This leaves the progressive and the perfect. Of these, the progressive *re-* carries the most “future-tense compatible” meaning, as the perfect carries strong past-tense secondary meaning. (Comrie (1976)) It is thus unsurprising that the analogical development of the future tense chose *re-* to bear future tense in the negative.

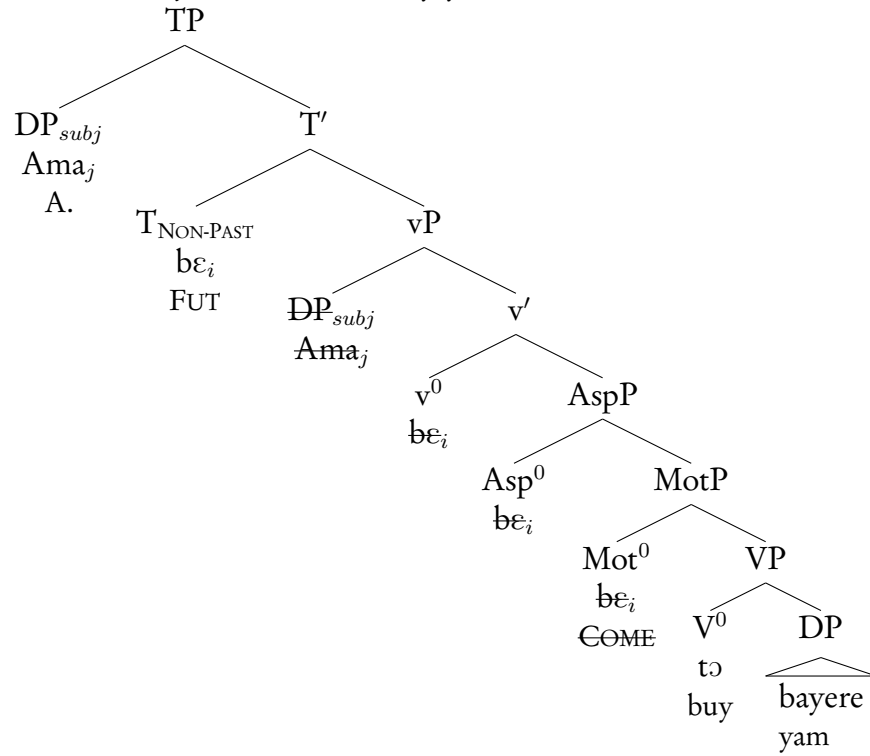
In summary, language-internal evidence suggests that the future tense in Akan developed by way of a reinterpretation of the [$\text{T}^0 + \text{Mot}^0$] complex that arose naturally after the development of motional verbs from SVCs due to pre-existing V-to-T move-

ment. The affirmative future was then extended to the negative effectively by analogy – finding a future-tense compatible functional projection (i.e. the progressive) which commonly occupied T^0 and reinterpreting this complex as a future-tense morpheme.

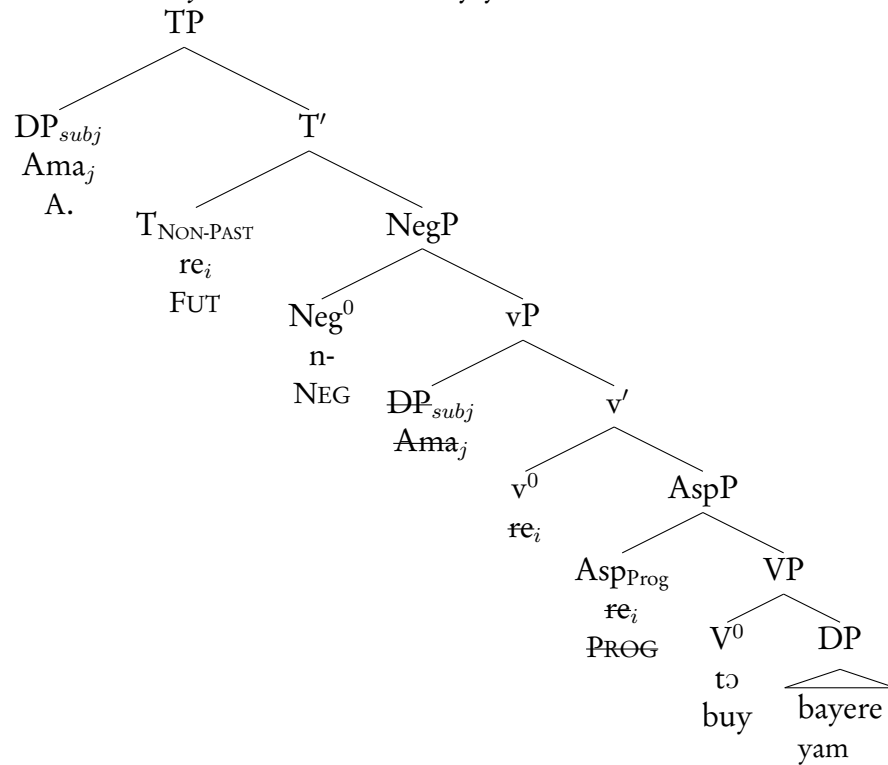
The question remains as to why the functional projection compounded with T^0 to create a future tense morpheme ever originates below Asp^0 – that is, if [$T^0 + Asp_{PROG}$] bears future tense in the negative now, why did it not develop future tense meaning in the affirmative? No definitive answer can be offered, but a few speculations can be made. The connection between progressive meaning and future tense meaning, while extant, seems rather more tenuous than the connection between motional meaning and the future tense: In the latter case, there is the implication of consecutivity, i.e. that the event denoted by the main verb has not yet happened, while in the former there is only a compatibility rather than an implication. Presumably, then, the Motion prefixes inherently form a more likely candidate for the future tense. Their development from SVCs, i.e. their recent reanalysis as functional projections rather than full verbs, then, seems to have spurred the development of the future tense, a tense which previously had no clear paths for development.

The structure of future tense sentences under this analysis is shown below, for representative affirmative and negative sentences.

(60) *Ama bεtɔ bayere.* "Ama will buy yam."



(61) *Ama rento bayere.* "Ama won't buy yam."



5.4 Applications

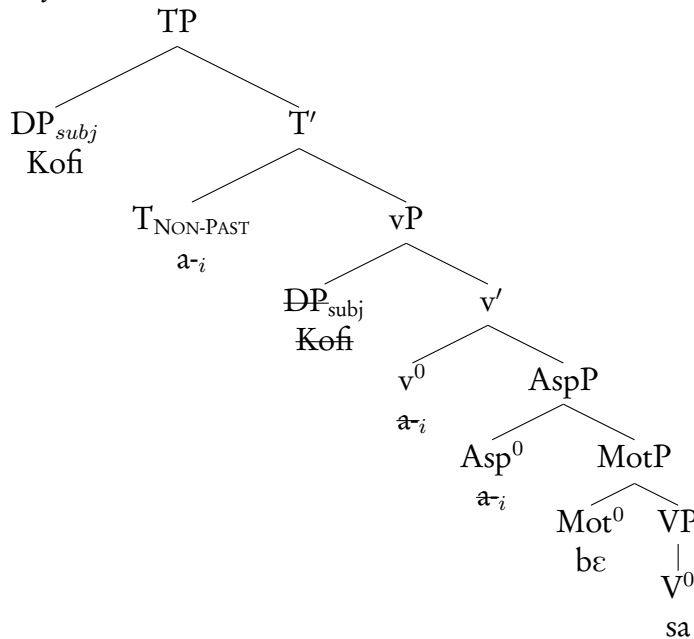
This analysis has the benefit of explaining the complex interactions of the future tense with aspect and motional marking. This section will present a few supporting examples of these interactions.

5.4.1 Overt Aspect

As noted in section 4, the future tense is incompatible with overt aspect marking. This is explained differently in the affirmative and the negative. In the affirmative, the presence of an overt Asp^0 blocks the raising of Mot^0 to $T_{NON-PAST}$, preventing it from receiving future tense interpretation. Asp^0 then raises to T^0 , leaving a sentence with motional meaning.²¹

- (62) Kofi a- bε- sa.
K. PROG- COME- dance.
“Kofi came to dance.” (Cannot mean: “Kofi will have danced.”)

- (63) *Kofi rebεsa.*



In the negative, however, this incompatibility is more direct – only when the progressive aspect is merged at Asp^0 to the exclusion of other aspect heads can it receive future tense interpretation by raising to $T_{NON-PAST}$. That is, future tense meaning in the negative is assigned to the combination of *re-* and $T_{NON-PAST}$, overriding the original aspectual

²¹The question remains as to why Asp_{PROG} cannot take future meaning in the affirmative. This is likely for diachronic reasons, as outlined in section 5.3.

meaning of *re-*; since *re-* is in competition with other aspect markers for merger at Asp^0 , this leads to the incompatibility of future tense meaning and any aspectual marking.

5.4.2 *The Immediate Future*

The immediate future, in this analysis, is not a future tense at all: Due to the interaction of aspect and future tense just discussed, the *bε-* affix is unable to raise to $\text{T}_{\text{NON-PAST}}$ and receive future tense interpretation. Instead, *re-* raises, giving the whole sentence a progressive non-past motional meaning. It's fairly easy to see how such an understanding could become commonly used as an immediate future, especially once the analogical pressure of the new future tense was in place.

- (64) Ama *re-* *bε-* di.
 A. PROG- COME- eat
 “Ama is coming to eat.”, or “Ama will come eat.”

5.4.3 *Future Motion*

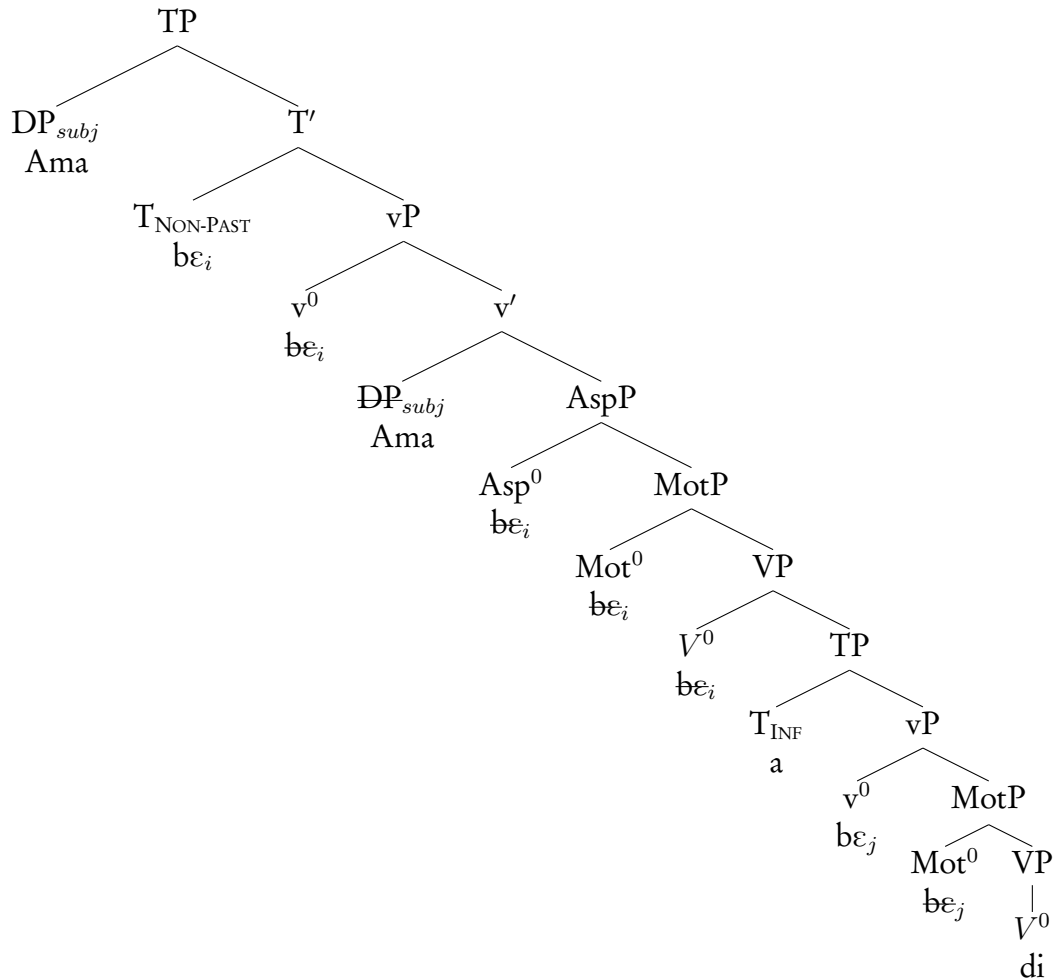
As previously noted, future tense motional meaning generally involves an SVC workaround:

- (65) Ama *bε-* ba a- *bε-* di.
 A. FUT- come INF- COME- eat
 “Ama will come eat.”

The incompatibility of the future tense with motion prefixes in the affirmative follows directly from the future tense morpheme being first merged as Mot^0 and only receiving future tense interpretation after raising to $\text{T}_{\text{NON-PAST}}$. Surface forms with both the Motion and the future-tense form are infelicitous on the grounds that they would represent a chain in which both the head of the chain in T^0 and the tail in Mot^0 are pronounced, a state of affairs that is not linearizeable. (Nunes (2004)) The compatibility, on the other hand, of the future and motional prefixes in the negative is explained by the *re-* progressive aspect raising to $\text{T}_{\text{NON-PAST}}$ and bearing future tense instead of Mot^0 .

In this analysis, each of the verbs in the SVC is merged with its own MotP. However, the higher copy of Mot^0 is then copied upward at the merger of $\text{T}_{\text{NON-PAST}}$, receiving future tense interpretation. This allows for future tense and motional meaning to co-occur in SVCs, explaining the grammaticality of the workaround given in (65).

(66) *Ama bεba abεdi.* ‘Ama will come eat.’



5.5 Conclusions

In summary, the complexities of Akan future tense morphosyntax are best explained by a movement analysis, in which head movement allows heads high in the verbal extended projection to surface in T^0 ; heads carrying future tense secondary meaning produce a future tense epiphenomenal reading for the sentence. Section 6 will examine this analysis diachronically in more detail, and discuss its relevance for the study of diachronic morphosyntax.

6. CONCLUSIONS: DIACHRONIC MORPHOSYNTAX

In this thesis, an account of the complexities of the future tense in Akan has been developed, with a supporting model of the Akan verbal extended projection and its diachronic development. This section will present this model in total, followed by a brief discussion with some remaining theoretical issues with the model. Evidence of further diachronic developments in Asante Twi will then be presented. Finally, the implications of this analysis for understandings of the future tense and diachronic morphosyntax will be discussed.

6.1 Diachronic Verbal Morphology in Akan

This section will present a hypothesized timeline of morphosyntactic reanalysis in Akan.

Akan is hypothesized to have once been primarily aspect-marking with a binary tense distinction between past and non-past. Both tense heads were phonetically null and bore [+EPP] features, but only the latter could tolerate aspectual heads at spell-out, as T_{PAST} has a verbal prosodic requirement (vowel lengthening) that needed to be satisfied, while $T_{\text{NON-PAST}}$ did not.

In the first reanalysis, the verbs *ba* “come” and *kɔ* “go” are reinterpreted as novel affixal heads when used as the first verb in a Serial Verb Construction. That is, intervening material between the motional verb and the main verb (namely, the infinitive prefix *a-*) was dropped, leaving both verbs within a single vP. This reanalysis creates an optional Mot^0 head, projecting MotP as the complement of Asp^0 . These affixes provide a new target for operations causing raising to T^0 : While T_{PAST} still only tolerates a verb root at spell-out, $T_{\text{NON-PAST}}$ lacks the prosodic requirements of T_{PAST} and thus has fewer restrictions. The new Mot^0 can thus surface in its position.

In the second reanalysis, the newly-formed [$T_{\text{NON-PAST}} + \text{Mot}_{\text{COME}}$] complex uses the consecutive, future secondary meaning of *bɛ-* and is reinterpreted as a marker of the future tense. The future tense is now available wherever Mot^0 is free to raise to T, namely whenever both Neg^0 and Asp^0 are not present in the base array.

This new future tense creates pressure to form a negative future. By analogy, the language chooses a [$T_{\text{NON-PAST}} + \alpha$] complex. Exactly three such complexes now exist in the language, namely where α is the progressive, perfect, or marked habitual head. Of these options, only the progressive is compatible with the future tense meaning, and so [$T_{\text{NON-PAST}} + \text{Asp}_{\text{PROG}}$] is analyzed as a marker of the future tense in negative.

A fourth, final reanalysis creates the immediate future. With the future-bearing capabilities of both *re-* and *bɛ-* already established, the occurrence of the two on the same verb (already close in meaning to an immediate future) begins to take on an immediate future reading.

6.2 Further Developments in Asante

Kandybowicz (2010) finds evidence in his fieldwork that Asante Twi has taken this re-analysis one step further:

- (67) Kofi bɛ- re- n- sa.
 K. FUT- PROG- NEG- dance
 “Kofi will not be dancing.”

Here, the reanalysis of *bɛ-* has been completed – it now seems to form a true future tense morpheme, merged in T^0 , allowing the formation of future progressive sentences. This seems the natural outgrowth of the process described above – the true development of a future tense.

6.3 Remaining Issues

Kandybowicz (personal communication) has pointed out a remaining issue with the analysis offered here: Namely, that if the direct object of the verb is allowed to raise to Spec, Asp^0 , as it is commonly assumed to do, in many cases an incorrect surface order will result: If either an aspect or motion head is merged, that head will raise to v^0 (and beyond) instead of V^0 , leaving the verb in final position with the object preceding it. In addition to being contrary to the common analysis, leaving the direct object *in situ* leaves the edge of Asp^0 unmarked – that is, if Asp^0 moves up to T^0 and nothing moves into Spec, Asp^0 , then by definition Edge, Asp^0 is unmarked. Under the theory proposed by Kandybowicz (2010), this should be a problem for prosodic alignment at spell-out – indeed, he shows that it is this situation that leads to the *-i/-e/-yɛ* do-insertion in the past tense.

To solve this issue, one might hypothesize that basic motional verbs are actually still SVCs, containing an entire subordinated TP; the embedded v^0 would provide a landing sight above the (embedded) Spec, Asp^0 for the verb and give the correct surface order. Several issues contradict such an analysis, however: Firstly, as described above, motional verbs do not exhibit independent past-tense marking on both Motion prefix and the verb root, as one would expect if this were a normal SVC. Secondly, the embedded T^0 would necessarily be infinitive (Martin (2010)), but no sign of the infinitive marker *a-* remains. Thus, one would need to hypothesize that motional sentences represented an entirely new class of SVCs in Akan, with entirely different properties – hardly an attractive option. What’s more, there remains the issue of the phonetic distinction between the motional prefix *bɛ-* and the verb of motion *ba* “come”; there doesn’t seem to be any distributional way to explain this variation, except to note that one is a bound morpheme and the other an independent verb root.

Thus, analyzing motional sentences as SVCs seems ill-advised. It is not clear how else to precede, except to assume that Akan does not, in fact, raise the object to Spec, Asp^0 . As noted, this assumption has consequences for prosodic mapping and do-insertion:

One must modify Kandybowicz's argument such that do-insertion occurs exactly when all of AspP is empty, not just Edge, Asp⁰. This thesis is not prepared to discuss the consequences of this modification.

6.4 Future Meaning and Diachronic Morphosyntax

Comrie (1985) notes that past-nonpast is a vastly more common binary tense system than its counterpart, future-nonfuture. Indeed, English itself and most other European languages are generally argued to display such a system. Future tense meaning in these languages is accomplished analytically – typically by the use of “light verbs”.

The case of Akan is very similar in many ways – the “light verb” in question just happens to have become an affix before gaining future tense meaning. However, the pattern is slightly richer than in many other cases: The future tense remains an epiphenomenal meaning borne by multiple affixes and expressed due to a new syntactic environment.

This finding potentially sheds light on morphosyntactic development more broadly. Consider the two contrasting cases of the development of the Motion prefixes and the development of the future tense. In the former case, the development might be characterized as being morphologically-driven: Common roots were given head status, syntactically, as they changed form to become more affixal. Contrast this with the case of the future, which might be characterized as syntax-driven: Existing syntactic processes (here, V-to-T) moved existing morphemes into new syntactic environments, allowing secondary meanings to predominate. In the case of Asante Twi, it seems, this reanalysis has gone far enough to leave the realm of the epiphenomenal and create a new future.

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