Yorùbá Sentential Negative Markers

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The main claim of this paper is that Yoruba has only 4 sentential negative markers, *kìí*, *kò*, *kọ́* and *má* which can be subcategorized into two morphemes (the *k* morpheme and the *má* morpheme), and that there is no such thing as NP negator in the language. The *k* and *má* morphemes are distinguished based on mood. By default, the *k* morpheme is used in realis mood while the *má* morpheme is used in irrealis mood. *Kìí*, *kò*, and *kọ́* are taken to be allomorphs of the *k* morpheme, which are distinguished based on aspect and focus. While describing these negative morphemes, the paper points out that they exhibit the kinds of mismatches described in Carlson (2006). Carlson argues that functional items pose greater challenges to language acquisition than lexical items because they often exhibit mismatches (between form and interpretation) which are not found for lexical items. The main purpose of this paper is to describe Yoruba negation; it only points out the mismatches to buttress some of the claims made in the paper and for further empirical investigation.

1.0.Yoruba SN markers

Given that most languages of the world have relatively small number of morphemes which realize sentential negation, modern English for example has only 'not' and 'n't' which according to R. Kayne[1] have distinct syntactic distributions, Carlson's learner problem may arise for language learners trying to learn languages where the negative markers number more than five and can sometime give rise to mismatches. Shupamem, described in Nchare (2012), for instance, has up to 9 distinct negative morphemes that are used to express sentential negation; which negative morpheme is used depends on tense, mood, and aspect. A similar phenomenon exists for Yoruba too, which has different markers for the expression of sentential negation.

Generally, six negative markers are often identified for Standard Yoruba[2]:

1. a. kò/ò b. kìí c. kọ́

   d. má/máà e. mọ́ f. yé

Note that the distinction between *kò* and *ò* in (1a) and *má* and *máà* in (1d) is often considered phonological, but what consequences this has for the claims made in this paper will become clear in due course. Often, the negative markers in (1a) and b are treated as sentence negators, the one in (1c) is treated as NP negator, while those in (1d), (1e) and (1f) are treated as imperative negators. However, I am proposing another way of looking at the members of (1). As will be shown shortly, I am suggesting that only (1a) to (1d) can be regarded as true sentential negative

[1] Professor Kayne of Department of Linguistics, New York University, mentioned this in my personal conversation with him.

[2] This is the tradition in Bamgbose (1967, 1990), Ogunbowale (1970), Banjo (1974), Oke (1982); Awobuluyi (1978, 2008), Adéwọle (1999), and Fabunmi (2013).

markers (SN Markers) in Standard Yoruba, and that (1e) is a Negative Polarity Item (NPI), while (1f) is a lexical verb.

The morpheme *mọ́* in (1e) can be a variant of the imperative negator in (1d) in Ọ̀yọ́-Ìbàdàn Yoruba dialect (Fabunmi 2013:7). This does not make it a separate negative morpheme just as the differece between *kò* and *ò* in (1a) does not give rise to two separate morphmemes. But in standard Yoruba, *má* and *mọ́* are two distinct morphemes, which both carry the NEG feature. The difference between the two is that *má* is a negative marker while *mọ́* is an NPI, a strong NPI for that matter. See a detailed description of *mọ́* in Adéwole (1990). Consider the following sentences:

2. a. Mọ́/má sùn mọ́

   NEG sleep anymore

   'Don't sleep anymore' (Ọ̀yọ́-Ìbàdàn Yoruba dialect)

   b. Má sùn mọ́

   NEG sleep anymore

   'Don't sleep anymore' (Standard Yoruba)

In (2a) it is clear that the SN marker *má* has a variant which resembles the NPI *mọ́*, while in (2b) the SN marker *má* is clearly distinct from the NPI *mọ́*. The consequent intuition therefore is that in Standard Yoruba, *mọ́*, which can be a phonoligcal variant of the imperative negative marker *má* in some dialects of Yoruba, is not a negative marker but a NPI. To be sure, the meanings given to *mọ́* in the Yoruba-English Dictionary include only: 'again', 'anymore', and 'any longer'. A diagnostic that can be used to ascertain this intuition is the parametric fact that Yoruba is not a Negative Concord language like French, which can have two negative markers within the same indicative clause. For this reason, the glossing in (3a) violates this parameter for Yoruba, and so given the meaning that we get from the expression in (3a), *mọ́* can only be a NPI meaning 'anymore'. This fact is presented in (3b).

3. a.* Adé kò sọ̀rọ̀ mọ́

   Adé NEG say.word NEG

   'Adé is not taking anymore'

   b. Adé kò sọ̀rọ́ mọ́

   Adé NEG say.word anymore

   'Adé is not talking anymore'

The morpheme in (1f) is also misplaced as it is clearly not a SN marker. According to the Yoruba-English Dictionary, *yé* means 'stop' or 'cease'. For this reason, the structure in (4a) cannot be said to have been properly glossed. In (4b), I give an alternative gloss that supports the view in this paper. To be sure, the diagnostic in (3) is used for *yé* in (5), and it is clear from (5a&b) that *yé* is far from being a SN marker.

4. a. *Yé sọ̀rọ̀ b. Yé sọ̀rọ̀

NEG say-word any Stop say.word

"Don't say anything." 'Stop talking'

5. a. *Adé kò yé sọ̀rọ̀

Adé NEG NEG say.word

'Ade did not stop talking'

b. Adé kò yé sọ̀rọ̀

Adé NEG stop say.word

'Ade did not stop talking'

As demonstrated, the morpheme *yé* is not a SN marker but a lexical verb meaning 'stop' or 'cease'. However, the fact that this morpheme has been taken for a negative marker raises an important question of how the semantic and syntactic treatment of SN markers defers from such constituents as *stop*, *disagree*, etc., which tend to reverse the truth-value of a proposition in ways resembling the SN makers. At any rate, the morpheme *yé* is not a SN marker.

Based on the foregoing, a refined form of (1) is given in (6).

6. SN markers in Standard Yoruba include:
   a. kò b. kìí
   b. kọ́ d. má

Having established that only four SN markers can be identified in Yoruba, I propose that the four SN markers are simply two morphemes. This will be the major concern of Section 2, where I argue that the four negative markers are simply two morphemes with one of them having three allomorphs. Section 3 explores the aspectual-modal distributions of the Yoruba negative markers, while section 4 contains the syntax of the negative markers. In Section 5, I review Carlson (2006) and discuss the mismatches that are identified in Section 3. Section 6 concludes with a summary of the paper.

2.0. *Kìí*, *Kò* and *Kọ́* as Allomorphs *of K*-Morpheme

Given the intuition that primitive functional elements are often very minimal in natural language, it seems right to pursue the idea that *kìí*, *kò* and *kọ́* are allomorphs of the same NEG morpheme whose surface forms depend on aspect, focus and phonological constraint. It should already have been noticed that the three SN markers look similar as the only difference among them is the vocalic elements. Apart from this basic fact, there is a useful diagnostic which readily lends itself to accounting for this intuition: this is the syntax and semantics of Yoruba NPIs offered in Collins and Postal (2014).

Collins and Postal (2014), henceforth CP2014, identify two types of NPIs that pattern with the traditional categories of NPIs: strict NPIs, which are licensed in antiveridical context and the non-strict NPIs which, in addition to being licensable in antiveridical contexts, can occur in

veridical contexts (Giannakidou, 2011). In CP2014, the former is regarded as *Unary NEG NPI* (Type 1), while the latter is taken to be *Binary NEG NPI* (Type 2). This categorization is different from the traditional categorization in essential theoretical terms. This is a detail I am not addressing here (see CP2014:6 for a more elaborate discussion); it is sufficient to establish an understanding of this two types in the CP2014 sense.

In CP2014, NPIs are interpreted as consisting of NEG, a covert existential quantifier, and the NP that is quantified. A Type 1 NPI contains only one NEG and requires negation somewhere in the structure while a Type 2 NPI has two NEGs and does not require any negation in the structure. For instance, *anybody* in (7) is a Type 1 NPI which contains one NEG and requires the *n't* morpheme. In (8), *anything*, a Type 2NPI, contains two NEGs and does not require any negative morpheme in the structure.

7. a. I didn't see anybody
   b. I did.NEG see [[<NEG> SOME] body] (Collins et al., 2015)

8. a. If you see anything, tell me

   b. If you see [[<NEG> [<NEG> SOME]] thing], tell me (Collins et al., 2015)

For the purpose of the present paper, I focus only on the Type 1 NPIs to account for the allomorphy status of three of Yoruba SN markers. Based on the assumption that NPIs contain NEG, Collins et al. (2015) analyze structures containing NPIs in terms of Classical NEG-raising, a phenomenon in which NEG originates in the NPI (or in a subordinate clause—not relevant here) and raises to the post-auxiliary position (for English). I will return to the notion of Classical NEG-raising shortly. First, I explore the cross-linguistic interpretation of Type 1 NPI. Based on CP2014 and Collins et al. (2015), I propose a cross-linguistic interpretation for Type 1 NPIs in (9).

9. [[NEG SOME] NP]

Where NEG and SOME can be null and overt, and the order of the elements can vary cross-linguistically, so that (9) works fine for English, while for Ewe (see a detailed description of Ewe NPIs in Collins et al., 2015) the structure is [[SOME NP] NEG], while for Yoruba, we have [NP [NEG SOME]]. Consider (10) and (11).

10. I said **nothing**
11. I did not say **anything**

In (10), NEG is overtly spelt out as *no* and SOME is covert in the n-word *nothing*, while SOME is spelt out as *any* and NEG is null in *anything* in (11). (10) and (11) can be given the same interpretation as in (12).

12. $\neg\exists x[\text{thing}(x) \wedge \text{say}(I, x)]$

The basic syntactic difference between the two is that in (10) NEG does not raise to the post-AUX position while it does in (11) in a manner consistent with what CP2014 call *Classical NEG-raising*. This is shown below.

'10. I said [[NEG <SOME>] thing]

'11. I did NEG$_1$ say [[<NEG$_1$> SOME] thing]

In the CP2014 framework, <…> signifies that an element is silent. Based on the foregoing, Collins et al. (2015) arrive at two parameters which distinguish English NPIs from Ewe NPIs. The first parameter is that NEG does not leave a copy when it raises in English while it does in Ewe. The second one is that in structures containing NPIs, NEG optionally raises in English while it obligatorily raises in Ewe.

Turning now to Yoruba, there are NPIs in the language which pattern with the description of Type 1 NPIs above (however, I do not explore the details of Yoruba NPIs here; See Adebayo (forthcoming) for an elaborate discussion on Yoruba NPIs). These are somewhat close to the English *any*-NPIs. As expected, they have only one NEG and require negation in the structure.

13. Adé kò rí **enikéni**

    Adé NEG see anybody

    'Adé did not see anybody'

Applying (9), we have:

14. Adé **k**(ò) rí eni **k** éni
    Adé NEG see [person[$_c$NEG SOME??]]

In (14), NEG originates in the NPI and obligatorily raises to the preverbal position leaving a copy. In the framework of Collins et al. (2015), there is room for $_c$NEG to be phonologically identical to the raised NEG. My assumption is that this is an instance where this is the case. The main difference between *k* ($_c$NEG) and *kò* (raised NEG) can be explained. When *k* raises to preverbal position, it occupies a position in the syntax where it has to stand alone. Since Yoruba as a language does not allow a consonant to stand in isolation without a vowel, *k* has to merge with a vowel, to satisfy the syllable well-formedness constraint (Ola, 1995), which forbids a non-maraic consonant, such as *k*, from standing alone as a syllable. The vocalic derivation for *k* is determined by the aspectual modal environment where *k* is raising to. Consider (15) where k raises to a progressive indicative environment, unlike in (14) where *k* raises to a perfective indicative environment.

15. a. Adé kìí jẹ **ohunkóhun** lálẹ́

    Adé NEG eat anything at.night

    'Adé doesn't eat anything at night (habitually)'

    b. Adé **k**(ìí) jẹ ohun **k** óhun lálẹ́

    Adé NEG eat [thing[$_c$NEG SOME??]] at.night

The case of *kọ́* is different. The *k* morpheme in the NPI cannot raise directly to a position where it can negate the focus phrase. It has to raise first to a position within the predicate of the focus phrase, and then to a position dominating the focus phrase. This can be seen below.

16. Adé **k**ọ́ ni **k**ò lọ sí ibi **k** íbi

Adé NEG Foc cNEG go to [place[cNEG SOME??]]

‘It’s not Adé who did not go anywhere’

There are other ways of explaining the allomorphy status of the *k* morpheme. One available intuition is that the *k* morpheme combines with three vocalic morphemes *ò*, *ìí* and *ọ́* depending on aspect and focus. It combines with *ò* in non-progressive aspect, *ìí* in progressive aspect and *ọ́* in focus constructions. These vocalic morphemes assimilate the NEG feature of the *k* morpheme and can therefore exist without the *k* morpheme in some contexts, but not where the *k* morpheme is involved in some form of emphasis or focus.

17. a. Adé KÒ jẹ ìrẹsì

Adé NEG eat rice

‘Ade did NOT eat rice’

b. Adé ò jẹ ìrẹsì

Adé $_{ass}$NEG eat rice

‘Ade did not eat rice’

18. a. Adé KÌÍ jẹ ìrẹsì

Ade NEG eat rice

‘Ade does NOT eat rice (habitually)’

b. Adé ìí jẹ ìrẹsì

Ade $_{ass}$NEG eat rice

‘Ade doesn’t eat rice (habitually)’

19. a. Adé KỌ́ ní ó jẹ ìresì

Ade NEG Foc 3SG eat rice

‘It is not Ade who ate rice’

b. *Adé ọ́ ni ó jẹ ìresì

Ade $_{ass}$NEG Foc 3SG eat rice

‘It is not Ade who ate rice’

In the examples above, $_{ass}$NEG is used to indicate that the vocalic morphemes are assimilated NEGs and are not themselves NEG. In other words, they carry uninterpretable NEG features. The idea here is that the vocalic morphemes manifest the NEG feature, but are not themselves the carrier of the NEG feature. They are therefore semantically redundant. This treatment of the

vocalic elements is in line with the assumption, in Zeijlstra (2014), that if a morpho-syntactic element X manifests the presence of some semantic feature F, but X cannot be assumed to be the carrier of F, then X is an uninterpretable feature. In (17) and (18), note that the $_{ass}$NEG can stand in place of NEG when there is no contrast involved. But when NEG is contrasted, the $_{ass}$NEG cannot stand in its place. Since *kọ́* is always in contrast and there is no context in which it is non-contrastive, the $_{ass}$NEG *ọ́* is not possible in any context. This explains why (19b) is ungrammatical. To be sure about this, the case of *kìí* should be mentioned. *Kìí* can also be used to negate a focus phrase (details of this can be found in the next section). When this happens, the $_{ass}$NEG *ìí* cannot be used as shown below.

20. a. Kìí se Adé ni ó jẹ ìrẹsì
NEG EMPH Ade Foc 3SG eat rice
'It is not Ade who ate rice'

b. *ìí se Adé ni ó jẹ ìrẹsì
NEG EMPH Ade Foc 3SG eat rice
'It is not Ade who ate rice'

The question that arises from this is: if the *k* morpheme is itself NEG and the vocalic morphemes are $_{ass}$NEG, what then is the combination of the two? My assumption is that they both spell out as NEG, since $_{ass}$NEG in itself is not NEG but an uninterpretable NEG feature.

Essentially, I am claiming that the NEG raising in (14), (15) and (16) and the idea pursued in (17) through (20) are evidence that *kìí*, *kò* and *kọ́* are variants of the same morpheme *k* which is found in CP2014 Type 1 NPIs. The variation in vowel is only due to the syntactic environments in which it is used and the phonological well-formedness constraint in Yoruba which forbids a syllable made up of only a non-moraic consonant like *k*.

However, there is a problem that arises from using the CP2014 framework. Note that in the NPIs above, there is some sort of reduplication: *eni* in *enikeni*, *ibi* in *ibikibi*, and *ohun* in *ohunkohun*. So far, the reduplicated copies and their base forms appear to be having different interpretations. This cannot be right as it violates Kayne's (2016) no homophony principle. Therefore, while it is clear that *eni* spells out as *person*, *ibi* as *place*, and *ohun* as *thing*, it is not clear what the contribution of their reduplicated counterpart would be, and this is why I put '??' in front of SOME, what they would superficially appear to spell out as. It could well be posited that the copies in front of *k* are reduplications whose underlying semantics is spelt out as SOME, and this might be in the right direction given that reduplications of this sort abound in Yoruba that could be given similar treatment. This is a question that I have addressed in Adebayo (forthcoming).

This problem does not in any way undermine the claim made about the presence of the NEG morpheme *k*, in so far as it is clear, for instance, that *ẹni* is a distinct morpheme in ẹnikẹ́ni, and that it is its copy that we find in front of *k*.

Granted that *kìí*, *kò* and *kọ́* are allomorphs of the *k*-morpheme, it follows that Yoruba has only two morphemes for the expression of sentential negation: the *k*-morpheme and the *m*á morpheme which are distinguished based on mood. This is captured in the following table.

Aspect	**Mood**	
	Realis (k)	**Irrealis** (*m*á)
Perfective	*kò*/ *kọ́*	*M*á
Imperfective	*kìí*,/*kọ́*	

Table showing the aspectual-modal distribution of Yoruba NEG morphemes

What the table displays is an unmarked (default) distribution; it will be clear from the next section that the SN markers can be used in different aspectual-modal environments in a way that usually gives rise to mismatches. What can be taken from the foregoing is that at a closer look, functional (or primitive functional) elements are extremely minimal in number so that the multiplicity of negative markers described in Nchare (2012), for example, can be reduced to a reasonably minimal number. This kind of systematic reduction is the main purpose of Kayne (2016), where the different types of English *there* are reduced to one through no homophony hypothesis. In what follows, I present data that demonstrate how the negative markers are used with respect to aspect and mood.

3.0. The Aspectual-Modal Distributions of SN Markers in Yoruba

If we assume that *kò* and *kìí* are the SN markers for past and present realis mood, disregarding aspect, and that *má* negates the irrealis mood, while *kọ́* negate focus irrespective of the nature of what aspect is involved, we might be tempted to think that the jobs of these negative markers are clearly spelt out for each of them so that the idea put forward in the previous section appears to be neatly worked out. But as the data presented below will suggest, this is far from being so. However before going to this detail, the appropriate point of departure seems to be a review of the relationship that negation has with tense, mood and aspect in Yoruba.

Tense is not overtly marked in Yoruba, though the temporal frame of the verb can be expressed optionally by temporal adverbials (Fabunmi, 2013), and there is a prospective aspectual morpheme *yoo/a*, which some writers have claimed is the future tense marker (see Hewson 2010). By implication, the same structure is used to express the present tense and the past tense, with the distinguishing factor being the context or the optional modification of a temporal adverbial. Aspect and modality on the other hand are overtly marked in the syntax and this has consequences for the choice of SN markers. With this background, we can now explore how modal and aspectual sentences are negated by the SN markers in what follows.

a. Negation in Indicative Simple Present and Past

21. a. Adé yọ lókéèrè sí wa

Adé appear from.afar to us

'Adé appeared/appears to us from afar'

b. Adé kò yọ lókéèrè sí wa

Adé NEG apear from.afar to 1Pl.Obj

'Adé did/does not appear to us from afar'

It is clear in (21) that only *kò* can be used effectively in indicative present and past. The other three SN markers either yield wrong interpretation or are ungrammatical. Note also that it is only *kò* that is used in indicative present and past progressive and even in present and past evidential. What is interesting about its use in the progressive is that it deletes the progressive marker, as seen in (22a).

22. a. Adé ń ka ìwé

Adé PROG read book

'Adé is/was reading'

b. Adé *kò* ka ìwé

Adé NEG read book

'Adé is/was not reading'

b. Negation in Indicative Simple Perfective and Imperfective Future (Prospective)

23. a. Adé yóò/á ka ìwé

Adé FUT read book

'Adé will/woul read'

b. Adé *kò* níí (*yóò/*á) ka ìwé or Adé kì yóò/*á ka ìwé

Adé NEG FUT read book Adé NEG FUT read book

'Adé will/would not read'

Again, only *kò* works fine in prospective negation. But it also has some inconsistencies: note that *kò* cannot occur with the prospective morpheme *yoo* without bringing some changes in the morphology of the prospective marker. If *kò* is to be used, nii, an out-of-the-blue morpheme, has to be the one signaling the prospective mood. If yóò is to be retained, *kò* has to change to kì, another arbitrary morpheme whose existence in this context can only be explained phonologically.The *a* form of *yoo* does not surface at all in negation. This is the case for the prospective perfective and imperfective presented in (24) and (25) respectively.

24. a. Adé yóò ti sùn

Adé FUT PAF sleep

'Adé will/would have slept'

b. Adé *kò* níí (*yóò/*á) tíì sùn or Adé kí yóò/*á tíì sùn

Adé NEG will PRF sleep Adé NEG FUT PRF sleep

'Adé will/would not have slept'

25. a. Adé yóò/á ti máa sùn

Adé FUT PRF IPRV sleep

'Adé will/would have been sleeping'

b. Adé *kò* níí (*yoo/*a) tíì máa sùn or Adé kì yóò(/*á) tíì máa sùn

Adé NEG FUT PRF PROG sleep Adé NEG FUT PAF IPFV sleep

'Adé will/would not have been sleeping'

c. Negation in Indicative Present and Past Habitual

Consider the following sentences.

26. a. Túndé máa-ń jẹ ẹ̀wà l'ójoojúmọ̀

Túndé IPFV eat beans in.everyday

'Túndé eats/used to eat beans everyday'

b. Túndé *kìí* jẹ ẹ̀wà l'ójoojúmọ́

Túndé NEG eat beans in.everyday

'Túndé does/ did not use to eat beans everyday'

c. Túndé *kò* ń jẹ ẹ̀wà l'ójoojúmọ́

Túndé NEG PROG eat ẹ̀wà in.everyday

'Túndé does/ did not use to eat beans everyday'

As shown in (26), *kìí* and *kò* can be used in present and past habitual, but since *kìí* can negate the habitual sentence without any overt progressive or imperfective marker present, and *kò* cannot do this without the progressive *ń*, the correct intuition seems to be that *kìí* is the unmarked habitual SN marker.

d. Negation in Present and Past Copula

27. a. i. Túndé jẹ́ akẹ́kọ̀ọ́ ni NYU ii. O jẹ́ akẹkọ ni NYU

Túndé COP student at NYU 3sg COP student at NYU

'Túndé is a student at NYU.' 'S/he is a student at NYU.'

b. i. Túndé *kò* jẹ́ akẹ́kọ̀ọ́ ní NYU

Túndé NEG COP student at NYU

'Túndé is not a student at NYU.'

ii. *Kò* jẹ́ akẹ́kọ̀ọ́ní NYU

NEG COP student at NYU

'S/he is not a student at NYU.'

c. i. Túndé *kìí* se akẹ́kọ̀ọni NYU

Túndé NEG EMPH student at NYU

'Túndé is not a student at NYU'

ii. *Kìí* se akẹ́kọ̀ọ́ ni NYU

NEG COP student at NYU

'S/he is not a student at NYU'

28. a. i. Túndé ga

Túndé be.tall

'Túndé is tall'

ii. Ó ga

3sg be.tall

'S/he is tall'

b. i. Túndé *kò* ga

Túndé NEG be.tall

'Túndé is not tall'

ii. *Kò* ga

NEG be.tall

"S/he is not tall"

c. *Túndé *kìí* ga

Tunde NEG be.tall

"Tunde is not habitually tall."

d. **Kìí* ga

NEG be.tall

"He is not habitually tall"

While *kìí* and *kò* are both possible in copula as shown in (27), it turns out that *kìí* is not possible when the complement is an adjective. This can be seen in (28c) and (28d). We can also observe that when the SN markers *kò* and *kìí* are preceded by a third-person singular pronoun, such pronoun gets deleted, so that the subject argument in the syntax is absent while it is present in the semantics.

e. Negation in Prohibitive, Imperative, Interrogative, Subjunctive, and Potential

Kò and *má* are used in prohibitives and imperatives respectively as can be seen in (29) and (30).

29. Ẹ/o *kò* gbọdọ̀ wọlé

2PL/SG NEG must enter

'You must not enter'

30. Má wọlé

NEG enter

'Don't enter'

All of the SN markers are possible in interrogatives as most of the structures we have seen for each of them so far can easily be turned into question. In potential, only *má* is possible with some variations. Consider (31) and (32).

31. a. Túndé lè kọrin

Túndé can sing

'Túndé can sing'

b. Túndé *kò* lè kọrin

Túndé NEG can sing

'Túndé cannot/could sing'

32. a. Túndé lè kọrin

Túndé may sing

'Túndé may sing'

b. Túndé lè má kọrin

Túndé may NEG sing

'Túndé may/might not sing'

When *lè*, the potential morpheme, signals ability, to negate it, the SN marker *kò* has to be used and precede it, but when it signals possibility, the SN marker *má* has to be used and follow it. There is an important question here: in Yoruba, SN markers are generally preverbal, why is *má* VP internal in (32b)? This is a question for further empirical studies. The subjunctive mood on the other hand seems to come with a load of surprises. First, all of the SN markers are possible in subjunctive mood. This is illustrated in (33).

33. a. Tí ó bá se pé ìwọ kọ́ ni wọ́n pè ni...

If it were EMPH that 2SG NEG FOC 3PL call FOC

'If it had not been you they called...'

b. Àfi bíi pé wọn *kìí* se èníyàn

As.if like that 3PL NEG EMPH human

'As if they were not human...'

c. Mo dábàá pé kí Pọ̀ọ̀lù má jẹ ápù

1SG suggest that such.that Paul NEG eat apple

‘ I suggest that Paul does (should) not eat apple’

d. Tí Pọ̀ọ̀lù *kò* bá jẹ àpú yen ni...

If Paul NEG were eat apple that FOC

‘If John had not eaten that apple...

Second, the subjunctive mood allows bipartite negation with *kò* and *m*á. For a detailed description of bipartite negation, see Bell (2004) and Collins et al. (2015). Take a look at the following sentences.

34. a. Adé **kò** báà **má** rí i, *kò* kàn mí

Adé NEG_2 even.if NEG_1 see 3SG, NEG touch 1SG.OBJ

‘Even if Adé does not see it, I am not concerned’

b. Ẹ **kò** báà **má** lọ, wàhálà yín ni ìyen

2PL NEG_2 even.if NEG_1 go, problem your FOC that

‘Even if you do not go, that is your problem’

In (34a&b), there is an instance of two negative morphemes in the syntax while the semantics has only one negation. Still, there is something crucial to notice in the sentences in (34). If NEG_1 is removed, the sentences appear to be perfectly fine. The only problem is that the subjunctive clauses are no longer negative, even with the presence of NEG_2. This is shown in (35). However, if NEG_2 is removed in both (34) and (35), the sentences are ungrammatical.

35. a. Adé kò báà ri i, kò kàn mí

Adé NEG_2 even.if see 3SG, NEG touch 1SG.OBJ

‘Even if Adé sees it, I am not concerned’

b. Ẹ kò báà lọ, wàhálà yín ni ìyen

2PL NEG_2 even.if go, problem your FOC that

‘Even if you go, that is your problem’

What the use of *kò* in (35a&b) suggests is that *kò* is semantically redundant. It is therefore an element present in the syntax but with no import in the semantics.

f. Negation in Focus Constructions

Yoruba has a distinct focus construction which can be taken as a clean-cut phrase that is projected from the focus morpheme which serves as the head. The detail of this is presented in the next section. In focus constructions, only *kọ́* and *kìí* seem to work out fine.

36. a. Adé ni ó wọlé

Adé Foc 3SG enter

'It is Adé that entered (not another person)'

b. Adé kọ́ ni ó wọlé

Adé NEG FOC 3SG enter

'It is not Adé that entered'

c. *Kìí* se Adé ni ó wọlé

NEG EMPH Adé FOC 3SG enter

'It is not Adé that entered'

The SN marker *kọ́* can be taken as the unmarked negative marker for focus construction based on the following reason: it yields a perfect negative polarity for a sentence in focus with no additional morpheme as shown in (36b). *Kìí* on the other hand is marked since it has to combine with the emphatic copula *se* whose presence in the syntax has no semantic effect.

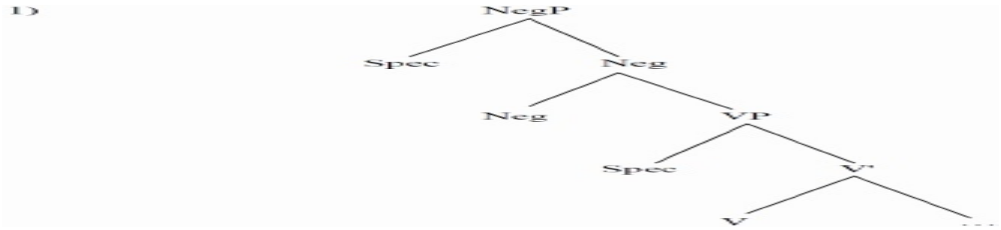
3.1. Summary

From the above data, it looks like we can make some generalizations about the SN markers in Yoruba. We can establish that SN markers in Yoruba are generally of the strong preverbal type. All of them are to the left side of the VP, with one exception: *m*á appears to split the VP into two in (32). We have seen that tense does not have anything to do with the choice of the SN markers, and that rather their selection is largely determined by aspect and mood. We have also seen that *kò*, *kọ́* and *kìí* are unmarkedly used in realis context, while *m*á is unmarrkedly used in irrealis context. The data generally favors the claim in section 2. Their usage in different modal or aspectual environment gives rise to mismatches. These mismatches are described in section 5.

4.0.The Syntax of Yoruba SN markers

In this section, I turn to the syntax of each of the Yoruba SN markers basically from the view point of X-bar scheme (Chomsky 1995 and Ouhalla 1999). My purpose is to explore their points of convergence and highlight their differences. I will be showing that though all of them appear to the left of the VP with some minor variations and can be taken as syntactic heads (Fabunmi 2013), there seems to be some differences in what they c-command as a result of aspect and mood. Following Ouhalla (1999), Fabunmi proposes that Neg in Yoruba heads its own projection and takes a VP in its complement. This is schematized as shown in (37).

37.



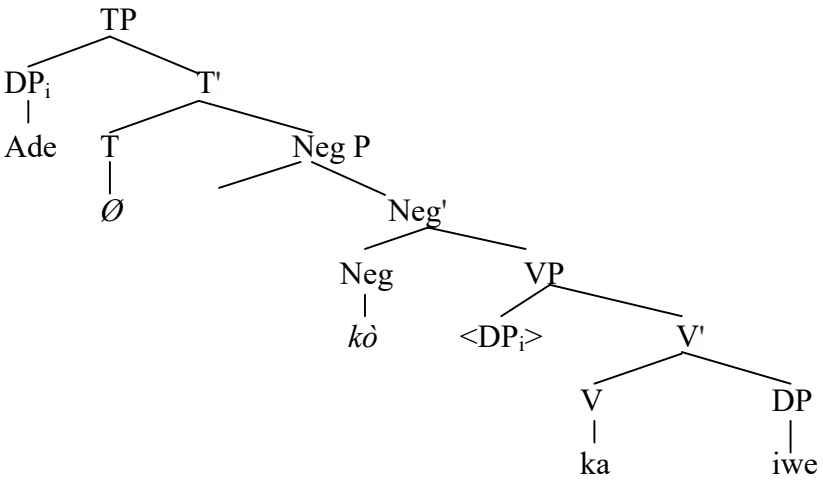
Fabunmi (2013) assumes that Neg has the status of a VP adjunct which can be generated in tense (in the sense of Ouhalla, 1999). This is not my concern here, but I will be arguing that SN markers in Yoruba do not have a unified syntax at least to the extent that there is variation in what they c-command in different modal-aspectual environments. There is also the question of tense in Yoruba that must be clarified before embarking on this enterprise. Yoruba does not mark tense morphologically but since tense category is a salient characteristic of UG and since tense can be checked by a temporal adverbial in Yoruba, I assume that Yoruba has the category TP which is headed by a null head T and is generated above Neg. This assumption of a null T head is in line with Koopman's Principle of Projection Activation (Koopman, 2000:369). The principle requires that there be movement of some sort, but since this has only a marginal role to play in this paper, the derivation of the movement is assumed. (See Cummings, 2001:277 for a full derivation). In the trees presented subsequently, I abstract away from such functional categories as little vP, AgrOP, AgrIOP and CP. These are not reflected in the trees, so that the interaction of NegP with other phrases in the structures can be focused on.

a. The Syntax of *kò*

Generally, *kò* is used in two distinct syntactic environments: where it precedes the VP or the AspP and where it precedes an IP headed by the modal *le*. The former is shown in (38), (39) and (40) while the latter is shown in (41).

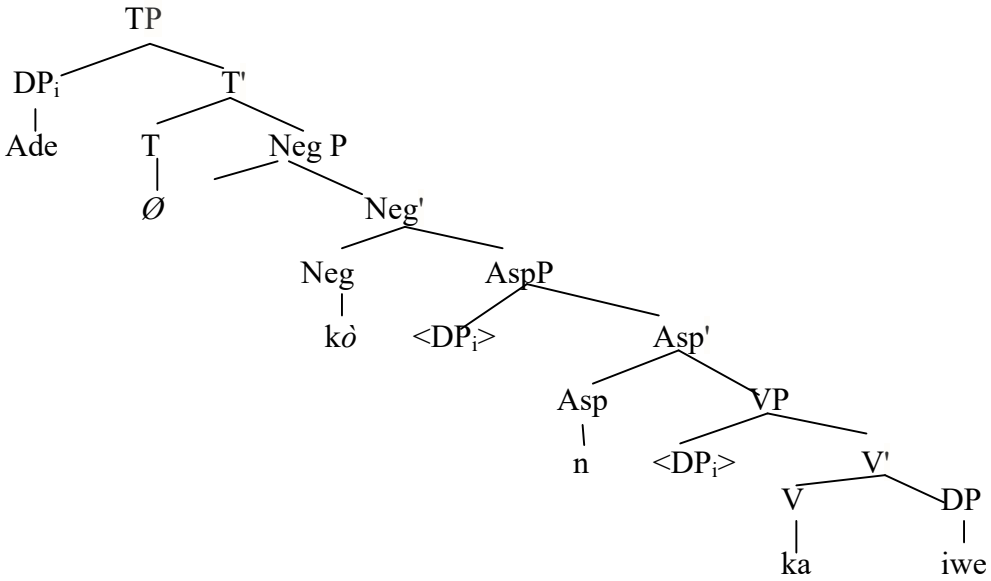
38. a. Ade *kò* ka ìwé
Ade NEG read book
'Ade does/did not read'

b.



39. a. Ade *kò* ń ka ìwé
Ade NEG PROG read book
'Ade does not read (habitually)'

b.

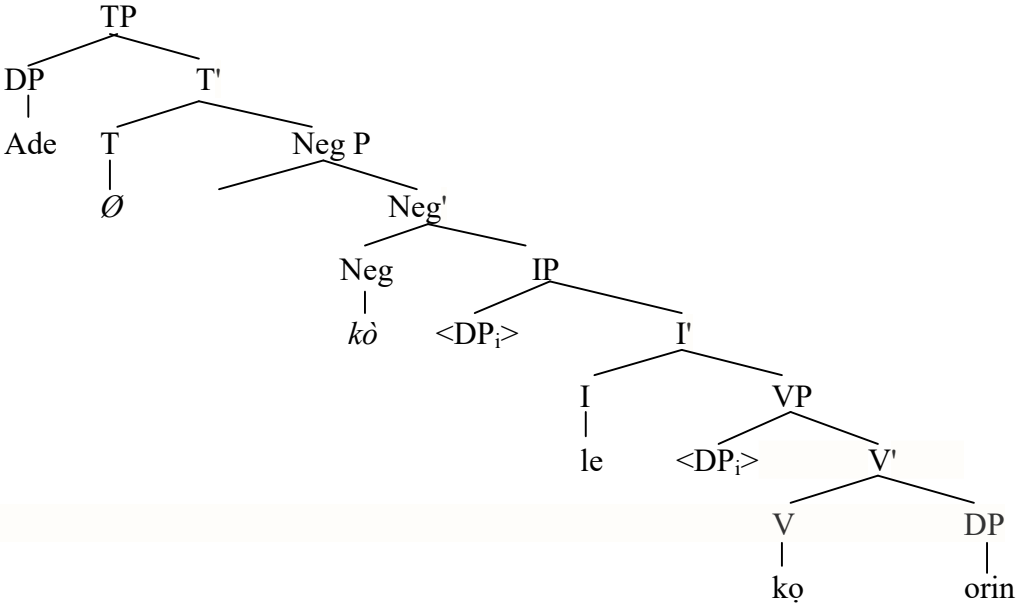


40. a. Adé *kò* tíì jẹ ẹ̀wà
Ade NEG PRF eat beans
'Ade has not eaten beans'

b. [$_{NegP}$ [Adé $_{Neg'}$ [kò $_{AspP}$[tíì $_{VP}$[jẹ $_{DP}$[ẹ̀wà]]]]]]

41. a. Ade *kò* le kọ orin
Adé NEG can sing song
'Adé cannot sing'

b.



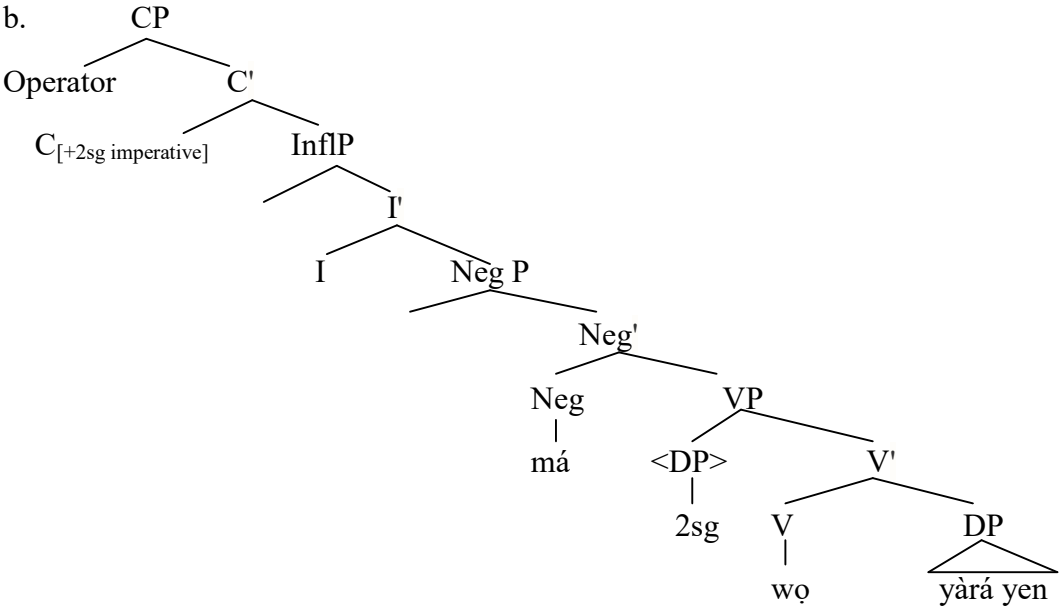
From the schemata above, we have seen that three basic syntactic derivations can be highlighted for *kò*: one in which it selects the VP in its complement (38b), one in which it selects the AspP in its complement (39 and 40) and one in which an IP occupies its complement position (41).

b. The Syntax of *má*

Both uses of *má* in pure imperatives and in modal constructions have the same syntax with a minor difference. Consider (42) and (43).

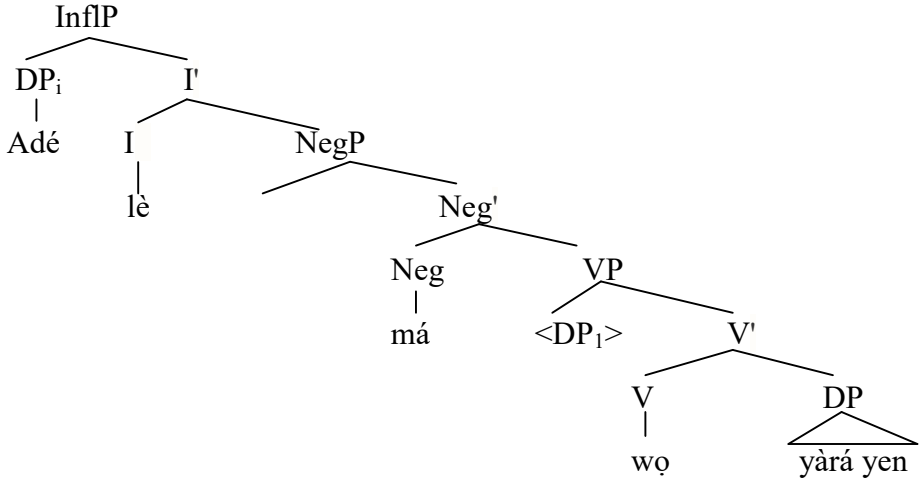
42. a. Má wọ yàrá yen
NEG enter room that
'Don't enter that room'

b.



43. a. Adé lè má wọ yàrá yen
Ade may NEG enter room that
'Ade may not enter that room'

b.



The derivation in (42b) for Neg in the imperative follows the convention in Nchare (2012:397) which is patterned after Zanuttini (2008). VP is the complement and both are dominated by an Inflectional Phrase.

c. The Syntax of *kọ́*

Adewọle (1990) and Fabunmi (2013) take *kọ́* as the negator of the NP. This is to say that *kọ́* has the kind of status that the English 'no' has and to assume that it can form a constituent with an NP to generate a quantifier phrase like 'no planet', 'no teacher', etc. It appears that this may not be the right way to think about the syntax of *kọ́* for two good reasons. First, this treatment of *kọ́* does not acknowledge the specific syntactic environment in which *kọ́* is found, which is in focus constructions. Second, in a structure like *ọba kọ́* (king NEG/ 'it is not the king'), *kọ́* does not negate *ọba*, such that we have something like 'no king' or 'not king', but a whole proposition in which *ọba* is an argument. This proposition must be picked out in context, given the fact that a structure like *ọba kọ́* is not felicitous out of the blue. So if one utters *ọba kọ́* out of the blue, people will be curious to know what proposition is such that it does not apply to *ọba*.

The fact that *kọ́* cannot be found in any other context than in focus construction rightly suggests that its syntax must be closely tied to focus. My starting point therefore is to propose that Yoruba has a focus phrase that is projected right from the focus morpheme which is its head (44), and then I will argue that it is this (and only this) focus phrase that *kọ́* selects in its complement position.

44. Yoruba has a functional category headed by the focus morpheme *ni*, which projects a Focus Phrase (FocP)

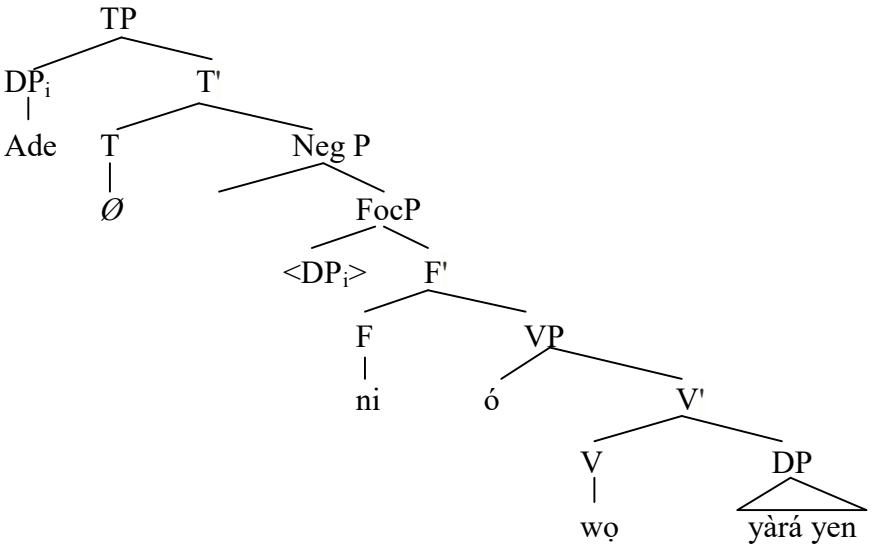
Assuming (44) certainly gives rise to a number of issues that need to be addressed. First, one has to consider the traditional treatment of *ni*, and then assess the legitimacy of the phrase that *ni* heads. Previous works such as Jones (2006) and Bisang and Sonaiya (2008) take *ni* as a focus morpheme as well as a copula. Generally *ni* can be regarded as a copula focus morpheme. In Yoruba, three distinct copula morphemes can be identified: the pure copula *jẹ́*, the emphasis copula *se*, and the focus copula *ni*. These three morphemes are decribed in Hewson (2010), but for detailed descrption of *ni*, see Jones (2006) and Déchaine (2002). My assumption in this paper is that *ni* is primarily a focus morpheme whose copula status is simply secondary and a requirement of its focus status. Assuming that the primary function of *ni* is to signal focus and that its use in this capacity is in most contexts it occurs, I propose that *ni* is a functional head, Foc, projecting a whole phrase FocP. This is schematized below.

45. a. Adé ni ó wọ yàrá yen

Adé Foc 3SG enter room that

'It is Ade that entered that room'

b.



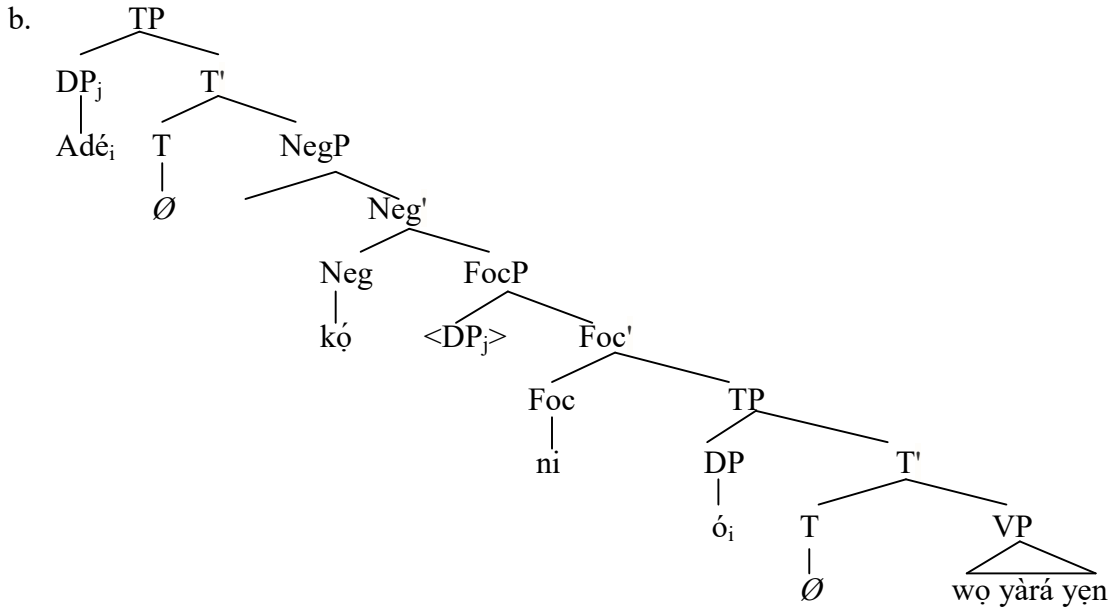
This idea that Yoruba has a distinct focus phrase is conceived in Jones (2006), but not pursued. It can also be found in Awobuluyi (1978) which recognizes that the function of *ni* is similar to that of the complementizer *ti* (which/who)[3]. However, the idea pursued here is different from that of Awobuliyi in the respect that the whole phrase that *ni* heads is not taken to be a noun phrase but a focus phrase. Assuming that this assumption works out fine, I then propose that it is this focus phrase that *kọ́* selects in its complement as shown in (46b).

46. a. Adé kọ́ ni ó wọ yàrá yen

Adé NEG Foc 3SG enter room that

'It is not Ade that entered that room'

b.



[3] It is worth noting, however, that there are some works (such as Owolabi, 1983, 1987 and Yusuf 1990) which hold contrary views on this.

If the foregoing intuition is correct, then we can assume (47).

47. *Kọ́* negates a focus phrase (FocP) and not an NP.

One of the fundamental characteristic of the FocP headed by *ni* is that it takes a TP complement and has a DP in its specifier that is co-referential with the resumptive pronoun DP within the TP in its complement, as shown in (46b).

d. The Syntax of *kìí*

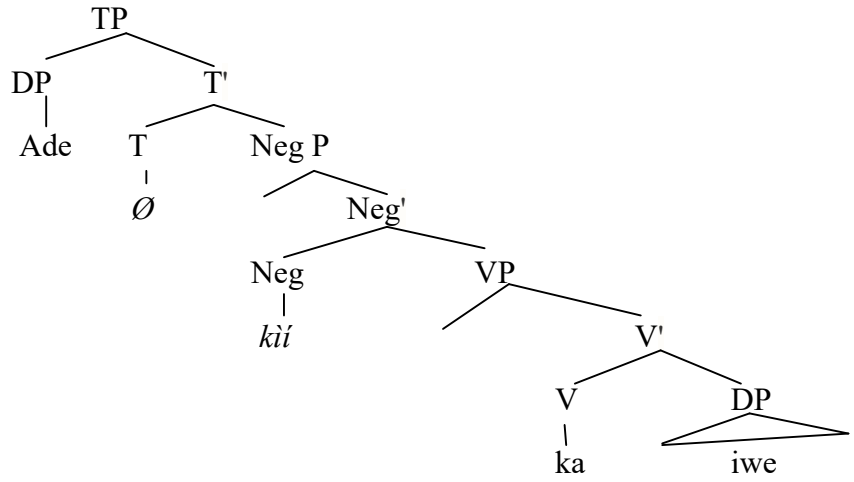
Kìí has a similar syntax with *kò* when it is used to negate a habitual sentence as in (48). The only difference is that the aspectual head is not present in the syntax, unlike what obtains for *kò* in (39b) where *ń* is the aspectual head.

48. a. Adé *kìí* ka ìwé

Ade NEG read book

'Ade does not read (habitually)'

b.

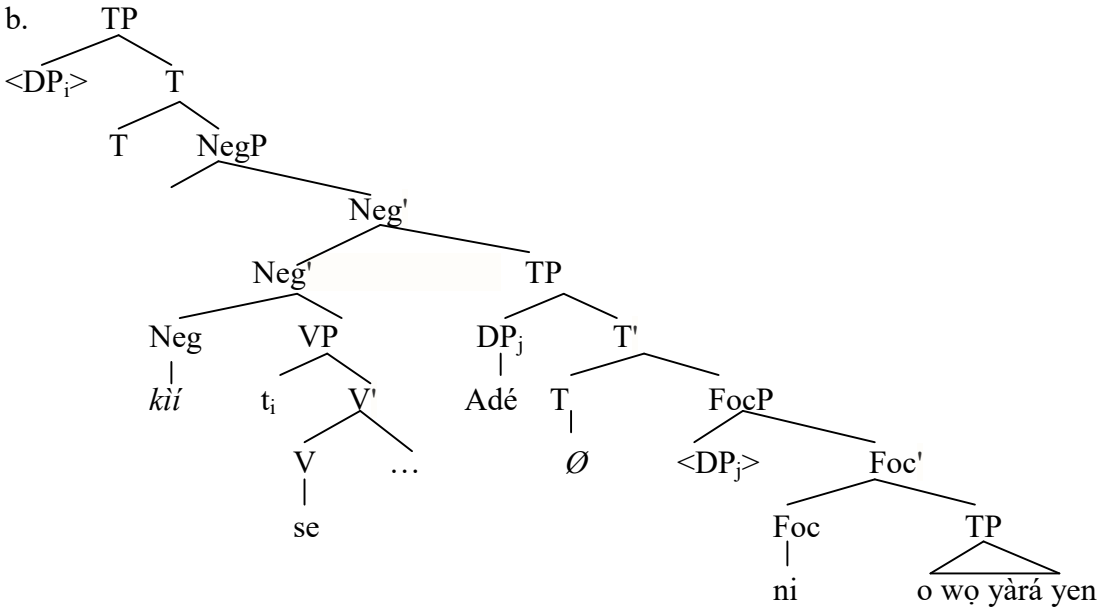


However, its syntax seems to be markedly different when it negates a focus sentence like (49a) as it has to combine with the focus phrase by adjunction. To negate a focus construction, *kìí* has to combine first with the emphasis copula *se*, and then with FocP. This is illustrated in (49b).

49. a. *Kìí* se Adé ni ó wọ yàra yen

NEG EMPH Ade Foc 3SG enter room that

'It is not Ade that entered that room'



Note that $<DP>_1$ and its trace t_1 represent the 3sg that is deleted by *kìí*. This is described in section 3. This syntax of *kìí* makes it distinct from the others as it is the only one in which NEG combines with what it negates by adjunction. *Kìí* and the VP it c-commands can be paraphrased as 'it is not the case that…', while everything that TP and FocP dominates can be paraphrased as 'It is Ade that entered that room'. Combining Neg' with FocP, we have something like 'It is not the case that it is Ade that entered that room'.

4.1. Summary

Among all the four Yoruba SN markers analyzed, only *kọ́* has a unified syntax, having FocP in its complement position, suggesting that it is not sensitive to aspect. The rest have at least two syntactic analyses, having variations in what they select at their complement positions. My argument is that these variations are parametric on aspect and mood and that tense which is headed by a null head has no significance in the variation.

5.0. Mismatches of Form and Interpretation: the Case of Yoruba SN Markers

The major concern in Carlson's (2006) work on functional elements is the challenges which an attempt to look at the syntax and semantics of function words poses. Carlson recognizes that learning the meaning of lexical items gives rise to a number of difficulties which have to do with identifying the specific sense of a lexical item in a given context, especially as it is the inherent property of lexical items to refer to a diverse number of things, and given the ambiguities that may result from how they are combined. However, far greater, Carlson notes, is the difficulties that arise when one seeks to understand the meanings of functional elements. Functional elements interact with the syntax of a language in ways quite distinct from their lexical counterpart and thereby give rise to a number of issues which are absent for lexical items when mapping between form and interpretation. These 'issues' are what Carlson regards as 'mismatches'. The appropriate starting point, then, is identifying what linguists understand by mismatches.

The term 'mismatch' has been used by linguists to describe linguistic phenomena that involve mapping between elements or structures that are incongruent. We have an instance of mismatch when an element performs a function that it does not normally perform. Take the Chichewa verb *kuti* (referenced in Francis and Michaelis, 2003) as an example: this verb, meaning 'say', performs its normal function of predication, relating an argument with another, but it can also perform another function which most verbs in natural language are not known to perform, that of serving as clause-linkage marker. Performing this function of clause-linkage marking, the verb *kuti* is taken to exhibit a mismatch between syntax and semantics. Consider also the case of the non-standard English expression 'I didn't do nothing', where the double negation that appears in the syntax reduces to one at the level of semantics.

Francis and Michaelis (2003) classify mismatch phenomena into two: complexity mismatch and content mismatch. Complexity mismatch refers to instances where there is no one-to-one correspondence among the elements in the syntactic representation and the elements in the semantic representation of an expression, or among other forms of representation like LFG's f-structure and d-structure. For instance, the idiomatic expression 'taken aback' has only one lexical entry at LF. This is a mismatch in so far as it defies any assumption of one-to-one correspondence among levels of representation, an idea popular in Montague tradition (Partee, 1975:203). One thing to note however is that this is clearly noticed in parallel-architecture grammars like LFG, HPSG, etc., and it has been taken to be an evidence in support of the practice to have different levels of representation as this makes it easy to identify mismatches, while in derivational grammars, Chomskyan for example, this distinction is hard to make.

To prove that learning functional meanings poses a far greater challenge than learning lexical meanings because of the 'mismatches' they often exhibit, Carlson cites a number of phenomena. These include: two functional elements with the same meaning but with a different syntax, functional elements treated as higher level operator such as tense and plurality, functional elements with composite meaning such as French *du* which comprises *de* and *le*, two identical functional elements which reduce to one in the syntax but which are both present in the semantics, e.g., Japanese possessive postposition *–no* and pronoun *–no*), two or more functional items which add to one meaning such as Negative Concord in Zeijlstra (2014) and Szabolcsi's (2015) KA and MO, functional elements which are empty such as explitives, and Hindi habituality marker (Iatridou 2000) which when used in certain syntactic environment is empty, and lastly functional items bearing other meanings different from what they are known to signify, e.g. Spanish *se* discussed in Palmutter (1971). Carlson finally goes on to discuss the English definite article, showing how the definite feature which the article carries may disappear in the semantics in some structures and how it is possible for singular bare nouns to carry the definite feature even without the definite article present in the syntax.

From the description in Section 3, it appears that Yoruba SN markers exhibit a number of mismatches like the ones Carlson describes. Take *kò* for example. It is generally used in the indicative mood, but as shown in (34) and (35), it is possible in the subjunctive mood where its presence in the syntax has no effect in the semantics. It also combines with *má* in a bipartite negation, in a way that the syntax has double negation and the semantics has only one. Consider also the instances in (27) and (28) where *kò* and *kìí* delete the third-person singular pronoun such that the syntax has no subject argument that is present in the semantics. These cases well satisfy Francis and Michaelis's (2003) content and complexity types of mismatch.

A whole lot of other mismatch questions also arise from the description in section 3. Why does the progressive morpheme *ń* disappear in the presence of negation in (22)? Why does the morphology of the progressive marker *yóò* changes in the presence of negation and its other form *á* does not appear at all in negation in (24) and (25)? What is responsible for the atypical behavior of *má* in (32) where it splits the VP into two? In order words, why is the modal *lè* higher than the SN marker *má*? How also do we explain the emptiness of the emphasis copula *sé* in (36)? The fact that these SN markers have their distinct unmarked usages but are still interchangeable with some of their counterparts in some other usages can be considered instances of mismatches in itself. While some of the mismatches can be said to have arisen because of a SN marker being used in a different aspect and mood it is not normally used, a good example is the semantic vacuousity of *kò* in (35) and *sé* in (36), this does not explain all the mismatches.

These mismatches are only pointed out, therefore, for further empirical investigation. The point pursued here is that function items like Yoruba SN markers described above interact with the syntax in more complex ways than their lexical counterparts (Carlson 2006). To be sure, most of the questions raised above do not surface for lexical items. At any rate, I am maintaining the claim that Yoruba has only two morphemes for the expression of sentential negation, which flesh out as the four SN markers *kò*, *kìí*, *kọ́*, and *má* whose uses in different aspectual and modal environments can explain some of the mismatches identified above.

6.0. Conclusion

I have tried to show that Yoruba has only two morphemes for the expression of sentential negation whose basic difference is modal: the realis *k*-morpheme which has *kìí*, *kò* and *kọ́* as allomorphs and the irrealis *m*á morpheme, and that the use of these morphemes in a different modal-aspectual environment often gives rise to mismatches which are similar to the mismatch phenomena described in Carlson (2006). While doing this, I suggest alternative ways of looking at negation in the language. For instance, I claim that, rather than being an NP negator, *kọ́* negates a focus phrase which I proposed for the language. I also claim that, despite the fact that they are majorly preverbal, the SN markers do not have a unified syntax, at least to the extent that there is no uniformity in what occupy their complement positions, and that this variation is only as a result of their interaction with aspect and mood.

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