I músu fu woóko taánga: Restructuring in Saamáka

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Abstract

This paper addresses *FU* constructions in Saamáka. *FU* constructions are composed of a lexical or auxiliary verb and the complementizer/preposition *fu*. They convey an aspectual or modality reading. *FU* constructions have a fixed position in the TMA sequence, and they are placed in between the core TMA morphemes of Saamáka. In this paper, I show that verbs in *FU* constructions are restructuring verbs and therefore they have a mono-clausal structure.

1. Introduction

The morpheme *fu*[1] in Saamáka[2] co-occurs with lexical and auxiliary verbs to form a complex predicate. They convey an aspectual or modality reading. For now, I will refer to them as *FU* constructions. In the literature (see e.g. Byrne 1985, 1987; Wijnen and Alleyne 1987; McWhorter 1997; Aboh 2006; Lefebvre and Loranger 2006), the morpheme *fu* has been given a great deal of attention. However, constructions such as those in (1) and (2)[3] have not been paid much attention.[4]

(1) A kabá u mbéi huiswerk
3SG finish FU make homework
'S/he finished making her/his homework'.

* This study is based on data collected in Wageningen, the Netherlands and Pikinslee, Suriname. I would like to thank my consultants for their time and patience. I am also thankful to Gillian Ramchand for discussion and Øystein Nilsen, Minjeong Son and Peter Svenonius for comments on an earlier draft of this paper. All remaining errors are my own.

[1] In speech the morpheme is often reduced to *u*. In addition, when *fu* combines with certain pronouns coalescence takes place. *Fu* combined with the second person singular pronoun *i* results in *fii*.

[2] Saamáka is an English-based creole spoken along the Suriname river, Suriname. In the literature, the language is also referred to as Saramaccan.

[3] Abbreviations: SG = singular; PL = Plural; MOD = modal marker; ANT = Anterior; IMP = Imperfective; NEG = Negation; BE = Copula; COMP = Complementizer; DET = Determiner; ART = Article; LOC = Locative; Q = Question marker; NARR = narrative marker.

[4] Saamáka is a tone language. It distinguishes high and low tones.

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(2) Híi sembe ábi u nyá u dee sa líbi.
all person have FU eat FU 3PL MOD live
'Everyone must eat so they can live'.

FU constructions in Saamáka can be analyzed as restructuring verbs (see e.g. Cinque 2004; Wurmbrand 2008) or as constructions which fall under modal and aspectual categories. Building on Cinque (2004), *FU* constructions can be analyzed as either being mono-clausal or bi-clausal. This paper discusses the position of *FU* constructions in the tense-aspect-modality sequence. I show that *FU* constructions have a fixid position in the IP domain of Saamáka. There is no evidence for a restart after *fu*. Thus, I argue that for the Saamáka data presented, a mono-clausal analysis is favored. Furthermore, I address the question of whether *fu* in *FU* constructions is the same morpheme as complementizer *fu* or if they are different morphemes. The two morphemes cannot occur together. As a result, I argue that they are in complementary position and they are placed in ForceP, in the sense of Rizzi (1997).

2. Interpretations of *fu*

2.1. Multiple functions of *fu*

Fu is a polysemous morpheme. It can be used as preposition, complementizer and, in some varieties of Saamáka, as modal morpheme expressing obligation.

When used as a preposition, *fu* introduces a beneficiary or a possessor, as in (3).

(3) a. Amato bái dí búku fu mi.
Amato buy DET book FU 1SG
'Amato bought the book for me' (Aboh 2006:12).
b. Freddy hén téi dí móni u mi hén dé fufúuma.
Freddy 3SG take DET money FU 1SG 3SG BE thief
'Freddy has taken my money, he is a thief'.

Fu can also be used as a complementizer to introduce both tensed and tenseless clauses (Aboh 2006).

(4) a. Amato bói dí ganía fu nyá.
Amato cook DET chicken FU eat
'Amato cooked the chicken to eat'. (Aboh 2006:33).
b. Mi musu kulé u mi sa kísi í bus éti.
1SG MOD run FU 1SG MOD catch DET bus yet
'I have to run in order to be able to catch the bus'.

My consultants interpret sentence (4a), as in (5). In (5), the pronoun *u*, expressing first person plural, is attached to the complementizer *fu*, resulting

in *fuu*. Thus, a full clause is embedded under *fu* in (5).

(5) Amato bói dí ganía fuu nyá.
Amato cook DET chicken FU.1PL eat
'Amato cooked the chicken for us to eat'.
*'Amato cooked the chicken (for him) to eat'.

Another function of *fu* is to express modality i.e. obligation, as claimed for example by Byrne (1987), McWhorter (1997), and Aboh (2006). However, the use of *fu* as a modality marker is debatable. Others have claimed that their consultants reject the use of *fu* as a modal marker (see Wijnen and Alleyne 1987). My consultants systematically judge a sentence like (6a) to be ungrammatical and replace it with (6b). One possibility to explain the discrepancy in judgement is to say that the language has several varieties. In the variety spoken by my consultants the morpheme *fu* by itself cannot occur as an obligation modal marker.

(6) a. %Amato fu bói dí ganía.
Amato FU cook DET chicken
'Amato should cook the chicken' (Aboh 2006:12).
b. Amato á(bi) fu bói dí ganía.
Amato have FU cook DET chicken
'Amato must cook the chicken'.

This paper focuses on the use of *fu* in *FU* constructions shown in (1) and (2). What is interesting about these *FU* constructions is that they have a fixed surface position in the syntactic structure. Together with core tense, aspect and modality morphemes (TMA), *FU* constructions occur between the subject and the main verb. The ordering of core TMA morphemes and *FU* constructions is very rigid. The past time reference marker *bi*, if present, is always the first morpheme in the TMA sequence and the imperfective marker *ta*, if present, is the final morpheme. Core modals and *FU* constructions occur in between these two morphemes.

(7) A bi ló u ta feée dágu.
3SG ANT love MOD IMP fear dog
'S/he had been fearing dogs regularly'.

(8) Éside a bi bigí u ta lési wán búku.
yesterday 3SG ANT begin FU IMP read ART book
'Yesterday s/he had begun reading a book'.

I discuss the interaction between *FU* constructions and core TMA morphemes in more detail in Section 4. First, I concentrate on the different *FU* constructions and their interpretation in Section 2.2. Section 3 discusses the outline of the problem. The paper concludes with a functional sequence approach analysis in Section 5.

2.2. *FU* constructions and their interpretations

FU constructions involve lexical and auxiliary verbs like *lóbi* 'love', *kabá* 'finish', *bigí* 'begin', *músu* 'must', *ábi* 'have', and *sábi* 'know', combined with the morpheme *fu*. The constructions and their interpretations are listed in Table 1.

Aspect		Modality	
habitual	*ló u*	necessity	*músu fu*
completive	*kabá fu*	mental ability	*sá u*
inceptive	*bigí fu*	obligative	*ábi fu*

Table 1: *FU* constructions

2.2.1. The *FU* constructions expressing modality

When *fu* combines with the necessity modal morpheme *musu*, the combination expresses either obligation, as in (9) or deductive epistemic modality, as in (10).

(9) I músu fu gó duumí.
2SG MOD FU go sleep
'You must go to bed' (Lit. 'You must go and sleep').

(10) Freddy músu u dóu a wósu kaa a di yúu akí
Freddy MOD FU arrive LOC house already LOC DET hour here
a ta kó, a músu u dóu.
3SG IMP come 3SG MOD FU arrive
'Freddy must have arrived at home at this time, he has been coming, he must have arrived'.

The second modal expression is *ábi fu*. Here the verb *ábi* 'have', combines with *fu*. It conveys a strong obligation interpretation, particularly an obligation of natural forces.

(11) A ábi fu kíi mbéti.
3SG have FU kill animal
'He has to kill animals' (in order for him to eat).

The last modal construction is *sá u*. This construction is derived from the verb *sábi* 'know' and expresses a learned ability, as in (12) and (13).

(12) A sá u táki Saaná.
3SG know FU talk Sranan
'S/he knows how to speak Sranan'.

(13) Dí míi de sá u sún.
DET child there know FU swim
'That child knows how to swim'.

2.2.2. The *FU* constructions expressing aspect

Ló u is composed of *lóbi* 'love' and *fu* and has a habitual interpretation.

(14) Mi ló u hópo a ganía kandá.
1SG love FU stand up LOC chicken sing
'I always get up at dawn'.

(15) Híi dáka dí sónu ló u hopo a síkísi yúu mámate.
every day DET sun love FU lift LOC six hour morning
'The sun raises at six o'clock every morning'.

Kabá fu consists of the lexical verb *kabá* 'finish' and *fu*. It expresses the end stage of an event, i.e. completion.

(16) Dí muyée-míi kabá u seeká dee físi.
DET woman-child finish FU clean DET.PL fish
'The girl has finished cleaning the fish'.

(17) A kabá u fón dí alísi.
3SG finish FU hit DET rice
'S/he has finished to pound the rice'.

The final construction is *bigí fu*, which is composed of the lexical verb *bigí* 'begin' and *fu*. The construction has an inceptive meaning.

(18) Jan bigí fu lési dí búku.
John begin FU read DET book
'John starts to read the book'.

(19) Dí muyée bigí u bói.
DET woman begin FU cook
'The woman begins to cook'.

3. The Puzzle

Based on the data presented in Section 2, *fu* appears to have multiple functions. It can be used as a preposition, a complementizer or in the *FU* constructions. As a complementizer, *fu* has a [+IRR] feature (also noted by Aboh 2006). An argument in favor of this comes from the temporal orientation of unmarked non-stative verbs. In Saamáka, unmarked non-stative verbs convey a past time reference. However, if embedded under the complementizer *fu*, unmarked predicates express present/future orientation.

(20) Á dé fii nyá dí nyanyá fii kabá a
3SG.NEG BE FU.2SG eat DET food of.2SG finish LOC
paabí tidè.
plate today
Mother to child on her/his birthday: 'You don't have to finish your plate completely today'.

Fu in its *FU* construction use also conveys an [+IRR] feature, except when *fu* is combined with *kabá* with a completive interpretation.

This paper aims to establish how *FU* constructions are analyzed. Moreover, I will try to figure out how many different *fu*'s there are in Saamáka. Thus, whether the complementizer *fu* and the *fu* used in the *FU* constructions are the same morpheme or different morphemes. The prepositional use of *fu* is set aside in this paper.

If we follow Cinque (2004), there are two options of analyzing a predicate of which its semantic content matches a functional head. First, the verb can be analyzed as a regular lexical verb that can take a CP as a complement. Second, the verb can be analyzed as a functional head which is inserted in a functional position dominating the main verb in its extended projection. The former results in a bi-clausal structure and the latter in a mono-clausal structure. Cinque (2004) argues that restructuring verbs in Italian are functional verbs. He gives a number of arguments for his reasoning. I only point out those that might be of relevance for Saamáka. First, restructuring verbs cannot assign θ roles and therefore have no arguments. Furthermore, the ordering of restructuring verbs is rigid. This is due to the rigid ordering of functional heads in the structure.

In the literature, it has been pointed out that creoles have a rigid word order (see e.g. Bickerton 1984). Previous work on Saamáka has confirmed this claim (see e.g. Byrne 1987; Veenstra 1996). Therefore, a mono-clausal approach for *FU* constructions in Saamáka should be considered. However, *fu* as a complementizer can embed a full clause. One would expect a restart of the functional sequence after *fu*. Thus, both suggested analyses are possible in Saamáka. Section 4 discusses the syntactic distribution of *FU* constructions and the ordering of core TMA morphemes. In Section 5, the *FU* constructions are analyzed.

4. Syntactic Distribution of the *FU* constructions

In this section, the interaction between core TMA markers and *FU* constructions in Saamáka is studied. For readers unfamiliar with the core TMA system of Saamáka, I first provide a brief overview in Section 4.1.

4.1. Interpretations of core TMA morphemes

Unmarked non-stative verbs in Saamáka denote a past time reference, as in (21). Unmarked stative verbs are states and thus, they refer to present

moment, as in (22).

(21) A sun.
3SG swim
'S/he has swum'.
or 'S/he swam'.

(22) A dé a wósu.
3SG BE LOC house
'S/he is at home'.

Saamáka has five core TMA morphemes, as listed in Table 2 and exemplified in (23) - (27).

Tense		Aspect		Modality	
bi	past time reference	*ta*	imperfective	*sa*	possibility
				musu	necessity
				o	future time reference

Table 2: Core Tense-Aspect-Modality morphemes

Bi expresses past time reference and is analysed as a relative past tense marker.

(23) A bi wáka a mátu déndu.
3SG ANT walk LOC forest in(side)
'S/he had walked in the forest'.
or 'S/he walked in the forest'.

The imperfective marker *ta* expresses progression and habituality.

(24) Someone on the phone asks what Senni, who is sitting next to you, is doing.
a. Senni ta woóko nóúnóu akí.
Senni IMP work now here
'Senni is working here right now'.

Sa is a possibility modal morpheme that expresses permission, ability and speculative epistemic. *Sa* differs from the learned ability construction *sá u* in that *sa* is used as marker for general ability or physical ability and *sá u* can only express learned ability.[5]

[5]A difference between *sá u* and *sa* is that the former is derived from the verb *sábi* which has its origin in the Portuguese word *saber* ('know'). In addition, *sá u* has a high tone. For the modal morpheme *sa* it has been argued that it is derived from English *shall* (Smith 1987) or Dutch *zal* (=future time reference morpheme) (Donald Winford p.c.).

(25) a. A sa gó peé a lío.
3SG MOD go play LOC river
'S/he might have gone to the river to play'.
or 'S/he is allowed to go to the river and play'.
b. Sínsi dí míi fíni wán beéi nóó a sa lési
since DET child find ART glasses NARR 3SG MOD read
móo búnu.
more good
'Since the child has glasses, s/he can read better'.

Musu expresses necessity is ambiguous between an obligative and a deductive epistemic reading, as illustrated in (26). The difference between *musu* and *músu fu* is that the use of the latter expresses a greater certainty or stronger obligation.

(26) a. I musu wási yu máu bifo i gó nyá.
2SG MOD wash 2SG hand before 2SG go eat
Mother to child: 'You must wash your hands before you eat'.
b. Wán sembe ta náki mi dóo, a musu dé Freddy.
ART person IMP hit 1SG door 3SG MOD BE Freddy
'Someone is knocking on the door: It must be Freddy'.

Future time reference is expressed by the morpheme *o*.[6]

(27) What are you going to do tomorrow?
a. Mi o gó a goón gó wooko amanyá.
1SG MOD go LOC vegetable garden go work tomorrow
'Tomorrow I will go to my vegetable garden to work'.

The past time reference marker *bi*, the imperfective marker *ta* and the possibility modal *sa* can co-occur with all other core TMA morphemes. The modals *musu* and *o* cannot be combined with each other. These modals can co-occur with other core TMA morphemes. Core TMA morphemes occur, when combined, in a fixed order, i.e. T-M-A.[7]

(28) A bi o sa ta sún.
3SG ANT MOD MOD IMP swim
'He would be able to swim regularly'.

(29) Senni bi musu sa ta dé a wósu.
Senni ANT MOD MOD IMP BE LOC house
'Senni had to stay home' (there was no opportunity, but at that moment he should have been at home).

[6] I assume future time reference markers to be modal morphemes, following Iatridou (2000).

[7] For a detailed study of the interaction of the core TMA morphemes in Saamáka, I refer readers to van de Vate (in progress).

4.2. Ordering of *FU* constructions and core TMA morphemes

4.2.1. Músu fu

The modal construction *músu fu* can combine with the past time reference marker *bi*, the possibility modal *sa* and the imperfective marker *ta*. It cannot co-occur with the future time reference marker *o*.

(30) a. *A músu fu o kulé gó a sikóo.
3SG MOD FU MOD run go LOC school
b. *A o músu fu kulé gó a sikóo.
3SG MOD MOD FU run go LOC school

With regard to word order, the past time reference marker *bi* precedes *músu fu*, while the other two core TMA morphemes, possibility modal marker *sa* and imperfective *ta*, follow it. The epistemic interpretation of *músu fu* is ungrammatical when combined with *bi*.

(31) A bi musu u mbéi / tapá dí singi (baáku)
3SG ANT MOD FU make / close DET wooden roof hole
éside.
yesterday
'S/he was obliged to repair the roof yesterday'.
*'It must be that s/he had repaired the roof yesterday'.

In combination with the modal *sa*, *músu fu* can be ambiguous between an obligation and a deductive epistemic reading. *Sa* can only convey a permissive or ability reading. My consultants prefer a bi-clausal construction when epistemic *sa* combines with obligative *músu fu*.

(32) a. A músu fu sa sún.
3SG MOD FU MOD swim
'It must have been that s/he was able to swim'.
or 'It must have been that s/he was allowed to swim'.
b. I músu u sa sikífi e fu i sa féni dí
2SG MOD FU MOD write NARR FU 2SG MOD find DET
woóko.
work
'You are obliged to be able to write in order for you to be able to find a job'.

In combination with imperfective *ta*, *musu fu* is usually interpreted as an epistemic necessity.

(33) A músu fu tá duumí kaa.
3SG MOD FU IMP sleep already
'S/he must be sleeping already'.

To summarize, *músu fu* can combine with *bi*, *sa*, and *ta*, but not with the modal *o*. This gives the following order:

(34) bi > músu fu > sa > ta

4.2.2. Ábi fu

The obligative modal construction *ábi fu* co-occurs with the past time reference marker *bi* and the future time reference marker *o*, which precede *ábi fu*, and imperfective *ta*, which follows *ábi fu*.

(35) Dí wómi bi ábi fu woóko a dí bakáa wósu.
DET man ANT have FU work LOC DET white person house
'The man was obliged to work at/in the white person's house' (Byrne 1987).

(36) A o ábi u gó a hóndi amanján.
3SG MOD have FU go LOC hunt tomorrow
'S/he will be obliged to go hunting tomorrow (otherwise there is nothing to eat)'.

(37) Dí wómi ábi fu ta woóko a dí bakáa wósu.
DET man have FU IMP work LOC DET white person house
'The man is obliged to be working at/in the white person's house' (Byrne 1987).

Ábi fu cannot co-occur with *musu*, both denote obligation. With *musu* as epistemic marker, my consultants prefer to use a bi-clausal structure, as in (39).

(38) *A musu ábi fu kísi físi.
3SG MOD have FU catch fish

(39) A musu dé taa a ábi fu gó kísi físi.
3SG MOD BE COMP 3SG have FU go catch fish
'It must be that s/he is obliged to go catch fish'.

Ábi fu can only combine with epistemic *sa*. The permissive and ability reading of *sa* do not rise.

(40) a. *A ábi u sa kíi dí mbéti.
3SG have FU MOD kill DET animal
b. *A sa ábi fu kíi déé mbéti.
3SG MOD have FU kill DET+PL animal

(41) Senni sa ábi fu gó a hóndi.
Senni MOD have FU go LOC hunt
'It might be that Senni is obliged to go hunting'.

To summarize, *ábi fu* can combine with *bi*, *o*, epistemic *sa*, and *ta*. Combinations with deontic/dynamic *sa* and *musu* are ungrammatical. This gives the following order:

(42) bi > o > sa > ábi fu > ta

4.2.3. Sá u

The learned ability construction *sá u* combines with all of the aforementioned core modals *musu*, *sa* and *o*, imperfective *ta* and the past time reference marker *bi*. All core TMA morphemes precede *sá u*, as shown below.

(43) A bi sá u waka a dúngu.
3SG ANT know FU walk LOC dark
'He knew how to walk in the dark (but he lost the ability)'.

(44) Abitimoo a o sá u lési.
later 3SG MOD know FU read
Teacher to parent: 'In a little while, she (=your daughter) will know how to read'.

In cases where the learned ability marker, *sá u*, combines with the modal *sa*, the latter always gives rise to an epistemic reading.

(45) A sa sá u mbéi dí ladio.
3SG MOD know FU make DET radio
'It may be that s/he knows how to fix the radio'.

Both the deductive epistemic and the obligative reading of *musu* are available when combined with *sá u*.

(46) I musu sá u skífi fii sa woóko akí.
2SG MOD know FU write FU.2SG MOD work here
'You must know how to write in order for you to be able to work here'.

When *sá u* combines with imperfective *ta*, the aspect marker follows the *FU* construction. Note that not all my consultants accept the combination of *sá u* and *ta*.

(47) %A sá u ta mbéi dí ladio.
3SG know FU IMP make DET radio
'S/he knows how to fix a radio'.

To summarize, *sá u* can combine with all core TMA morphemes. This gives the following order:

(48) bi > o/musu > sa > sá u > ta

4.2.4. Ló u

The habitual construction *ló u* co-occurs with the past time reference marker *bi*, necessity modal *musu* and imperfective *ta*. *Ta* follows *ló u*, and *bi* and *musu* precede *ló u*. For the necessity modal *musu* both readings are available when combined with the *ló u*.

(49) A dí tén de Jan bi lo u kandá.
LOC DET time there John ANT love FU sing
'In those days John used to sing'.

(50) A musu ló u hópo a ganía kandá.
3SG MOD love FU get up LOC chicken sing
'It must be that s/he gets up early in the morning regularly'.
or 'S/he is obliged to get up early in the morning regularly'.

(51) A ló u ta lési búku.
3SG love FU IMP read book
'S/he loves to read books at certain times'.

Combinations of *ló u* and the future time reference marker *o* are ungrammatical.

(52) *A o ló u gó pée báli.
3SG MOD love FU go play ball

Ló u can only combine with epistemic *sa*. The permissive and ability reading of *sa* do not rise.

(53) *A sa ló u gó pée báli.
3SG MOD love FU go play ball

(54) A sa ló u lési.
3SG MOD love FU read
'It might be that s/he reads habitually'.

To summarize, *ló u* can combine with *bi*, *musu*, epistemic *sa* and *ta*. Combinations with *o* and deontic/dynamic *sa* are judged ungrammatical by my consultants. This gives the following order:

(55) bi > musu > sa > ló u > ta

4.2.5. Kabá fu

The completive marker *kabá fu* can co-occur with the modals *musu*, *o* and *sa* and the past time reference marker *bi*. When they combine, *kabá fu* always follows these four core TMA markers. In my corpus, I do not have an example in which the completive marker combines with the imperfective marker *ta*. My corpus also lacks examples of the epistemic reading of *musu* when combined with *kabá fu*.

(56) Dí muyée-míi bi kabá u kóti déé físi.
DET woman child ANT finish FU cut DET.PL fish
'The girl had finished cleaning the fish'.

(57) Dí muyée miíi o kabá fu kóti déé físi bifó ú
DET woman child MOD finish FU cut DET.PL fish before 1PL
dóu a wósu.
arrive LOC house
'The girl will have cleaned the fish, before we arrive home'.

(58) a. Dí muyée sa kabá fu kóti dí alísi feen bifó
DET woman MOD finish FU cut DET rice FU.3SG before
yáa.
year
'The woman is able to harvest her rice before the new year'.
b. A sa kabá u seeká dee físi.
3SG MOD finish FU clean DET.PL fish
'She might have finished cleaning the fish'.

(59) Té u mi tooná kó i musu kabá u sikífi dí
when FU 1SG return come 2SG MOD finish FU write DET
sondí akí.
thing here
Teacher to student: 'When I come back, you must have finished writing this letter'.

To summarize, *kabá fu* can combine with *bi*, *musu*, *o* and *sa*. This gives the following order:

(60) bi > o/musu > sa > kabá fu

4.2.6. Bigí fu

The inceptive marker *bigí fu* co-occurs with all core TMA morphemes. The imperfective marker *ta* follows this construction, while the modals, *o*, *sa* and *musu* and the past time reference marker *bi* precede it. Unfortunately, my corpus lacks the combination of inceptive *bigí fu* and the epistemic reading of the modals *musu* and *sa*.

(61) Jan bi bigí fu lési dí búku éside bifó a gó
John ANT begin FU read DET book yesterday before 3SG go
a sikóo.
LOC school
'Jan had started to read the book yesterday before he went to school'.

(62) Jan bigí fu ta náki dí oto wán.
John begin FU IMP hit DET other one
'John starts hitting the other one'.

(63) Jan o bigí fu kóti dí alísi amanyá.
John MOD begin FU cut DET rice tomorrow
'John will start harvesting the rice tomorrow'.

(64) a. Dí muyée sa bigí u náki dí alísi.
DET woman MOD begin FU hit DET rice
Everything is set: 'The woman is able to begin to husk the rice'.
b. Senni sa bigí u nyá nyán.
Senni MOD begin FU eat food
'Senni is allowed to begin to eat rice'.

(65) A musu bigí u balí dí wósu.
3SG MOD begin FU sweep DET house
'S/he must begin to sweep the house (to be ready in time before her/his mother comes back)'.

To summarize, *bigí fu* can combine with all core TMA morphemes. This gives the following order:

(66) bi > o/musu > sa > bigí fu > ta

4.3. Summary

FU constructions can be grouped into a modality class, containing *músu fu*, *ábi fu*, and *sá u*, and an aspectual class, containing *ló u*, *kabá fu*, and *bigí fu*. In addition, when used in *FU* constructions, the lexical/auxiliary verb is obliged to take *fu*. Without *fu*, the aspectual or modality interpretation is lost, only their lexical/auxilary meaning surfaces. The ordering of the morphemes, as presented in Section 4.2, is the only possible order in Saamáka. Deviations from these orderings are ungrammatical. From this, we can conclude that the ordering of TMA markers in Saamáka is rigid. A *FU* construction cannot be placed on top of another *FU* construction, i.e. they cannot combine. A sentence with two *FU* constructions, as in (67a), is ungrammatical. *Fu* in the second construction is deleted to make the sentence grammatical (67b).

(67) a. *A sá u bigí u mbéi dí wósu.
3SG know FU begin FU make DET house
b. A sá u bigí mbéi dí wósu.
3SG know FU begin make DET house
'He knows how to start building the house'.

When *músu fu* is combined with another *FU* construction, the structure is judged to be grammatical. I will come back to this doubling effect in Section 5.2.

Before discussing the syntactic distribution of *FU* constructions with respect to core TMA markers in Saamáka, the surface ordering of core TMA

morphemes is given. The past time reference marker *bi* is always the first morpheme in the sequence when it co-occurs with other TMA morphemes. *Bi* places the event referred to at some point in time before the reference time. This reference time may be the utterance time, but this is not obligatory. The interpretation of *bi* scopes over the whole event, including the modality or aspectual feature expressed by other TMA morphemes present. Since the necessity modal *musu* and the future time reference marker *o* cannot co-occur with each other, I assume that they occupy the same syntactic position. A reason to assume this is that there is no semantic reason for these two morphemes not to co-occur.[8] Both *musu* and *o* follow the past time reference marker *bi*. *Musu* is interpreted either as an obligation morpheme or as an deductive epistemic morpheme. The morpheme *o* gives a future time reference reading of an event. The possibility modal morpheme *sa* follows the modal morphemes *musu* and *o* when they co-occur. *Sa* gives either a permissive or an ability reading. Only in combination with imperfective *ta* is the epistemic reading available. The imperfective morpheme *ta* is always the final morpheme in the sequence. It conveys a progressive or habitual reading of an event. The surface structure of core TMA morphemes in Saamáka is as follows:

$$\text{bi} \quad \begin{matrix} > \text{musu} \\ > \text{o} \end{matrix} \quad > \text{sa} \quad > \text{ta}$$

Now, I discuss the surface order of *FU* constructions and core TMA morphemes in Saamáka. The necessity construction *músu fu* behaves differently from the other constructions. It can precede other *FU* constructions. Second, as only *FU* construction it can precede the possibility modal morpheme *sa*. The other *FU* constructions follow *sa*. Furthermore, *músu fu* is the only *FU* construction which is not derived from a lexical verb, but an auxiliary, *musu*. Because *músu fu* behaves differently from the other *FU* constructions, I put the marker aside for now. I assume that in the surface structure it is in the same position as the modals *musu* and *o*.

The following generalizations can be made for other *FU* constructions based on the data presented in Section 4.2. All follow the past time reference marker *bi* and the necessity modal *musu*. In addition, if they can co-occur with the modals *o* and *sa*, modals precede *FU* constructions. Imperfective *ta*, if present, always follows *FU* constructions. Furthermore, a *FU* construction cannot co-occur with another *FU* construction. Since semantic restrictions for certain combinations are ruled out, I assume that all *FU* constructions appear in the same position in the surface structure. Going back to the surface structure of core TMA morphemes, *FU* construc-

[8]The future time reference marker *o* could be analyzed as an universal modal, like *musu*, in the sense of Kratzer (1991). As a result, semantic restrictions on their co-occurrence apply. However, a thorough study of *o* is necessary to characterize this morpheme.

tions are placed in between the modal *sa* and the imperfective marker *ta*. Moreover, I assume *fu* not to be in the same slot as the *FU* constructions, but in a position right after them. As a result, there will only be one *fu* present in the surface structure, instead of six different ones. The surface structure of TMA expressions in Saamáka is then as follows:

bi	> musu	> sa	> ló	> fu	> ta
	> o		> kabá		
	> músu		> bigí		
			> sá		
			> ábi		

5. Analysis

In Section 4.2, the attested surface ordering of core TMA morphemes and *FU* constructions was given. Building on Cinque (1999)[9] and Starke (2007), I propose a more fine-grained underlying order of functional heads in the IP domain in Saamáka. First, the *FU* constructions are divided into at least two different heads; an aspectual and a root modality head. *Ló* 'love', *kabá* 'finish' and *bigí* 'begin' are placed under the aspectual head. Inceptive and completive refer to a certain point/time span of the event; inceptive refers to the beginning and completive to the end. Based on their semantic characteristics, it is logical to place them under the same aspectual head. One could argue that habitual, *ló*, is located in a different position than inceptive and completive, because their characteristics are quite distinct and there are no semantic restrictions on the co-occurance of the habitual marker and the other two aspect markers. Thus, the habitual marker is placed above the inceptive and the completive marker in Saamáka. *Ábi* 'have' and *sá* 'know' are root modals. However, the former expresses deontic modality and the latter dynamic modality. Therefore, I assume that they occupy two different positions. The head containing *ábi* will precede the head containing *sá*. These modal heads will precede the aspectual heads containing *ló*, *kabá* and *bigí* in the structure.[10] The core modals are divided into two

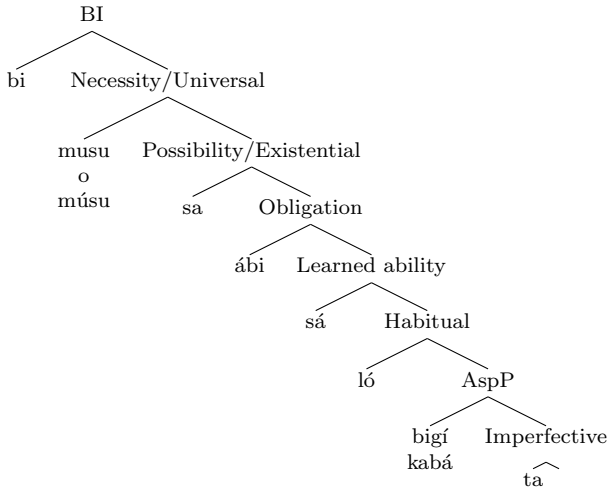
[9] The hierarchy of functional heads as given in (Cinque 1999:106):

(i) [Mood$_{speech\ act}$ [Mood$_{evaluative}$ [Mood$_{evidential}$ [Mod$_{epistemic}$ [T(Past) [T(Future) [Mood$_{irrealis}$ [Mod$_{necessity}$ [Mod$_{possibility}$ [Asp$_{habitual}$ [Asp$_{delayed}$ [Asp$_{predispositional}$ [Asp$_{repetetive(I)}$ [Asp$_{frequentive(I)}$ [Mod$_{volitional}$ [Asp$_{celerative(I)}$ [Asp$_{terminative}$ [Asp$_{continuative}$ [Asp$_{perfect(?)}$ [Asp$_{retrospective}$ [Asp$_{proximative}$ [Asp$_{durative}$ [Asp$_{generic/progressive}$ [Asp$_{prospective}$ [Asp$_{inceptive(I)}$ [Mod$_{obligation}$ [Mod$_{ability}$ [Asp$_{frustrative/success}$ [Mod$_{permission}$ [Asp$_{conative}$ [Asp$_{completive(I)}$ [Voice [Asp$_{celerative(II)}$ [Asp$_{inceptive(II)}$ [Asp$_{completive(II)}$ [Asp$_{repetetive(II)}$ [Asp$_{frequentive(II)}$]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]

[10] The suggested order of TMA heads is influenced by Cinque (1999) and the claims regarding the functional sequence made there.

groups, universal modals, *musu*, *o* and *músu*, and an existential modal, *sa*. The past time reference marker *bi* is placed on top of the modals. At the moment *fu* is left aside. I come back to its position in the syntactic structure later in this paper. The structure of the IP domain in Saamáka is given in (68).

(68)



As pointed out in Section 3, Cinque (2004) argues that restructuring verbs are functional verbs in a mono-clausal structure. Additionally, restructuring verbs form a complex verb in which a complement and a matrix verb are combined. Moreover, restructuring verbs occur, when they co-occur, in a very rigid order. Since restructuring verbs are functional verbs, they do not have arguments and thus do not assign θ roles. I suggested two possible options for the analysis of *FU* constructions in Saamáka; a restart approach or a continuous functional sequence approach. Having examined the data, I suggest some adaptations to the restart analysis. The embedding analysis suggests a restart under FU. From the rigid word order in Saamáka it follows that *fu* in the *FU* constructions can only embed something as small as an aspectual head containing imperfective *ta*. The continuous functional sequence approach does not need to be adapted.

In Saamáka, verbs that are used as complex predicates (*ábi*, *bigí*, *kabá*, *lóbi*, *músu*, and *sábi*) do not take DP arguments, unlike their lexical counterparts. Furthermore, Section 4.2 has shown that the ordering of TMA morphemes and *FU* constructions is very rigid. This is in favour of a mono-clausal approach. However, a bi-clausal approach has not been rejected yet. The following data show that imperfective *ta* can also precede the verb in *FU* constructions with the interpretation of habituality, as in (69) - (71).

(69) A ta bigí fu náki dí oto wán.
3SG IMP begin FU hit DET other one
'S/he regularly begins to hit the other one'.

(70) A ta sá u lesi.
3SG IMP know FU read
'S/he regularly learns how to read'.

(71) Dí wómi bi ta ábi fu woóko a dí bakáa
DET man ANT IMP have FU work LOC DET white person
wósu.
house
'The man was obliged to regularly work at/in the white person's house'.

The difference between *ta* in the above examples and *ta* discussed earlier (see e.g. (62)) is that it in the latter gives rise to a progressive interpretation while in the former it has a habitual interpretation.[11] Keeping in mind the rigid word order in Saamáka, a possible conclusion we can draw from these different interpretations is that *ta* has two positions in the structure. Doubling of *ta* is then expected. This is shown in (72).

(72) A ta bigí fu ta náki dí oto wán.
3SG IMP begin FU IMP hit DET other one
'S/he begins hitting the other one regularly'.

From this example, I conclude that imperfective *ta* has two positions in the structure, one above the *FU* constructions for its habitual interpretation and one below the *FU* construction for its progressive reading. Thus, there is no evidence for a restart after *FU* constructions in Saamáka. I argue that *FU* constructions in Saamáka are restructuring verbs, and therefore have a mono-clausal structure.

Another question raised in Section 3 concerned whether complementizer *fu* and restructuring *fu* are the same morpheme or two different morphemes. There is no evidence that complementizer *fu* and *fu* in *FU* constructions are different morphemes. They are in complementary distribution. As (73) and (74) show, the morphemes cannot co-occur. The *fu* in the *FU* construction is deleted.[12]

[11] Imperfective *ta* can also precede *ló u*. However, it cannot precede *músu fu*. This is another difference between *músu fu* and other *FU* constructions.

[12] The impossibility of having complementizer *fu* and *FU* constructions *fu* in one sentence is also pointed out by Damonte (2002). Aboh (2006), however, claims that these two morphemes can co-occur. Veenstra (2008) argues that Aboh has mis-analysed sentences containing two *fu*'s. In Aboh's examples, the two *fu*'s present are prepositional *fu* and complementizer *fu*. I agree with Veenstra analysis.

(73) a. *Dí mamá u dí wómi-míi akí á bi musu
DET mother of DET boy DEM 3SG.NEG ANT MOD
dá pasi fu a bi músu fu sa gó a
give permission FU 3SG ANT MOD FU MOD go LOC
di fesa.
DET party

b. Dí mamá u dí wómi-míi akí á bi musu
DET mother of DET boy DEM 3SG.NEG ANT MOD
dá pasi fu a bi musu sa gó a di
give permission FU 3SG ANT MOD MOD go LOC DET
fesa.
party
'The mother of this boy here should not have given permission for him to go to the party'.

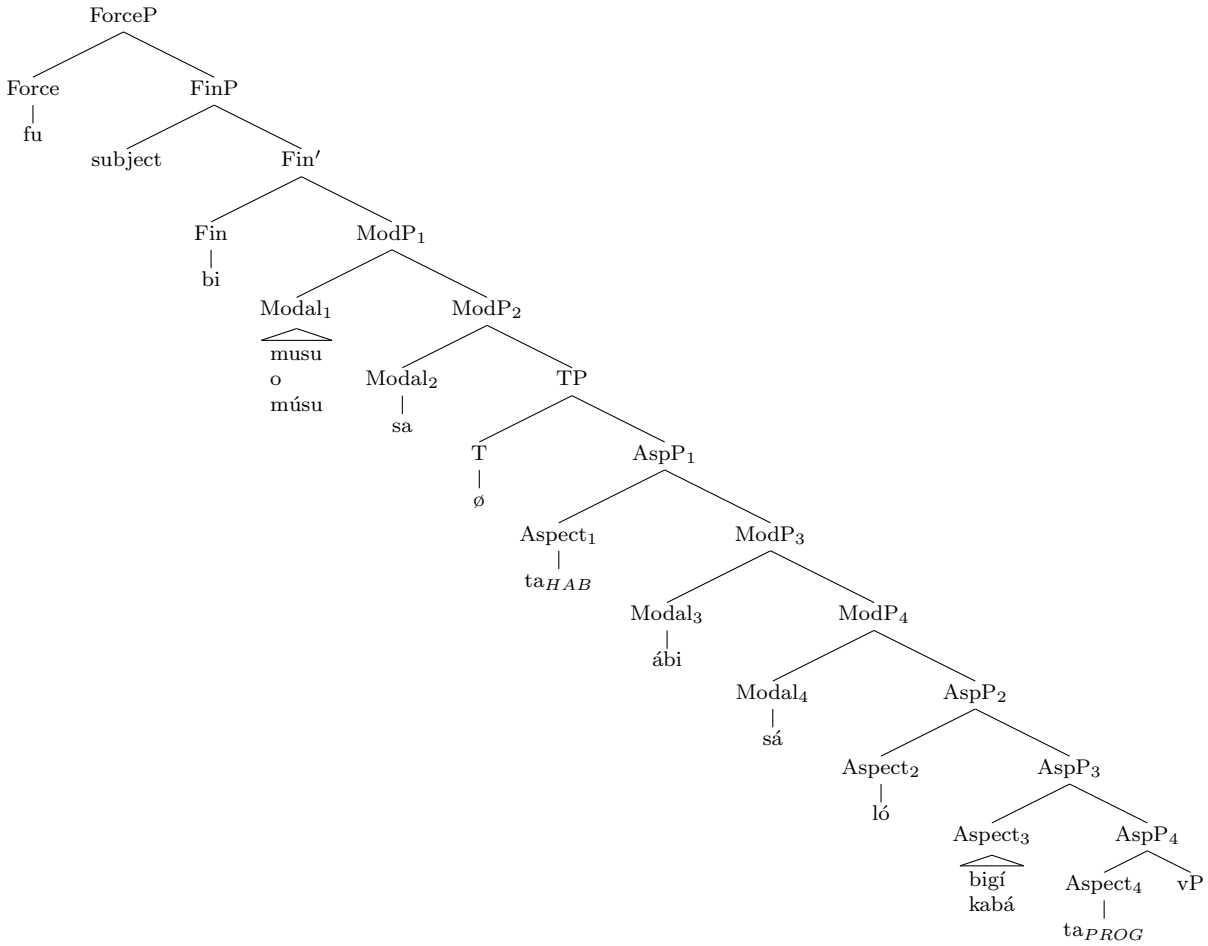
(74) a. *A bi dé fanóudu fu dí wómi bigí fu woóko
3SG ANT BE necessary FU DET man begin FU work
a dí wósu.
LOC DET house

b. A bi dé fanóudu fu dí wómi bigí woóko a
3SG ANT BE necessary FU DET man begin work LOC
dí wósu.
DET house
'It was necessary for the man to start working on the house'.

As a result, I argue that *fu* as a complementizer and *fu* in *FU* constructions are the same morpheme. As mentioned earlier, *fu* has an irrealis feature. Following Rizzi (1997), complementizers can be placed under Force. Aboh (2006) also places complementizer *fu* under Force. Thus, *fu* is base generated in ForceP. The difference in word order between complementizer *fu* and restructuring *fu* is due to movement. The tree structure of the CP and IP domain in Saamáka, regarding TMA expressions, is shown in (75).[13]

[13]I argue that the past time reference marker *bi* is an anchor point shifter, in the sense of Enç (1987). As a result, *bi* is situated in FinP. For a detailed argument for this position, I refer the reader to van de Vate (2007).

(75)



Summarizing, this paper has shown that *FU* constructions in Saamáka are composed of a lexical/auxilary verb and the morpheme *fu* to form a complex predicate. Saamáka has a rigid word order, both on a clausal level and in the TMA sequence. As a result, *FU* constructions have a fixed position in the structure. They follow all core TMA morphemes, except for progressive *ta* which follows the *FU* constructions. They are restructuring verbs and should be analyzed as having a mono-clausal structure. I also have demonstrated that complementizer *fu* and restructuring *fu* are the same morpheme. *Fu* is located under ForceP.[14] Cinque (1999, 2004) was

[14]Saamáka has two complementizers *fu* and *taa* 'that'. They can co-occur, as observed by Veenstra (1996) and confirmed by my consultants.

(i) I taki taa faa naki di dagu.
2SG say COMP FU.3SG hit DET dog

taken as a guideline regarding ideas about the functional hierarchy of heads and restructuring verbs. This paper adds to Cinque (2004) the discussion of a prepositional complementizer, *fu*, and its position in the underlying structure, which is, as shown, high in the CP domain.

In the final pages of this paper I will demonstrate how the analysis works with an actual example. Furthermore, I will come back to the doubling of *músu fu*, pointed out in Section 4.3.

5.1. The analysis at work: *A bi ábi fu ta kísi físi*

In (76), obligation construction *ábi fu* co-occurs with past time reference marker *bi* and progressive *ta*.

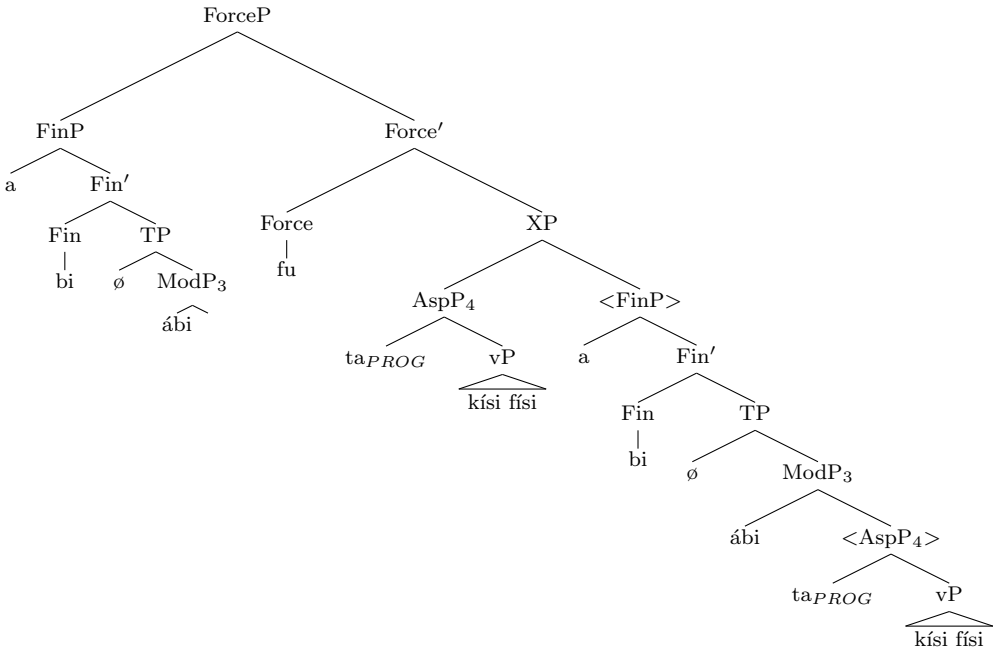
(76) A bi ábi fu ta kísi físi.
3SG ANT have FU IMP catch fish
'S/he was obliged to be catching fish (in order to eat)'.

In order for the surface structure to come out right, now that *fu* is located under ForceP, two movements have to take place. First, the complement of *ábi*, *ta kísi físi*, will have to move, leaving a remnant behind, *a bi ábi*. This remnant will, after movement, be placed in the specifier position of ForceP. The reasoning behind these movements is as follows: I argue that *ábi* carries a FOCUS feature which forces the complement selected to be backgrounded. As a result, the constituent of $\text{Mod}P_3$, $\text{Asp}P_4$, is moved to specXP. Now, we are left with a remnant under FinP. FinP has a [+IRR] feature. *Fu*, positioned under ForceP, has an unchecked strong [IRR] feature. Consequently, the constituent FinP is moved to specForceP. The structure of (76) is given in (77).

'You told him t hit the dog' (Veenstra 1996:156).

Because of this co-occurance, Damonte (2002) argues that *taa* is located in ForceP and *fu* in FinP. Since I have strong arguments in favor of the past time reference marker *bi* bing located in FinP, I disagree with Damonte's analysis. I would like to argue that to explain languages like Saamáka, in which two complementizers can co-occur, we need to expand the CP domain with an extra position for prepositional complementizers like *fu*. How this works exactly, I leave for future research.

(77)



It is the FOCUS feature of *ábi* that first triggers the backgrounding of the complement of *ábi* followed by the movement of the complement to XP. Resulting in a remnant movement of *a bi ábi*. These movements will not take place if complementizer *fu* is present in the clause, because there will not be an element carrying this FOCUS feature that the verbs in the *FU* constructions carry. Thus, there is no trigger for the movement story. Other focus constructions in Saamáka are triggered by the focus particle *we*. For detailed discussion of focus constructions in Saamáka, I refer to Smith (1996).

5.2. Future research: Doubling of *músu fu*

Doubling of *fu* appears in cases where *músu fu* is placed on top of another *FU* construction like *ló u*, *kabá fu* and *sá u*. This raises a problem for the movement story.

(78) A músu fu ló u hópo a ganían kandá.
3SG MOD FU love FU get up LOC chicken sing
'She must like to get up early in the morning' (cause s/he is always up with dawn).

I leave this problem for further research. Nevertheless, I would like to propose two possible solutions. Since I only have examples in which *músu*

fu co-occurs with another *FU* construction, it is possible that *músu fu* is grammaticalized. In addition, as pointed out in Section 4.2, *músu fu* behaves differently from the other *FU* constructions.

The second option is recursion of FORCE. In (78), the movement story is as before, taking *ló* as the morpheme which combines with *fu* and leaving *músu* as a 'normal' morpheme. After all movement has taken place, recursion of FORCE triggers the movement of *músu*. With the second option, the question arises why there is no recursion in case of complementizer *fu*.

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