ON THE DEVELOPMENT OF THE VERB INFINITIVE PHRASE IN YORUBA*

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This paper will concentrate on a type of verb complement structure referred to as the HTS construction in Yoruba, essentially to show four points: a. that it is an older form of the verb-in infinitive phrase in Yoruba, out of which the infinitival gerunds, the à-fi complements, and (by a historical change) the serial verbal constructions originate; b. that the HTS construction is different from (and should not be confused with) the infinitival gerunds, since they are demonstrably distinct constructions; the infinitival gerunds which do not have HTS equivalents number in the hundreds, far too many to be exceptions; c. that the HTS constructions show Yoruba to be related to neighboring Kwa languages like Igbo, Itsekiri and Efik. Furthermore, the serial verb constructions will be shown to be far more productive and economical than the HTS constructions, the infinitival gerunds, and the à-fi complements; hence the former's gradual replacement of the latter, probably to suggest a direction of change (from relative complexity to relative simplicity and productivity); and lastly d. that it will become necessary to modify a portion of the orthography of the language to accommodate these new facts.

1. Introduction

Nothing seems to have defied rigorous analysis in Yoruba grammar as the structure of what has been referred to as the infinitive phrase (cf. Bamgbose [1971:38]). There are three main markers that have at one time or another been

*Professor Awobuluyi's comments and those of Russell G. Schuh have given this paper a completely new shape. Several of the final year students in the "Issues in Yoruba Syntax" classes, University of Ilorin, over the past two years have reacted to the material. I gratefully acknowledge all contributions; whatever errors still remain are in spite of them.
associated with this structure: (i) lâti (<nî + â-tî) 'to'; (ii) â-tî 'to'; and (iii) a high tone syllable (HTS), 'to', all three occurring mutually exclusively in the same position in a complex sentence:¹

(1) a. Adé fê è wá
   b. Adé fé lâti wá
   c. Adé fé àti wá

'Ade wants to come'

In general, there are not strong restrictions on the use of lâti or àti as complementizers in a verb phrase. Both are almost freely interchangeable since they come from the same source nî + â-tî. The only tangible restriction is that they co-occur with embedding verbs. However, not all Yoruba embedding verbs permit the high tone syllable (henceforth HTS). The following list, drawn largely from Awobuluyi [1970] and Bamgbose [1971], is arranged in two groups (the significance of this division will be spelt out later):

<table>
<thead>
<tr>
<th>GROUP A</th>
<th>GROUP B</th>
</tr>
</thead>
<tbody>
<tr>
<td>rorùn 'be easy'</td>
<td>fé 'want; be about to'</td>
</tr>
<tr>
<td>dâra 'be good for/to'</td>
<td>wá 'come; be about to'</td>
</tr>
<tr>
<td>sê/jë 'be possible'</td>
<td>bêrê sî 'start; be about to'</td>
</tr>
<tr>
<td>pê 'be late'</td>
<td>sì'wô 'stop; refrain; cease;</td>
</tr>
<tr>
<td>yá 'be fast; be on time'</td>
<td>yé 'stop; refrain; cease;</td>
</tr>
<tr>
<td>gô 'be unreasonable'</td>
<td>dékun 'stop; refrain; cease;</td>
</tr>
<tr>
<td>dûn 'be easy'</td>
<td>mî 'know'</td>
</tr>
<tr>
<td>tô 'be enough; be ready; be</td>
<td>kô 'learn'</td>
</tr>
<tr>
<td>capable'</td>
<td></td>
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<tr>
<td>yê 'be clear to'</td>
<td>nî 'has to; will have to'</td>
</tr>
<tr>
<td>sôro 'be difficult'</td>
<td>kû/kûn (verb of greeting)</td>
</tr>
<tr>
<td>sù/gô 'bores; tires'</td>
<td></td>
</tr>
<tr>
<td>wù 'pleases; appeals to'</td>
<td></td>
</tr>
<tr>
<td>férê 'be almost'</td>
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</table>

¹This translation is following Bamgbose [1971].
From the different types of analyses of the HTS and related structures in Yoruba, all of which are well documented in Awobuluyi [1970] and Bamgbose [1971], the following can be said to be the outstanding issues:

a. the HTS is a marker of the infinitive verb--Crowther [1852:19]; Bowen [1858:56]; Rowlands [1954:386; 1969:67]; Ward [1952:116] and Bamgbose [1971:38];

b. the HTS is a prefix--Crowther [1852:19]; Bowen [1858:56]; Ward [1952:116]; Rowlands [1954:386; 1969:67] and Bamgbose [1971:38];


e. the HTS is derived from a verb-verb source--Ward [1952:116]; Rowlands [1954:386; 1969:67]; Bamgbose [1971:38];

f. it is the first verb, rather than the second, which conditions the appearance of the HTS--Bamgbose [1966:77; 1971:37].

Additional crucial issues to this discussion, but which are either not raised in the previous analyses or are obscured by them, are:

g. whether or not there is a semantic basis (besides a purely structural basis) for the HTS group of verbs;

h. the pattern of interrelationships between the HTS and the lâti/âti constructions; between these on the one hand, and the serial verb constructions on the other; and between the HTS and tense in an embedded structure;

i. whether or not Yoruba now has what can be called a verb infinitive phrase;

j. whether or not âti can be broken down into the prefix â- and ti, and the consequence thereof; and finally

k. whether or not the surface linear order of the words can fully explain what verbs condition the HTS.

In this paper, we intend first to show that the proper understanding of the HTS underlies our insight into the verb complement structures in Yoruba, and further to demonstrate how previous analyses of the group of verbs that co-occur with the HTS have failed to reveal the true (syntactic and semantic) nature of such verbs. Secondly, and most importantly, we intend to establish the interrelationship between the HTS constructions on the one hand, and the lâti /â-ti
structures and the serial verb constructions on the other. Thirdly, we intend to use the rules of grammar as they apply to these structures to suggest a possible modification of the relevant portion of the Yoruba orthography.

2. The Nature of the High Tone Syllable (HTS)

2.1 Prefix source. Among the issues emanating from the previous analyses, points (b), (c), (f) and (k), can easily be disposed of. The claim that the HTS is a prefix has no clear synchronic evidence. If it is truly a prefix, then it must be a very peculiar one. When verbals take prefixes, the new derivatives become cemented as compounds, with their former internal morpheme/word boundaries wiped out. The HTS does not do such a thing, as we will go on to show. Previous writers have taken the prefix claim for granted for too long, without considering the phonological, as well as the morphological implications. We therefore reject the prefix interpretation in a synchronic description, on the grounds that it violates both phonological (with its initial high tone) and morphological principles (for not converting the base to a compound). Rather, the HTS is a separate particle on its own, its phonetic shape being dependent on the preceding vocalic form. 2

The claim that the HTS is underlyingly /i/ is based on cases where there are two alternative pronunciations, as in:

(2) a. ọṣẹ nàá ẹ̀ à / ë̀ à
b. ọṣẹ nàá ẹ̀ è / ë̀ è

work the possible do
'the work is possible to do'

where (2b) is produced by backward assimilation. However, there is intense controversy over its derivation. As we shall go on to show, it seems too tempting

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2 The high tone phenomenon with its phonetic shape being dependent on the preceding vocalic segment, is not restricted to the infinitive structure. Others are: (i) the subject demarcator; (ii) the progressive tense spread, as in Ọlú ń sùn HTS ọ́ (Ọlú PROG sleep PROG go) 'Ọlú is sleeping away'; and (iii) in negative polarity reduplication, as in kò sùn HTS sùn (not sleep HTS sleep) 'did not sleep at all'.
to argue that the /f/ in (2a) is the remnant of the gerundive C1 f-C1V... form, after the initial C- has been deleted. Otherwise, (3b) would be claimed to be derived from a non-attested (3a):

(3) a. *ọjọ fẹ rfrọ rain wants pouring
    b. ọjọ fẹ ẹ rọ 'it wants to rain'

That a totally ungrammatical sentence would suddenly become grammatical as a result of a phonological deletion rule is unsatisfactory. It is not that (3a) is unpronounceable, but that it is ill-formed. 'Rain wants pouring' is not the same thing as 'it wants to rain.' On the other hand, the claim that the HTS is a prefix would force one to compare the HTS as a prefix with other prefixes in the language. No other prefix has a high tone, and no other prefix fails to produce a nominal compound after attaching to a stem. Certainly, the two positions—that the HTS is an ordinary prefix, and that it is derived from a gerundive source—are untenable.

That it is the first verb, rather than the second, which conditions the surfacing of the HTS, is a bit misleading without further clarification. In embedding, directionality is determined by the relative position of the subordinate verbs to the main predicate. The term "pre-infinitive verb" as used by Bamgbose [1971:37], can only be true at the surface structure, since, as we shall go on to show, there are two main types of embedding involved here: one to the right of the matrix verb, and the other to the left of it, in deep structure. In other words, the surface linear order of words cannot fully explain what verbs condition the HTS.

Claims (a), (d), (e), (g), (h), (i) and (j) therefore, form the central issues in this discussion. The centre of the controversy is whether the HTS is derived from a gerundive reduplicated nominal source via initial consonant deletion, or from a verb-verb source.

2.2. Gerundive source. Gerunds are formed by prefixing a syllable consisting of a copy of the initial consonant of the predicate stem, plus a high tone /f/, on to the stem, as in

(4) a. gbí-gbàgbé 'forgetting' (< gbàgbé 'to forget')
    b. kí-korò 'being bitter' (<korò 'bitter')
Essentially there are three main structures in which gerundive forms can occur: (a) gerundive adjectives, (b) factive gerunds (cf. Lees [1960:64]), and (c) infinitival gerunds.

The gerundive adjectives are derived from predicate adjectives, and function primarily as qualifiers of nouns, as in

(5) *ewe kí-koró*
    leaf bitter
    'bitter leaf'

On the other hand, a gerundive form of this type can also function as a head nominal form, and can be qualified (and possibly quantified), as in

(6) kí-koró rè dára
    being-bitter its good
    'its bitterness/ its being bitter is good'

(7) kí-koró diè rè dára
    being-bitter small its good
    'its mild bitterness/ its being mildly bitter is good'

Like gerundive adjectives, factive gerunds can occur in two structural patterns: either as in (8) and (9) on the one hand, or like (10), on the other:

(8) ìfí-ìq-òlú dun mí (subject complement)
    going-Olu sadden me
    'Olu's going saddens me'

(9) mo ti gbàgbé e ìfí-ìq-òlú (object complement)
    I have forget of going-Olu
    'I have forgotten (about) Olu's going'

(10) ìfíq-tí -òlú ìq dun mí (subject complement)
    going-that-Olu go sadden me
    'the fact that Olu went saddens me'

The factive gerunds are generally either subject (as in (8) and (10)), or object of factive predicates, as in (9). Example (10) has been variously referred to in Yoruba syntax as factive nominalization (cf. Awoyale [1974:390]; Bamgbose [1975:205]), or verb phrase relativization (Awobuluyi [1972]). Note that (8) and (10) are synonymous; they both presuppose that Olu went. The factive gerunds therefore acquire their factivity from the factive predicates with which they co-occur. Note further that the gerunds in (8) and (10) are immovable, as in

(11) **ó dun mí ìfí-ìq-òlú**
    it saddens me Olu's going
The infinitival gerunds, on the other hand, are essentially objects of prepositions (fún 'for'; sí '(in)to'; and ní 'to, at, in') as in:

(13) a. Adé pé sí lí-ọ =
    b. Adé pé ní lí-ọ
    Ade be late in going
    "Ade is/was late in going"

(14) a. iṣu dára fún jí-je =
    b. iṣu dára ní jí-je
    Yam be good for eating
    "Yam is/was good for eating/to eat"

These gerunds are claimed to be infinitival because they lack: (a) a definite tense of their own, (b) any overt subject of their own, and (c) they in themselves do not limit the truth value of their own predicates. Their main predicates are usually emotive verbs. These points are worth noting since Yoruba does not have the type of inflections that will automatically mark embedded verbs as infinitives. These points will also re-emerge when we come to examine the serial verb constructions. Furthermore, it is our contention, as we shall go on to show, that gerundivization is occupying the slot for the embedded tense.

Similarly, all other factive and non-factive nominalizing prefixes, à- and l-, have the characteristic of neutralizing embedded tense. That is why lí-ọ and jí-je in (13) and (14) respectively, cannot limit their own truth value; rather, pé and dára do that. And, similarly, in the following,

(15) a. Adé pé sí à -ti -ọ =
    b. Adé pé ní à -ti -ọ
    Ade be late in fact-have-go
    "Ade was late in going"

(16) a. iṣu dára ní à -ti -je =
    b. iṣu dára fún à -ti -je
    Yam good for fact-have-eat
    "Yams are good for eating/to eat"

(which are synonymous with (13) and (14) respectively), the embedded tense has been neutralized. Our attempt to impose tense interpretation on (15b) and (16b) has resulted in semantic awkwardness. The ti in (15) and (16) must have ear-
lier been related to the perfective marker, ti. Note further that as is to be expected, both (13) and (14), with pé and dára, can occur with the HTS:

(17) a. Adé pé HTS iq
    b. Adé pé è iq
    'Ade was late to go'

(18) a. ìṣù dára HTS jẹ
    b. ìṣù dára à jẹ
    'yam is good to eat'

where again the embedded tense is non-definite. These pairs, from (13) through (18), have equivalent meanings.

2.3 Rules for embedding nominalizations. What now remains to be established are the processes of derivation. On the one hand is the claim that (13) and (14) result in (17) and (18) by phonological deletion; while on the other hand is the claim that (17) and (18) come from (15) and (16) by a process of replacement. These two claims apart, it is only what we have referred to as infinitival structures, among the three, that are relevant to our discussion; and these structures can be derived by prefixing çf- or à-ti- to the predicate stems.

The matrix verbs with which the HTS co-occur have been subdivided into two main groups. Group A is largely subject-embedding, while Group B is largely object-embedding. Each group will now be examined to establish the link between the two, as it concerns the HTS.

2.3.1. Group A verbs. These subject-embedding verbs are essentially TOUGH-verbs.3 Tough Movement applies to almost any non-subject complement NP in Yoruba. Such an NP may be the direct object, indirect object, locative object, directional object, time object, though not manner adverbials and predicative

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3Tough Verbs and Tough Movement in English are discussed in Postal [1971:27-31].
ideophones. Examples are: 5

(19) a. Ọmọ náà rórún ní à-ti-bí --- 5
b. Ọmọ náà rórún ní bí-bí --- OBJECT
c. Ọmọ náà rórún HTS bí ---

baby the easy in being-delivered/to deliver
'the baby was easy to deliver/in being delivered'

(20) a. Iyà ̀ṣe HTS kò --- fún Ẹbùn
misery possible shake off for Ẹbùn
'misery is possible to shake off for Ẹbùn'
b. Ẹbùn ̀ṣe HTS kò Iyà fún ---
Ẹbùn possible shake off misery for
'Ẹbùn is possible to shake off misery for'

(21) Ilé dún HTS fún Ọmọ ní ìwé ---
house easy give child book
'house is easy to give a child a book'

(22) Owúrò dún HTS fún Ọmọ ní ìwé ---
morning easy give child book
'morning is easy to give a child a book'

(23) Ilé dún HTS gbé ìwé lọ ---
house easy carry book go
'home is easy to carry a book to (to go to)'

(24) **pèjí-kùtú dún HTS fún Ọmọ ní ìwé ---
much ease easy give child book
'much ease is easy to give a child a book'

(25) **tíle-tíle dún HTS kó lọ ---
completely easy gather go
'completely is easy to gather (and to) go'

The following is the approximated deep structure for sentences like (20a) and (20b): 6

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"Ideophones are consonant-initial forms which are basically non-verbs; they can function predicatively and nominally (cf. Awoyale [1974, 1979, 1980, 1981a])."

5The lines in these sentences indicate semantic gaps created by movement.

6Yoruba has no category of tense. All references to tense stand for aspect.
Tough Movement will move a non-subject complement NP in the direction of any of the two arrows after Extraposition has moved S₂ out and adjoins it to the right of the top VP. The following will be the result of the two operations (Extraposition and Tough Movement) for (20a):

(27)

It is possible for ḏùn 'be easy' in (26) to have what Curme [1931:192] calls a "sentence dative" accompanying it, so that the verb phrase will be ḏùn fún mì 'be easy for me', or any other suitable NP. The occurrence of sentence datives is characteristic of most TOUGH verbs. In (26) therefore, we will have to assume that a rule like Unidentified NP Deletion has erased the subject NP of S₂. But in other cases with a sentence dative, Equi-NP Deletion may be employed, as in the following intermediate derivation:
(28) ́lya tun fun mì (ámi kò --- fun ṣe bûn) 

'misery easy for me (I shake off --- for Òbùn)

where ámi, which is within the scope of mì in deep structure, will delete through Equi.

The structural configuration of (27) after embedded subject deletion is now

(29) ́lya tense dun ( tense kò fun ṣe bûn) 

'misery easy (shake off for Òbùn)

which can now be realised as any of the following:

(30) a. ́lya dun HTS kò fun ṣe bûn =(infinitivization)
b. ́lya dun ní kì-kò-fún-ṣe bûn =(gerundivization)
c. ́lya dun ní à-ti-kò-fún-ṣe bûn =(prefixation)

'misery is easy to shake off (in shaking off) for Òbùn'

through Infinitivization. Infinitivization is automatic once the embedded subject has left its original position. Later on, we shall discuss the significance of this close interaction between these processes. To sum up here, the following rules can be said to have applied in these derivations: Extraposition, Tough Movement, Unidentified NP Deletion/Equi-NP-Deletion, Infinitivization (HTS/gerundivization/prefixation).

2.3.2. Group B verbs. The object-embedding verbs form a large group, but only the ones listed earlier permit the HTS. An example of this group in a sentence is (31):

(31) a. 0 ́lù dékun HTS pa ariwo = (by HTS)
b. 0 ́lù dékun ní à-ti-pa-ariwo = (by prefixation)
c. 0 ́lù dékun ní pé-pa-ariwo = (by gerundivization)

'Olu ceases to make noise/making (killing) noise'

with (32) as an approximated deep structure:
Equi-NP-Deletion will delete the embedded subject to derive (33):

$$\text{(33)} \quad \text{Olu tense dèkun } \underline{\text{( tense pa ariwo)}}$$

'Olu ceases to make/kill noise'

which is converted to any of (31). However, (31) has other equivalents:

$$\text{(34) a. Olu dèkun ariwo HTS pa } (=31a)$$
$$\text{b. Olu dèkun ariwo ní à-ti-pa } (=31b)$$
$$\text{c. Olu dèkun ariwo ní pí-pa } (=31c)$$

'Olu ceases noise (in) to make/making'

We propose that raising is what is involved here. The rule however, is Object-Object Raising rather than the familiar Subject-Object Raising in generative syntax (cf. Postal [1974] and Awoyale [1981b]).

2.3.3. Co-occurrence restrictions. Besides the two groups of verbs, each functioning as a distinct group, the two groups also cut across each other. In other words, just as members of one group can embed each other, some members of Group B can conveniently embed Group A, but not the other way round without considerable semantic difficulties.

Table 1 below illustrates the patterns of co-occurrence between these verbs; the vertical ones can pair up with the horizontal ones as ticked (X and ? indicate impossibility and doubtful co-occurrence respectively).
These verbs are mostly factive, which probably explains their high degree of mutual embeddability. The following points on the table are worth noting. First, gò 'be unreasonable' scores zero in mutual embedding. No other verb on the list can embed it, just as it cannot embed any of the others. However, gò can embed almost any active verb, as in

(35) a. Adé gò HTS só ọrùn
b. Adé gò ní à-ti-só-ọrùn
   'Adé be unreasonable talk/talking talk'

Secondly, those verbs among them which are either semantically similar, or are semantically incompatible, cannot embed each other; an example is

(36) a. **igé ọrùn HTS ọrùn HTS ẹ̀
   work easy difficult do
   'work is easy to be difficult to do'

This sentence is ruled out on the basis of meaning alone. On the other hand, we can have the following as an example of multiple embedding:
(37) **iṣé nàà rọrun HTS yá HTS ọ̀rọ̀

work the easy quick do

'the work is easy to be done quickly'

with (38) as an approximated deep structure:

(38)

\[
\begin{array}{c}
S_1 \\
\downarrow NP \\
\downarrow Aux \downarrow VP \\
\downarrow tense \downarrow Vb \\
\downarrow rọrun \\
\end{array}
\]

After Tough Movement on \( S_2 \), **iṣé 'work' will become the derived subject, and from thereon, Subject Raising will apply to derive (37).

The à-ti- and Cí- versions of (37) on the other hand are very weird indeed:

(39) a. **iṣé nàà rọrun ní à-ti-yá ní à-ti-ọ̀rọ̀

work the easy in fact-have-quick-do

'it is easy for the work to be quick to do'

b. iṣé nàà rọrun ní à-ti-yá HTS-ọ̀rọ̀

work the easy in have-quick-do

'it is easy for the work in have quick to do'

(40) a. **iṣé nàà rọrun ní yí-yá ní sì-ọ̀rọ̀

work the easy in being-quick-do

'it is easy for the work in being quick to do'

b. iṣé nàà rọrun ní yí-yá HTS-ọ̀rọ̀

work the easy in being-have-quick-do

'it is easy for the work in being have quick to do'

We contend that the grammaticality of (39b) and (40b) is due to a global application of à-ti- and Cí- prefixation to the underlined stem, rather than a cyclic application which the ungrammatical (39a) and (40a) suggest. In another section below, we shall provide appropriate explanation for the similar behaviour of these verbs.

The following table illustrates the patterns of co-occurrence between these verbs, again pairing the vertical ones with the horizontal ones as ticked.
Table 2: Mutual Embedding Among Group B Verbs

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<th>bērè(sf)</th>
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</table>

Again the following points about the table are worth noting. First, ní is a polarity negative-sensitive item, and therefore cannot occur without kọ or a negative equivalent. That probably explains why it has the highest frequency relative to this context. Secondly, none of the verbs denoting cessation, yè, dēkun and sīwọ, can occur in mutual embedding to avoid tautology. Thirdly, the two verbs of perception, kọ and mọ, cannot embed each other because of their cognitive interpretation. Fourthly, kú scores zero on the chart of mutual embedding because it is an absolute idiom; it occurs as a greeting verb with no particular meaning in regular usage. And finally, the remaining three verbs, bērè sf, wá and fè, which are process verbs, score the highest in mutual embedding. In fact, the three of them can co-occur, as in the following:

(41) a. Ade bērè sf HTS wá HTS fè HTS lọ ilé-lwé
    Ade start come want go school
    'Ade now is about to want to go to school'

    b. Ade bērè sf HTS fè HTS wá HTS lọ ilé-lwé
    Ade start want come go school
    'Ade now wants to be about/ready to go to school'

    c. Ade wá HTS fè HTS bērè sf HTS lọ ilé-lwé
    Ade come want start go school
    'Ade has come to want to start to go to school'

    d. Ade wá HTS bērè sf HTS fè HTS lọ ilé-lwé
    Ade come start want go school
    'Ade has come to start to want to go to school'
e. \( \text{Ade fé HTS bèrè sì HTS wá HTS ìp ìlé-ìwé} \)
\( \text{Ade want \_ \text{start} \_ \text{come} \_ \text{go school}} \)
'Adé wants to start now to go to school'

f. \( \text{Ade fé' HTS wá HTS bèrè sì HTS ìp ìlé-ìwé} \)
\( \text{Ade want \_ \text{come} \_ \text{start} \_ \text{go school}} \)
'Adé wants to be about to start to go to school'

Though these verbs freely embed in these contexts, each of them is contextually undergoing a semantic change from a basic meaning to a derived one: fé 'want' \( \rightarrow \) 'be about to'; wá 'come' \( \rightarrow \) 'be about to'; bèrè sì 'start' \( \rightarrow \) 'be about to'. Only ìp has a constant meaning in (41). The implication of this observation is that it is possible for a (process) object-embedding verb as in (41) to become subject-embedding, as in the following:

(42) \( \text{ígé nà à fé HTS wá HTS bèrè sì HTS sè work the want \_ \text{come} \_ \text{start} \_ \text{do}} \)
'\text{the work wants to be about to start (to be done)}'

The possibilities with prefixation and gerundivization follow the same patterns as in (39) and (40), as in the following:

(43) a. **\( \text{Ade bèrè sì ní wí-wá ní fí-fé HTS-ìp-ìlé-ìwé} \)
b. **\( \text{Ade bèrè sì ní wí-wá ní fí-fé-HTS-ìp-ìlé-ìwé} \)
c. \( \text{?Adé bèrè sì ní wí-wá-HTS-fè-HTS-ìp-ìlé-ìwé} \)
\( \text{Ade start \_ \text{in going} \_ \text{want} \_ \text{go school}} \)
'Adé started in going/coming in wanting in going to school'

(44) a. **\( \text{Ade bèrè sì ní à-ì-wá ní à-ì-fé ní à-ì-ìp-ìlé-ìwé} \)
b. **\( \text{Ade bèrè sì ní à-ì-wá ní à-ì-fé-HTS-ìp-ìlé-ìwé} \)
c. \( \text{Ade bèrè sì ní à-ì-wá-HTS-fè-HTS-ìp-ìlé-ìwé} \)
\( \text{Ade start \_ \text{in fact-have/of-\text{come-want-go-school}}} \)
'Adé started to be going to be wanting to be going to school'

Again cyclic application, either prefixation or gerundivization, will produce the totally ungrammatical sentences in (43a, b) and (44a, b).

Besides the three process verbs, fé, wá and bèrè sì, in mutual embedding the combined string can further embed either kò or mò, but not dèkun and sìwó because of the conflict in meaning with bèrè sì. Examples are:

(45) a. \( \text{Adé fé HTS wá HTS bèrè sì HTS kò ìgé HTS sè work the want \_ \text{come} \_ \text{start} \_ \text{learn work} \_ \text{do}} \)
'Adé wants now to start to learn to (do) work'
b. Ade fẹ HTS wá HTS bèrè sí HTS mọ iṣẹ HTS ṣe
   Ade wants come start know work do
   'Ade wants to be about to start to know (how) to (do) work'

c. *Ade fẹ HTS wá HTS bèrè sí HTS ṣíwọ iṣẹ HTS ṣe
   Ade wants come start stop work do
   'Ade wants to be about to start to stop to (do) work'

d. *Ade fẹ HTS wá HTS bèrè sí HTS dékun iṣẹ HTS ṣe
   Ade wants come start stop work do
   'Ade wants to be about to start to stop to (do) work'

In Table 3 below, the vertical entries (Group B) can pair with the horizontal ones (Group A) as ticked.

Table 3: Group B Verbs Embedding Group A Verbs

<table>
<thead>
<tr>
<th>pé</th>
<th>ụ</th>
<th>jẹ/ṣe</th>
<th>tó</th>
<th>yá</th>
<th>ṣórún</th>
<th>wù</th>
<th>dára</th>
<th>dún</th>
<th>yé</th>
<th>ọ̀rọ̀</th>
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<td>bèrè(sí)</td>
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There are two points to note on these patterns of cross-embedding. First, it is significant that only the process verbs in Group B permit cross-embedding, while the others do not. Even the perception verbs, mọ́ and kọ́, do not. It is very probable that the three process verbs and the Group A verbs belong to related semantic fields. The second point is that ọ̀pọ̀ is almost totally excluded in cross-embedding, perhaps to further highlight the point that ọ̀pọ̀ is gradually losing its distribution with the HTS. We can use the following to illustrate cross-embedding among these verbs:
3. Relation of the HTS to Other Structures

3.1. Infinitivization and/or gerundivization. The preceding pages have shown the close affinity between the HTS phenomenon on the one hand and gerundivization and factive prefixation on the other. What now remains to be shown is whether it is gerundivization (i.e. infinitival gerunds) that results in the HTS through phonological deletion rules as contended by Bowen [1858], Ward [1952], Abraham [1958] and Awobuluyi [1967, 1970, 1978]; or outright replacement of á-tí and á-tí- by í, by Bamgbose [1971]; or of the HTS by í-tí-a-tí- and the infinitival gerunds as we contend here.

However, before going further, let us summarize the points made so far. First, there is overwhelming evidence that the HTS is closely related to a verb-verb sequence as witnessed in (39), (40), (43) and (44), where cyclic gerundivization and á-tí- prefixation are blocked. Secondly, the HTS, gerundivization, and á-tí- prefixation, on the one hand, and tense-aspect on the other hand are mutually exclusive; hence the HTS, the gerundive marker, and the á-tí- prefix, each becomes the leftmost node in its own clause, as in (34). Thirdly, (34) has demonstrated that we need a rule like Object-Object Raising to explain the pervasive object inversion in Yoruba. Recall that the derived object now comes in front of the HTS, the gerundive marker, and the á-tí- prefix, and therefore, technically, is no longer part of the remnant of the embedded clause, but a derived direct object of the upper verb. And fourthly, there is a greater similarity between the sets of rules that apply in both Group A and B verbs. So far, the following syntactic processes have been featured: Equi-NP-Deletion/Indefinite NP Deletion; Raising; Extraposition; Tough Movement; (Sentence Dative Deletion); Infinitivization (Gerundivization; á-tí- prefixation; HTS).

3.1.1. Derivation of the HTS from gerunds. The claim that the HTS is a relic of the gerundive structure seems to be supported by one very strong point. The
high tone /í/ in the structure already provides explanation for the HTS. This is backed up by the correspondence between the infinitival gerundive phrase and the HTS phrase, as in the following:

\[(47)\]

\[\begin{align*}
\text{(a) } & \text{Olú pé HTS dé = } \\
\text{(b) } & \text{Olú pé ní df-dé} \\
& \text{Olu late arrive/in arriving} \\
& \text{'Olu was late in arriving/to arrive'}
\end{align*}\]

Hence it is claimed that (47a) is derived from (47b) after both ní and /d/ have been unilaterally deleted. However, the same correspondence also exists between the HTS and the à-ti- phrase, as in the following:

\[(48)\]

\[\begin{align*}
\text{(a) } & \text{Olú pé HTS dé = } \\
\text{(b) } & \text{Olú pé ní à-ti-dé} \\
& \text{Olu late arrive/in arriving} \\
& \text{'Olu was late in arriving/to arrive'}
\end{align*}\]

This same evidence leads Bamgbose to claim that /í/ must have replaced à-ti. In other words, the issue at stake is in finding how these three are inter-related.

We take this side of the coin first. While it looks simple enough to derive the HTS from the /í/ of the gerund, there are several problems that positively advise against such a move. First, at least three prepositions feature in the infinitival gerundive phrase: fún, ní and sí, as pointed out earlier in (13) and (14). Therefore, the appropriate deletion rule will be a preposition deletion rule rather than ní-deletion. Such a preposition deletion will be a syntactic rule, not a phonological rule. Yet, deletion of the initial consonant of the gerundive phrase is dependent on the preposition deletion; that is, making a phonological rule dependent on a syntactic rule. Unless the preposition is deleted, the initial consonant of the gerund cannot delete; we do not have (49):

\[(49)\]

\[\begin{align*}
\text{**ísé náá sòro ní HTS sè} \\
& \text{work the difficult in do} \\
& \text{'the work is difficult to do'}
\end{align*}\]

In other words the two crucial rules that are supposed to derive the HTS do not belong in the same component of the grammar. While one of them is motivated (i.e. preposition deletion), the other (i.e. initial consonant deletion of
the gerund), is not clearly motivated.\(^7\)

Secondly, gerundivization in Yoruba makes compound lexical items out of a string, just like other instances of prefixation, so that if \(\text{lọ ilé}\) 'go home' is gerundivized, we have \(\text{lí-lọ-ilé}\) or \(\text{lí-lọ-lé}\) 'going home' as a single word. Similarly, when a compound verb like \(\text{gbàgbọ}\) 'believe' is gerundivized in a verb phrase, we have \(\text{gbí-gba-ọmọ-gbọ}\) 'believing the child' but not \(\text{*gbí-gba ọmọ gbọ}\). However, the HTS plus verb sequence does not function like (nor does it mean) a gerundive phrase, as in

\[
\begin{align*}
\text{(50)} \quad \text{a. } \text{igé nàà kò ñe nì ṣìṣe}^{6} & \neq \text{b. } \text{igé nàà kò ñe HTS ñe}
\\
& \quad \text{work the not do in doing work the not possible do}
\\
& \quad \text{'the work is not done in doing/at all'}
\\
\end{align*}
\]

\[
\begin{align*}
\text{(51)} \quad \text{a. } \text{**ọjà kò ní ní títà} & \neq \text{b. } \text{ọjà kò ní HTS tà}
\\
& \quad \text{wares not have to in selling wares not have to sell}
\\
& \quad \text{'the wares will not have not sell' in selling'}
\\
\end{align*}
\]

Furthermore, while the gerundive phrase can undergo some transformations, its HTS equivalent cannot. While \(\text{lí-lọ-ilé}\) 'going home' in (52) can focus, its HTS equivalent cannot:

\[
\begin{align*}
\text{(52)} \quad \text{a. } \text{Adé pé ní lí-lọ-ilé}
\\
& \quad \text{b. } \text{Adé pé HTS lọ ilé } \rightarrow \text{Adé pé ẹ lọ ilé}
\\
& \quad \text{‘Ade is late in going home’ ‘Ade is late to go home’}
\\
\end{align*}
\]

\[
\begin{align*}
\text{(53)} \quad \text{a. } \text{lí-lọ-ilé ní Adé pé sì (*nì)}
\\
& \quad \text{b. } \text{**ẹ lọ ilé ní Adé pé sì (*nì)}
\\
& \quad \text{‘going is Ade late in}
\\
& \quad \text{‘going home is what Ade was late in’}
\\
\end{align*}
\]

Our explanation for the blockage in (53b) is that the HTS does not cement its constituents the way gerundivization does: \(\text{ẹ lọ ilé}\) is not a word the way \(\text{lí-lọ-ilé}\) is.

---

7The objection here, though, may be more of description than of explanation or analysis.

8The full meaning of (50a) is that the work was not done at all, not even attempted; whereas (50b) implies that the work was attempted but was not possible to do.
Thirdly, the ill-formedness of (49) has shown that \( n\) (on which either the gerundive marker or the \( \dot{a}-ti- \) depends) and the HTS are mutually exclusive. In other words, the HTS can function independently of the \( n\) ; that is, either (54) or (55), not both:

(54) \( i\dot{s}\dot{e} \ n\dot{\alpha} \dot{a} \ s\dot{\circ}r\dot{o} \ \dot{s}\dot{e} \)
work the difficult do

(55) \( i\dot{s}\dot{e} \ n\dot{\alpha} \dot{a} \ s\dot{\circ}r\dot{o} \ n\dot{\dot{i}} \ \dot{s}\dot{i}\dot{-}\dot{\dot{s}} \dot{e} \)
work the difficult in doing
'the work is difficult to do/in doing'

Yet, if the HTS truly comes from the gerund, then the two should be able to co-occur in a clause. In addition, both the \( \dot{a}-ti- \) phrase and the gerund crucially depend on a preposition before they can surface at all. If therefore the gerund and the HTS are the same thing, then there should be no conflict with \( n\).

Fourthly, while gerundivization destroys the verb phrase nature of the stem and replaces it with a quasi-nominal sense, the HTS on the other hand preserves the verb phrase nature, hence the difference in grammaticality between the following two:

(56) \( m\omega \ f\omega \ H\dot{T}\dot{S} \ m\dot{\alpha} \ l\omega \)
'I want keep on go
'I want to keep going'

(57) **\( m\omega \ f\omega \ m\dot{\ell}-m\dot{\alpha}-l\omega \)
'I want keeping-on-going

Similarly, while a gerundive structure can be potentially ambiguous,\(^9\) the HTS equivalent is not usually so:

(58) \( m\omega \ m\omega \ \dot{\varnothing}k\dot{\omega} \ n\dot{\dot{i}} \ w\dot{i}-w\dot{\dot{a}} \)
'I know vehicle in driving (as a process)
'I know driving/how to drive'

(59) \( m\omega \ m\omega \ \dot{\varnothing}k\dot{\omega} \ w\dot{i}-w\dot{\dot{a}} \)
'I know vehicle driving (as a profession)
'I know driving/vehicle driving'

(60) \( m\omega \ m\omega \ \dot{\varnothing}k\dot{\omega} \ H\dot{T}\dot{S} \ w\dot{\dot{a}} \ = \ m\omega \ m\omega \ \dot{\varnothing}k\dot{\omega} \ \dot{\varnothing} \ w\dot{\dot{a}} \)
'I know vehicle drive I know vehicle drive(as in 58 only)
'I know driving/how to drive' 'I know driving/how to drive'

And finally the co-occurrence restrictions on both the gerundive phrase

---

\(^9\)Cf. Bamgbose [1971:39] for a similar view on the potential ambiguity of these forms.
and the HTS are not the same. While (41) and (45) show that we can have as many of the HTS as possible, (40) and (43) show the impossibility of more than one gerundive marker. If they truly come from the same source, the main problem should be unpronounceability rather than ill-formedness.¹⁰

These points put together make the conclusion that the HTS cannot be directly derived from a gerundive source inescapable.

3.1.2. Derivation from lâti or á-ti-. Now to the other side of the coin. Bamgbose [1971] claims that either lâti or á-ti- can be replaced by /f/; and so, he sets up lâti for all the so-called infinitives in Yoruba, out of which á-ti phrase and the f- phrase are derived. He then specifies two environments for the replacement: (a) where /f/- replaces lâti when the verb after lâti does not govern a nominal (i.e. the verb is not transitive); and (b) where /f/- replaces either lâti or á-ti- when such a verb governs a preceding nominal.

The problems with this analysis are equally tremendous. First, the decision both to make lâti basic, and to replace lâti or á-ti- with /f/-, is arbitrary, the process can work the other way round. Secondly, the impossibility of directly deriving the HTS from either lâti or á-ti-, but resorting to a process of replacement, has created a gap in the argument. Thirdly, the verbs that Bamgbose claims to precede lâti (which f- replaces) do not fall neatly into two (formal and/or semantic) classes. Following his division, while in (a) we have fé 'want', ní 'has to', pé 'be late', tó 'be enough, be ready', yé 'stop', and báre sí 'start' (p.44); in his (b) we have báre sí 'stop, start', mò 'know', ëse 'possible', yé 'clear to' and kú (verb of greeting) (p.45). Not only is there a conspicuous overlap, there is also crosslisting in the types of embedding verbs. Fourthly, it is not obvious whether f- should be related to á- in á-ti or to ní in ní á-ti > l'á-ti > l'áti. In other words, are the HTS, á-ti- and l'á-ti on the same level?

¹⁰It seems to us that this is more than a descriptive problem since ill-formedness is not matched by unpronounceability.
3.1.3. The HTS as underlying. The position we take here is that the HTS, rather than being directly derived from /í-/, or replacing /i-t/-, /á-t/-, may be older and more representative than either of the two. Something like it, phonologically */í-/, has been attested in Igbo, Itsekiri, Efik and Igala. In fact, Yoruba, Igbo and Igala are very close on this; and like Yoruba, the verbs that permit the /í/- vary, but the context is still between verbs:

(61) a. English: I want to see him
   Yoruba: mo fé HTS rí i
   Igbo: achoro-m í- hu ya

b. English: he began to cry
   Yoruba: o bërè sǐ HTS so'kún
   Igala: ḳ tšanë ë raku

In fact, Igala uses the HTS to form all verbal nouns, gerunds and infinitives:

c. Igala: ë-rakú yò më
to cry/crying good enough
'to cry/crying is good enough'

This type of distribution would seem to suggest that the HTS is no longer a Yoruba affair, but may be older and more widespread than has hitherto been assumed; and further that the HTS is only recently being replaced by actual lexical items or lexicalized phrases in individual languages, most especially in the Kwa group. It can be conjectured that the systematic phasing out of the HTS as a verbal prefix in Yoruba has to do with the non-functioning of the HTS as a verbal prefix, in keeping with its function in other languages. Synchronously, Yoruba verbs no longer have prefixes, hence the conspicuousness of the HTS in Yoruba grammar.11 Historically, therefore, the HTS could be regarded as another variant of the associative morpheme in Yoruba (cf. Welmers [1952]); in this case, between a sequence of verbs.

Viewing the HTS as an associative morpheme will explain much of its distri-

11 Both the HTS and the subject demarcator, also on high tone, are probably relics of noun class affixes which proto-Yoruba shared with Bantu languages of the Niger-Congo family.
butional properties as well as its relationship to both the gerund and the à-ti-structure in Yoruba complement structures. Unlike both the gerund and the à-ti-phrase, the HTS cannot introduce subject complements; it can only function between a sequence of two or more appropriate verbs, relating subordinate verbs to the main verb. On the other hand, the language now has three other possibilities in addition to the HTS: (a) the gerund, (b) à-ti-, and (c) a zero associative morpheme as in serial verb constructions. These three now serve as alternatives to the HTS, in terms of relating subordinate verbs to the main verb.

Both the gerund and the à-ti- need either a preposition or particle to introduce them. In this regard, the prepositions fun, sí and ní merely signal a node in a derived position. In other words, one can conjecture that since the basic word order of Yoruba is SVO, any node that has by one reason or another vacated its original position, in the journey from deep to surface structure, and yet does not end up inside the SVO, will end up behind any of the three prepositions. For example, (62) is considered more basic than (63):

(62) mo mú ìwé fún Olú
    I take book give Olu
    'I gave a book to Olu'

(63) mo fún Olú ní ìwé
    I give Olu book
    'I gave Olu a book'

yet, with the interchange of position between ìwé and Olu, ní has to introduce ìwé which is taking up a position outside of the SVO order. In other words, the presence of ní in ìà-tí is just to introduce the nominalization. The fact that we can do without it in both the gerundive phrase and the à-ti-phrase, shows that not much importance should be attached to it. Rather, the HTS should be related to both the gerundive marker and the à-ti.

Not much will be said on the relationship between the HTS and the gerund since as we have indicated, the two should be regarded as two separate processes. The only similarity between them which is important to our discussion is that

12It is interesting to note that this 'filter' affects only rightward movement of NP nodes; hence the different types of Raising attested in Yoruba do not yield the particle ní.
both the HTS and the infinitival gerund relate subordinate predicates to the main one; the former does this directly, while the latter does so indirectly via Cf- prefixation.

À-ti- on the other hand performs the same function in a more complex manner. Originally, one could conceive of à-ti- as two morphemes: the prefix à- and -ti-. Awoyale [1974:390] claims that à- is primarily a factive nominalizing prefix, as in à-dédé-Iq (fact-for-nothing-go) 'going-for-nothing', dédé being a factive predicate. Ti on the other hand, has a different history. Abraham [1958:639-40] lists the following entries for ti :

- a. ti (perfective particle) 'has'
- b. ti (genitival particle) 'of/for somebody'
- c. ti (directional particle) 'issued from, came out of'
- d. ti ? 'how?'

Of these four, only (c) and (d) can occur in a nominal compound:

(64) a. à-ti-Igboro-Iq (fact-from-town-go) 'going-out-from-town'
    b. à-ti-Ilé-Iq (fact-manner-able-go) 'being-able-to-go'

neither the perfective ti nor the genitival ti can.

These supposed four ti's however can be divided into two groups: (i) the perfective ti (as in (a)), and (ii) the genitival/manner/source ti as in (b, c and d). The latter pattern of grouping is common in many languages. In this context however, the -ti- in à-ti- has lost its full perfective interpretation, since in this type of nominalization, tense-aspect has been neutralized; though it can still be shown that the sense of ti in our à-ti- complements is related to the perfective ti :

(65) a. ti Iq 'has gone'
    b. ti-Ilé-Iq (from home go) 'went from home'
    c. à-ti-Ilé-Iq (fact-from-home-go) 'fact-of going-from-home'
    d. à-ti-Ilé-Iq (fact-manner-able-go) 'fact-of being able-to go'

We contend that tense-aspect neutralization by prefixation has resulted in a shift or loss of meaning of ti .

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13 Cf. de in French and Spanish; da in Hausa; where a single morpheme is used for genitive, source, conjoining and manner (Russell Schuh, personal communication).
Synchronically, the originally morphologically complex form à-tí- has come to be treated as two separate forms in Yoruba grammar and writing. When it is used to conjoin two noun phrases as in Olu àtì Adè 'Olu and Ade', it is written and understood as a unit. On the other hand, when it is used with a subjectless verb, it is an affix. In fact, Abraham [1958:75] would derive the conjunction àtì from the genitival ti , but not the other à-tì- , which he claims forms verbal nouns. We however claim that à-tì- is derived from a neutralized perfective particle.

3.2. The HTS constructions vs. serial verb constructions. Having shown that the infinitival gerunds (marked with C[-]) and the à-tí- complements are two different constructions in their own right, from the HTS constructions, and that the former cannot directly derive the latter, we now want to show that the only two constructions in Yoruba which directly relate main and subordinate verbs to each other are the HTS constructions and the serial verb constructions. In spite of the similarity in function however, the two are different from each other. The serial verb constructions, which are myriad, are principally characterized by the significant absence of overt markers of the verb infinitive; the HTS constructions on the other hand, have the HTS located strategically between two (or more) verb phrases in agreement with the main verb. An example of the latter construction is:

(66) a. kò ní HTS wà HTS bèrè sì HTS fé HTS kò iṣẹ HTS sé
    b. kò ní in wà à bèrè sì fè è kò iṣẹ è sé
   not have come start want learn work do
   'he will not be about to start to want to learn to (do) work'

(66), however, without the HTS or any other overt marker, is completely unacceptable:

(67) ** kò ní wà bèrè sì fè kò iṣẹ sé

(67) Would have been the serial verb equivalent of (66). The serial verb construction can be illustrated with the following examples:

(68) iṣẹ nàà sù/gē mi ṣè pé
  work the bore' me late/long time
  'the work bored me for a long time'

(69) iṣẹ nàà sọ rọ ṣè pé
  work the difficult late/long time
  'the work was difficult for a long time'
Both these two patterns of co-occurrence in (68) and (69) are unacceptable with the HTS, the serial verb constructions being more productive and far less restrictive than the HTS forms. However, the two types of constructions can be combined, with each yet maintaining its identity, as in the following:

(70) iṣé náa ṣú mí ò pé HTS ìe
work the bore me long time do
'in doing the work, I got bored for a long time'

Furthermore, some non-permissible sequences of multiple HTS predication of these verbs will easily pass as serial verb constructions:

(71) iṣé náa ròrun ò dára ò pé ò tó
work the easy good long enough
'the work is very easy enough for a long time (to do)'

(72) a. **iṣé náa ròrun HTS dára HTS pé HTS tó
b. iṣé náa ròrun ún dára á pé é tó
work the easy good long enough
'the work is easy to be good to be long to be enough'

We contend that the basic difference between the HTS constructions and the serial verb constructions, among others, is the inability of the former to progressively subordinate its clausal meaning to the overall sentential meaning. That is, in the HTS constructions, the HTS makes the unit within its domain a small island. In the serial verb constructions however, there is a single focal meaning to which the other smaller propositions are subordinate. In (71), ròrun 'be easy' is the focal meaning (i.e. the main assertion), while in (72) there are at least three focal meanings, ròrun 'be easy', dára 'be good', pé 'be long', without any acceptable sum total.

Note further that in (71), rather than in (72), there is a gradual shift (in context) in the meaning of the predicates following the head predicate:
dára 'be good' > 'very'; pé 'be late' > 'for a long (time)'; tó 'be capable' > 'be enough (time and/or degree)'. The possibility of reducing a full verbal meaning to a semi-verbal meaning (what Ansre calls "verbid") has cleared (71), while blocking (72), in spite of the obvious similarities between the two. The same fact seems to be true of the so-called prepositions in Yoruba:
fún 'give' > 'to/for'; ní 'have' > 'at'; sí 'exist' > 'to/into'; mó 'touch' > 'against'; ẹsájú 'precede' > 'before'.

In other words, the full facts about the HTS, the infinitival gerunds and
and the á-ti-complements, and the serial verb constructions, point to a historical change, with the HTS preceding the serial verb constructions. Right now, the latter type of construction is far more productive and far more economical than the former. The possibility of verbs serializing enables far more semantically compatible verbs to be juxtaposed without any overt marker between them, as in

(73) Olu help me use hand push it touch be at top precede me 'Olu helped me to use (my) hand to push it up before I returned'

where all the underlined items are potential verbs; yet there is no overt marker between them.

The final picture we get from these facts is one where the HTS precedes all the other forms of relating predicates to each other in Yoruba. That is, the other three—the infinitival gerunds, the á-ti-complements, and the serial verb constructions with zero associative morpheme—originate from the HTS; and since the serial verb constructions are far more productive and far more economical, we can conclude that the change is from a position of relative complexity to relative simplicity:

(74) \[ \text{HTS complements} \rightarrow \text{infinitival gerunds} \rightarrow \text{serial verb constructions} \rightarrow \text{á-ti-complements} \]

That this may be the true picture can be seen from the fact that, of the four constructions, the HTS complements are far more restrictive and far less productive,\(^1\) while at the other end are the serial verb constructions which are far more productive and far more economical. The infinitival gerunds and the á-ti-complements, in the middle, run parallel lines to each other. While they are more productive than the HTS complements, they fall far short of the serial

\(^1\) Presumably there will be some dialects which will allow more HTS than others, as in (35a), which is common in the writer's dialect.
3.3. Summary. In summing up, does Yoruba now have infinitive constructions? The *Shorter Oxford English Dictionary* [1933:1067] defines an infinitive as "the name of that form of a verb which expresses simply the notion of the verb without predicating it of any subject...a verb that is not inflected to indicate person, number, or tense." By that definition, Yoruba would be claimed to have a verb infinitive structure, even though the language does not have inflections. First, the gerunds, which are claimed to be infinitival, arise from a loss of subject, and a subsequent neutralization of the tense, otherwise there will be no explanation for the exclusion of tense in the infinitival gerundive structures. Secondly, the à-tí- complements similarly arise after a loss of subject, and a subsequent neutralization of tense. The tì in the à-tí- complements does not allow a perfective interpretation. Even the prefix à- has lost the normal factive interpretation that one would normally have associated with it. In other words, à-tí has constituted itself into an idiom, and hence a special marker of a type of nominalization—the infinitive, in a synchronic description. In this indirect manner therefore, these two constructions relate subordinate predicates to the main predicate.

As for the HTS and the zero associative morpheme in the serial verb constructions, the conclusion we have been led into by this discussion, is that the HTS represents an older form of the infinitive phrase, while the zero associative morpheme is the neutralization of all these markers of the infinitive phrase, as a result of a historical change. Note also that in these two constructions, like the former two, tense has also been neutralized. In surface structure, the serial verb constructions are marked for tense once; that is, the tense of the main predicate usually determines the tense of the other predicates.

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15As is to be expected, there is hardly anything which can be expressed by HTS, infinitival gerunds and à-tí complements, which cannot be expressed in serial verb constructions; but this cannot be the other way around.
4. **Yoruba Orthography and the HTS/â-ti- Complements**

In the light of our discussion of the HTS and the â-ti-complements, we suggest that the present Yoruba orthography be modified to reflect the uniqueness of these two structures. The HTS should not be written together with the verb since it is not a prefix, as is being done presently; rather it should stand on its own as a free morpheme, just as we have done in this paper. Similarly the â-ti should now be treated as an independent marker for the infinitive verb. Fortunately, most Yoruba writers follow this recommendation, because they intuitively feel that â-ti has now been lexicalized. In other words, (75a) should be preferred to (75b):

(75) a. Olu gba əti 1ɔ
   b. *Olu gba ati-1ɔ
   'Olu agreed to go'

For (75b) to be acceptable, the low tone on gba would have to change to mid, and in that case, the interpretation would differ:

(75) c. Olu gba â-ti-1ɔ
    'Olu agreed to/accepted fact-of-having-to-go'

On the other hand however, both gerundivization and the other types of nominalization by prefixation create new and full words out of the stems, and should be written to reflect this fact, as in:

(76) a. â -tete -de -ilé -sûn (factive nominalization with â-)
    fact-early-reach-house-sleep
    '(fact of) getting-home-to-sleep'

b. tî -tete -dé -ilé -sûn (gerundivization)
    ing-early-get-home-sleep
    'getting-home-early-to-sleep'

5. **Conclusion**

This paper has concentrated on the HTS construction to show four important points: (a) that it is an older form of the verb-infinitive phrase, out of which the infinitival gerunds, the â-ti-complements, and (by a historical change) the serial verb constructions, originate; (b) that the HTS construction is different from (and should not be confused with) the infinitival gerunds,
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since both have been shown to be distinct constructions; the infinitival gerunds which do not have HTS equivalents are in hundreds, far too many to be exceptions; (c) that the HTS constructions have shown Yoruba to be related to some of its neighbouring Kwa languages, like Igbo, Itsekiri and Igala. Furthermore, the serial verb constructions have been shown to be far more productive and far more economical than the HTS constructions, the infinitival gerunds and the à-ti-complements, hence the former's gradual replacement of the latter set, probably to suggest a direction of change (from relative complexity to relative simplicity and productivity); and lastly (d) that it will become necessary to modify a portion of the orthography to accommodate these new facts.

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