

THE ARTICULATION OF INFLECTION IN JAMAICAN CREOLE¹

Stephanie DURRLEMAN

0. Introduction

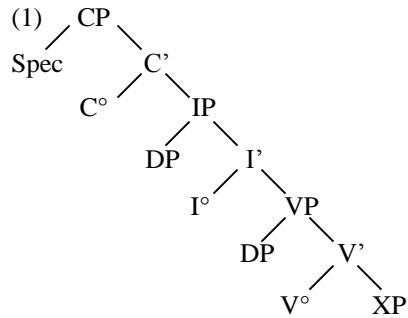
This paper explores the syntax of declarative clauses in Jamaican Creole (JC), focussing on the articulation of inflection in this language. The investigation situates itself within the Principles and Parameters framework, which upholds that the study of any natural human language reveals a complex linguistic system regulated by the Principles and Parameters of Universal Grammar (UG). Under this perspective, the examination of the architecture of the clause in JC is expected to show compatibility with the very elaborate functional clause-structure provided by UG (Pollock (1989), Belletti (1990), Cinque (1999)). This research verifies the validity of such a prediction. The work is organized as follows: section 1 presents the universal clause-structure in question, section 2 concentrates on the compatibility of the articulation of inflection in JC with this sophisticated clausal architecture, section 3 turns to theoretical issues raised by this comparison, section 4 highlights the evidence from JC for the framework provided by Cinque (1999), and section 5 concludes the discussion.

1. The Architecture of the Clause

1.1. The Split-Infl Hypothesis

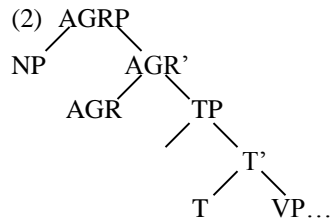
The structure in (1) illustrates a first application of X'-schema to both lexical and functional categories of sentential structure:

¹ This paper is a reduced version of Durrleman (1999). I thank Enoch Aboh, Guglielmo Cinque, Eric Haerberli, Liliane Haegeman, and Luigi Rizzi for their comments. Thanks are also due to Deborah DePass, Leah DePass and Evelyn Miller for their intuitions on the data considered.



Although this analysis is essentially on the right track, it has had to be modified into a more articulate structure on the basis of both conceptual and empirical shortcomings:

- (a) Conceptually, it is undesirable to associate a single X° with independent sets of features such as tense and agreement.
- (b) Empirically, the splitting of this projection is forced so as to accommodate word order variations such as those found between French and English²:



(Pollock (1989), Belletti (1990))

A recent development of clause structure has led to the postulation of additional functional projections to those in (2). Much of the evidence for this stems from a meticulous observation of the behaviour of adverbs as discussed in Cinque (1999), as well as that of bound and free functional heads expressing Tense, Modality and Aspect. The present paper situates itself within the framework provided by Cinque (1999). More specifically, it aims at testing its validity on new evidence of the third sort: i.e. free functional morphemes as found in the grammar of JC.

² C.f. Pollock (1989).

1.2. Cinque (1999)

1.2.1. A hierarchy of classes of adverbs

Adverbial hierarchy is established on the observation that certain adverbs (each representative of a class) necessarily precede others. For example, consider the data in (3) and (4) from French which examines the position of *déjà* in relation to *pas* and *plus*:

- (3) a. Si tu n'as *pas déjà* mangé, tu peux le prendre
 'If you have not already eaten, you can take it'
 b. *Si tu n'as *déjà pas* mangé, tu peux le prendre
 'If you have already not eaten, you can take it'
- (4) a. A l'époque, il ne possédait *déjà plus* rien
 'At the time, he did not possess already any longer anything'
 b. *A l'époque, il ne possédait *plus déjà* rien
 'At the time, he did not possess any longer already anything'

These examples yield the relative orders: *pas* > *déjà* and *déjà* > *plus*. Through transitivity, it is expected that *plus* be more structurally embedded than *pas*. At first sight, this may appear difficult to prove since the two cannot co-occur:

- (5) a. *Ils n'ont *pas plus* téléphoné
 They haven't not any longer telephoned
 b. *Ils n'ont *plus pas* téléphoné
 They haven't any longer not telephoned

Despite the impossible co-occurrence of *pas* and *plus*, evidence with respect to lexical infinitives (Pollock (1989)) upholds that, as expected from the data above, *pas* is higher than *plus* in the structure:

- (6) a. Ne dormir plus
 b. Ne plus dormir
- (7) a. *Ne dormir pas
 b. Ne pas dormir

The data above can be accounted for in terms of the syntactic analysis in (8):

- (8) [_ [pas _ [plus ... dormir]]]
 ↑ X ↑ ↑

This argumentation upholds both a hierarchical organisation of adverbs, the latter's status as XPs³, as well as the presence of intervening X° positions where, for example, a lexical verb [-fin] can occur.

The hierarchy of AdvPs proposed in Cinque (1999) on the basis of evidence from Romance (Italian and French), is shown to hold cross-linguistically: English, Norwegian, Bosnian/Serbo-croatian, Hebrew, Chinese, and Albanian, to name a few languages, reveal a striking consistency in the ordering of adverb classes. Indeed, despite the occasional surface variations of adverbial orders from one language to the next, it is illustrated in Cinque (1999) that, upon closer examination, these variations remain consistent with a single overall order. An example of apparent cross-linguistic variation in the ordering of adverbs may be found between English and Romance *always/sempr*e and *any longer / più*:

(9) John doesn't *always* win his games *any longer*

- (10) a. Gianni non vince *più sempre* le sue partite
G. [neg] win any longer always his games
b. *Gianni non vince sempre più le sue partite

However, "when both *always* and (*not..*) *any longer* appear before the verb, their order is just like that found in Italian (Romance)" (Cinque (1999, 33):

- (11) a. John doesn't *any longer always* win his games
b. *John doesn't *always any longer* win his games

The apparent subversion of the order of adverbs in (9) can therefore be analysed as XP movement of [*always win his games*] across *any longer* as shown in (12). Movement across *any longer* gives rise to a slight focus on this adverb:

(12) John doesn't [*always win his games*]_i *any longer* t_i

Through this type of meticulous consideration of the syntactic behaviour of adverbs, the single, universal order of AdvPs is identified:

- (13) Frankly > fortunately > allegedly > probably > once > then > perhaps > necessarily > possibly > willingly > inevitably > cleverly > usually > again > often > quickly > already > no longer > still > always > just > soon > briefly > characteristically > almost > completely > tutto > well > fast/early > completely > again > often

³ Note that if adverbs were X°s, they should block X° movement (e.g. of the infinitive) under Relativized Minimality (Rizzi 1990).

Independently of AdvPs, Cinque (1999) determines the order of clausal functional heads based on evidence from bound and free morphological inflection. Once again, he examines a wide variety of languages, and the overt relative orders evinced in these support his claim that, as found to obtain for AdvPs, functional heads are universally organised in a single overall order.

1.2.2. Bound functional morphemes

If a universal hierarchy of functional heads indeed exists, then head-initial languages such as English should reflect the mirror image to that observed in ‘head-final’ languages such as German:

- (14) English: These books *have been being* read all year
→ **Tense** > **Aspect**_{perfect} > **Aspect**_{progressive}
- (15) German: ...daß er von der Bank angestellt worden sein muss
... that he by the bank employed **been have must**
‘... that he must have been employed by the bank’
→ **Aspect**_{perfect} > **Tense** > Modal

The data above confirms that, as a consequence of the headedness parameter, German virtually duplicates the evidence from English for the order of functional heads.

1.2.3. Free functional morphemes

Free functional morphemes behave differently to bound functional morphemes in that they disallow the head immediately below them to adjoin onto them. Consequently, in instances of head-initial languages evincing particles, the latter “allow us to *directly* observe the order of functional heads. One such case is provided by creole languages” (Cinque 1999, 58).

Literature on Creoles has generally claimed that the ordering of functional particles is **Tense** - **Mood/modal** – **Aspect**, wherefore the reference to these as TMA markers. Cinque (1999, 59) underlines that “(t)hough in essence correct, this ordering is somewhat gross, and must be qualified. For one thing, various aspectual particles can co-occur, so that their relative order needs to be determined”. Cinque’s careful analysis of data from head-initial Guyanese Creole, Haitian Creole, and Sranan leads to a refinement of this claim. For example, Guyanese Creole provides evidence for co-occurring aspectual particles:

- (16) *Shi a aalweez/never de a sing* (Guyanese Creole; Gibson 1986, 852f)
She HAB always/never DUR PROG sing
‘She usually always/never keeps singing’

Therefore different positions for Asp head positions must be provided in the structure.

Secondly, Cinque (1999, 59) notes that “there are occasional claims in the literature for the order Modal > Tense rather than Tense > Modal”. Guyanese Creole once again gives insight for the postulation of various positions for modals:

- (17) *Jaan shuda bin kyaan get fu gu* (Guyanese Creole; Gibson 1986, 585)
 J. MOD_{epistemic} PAST MOD_r MOD_r COMP go
 ‘J. should not have been able to be allowed to go’

The data in (17) shows different positions for epistemic versus root modals (ability > permission) with respect to tense: indeed whereas the former precedes T°, the latter follows it. Therefore Cinque (1999) refines the traditional analysis of TMA markers so as to derive a more articulate structure with different positions for accommodating different modal types.

The more intricate structure of functional particles established on the basis of head-initial languages is further supported by evidence from ‘head-final’ languages which also make use of functional particles (e.g. Kachin of the Tibeto-Burman area, or Sanio-Hiowe of New Guinea): The latter in fact display their particles sentence finally, *in a mirror image order* to that which is established on the basis of direct evidence from ‘head-initial’ languages with particles.

Putting the attested relative orders together, Cinque (1999) arrives at the single overall order in (18):

- (18) Mood_{speech act} > Mood_{evaluative} > Mood_{evidential} > Mod_{epistemic} > T(Past) > T(Future)
 > Mood_{irrealis} Mod_{necessity} > Mod_{possibility} > Mod_{volition} > Mod_{obligation} > Mod_{ability/permission} > Asp_{habitual} > T(Anterior) > Asp_{perfect/imperfect} > Asp_{retrospective} > Asp_{durative}
 > Asp_{generic/progressive} > Asp_{prospective} > Asp_{Completive} > Voice > Asp_{celerative} > Asp_{completive} > Asp_{(semel)repetitive} > Asp_{iterative}

At this stage one can observe the two independently established hierarchies, namely that of AdvPs and that of functional heads, and see that they generally match semantically from left to right:

- (19) [*Frankly* Mood_{speech act} [*fortunately* Mood_{evaluative} [*allegedly* Mood_{evidential} [*probably* Mod_{epistemic} [*once* T(Past) [*then* T(Future) [*perhaps* Mood_{irrealis} [*necessarily* Mod_{necessity} [*possibly* Mod_{possibility} [*willingly* Mod_{volition} [*inevitably* Mod_{obligation} [*cleverly* Mod_{ability/permission} [*usually* Asp_{habitual} [*again* Asp_{repetitive(I)} [*often* Asp_{frequentative(I)} [*quickly* Asp_{celerative(I)} [*already* T(Anterior) [*no longer* Asp_{terminative} [*still* Asp_{continuative} [*always* Asp_{perfect(?)} [*just* Asp_{retrospective} [*soon* Asp_{proximative} [*briefly* Asp_{durative} [*characteristically* (?) [*?* Asp_{generic/progressive} [*almost* Asp_{prospec-}

tive [*completely* Asp_{completive(I)} [*tutto* Asp_{PICompletive} [*well* Voice [*fast/early* Asp_{celerative(II)} [*completely* Asp_{SgCompletive(II)} [*again* Asp_{repetitive(II)} [*often* Asp_{frequentative(II)} ...

Cinque (1999, 77) writes that “(i)n many cases a transparent specifier/head relation between a certain adverb class and the right-adjacent functional head is immediately recognizable”.

He concludes that the essential compatibility of individual languages attested with this comprehensive order cannot be accidental. Rather, it follows as a consequence of the fact that the structure in (19) above is a fixed order determined by UG. Therefore Cinque (1999) predicts that no human language should prove incompatible with the hierarchy expressed in (19) or refinements of it. JC is a new territory on which to test Cinque’s (1999) clause structure.

2. The articulation of Inflection in JC

Inflectional markers are the overt manifestation of clausal functional heads, and their corresponding adverbs are the overt realisation of the specifiers of their projections. The investigation undertaken in this paper verifies if a rigid order exists amongst the functional material of the clause in JC, as predicted by the framework, and if such a hierarchy is compatible with that established in Cinque (1999).

2.1. The preverbal markers

JC exhibits SVO surface order:

- (20) *Dem en/did⁴ nuo dat*
 S V O
 Them [+past] know that
 ‘They knew that’

Verbs are not conjugated via inflectional morphology in this language. In (20), an independent inflectional element, *en* (rural) or *did* (urban) depending on the variety of Creole, precedes the verb stem and gives rise to a past interpretation. These markers do not agree in tense or number with the subject:

- (21) *Mi/you/Im/Wi/Uno/Dem en/did nuo betta*
 I/you/S/he/We/You[+plural]/They [+past] know better
 ‘I/you/S/he/We/You[+plural]/They knew better’

⁴ *En* and *did* express past tense in rural and urban Creole respectively. Some of the data drawn from the literature on JC use *en*, so I familiarise the reader with this marker here. Although this marker is not unfamiliar to me, I will not always give it in my examples as I am not personally a user of it.

JC makes use of markers to express not only tense, but also mood and aspect (TMA). All of these markers, when used, must intervene between the subject and the invariant verb form, as seen for past tense markers in (20) and (21). An example of a modal is given in (22), and an aspectual marker in (23):

(22) *Im shuda nyam di bammy lang taim*
S/he [+modal] eat the bammy long time
'S/he should've eaten the bammy a long time ago'

(23) *Im a nyam di bammy*
S/he [+progressive] eat the bammy
'S/he is eating the bammy'

Long sequences of these middle-field inflectional markers seldom occur in JC, but nevertheless they can potentially be used combinatorily, and occasionally are, as long as they fall in a fixed order:

(24) a. *Jan shuda en a ron* Bailey (1966)
S/he [+modal] [+past] [+prog] run
'S/he should have been running'
b. **Jan shuda a en ron*
c. **Jan en shuda a ron*
d. **Jan en a shuda ron*
e. **Jan a shuda en ron*
f. **Jan a en shuda ron*

2.2. Modals

2.2.1. Mod(al) I

The examples in (24a-f) suggest that in JC the structural hierarchy of inflectional markers gives rise to certain modals, here *shuda*, dominating tense and aspect markers. An inventory of these initial modals is given in (25):

(25) *shuda, wuda, maita, mosa, kuda*

A particularity of modals belonging to this class is that they tend to all end in *a*

(26) *Im neva shuda tief di mango-dem*
S/he never [+modal] thief the mango-[plur]
'S/he never should've stolen the mangoes'

Modal-associated *a* is not a marker encoding past time (such as perfective *have* in the Standard), contrary to what the gloss for (26) may imply. Notice that stative verbs may follow these sequences and give rise to a present interpretation (27):

(27) *Betta Jan no tell im dat, caw im wuda tink seh im a di bess!*

Better John [neg] tell him that, 'cause him [+modal] think that him [equative] the best
'(It's) better that John doesn't tell him that, because he **would think** that he's the best!'

The past interpretation is therefore not *forced* by the presence of this modal-*a* element at all.

Modals from different sets can be combined in JC. The first set of modals in the hierarchy of modal markers is Mod(al)1. Modals of the same set cannot be combined amongst themselves:

- (28) a. **Im shuda wuda...*
b. **Im wuda shuda...*
c. **Im shuda maita...*
d. **Im maita shuda...*
e. **Im shuda mosa...*
f. **Im mosa shuda...*
g. **Im shuda kuda...*
h. **Im kuda shuda...* etc.

2.2.2. Mod(al)s 2 & 3

In the event that the combination of modals takes place (29a, 30a), this combination must respect a certain ordering constraint, otherwise the result is ungrammatical (29b-d, 30b-d):

- (29) a. *Im shooda muss kyan get tru* Adams (1995)
'He must surely be able to succeed'
b. **Im muss shooda kyan get tru*
c. **Im kyan muss shooda get tru*
d. **Im muss kyan shooda get tru*
e. **Im shuda kyan muss get tru*
- (30) a. *dat-de biebi wuda mos hafi priti* Bailey (1966)
'That baby would have to be pretty'
b. **Dat-de biebi mos wuda hafi priti*
c. **Dat-de biebi hafi mos wuda priti*
d. **Dat-de biebi mos hafi wuda priti*
e. **Dat-de biebi wuda hafi mos priti*

As a result the first set of modals, Mod1, whose members always end in *a*, can be opposed to *mos*, *hafi* and *kyan* which occur deeper in the structure. *Mos* can in turn be opposed to *hafi* and *kyan* in that the former precedes the latter.

On the basis of these observations, the positions of modals in the structure of JC seem to fall in the fixed order given in (31)⁵:

(31) [_{Mod1} kuda/wuda/shuda/mosa/maita] > [_{Mod2} mos] > [_{Mod3} hafi, kyan] ...

As already attested for Mod1, modals belonging to the same set compete for the same position and consequently cannot be combined amongst each other:

- (32) a. **Im kyan hafi*...
b. **Im hafi kyan*...

2.3. Tense

2.3.1. Past Tense

In the sequence of inflectional markers in JC, just after the modals ending in *a* comes the past tense marker *en* in basilectal varieties, *did* in mesolectal ones:

- (33) Im **wooda en** say (Adams 1995) Im **wooda did** say
S/he would have [+past] say S/he wouldhave [+past] say
'S/he would have said' 'S/he would have said'

This tense marker is optional in sentences such as those given in (33): even in the event that *en* and *did* were done away with, the interpretation yielded could still correspond to the conditional past:

- (34) *Im wooda say*
'S/he would have said'

This is because null tense specification is the default mechanism for expressing past with non-stative verbs in JC:

- (35) Im say dat saim ting deh
S/he say that same thing there
'S/he said that very thing'

⁵ It is not immediately obvious why sequences such as ...**kuda kyan*..., and ...**mosa mos*...are banned, as the mutual exclusion of these elements can neither be accounted for in terms of competition for the same position, nor in terms of semantics alone. Notice that in French, a similar constraint on modals exists: **pouvait pouvoir*, **devrait devoir*.

Wi and *a+(g)o* behave differently with respect to *en/did*. The former, though not the latter, is in complementary distribution with the past tense markers. Indeed, the sense of imminence given by the Asp markers *a+(g)o* may very well serve in the description of some past event:

(41) a. **Im en/did wi nyam dat*

b. **Im wi en/did nyam dat*

(42) *Im en/did a (g)o nyam dat aaff, bot mi stap im*

‘S/he was going to eat it all up, but I stopped her/him’

Given the complementary distribution between *wi* and *en/did*, *wi* is analysed here as a T marker expressing the opposite value (future) to *en/did* (past). The mutual exclusion of these elements could then be accounted for in terms of their targeting the same T head. This analysis does not extend to *a(g)o* in light of the compatibility of *a(g)o* with *en/did*. *A(g)o* is therefore considered an aspectual marker of futurity.

2.4. Modals and T

2.4.1. Mod1 and T

We have already observed in example (33) repeated here as (43) that mood (Mod1) must precede tense.

(43) <i>Im wooda en say</i>	(Adams 1995)	<i>Im wooda did say</i>
S/he would+have [+past] say		S/he would+have [+past] say
‘S/he would have said’		‘S/he would have said’

We can see now that the various tense markers must in turn precede aspectual ones:

- (44) a. *Im did a (g)o nyam...*
 b. **Im a did/en (g)o nyam...*
 c. **Im (g)o did/en a nyam...*
 d. **Im a (g)o did/en nyam...*
 e. **Im (g)o a did/en nyam...*

Examples (44a-e) confirm that tense must precede aspect. (45) gives the order established so far:

(45) **Mod1 > T > Asp**

2.4.2. Mod 2 & 3 and T

Mods 2 and 3, unlike Mod1, cannot precede a tense particle. Instead, Mods 2 and 3 must follow *did/wi*:

- (46) **Im did shooda laugh*
 (47) *Im did hafi laugh*
 ‘She had to laugh’
 (48) (*Mi feel seh wen di taim come*) *im wi kyan dwiit*
 ‘(I feel that when the time comes) s/he will be able to do it’
 (49) *Im wi mos hafi tek dat*⁷
 ‘S/he will be obliged to take that’

This means that Mod 2 and 3 are to be situated lower down in the structure than T. In the event that they behave like other lexical verbs, one could situate them under V. However this is unlikely: note that unlike lexical verbs, they cannot be situated below aspect because of the ungrammaticality of the following sequences:

- (50) *(*Wen di taim come*,) *im a (o) hafi laugh* vs. *Im wi hafi laugh*
 (51) *(*Wen di taim come*,) *maybe im a (o) kyan dwiit* vs. *Maybe im wi kyan dwiit*

The ordering of TMA markers thus seems to be as follows:

- (52) [_{Mod1} *wuda/shuda/mosa/maita*] > [_T *en/did/wi*] > [_{Mod2} *mos*] > [_{Mod3} *hafi, kyan*] > [_{Asp1} *a* [_{Asp2} (g)o] [_{V...}]

Therefore tense intervenes between epistemic and root modals. Recall that Guyanese Creole exhibits a similar phenomenon:

- (53) *Jaan shuda bin kyaan get fu gu* (Gibson 1986, 585)
 J. MOD_{epistemic} PAST MOD_r MOD_r go
 ‘J. should not have been able to be allowed to go’.

Cinque (1999) highlights that the distributional variation between different modal types in relation to T is linked to their correspondingly different interpretational values: Epistemic (pre-T° modals) are analysed as being “concerned with the speaker’s deductions or opinions” versus root modals (post-T° markers) which, “in contrast to epistemic (...) are strictly subject oriented”.

In JC, an epistemic and a root version of the same modal exist⁸: *mosa* and *mos*. The semantic contrasts between these two offers new ground where one can test this epistemic/root distinction:

⁷ See also Bailey (1966, 44) for more examples.

⁸ *Kuda* has alethic particularities which render it difficult to strike a clear contrast with *kyan*. C.f. Cinque (1999, 78,79 & 198n3).

(54) *Jan mosa did hafi tell dem*

‘John most probably/more than likely had to tell them’ / ‘*John was obliged to tell them’

(55) *Jan did mos hafi tell dem*

‘John was obliged to tell them’ / ⁹ % John probably had to tell them’

Whereas the preferred interpretation for *mos* yields the notion of necessary obligation with respect to the subject *Jan*, this is not accessible to *mosa*, which does not emphasise *Jan*’s obligation, but rather invokes the speaker’s opinion with respect to *Jan*’s plausible obligation.

Another clear difference between the two has to do with their use in questions: *mosa* though not *mos*, gives rise to a distinct awkwardness in a question:

(56) ??*Jan mosa did hafi tell dem?*

(57) *Jan did mos hafi tell dem?*

Jackendoff (1972, 103) writes that “(i)f epistemic modals are treated like speaker-oriented adverbs by the semantic component, this restriction will follow automatically”.

The above observations give evidence for the structure below:

(58) **Mod epistemic (Mod 1) > T > Mod root obligation (Mod 2) > Mod root ability/permission (Mod 3)**

2.5. *Asp markers*

This section turns to aspectual markers in JC. Markers of aspect in this language, and seemingly in all languages, form the group of inflectional particles located closest to the VP (see Bybee (1983)).

2.5.1. *Progressive Aspect*

This marker *a* precedes the [-stative] verb so as to give the action or event evoked by this verb an ‘on-going’ interpretation:

(59) *Jan a nyam i*’

John [+prog] eat it

‘John is eating it’

⁹ It would be inaccurate to conclude that *mos* cannot give rise to an interpretation where the speaker’s opinion is involved. This ambiguous nature is also attested with *dwe* for some speakers of Haitian Creole (see Leblanc (1989, 51)).

The fact that prospective *go* must be used in combination with the progressive (even though in rapid speech the latter may become somewhat shortened) can be seen by the fact that a minimal pair can be formed between preverbal *go* used without the progressive and one used with the progressive:

- (65) (*Afta wa im seh...*) *yu go picki'up?* Vs. *y(u)agopicki'up?*
(After what s/he say) you go pick it up you [+prog] [+prosp] pick it up
'(After what s/he said)you **went and picked it up?** /you're **going to pick it up?**

2.5.3. Retrospective Aspect

In this work, the marker *jus* designating 'immediate past' is referred to along the lines of Cinque (1999) as retrospective aspect

- (66) *Im did jus a go dwi'*
S/he [past] [retrospective] [progressive] [prospective] do it
'S/he was just about to do it'

2.5.4. Completive Aspect and Anterior

The inflectional particle *done* may precede the VP as do other aspect markers of JC, but it also has the particularity of occasionally occurring in a post-VP configuration. This was already noticed by Cassidy (1961) who gives the following description for *done*:

"The participle *done* enters into a peculiar adverbial idiom. Placed after verbs it shows completion of the action. (...) 'Me feed him *dun* dis long time' (...) *done* loses verbal force and becomes a modifier of the other verb."

In the event that *done* occurs in a pre-VP configuration with [-stative] verbs, it can yield two different interpretations. A sentence such as that in (67) is therefore ambiguous, giving rise to the interpretations in (67a) and (67b):

- (67) *Im done nyam i'*
S/he done eat it
a. 'S/he already ate it'
b. 'S/he finished eating it'

The additional interpretation in (67a) is erased in a post-VP configuration, so the ambiguity observed for (67) no longer obtains in (68) where *done* follows the VP it modifies:

- (68) *Im nyam i' done*
S/he eat it done
a. '*S/he already ate it'
b. 'She finished eating it (up)'

I take this to suggest the presence of two different *done* markers in JC, one corresponding to the meaning [+completion] as given by the verb ‘to finish’ in English, and the other corresponding to the meaning [+anterior], as given by the adverb ‘already’ in English.

These two *done* markers behave differently syntactically: Assuming that VP-movement¹⁰ takes place to the Spec of the completive marker *done* when the latter appears in a post-VP configuration, according to the data in (68) movement of the VP projected by a [-stative] verb to the Spec of Anterior *done* is not accessible to VP-movement. In other words, if one were to translate the sentence in (69) into JC, one could not say (69a), only (69b):

- (69) S/he already ate it
a. **im nyam i' done*
b. *im done nyam i'*

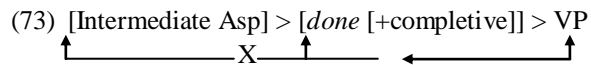
A possible hypothesis to account for the fact that a VP cannot move to the Spec of [+anterior] *done*, is that the VP in JC cannot move as high as the [+anterior] projection. Movement of the VP in JC is limited as examples (70-2) illustrate: a VP cannot be found in the specifier of projections for retrospective aspect *jus* (70a, b), progressive aspect *a* (71a, b), or prospective aspect *go* (72a, b):

- (70) a. *Im jus nyam i'*
S/he just eat it
'S/he just ate it'
b. **Im nyam i' jus*
- (71) a. *Im a nyam i'*
S/he [+prog] eat it
'S/he is eating it'
b. **Im nyam i' a*
- (72) a. *Im a (g)o nyam i'*
S/he [+prog] [+prosp] eat it
'S/he is going to eat it'
b. **Im a nyam i'(g)o*

If movement of [-stative] VPs in JC cannot go as high as the specifiers of aspectual particles such as *jus*, *a* and *(g)o*, yet the specifier of the particle *done*

¹⁰ I assume leftward movement of a VP to be possible, in line with Cinque (1999, 190n26) who also makes use of this device to derive sentence final *don* for Guyanese Creole. I return to the discussion of VP movement in section 3.

[+completive] may host the [-stative] VP in JC, then it can be reasonably hypothesised that the projection of *done* [+completive] be situated quite low in the structure: lower than the aspectual markers considered here. If this were not the case, then movement to the specifier of completive aspect would be excluded since it would violate Relativized Minimality through having to skip intermediate specifier positions. This predicts a structure along the lines of (73):



Indeed, this is confirmed by the examples in (74, 75) which overtly illustrate the distribution of this particle [+completive] as used in JC in relation to other inflectional markers:

- (74) *Wentaim mi reach, im did jus done nyam i'*
 When I reach, s/he [+past] [+retrospective] [+completive] eat it
 'When I arrived, s/he'd just finished eating it'

- (75) *Mine! Im a go done¹¹ nyam di whole a i'!*
 Mind! S/he [+prog] [+prosp] [+completive] eat the whole of it
 'Careful! S/he is going to finish eating all of it!'

Where *done* follows the lowest of the other overtly expressed aspectual heads in JC:

- (76) Asp [+retrospective] > Asp [+prog] > Asp [+prosp] > **Asp [+completive]**

As expected, this occurrence of *done*, i.e. deeply embedded structurally, cannot correspond to an interpretation meaning [+anterior], but is reserved only for an interpretation implying that the action expressed is completed. It follows that [+completive] aspect is as hypothesised, situated low down in the clausal hierarchy: lower than the other aspectual heads already considered, and lower than T [+anterior].

Given the observations above, JC gives evidence for two different types of inflectional particles *done*: one [+anterior], the other [+completive]. Completive may occur either in a pre- or post-VP configuration, and is only compatible with [-stative] verbs, Anterior can only occur in a pre-VP configuration, and may occur with both [+stative] and [-stative] verbs.

Done when used in combination with [+stative] verbs in a pre-VP configuration, unlike that observed with respect to [-stative] verbs, does not give rise to ambiguity

¹¹ Note that while *done* [completive] may potentially occur with prospective *a (g)o*, it does not occur easily with progressive *a* alone : ? ? *im a done nyam i'*.

in JC. Consider example (77) with the verb *nuo*, and the fact that the interpretation in (77a) can be derived, whereas the one in (77b) cannot:

(77) *Im done nuo seh mi like im*

- a. ‘S/he already knows that I like her/him’
- b. ‘*S/he finished knowing that I like her/him’

This amounts to saying that the only marker *done* which can occur with [+stative] verbs is the one which gives rise to the meaning [+anterior], as expressed by the adverb ‘already’ in English. Lamiroy (1987, 284)¹² accounts for this by suggesting that: “since all the phases in a state are identical (...) (states) lack an internal dynamic structure. Aspect, however, crucially deals with the internal structure of situations. Therefore states and the expression of aspect are naturally incompatible”. It follows then that stative verbs may be specified for T [anterior] *done*, but not for Asp [completive] *done*.

The hypothesis that there exist two different *done* markers in the clause structure makes a prediction as to the potential syntactic distribution of the projections of [+stative] verbs with respect to the particle *done*: If *done* [+anterior] cannot host VPs in its Spec for it is too far away, and only this *done* can occur with [+stative] verbs, then [+stative] VPs should never be able to occur in a pre-*done* configuration, as the latter configuration is derived by movement to the specifier of *done* [+completive] only. This prediction is borne out as the contrast between (78a) and (78b) illustrates:

- (78) a. *Im done nuo dat*
S/he done know that
‘S/he already knows that’
- b. **Im [[nuo dat]_i done] t_i*
S/he know that done

Done [+anterior] does not easily combine with other markers in JC, so although we have reason to believe it is relatively high in the hierarchy of markers, it would be difficult, maybe impossible, to locate its exact position in the structure if we did not have recourse to its corresponding adverb *aredi*, an overt manifestation of its specifier position along the lines of Cinque(1999, 94): *Aredi*, like *done*[anterior], has as “its core meaning (...) one of temporal priority (...), in fact, one of precedence with respect to a reference time. (...) This makes it plausible to locate it in the specifier position of the lowest TP (TP anterior)”.

¹² In Da Cruz (1995, 368).

Although *aredi* is, more often than not, placed at the end of a sentence (79a-c)¹³, it can occasionally be inserted amongst certain of the other markers, as examples (79e-g) illustrate:

- (79) a. *Im mosa gi 'im di gassip aredi*
 'S/he must have given her/him the gossip already'
- b. *Im did nuo dat aredi*
 'S/he knew that already'
- c. *Im a gwaan bad aredi*
 'S/he is behaving badly already'
- d. *Im (*aredi) mosa (aredi) gi 'im di gassip*
 S/he (*already) must [epistemic] (already) give her/him the gossip
 'S/he must have already given her/him the gossip'
- e. *Im (*aredi) did (aredi) nuo dat*
 S/he (*already) did (already) know that
 'S/he already knew that'
- f. *Im (aredi) a (*aredi) gwaan bad*
 S/he (already) [prog] (*already) go+on bad
 'S/he's already behaving badly'

The data in (79d-f) gives evidence for the structure in (80):

- (80) Mod (epistemic) T (past/future) > **aredi (anterior)** > **Asp prog**

Given the respective distributions of *done* [+completive] (76 repeated as 81) and *aredi* [+anterior] with respect to Asp [+prog] (80), the projection corresponding to [+anterior] is by transitivity higher in the structure than the one corresponding to [+completive] (82):

- (81) Asp [+retrospective] > **Asp [+prog]** > Asp [+prosp] > **Asp [+completive]**

- (82) **T [anterior]** > **Asp [+prog]** > Asp [+completive]

2.5.5. Continuitive and Frequentative Aspects

Cinque (1999) situates the adverb 'still' in the specifier position of the continuative aspect projection. In JC, the position of this adverb indeed coincides with the Asp [continuative] projection in his structure: i.e. JC *still* can be shown to follow the root modal [ability/permission] *kyan*, and therefore all markers dominating this mo-

¹³ Sentence final *aredi* may possibly be derived through XP movement past this adverb, along the lines of (Cinque (1999). I return to this hypothesis in Section 4.3.

dal, and it can also be shown to precede those markers dominated by continuative aspect in Cinque's structure¹⁴

(83) *Jan wuda/did/mos/kyan > still > a/go chat*

John [Mod1] / T / [Mod2] [Mod3] > **still** > **Asp [prog] Asp [prosp]** talk

Cinque (1999, 207n51) observes that "(c)ontinuative aspect is found expressed by particles, (...) or (apparently, more often) by reduplication of the verb stem"

In JC, reduplication of the verb stem is also a productive process:

(84) *Yu nuh nuo im? A di same wan weh **chat-chat** wi business?*

You [neg] know her/him? [equative] the same one which chat [V reduplicated] we business

'Don't you know her/him? S/he's the very one who's **incessantly** spreading our personal affairs'

Whether or not reduplication of the verb in JC directly corresponds to continuative aspect, however, is not so clear-cut: Bailey (1966, 16) takes repetition of a verb to "refer to **repetitive** or **habitual** action", while giving the examples *taak-taak*, and *biit-biit* which she translates as "talk **continuously**" and "whip **constantly**" respectively¹⁵. It seems therefore that what is stressed by the reduplication of a verb is not specifically the continuity of the action expressed, but rather more generally the frequency at which this action takes place. If reduplication were an expression of frequency in JC, then the fact that stative verbs do not reduplicate would follow: these verbs cannot be qualified frequentatively either.

Recall that the adverb 'still' and its analogues in different languages is taken by the framework here adopted, to be the overt realisation of the specifier position of the projection of continuative aspect. Notice in the example below that *still* can be separated from the reduplicated verb by the progressive particle:

(85) *im still **a** chat-chat di people-dem business bout di place*

S/he still [prog] Verb-Verb the people [+plur] business around the place

'She's still incessantly spreading those people's private affairs all over town'

¹⁴ *Still* is not compatible neither with retrospective aspect *jus*, nor with anterior or completive aspects *done*. Indeed if *jus* occurs with *still*, *jus* cannot mean 'a short while ago', but rather is automatically interpreted to mean 'nevertheless': *im still jus do wa im waan fi do*: 's/he kept on nevertheless doing what s/he wanted to do' vs. '*s/he kept on a short while ago doing what s/he wanted to do'. Anterior *done*, as well as its specifier *aredi*, are in complementary distribution with *still*: **im done still nyam*; **im aredi still nyam*. Similarly, completive *done* shows incompatibility with *still*: **im still done nyam*.

¹⁵ Bold letters are mine.

If *still* sits in the Specifier of AspContinuativeP, and *a* is the overt realisation of Prog°, then the preverbal copy cannot sit in AspContinuative°.

A possible analysis to account for the verbal reduplication in JC is one which situates the preverbal copy in AspFrequentative°, i.e. the lowest functional head of the clausal system. This would explain why it can even follow *done*, the marker of completive aspect:

(86) *Im nuh done chat chat di people-dem business all now?*

S/he [neg] [completive] [frequentative] chat-chat the people [plur] business even now?

‘S/he hasn’t yet finished incessantly spreading those persons’ private affairs?’

The interpretation and distribution of aspectual heads in JC considered here and, where possible, their corresponding specifiers, is compatible with the hierarchy in (87):

(87) **Anterior¹⁶ < Asp Continuative < Asp retrospective < Asp progressive < Asp prospective < Asp complete < Asp frequentative**

2.6. Overall order for TMA markers in JC

(88) **Mod epistemic (Mod 1) > T > Mod root obligation (Mod 2) > Mod root ability/permission (Mod 3) > Anterior < Asp Continuative < Asp retrospective < Asp progressive < Asp prospective < Asp complete < Asp frequentative**

3. Theoretical issues

This section returns to the case of the marker *done* in JC (section 2.5.4). The aim is to examine the validity of an IP-internal-movement analysis for sentence final material, as compared to a Serial Verb Construction (SVC) approach for Completive and distinct sentence-medial and sentence-final for AnteriorP.

3.1.1. Completive Aspect in JC and Fongbè: an SVC approach

It has been pointed out that the marker encoding Asp [completive] behaves differently syntactically with respect to the other markers in JC: *done* [completive] has the distributional particularity of optionally following the VP over which it takes scope¹⁷:

¹⁶ Note, however, that the incompatibility of Anterior with AspContinuative and AspRetrospective makes it difficult to determine the precise hierarchy between these projections in JC.

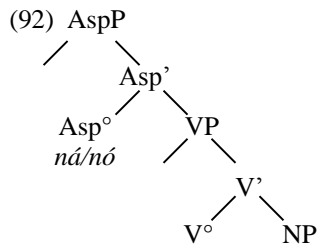
- (89) *Uno jus nyam di bammi done*^{18?}
 Subj [retrospective] VP **[completive]**
 ‘You all have just finished eating the bammy?’

Analogous patterns related to the completive marker are found cross-linguistically. Da Cruz (1995) observes that: Fongbè places completive markers *fó* and *vò* in a VP-final configuration:

- (90) *Kòkú wà àzo ó fó*
 Kòkú do work DET **finish**
 ‘Kòkú finished doing the work’

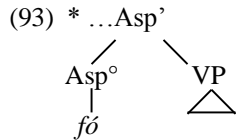
- (91) *Kòkú kló katake le vò*
 Kòkú wash high stool PL **finish**
 ‘Kòkú finished washing the high stools’

Da Cruz (1995, 364) defines *fó/vò* as aspectual verbs, and distinguishes them from aspectual morphemes of Fòn as the word order of sentences containing the former is different to that of sentences containing the latter: “The word order (...) distinguishes the verbs *fó* and *vò* from the aspectual morphemes of Fòn” (da Cruz 1995, 364). Whereas irrealis *ná*, and habitual *nó* precede the VP over which they take scope, *fó* and *vò* follow it. Consequently, da Cruz (1995) quotes Avolonto’s (1992) structure for aspect markers *ná* and *nó* as given in (92), and considers this an impossible underlying structure for *fó* and *vò* (93):



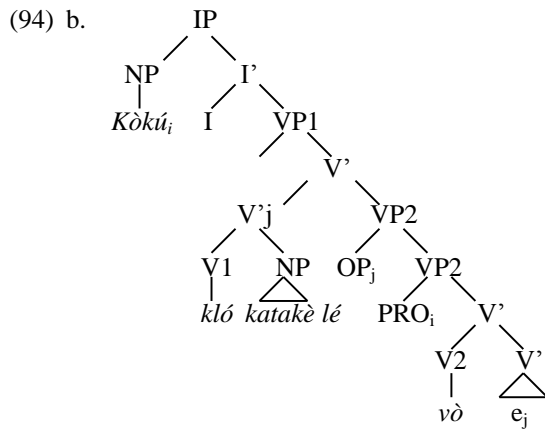
¹⁷ It is worth noting that this option is less exploited by the younger generations than pre-verbal *done*.

¹⁸ Whether or not there are restrictions on the type of VP which can precede *done* is a topic for future research.



To account for the particularities of *fó/vò* sentences, da Cruz argues that they are serial verb constructions involving obligatory control. Therefore under his approach, a sentence such as (91), repeated as (94a), is assigned the structure (94b) below:

- (94) a. *Kòkú kló katake le vò*
 Kòkú wash high stool PL **finish**
 ‘Kòkú finished washing the high stools’



Da Cruz (1995, 374) explains his approach as follows: “In order to express the fact that *fó* and *vò* semantically select an event, I propose that (...) the complement of *fó, vò* is an empty verbal projection (minimally a *V'*). I argue that the empty category which occupies this position is a variable bound by a null operator (*Op*) which is adjoined to the VP headed by *fó, vò*. The first VP and *Op* have the same reference. *Op* and the variable form a chain ; thus, by co-indexation, there could be transfer to the chain of the semantic properties of VP1.” He argues (p.377) that “The analysis of sentences with aspectual verbs *fó* and *vò* as obligatory control constructions has many advantages. The structure in (98b) accounts for the S-structure word order in Fongbè, and offers a mechanism for understanding the selectional restrictions on the verbs which combine with *fó* and *vò*. As a matter of fact, indicating that the subject

of the construction finished realizing the event expressed by the preceding VP, *fó* and *vò* can only combine with verbs which are compatible with this property”.

Da Cruz (1995) bases his analysis of sentences containing *fó* and *vò* as serial verb constructions on the observation that they have four characteristics of serial verb constructions as listed under (95) through (98) below. In both *fó/vò* sentences and serial verb constructions:

- (95) “there is only one lexical subject and more than one verb”
- (96) “there is only one expression of time and aspect”
- (97) one can see that they “only contain one expression of negation”
- (98) and, “just as there are semantic restrictions on serial verb constructions (...) there are semantic restrictions in the context of the aspectual use of *fó* and *vò*”

On the other hand, da Cruz (1995, 370) recognises that “there is not object sharing with aspectual verbs *fó* and *vò*” although it has been argued in Baker (1989) that “the Projection Principle predicts that object sharing is not only possible in serial verb constructions, but obligatory”. Da Cruz then takes *fó/vò* constructions to be evidence for the conclusion that argument sharing is not a necessity in serial verb constructions¹⁹.

I do not adopt the analysis of da Cruz (1995) in this paper, and instead tentatively propose an analysis along the lines of Cinque (1999) which involves movement²⁰. The VP-movement analysis is seen to account for the ungrammaticality of *fó/vò* constructions as discussed in da Cruz (1995) independently of a consideration of such sentences as serial verb constructions involving obligatory control. The fact that *fó/vò* sentences do not involve argument sharing follows from this approach: The lack of argument sharing would then not in itself constitute an argument for abandoning Baker’s (1989) hypothesis that serial verb constructions obligatorily involve argument sharing, but rather could be a consequence of the fact that *fó/vò* sentences are not serial verb constructions.

¹⁹ The fact that I do not treat *fó/vò* (Fongbè) and *done* (JC) constructions as serial verb constructions is inspired by the approach in Cinque (1999). The IP-internal VP-movement hypothesis applied here has implications for a serial verb approach. These implications deserve careful examination which is beyond the scope of this work.

²⁰ In this paper, I follow Kayne (1994), Cinque (1999) in assuming a head-initial X’-schema. Notice that an alternative approach which would allow for head-final structure would imply that the constructions here considered could be derived independently of movement.

3.1.2. *Completive Aspect in JC and Fongbè: VP-movement*

The observation in (95) that *fó/vò*, like serial verb constructions, involve “only one lexical subject and more than one verb” is used by da Cruz (1995) to account for the ungrammaticality of the (99):

- (99) **Kòkú wà àzo ó Kòkú fó*
 Kòkú do work DET Kòkú finish
 ‘Kòkú finished doing the work’

However, the fact that there is “only one lexical subject and more than one verb” is a characteristic of any sentence containing a lexical verb augmented with an aspectual marker, once this marker is simply labelled as an aspectual ‘verb’, which I take to be the case of *fó* in (99). Consider, for example, the contrast between the data in (100a) and (100b, c):

- (100) a. *Jan a go nyam di bammi*
 J. [aspectual verb 1 (progressive)] [aspectual verb 2 (prospective)] VP
 b. **Jan a go Jiemz nyam di bammi*
 c. **Jan a Jiemz go nyam di bammi*

The contrast in (100) stems from the fact that aspect markers are functional material and consequently do not project an argument structure. To insert an additional external argument into a sentence with only one lexical verb would mean that this argument would be without a theta role and therefore entail a violation of the Theta Criterion.

The second parallelism drawn by da Cruz (1995) between serial verb constructions and sentences containing *fó/vò*, is that “there is only one expression of time and aspect” in both. He illustrates the relevance of this hypothesis by means of the contrast between (101a) and (101b):

- (101) a. *Asíba ná sá sèn dó hòn ó fó*
 Asíba IRR pass on paint put door DET finish
 ‘Asíba will finish painting the door’
 b. **Asíba ná sá sèn dó hòn ó ná fó*
 Asíba IRR pass on paint put door DET IRR finish

However, if (101b) were not treated as a serial verb construction but rather as a run-of-the-mill sentence with multiple asp markers, it would be ruled out anyway since this sentence makes use the same marker twice: In (101b), the marker encoding irrealis is repeated within one single sentence. Notice that a double use of an aspectual marker in one sentence such as that encoding progressive from JC below also yields ungrammaticality (102b, c):

- (102) a. *Im a go nyam I'*
S/he [prog] [prosp] eat it
'S/he is going to eat it'
b. **Im a go a nyam I'*
c. **Im a a go nyam I'*

The third parallelism between serial verb constructions and *fó/vò* sentences has to do with the two “constructions only contain(ing) one expression of negation”. The ungrammaticality of (103) is assumed to stem from the fact that it is a serial verb construction:

- (103) **Asíba má sá sèn dó hòn ó má fó*
Asiba NEG pass on paint put door DET NEG finish

However, once again, the ungrammaticality of (103) could also be linked to another factor: Multiple negation can give rise to ungrammaticality in almost any sentence involving an asp marker if this marker as well as the VP it modifies are both negated (104b):

- (104) a. *Jan nuh jus pain di door deh?*
John neg [retrosp] paint the door there
'Isn't it just a while ago that John painted that door?'
b. **Jan nuh jus nuh pain di door deh?*
John NEG just NEG paint that door there

Finally, da Cruz (1995, 366) remarks that “just as there are semantic restrictions on serial verb constructions in Fongbè in general (...), there are semantic restrictions in the context of the aspectual use of *fó* and *vò*”. He takes the ungrammaticality of (105) to be a consequence of its being a serial verb construction which violates a semantic selectional restriction:

- (105) **Kòkú mò Báyi fó*
Kòkú see Báyi finish
'Kòkú finished seeing Báyi'

Notice, however, that not only lexical verbs, but also markers of aspect commonly show semantic restrictions on the VP they select: recall, for example, that the progressive aspect marker cannot combine with a [+stative] VP:

- (106) **Jan a nuo dat*
John [prog] know that

Therefore the semantic restriction on selection typical of *fó/vò* sentences does not necessarily lead to the conclusion that *fo/vo* are verbs in serial verb constructions.

Indeed *fó/vò* are likely to be aspect markers with selectional restrictions like those already observed with other aspectual markers.

In conclusion, I do not believe that the characteristics sketched in da Cruz (1995) imply necessarily that *fó/vò* sentences involve serial verb constructions with obligatory control. Moreover, I believe this analysis has undesirable theoretical shortcomings:

Serial verb constructions are typically constructions involving a sequence of verbs which share logical arguments. To illustrate this with an example from JC, consider the data in (107):

- (107) (Yu nuo wa dat ginal do?) Im tek mi ackee²¹ (go) sell a maakit!
(You know what that ginal do?) Him take me ackee (go) sell at market
'(Do you know what that trickster did?) S/he actually (went and) sold my ackee
at the market!'

Both *tek* and *sell* are transitive verbs. The object *mi ackee* is 'shared' by the verbs *tek* and *sell*: i.e. what is both 'taken' and 'sold' is 'my ackee'. Indeed according to the Projection Principle, this sharing of an object is considered by Baker (1989) to be obligatory in serial verb constructions. Da Cruz (1995) illustrates that *fó/vò* constructions do not involve object sharing:

- (108) *Ajòtó lé xò kǎnlìn lé fò*
Thief PL hit animal PL finish
'The thieves finished hitting the animals'

Da Cruz (1995) explains that the data from Fongbè in (108) above "mean(s) that the action of hitting (...) is finished. (...) The interpretation of (this) sentence() does not imply that (...) the animals are "finished"." This reading extends to *done* in JC as the example (109) taken from Bailey (1966, 42) nicely illustrates:

- (109) *Jiemz no riid di buk don yet*
Jamed [neg] read the book [completive] yet
'James has not finished reading the book yet'

It is indeed the act of reading the book, and not the book itself, which is qualified by the marker *done*. The data above illustrates therefore that object sharing is a characteristic of serial verb constructions which is not typical of *fó/vò* and *done* sentences. This suggests, according to the hypothesis in Baker (1989), that *fó/vò* and *done* sentences are not serial verb constructions.

²¹ Ackee is a fruit used to prepare Jamaica's national dish: ackee and saltfish.

Notice that the analysis proposed in da Cruz (1995) for *fó/vò* sentences is unable to capture similarities between *fó* and *vò* and markers of completive aspect in other languages such as English which do not at first sight exploit (serial verb) constructions with obligatory control. One such similarity is noted by da Cruz (1995, 372) himself: “(*fó*) and *vò* present the same selectional restrictions as the aspectual verb ‘finish’. They only combine with accomplishment verbs or with activity verbs which are interpreted as quasi-accomplishments”. The choice of a different syntactic apparatus for *fó/vò* on the one hand, and ‘finish’ or ‘finir’ on the other is based on the observation that “contrary to what is observed in English and French (...) the verbs *fó* and *vò* appear after the VP complement (da Cruz 1995, 369).” Postulating an entirely new analysis for constructions which share many points in common apart from surface word order is intuitively unattractive. What would be preferable is an approach which would reflect the underlying cross-linguistic parallelism between linguistic elements such as those considered here, while allowing for a derivation which could be responsible for their Surface-Structure difference.

On a language specific level, this analysis also fails to reflect underlying similarities between heads encoding aspect in Fongbè. It is shown in da Cruz (1995) that other aspectual morphemes of Fòn occur in a pre-VP configuration. Example (110) taken from da Cruz (1995) illustrates that markers encoding irrealis or habitual aspect select a VP complement which must surface to their right:

- (110) *Kòkú ná/ nó wà àzo*
Kòkú IRR HAB do work
‘Kòkú will work / usually works’

To postulate that markers encoding irrealis and habitual aspect select a phonetically realised VP complement, whereas what appears to be the marker encoding completive aspect selects a control construction strikes an undesirable inconsistency in the underlying grammar of Fongbè: the obligatory control construction postulated by da Cruz (1995) would be a structural particularity of the complement of the element encoding completive aspect as opposed to those encoding irrealis and habitual. It would be favourable to account for the respective Surface-Structure differences between the markers of this language with an analysis which retains an underlying similarity between them.

It is also noteworthy that when *fó* and *vò* function as lexical verbs they must select a nominal complement which surfaces to their right (111a, b) just as JC *done* does (112):

- (111) a. Fongbé: *Kòkú fò àzo ó*
Kòkú finish work DET
'Kòkú finished the work'
b. *Kòkú vò mólìnkún ò*
Kòkú finish rice DET
'Kòkú finished the (plate of) rice'

- (112) JC: *Im done di bammi*
S/he finish the bammy
'S/he finished the bammy'

If other aspectual verbs in Fongbè generate their verbal complement to their right (110) without recourse to control, and lexical verbs in this language also generate their nominal complements to their right (111), then the underlying structural tendency is for a X° , lexical or functional, to generate its complement to its right. It is therefore plausible that the VP which precedes *fò* and *vò* is its complement which has simply been generated to the right and has undergone leftward movement. Da Cruz (1995) himself touches upon this possible analysis: 'In Fongbè, the NP complement of the verbs *fò/vò* is always on the right (...). If the VP (...) is generated in the same position, we would then have to explain the word order at S-structure by a movement of this VP (...). Thus, one could suppose that there is movement to the left of the VP complement.' Indeed this is what I argue to be the case.

The VP-movement hypothesis is rejected by da Cruz (1995) for Fongbè for two main reasons: One reason is that "(i)t is impossible to have S-structure sentences like those in (113a, b) in which a VP with a phonological content is on the right of *fò* and *vò*."

- (113) a. **Kòkú fò wà àzo ó*
Kòkú finish do work DET
'Kòkú finished doing the work.'
b. **Kòkú vò kló katake le*
Kòkú finish wash high stool DET
'Kòkú finished washing the high stools.'"

Another reason he gives for rejecting a VP-movement hypothesis is that "this hypothesis is difficult to defend, given that there is no independent motivation for such a movement of VP in Fongbè" (da Cruz 1995, 373). I believe that these reasons can be countered on the basis of the following observations:

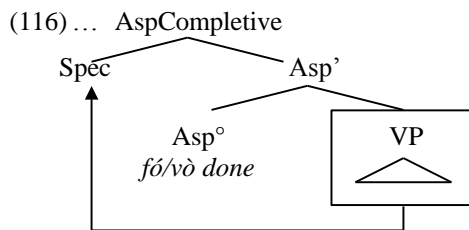
Firstly, other languages influenced by such African languages as Gbe, namely creoles, do allow S-structure sentences where the completive marker may surface to

the left of a phonetically realised VP complement. This can be seen in data from JC (114) and Guyanese Creole (GC) (115, taken from Edwards 1991):

(114) JC *Jan done nyam i'?*
 Subj [completive] V O
 'John finished eating it?'

(115) GC *Somtaim wen you don wok yu go an bai a drink*
 Subj [completive] V
 'Sometimes when you are finished working you go and buy a drink.'

The fact that Gbe languages constitute part of the substratum of JC, and that JC allows the completive marker to optionally precede its VP complement reinforces the idea that when the VP surfaces to the left of completive markers *fó/vò* in Fongbè or *done* in JC, it has in fact originated in a post-VP configuration and undergone leftward movement:

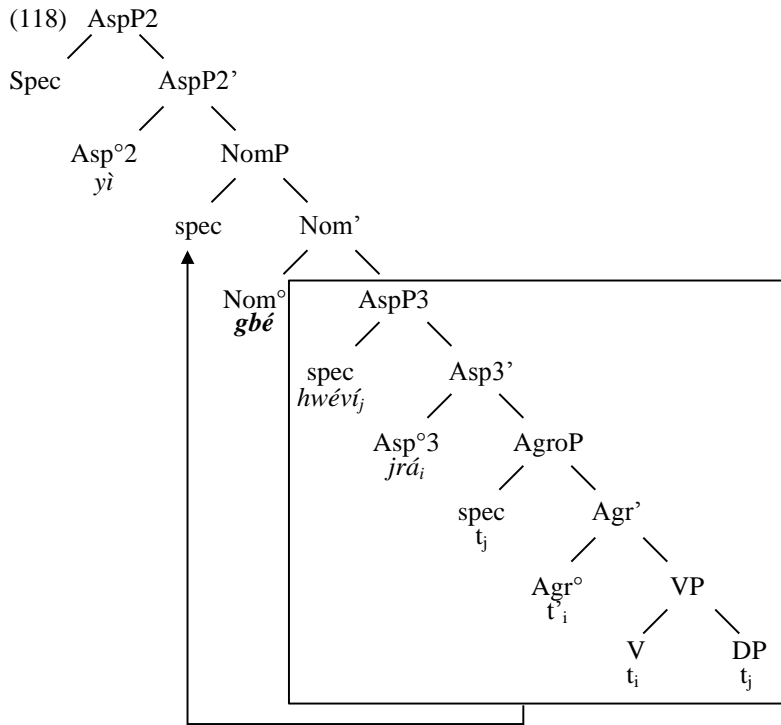


Secondly, observe that this type of movement is plausibly exploited by Fongbè since another Kwa language of the Gbe group, namely Gungbe, exploits such movement of the VP and extended projections of VP. This is illustrated for purpose-clauses, and imperfective/prospective constructions in Aboh (1998). It is therefore not implausible that this analysis be extended to Fongbè.

One instance of the application of leftward movement of an extended projection of V in Gungbe is applied by Aboh (1998) to 'purpose'-clauses in Gungbe known as *gbé*-constructions (117):

(117) *Hwé-énenu Asíba nò yì hwéví jrá gbé*
 At that time Asiba Hab go fish sell **Purpose**
 'At that time Asiba habitually went out to sell fish'

The analysis given to account for the structure of the purpose-clause in (117) is (118):



Under the approach in Aboh (1998), aspect verbs like *yì* ‘go’ select a syntactic unit NomP whose head may be realised by the purpose-marker *gbé*. The internal argument of this marker is a reduced clause: the aspectual projection AspP3. This entire aspectual projection must move to the specifier position of the projection to the immediate left of the small clause: [Spec,NomP] for nominalization purposes. This analysis is shown in Aboh (1998) to capture not only the syntactic particularities of purpose-clauses, but also those of imperfective/prospective clauses.

Imperfective/prospective sentences in Gungbe always end in a low tone: ̀. This can be explained under the analysis that the imperfective marker *tò*, is situated under AspP2 in a structure like that given in (118). *Tò* is then logically in complementary distribution with aspectual verbs such as *yì*. Imperfective *tò* selects a NomP which is headed by a Nom° realised as ̀. When AspP3 moves to [Spec,NomP] for nominali-

zation purposes in imperfective constructions, a logical consequence of this movement is that a low tone ` always floats at the end of the sentence²²:

(119) ... tò [_{Spec} NomP [_{AspP3} nà O V]_i [_{Nom°`}] t_i
 imperf prosp O V

Therefore, if movement of extended projections of VP arguably takes place in languages of the Gbe group, it is not implausible that VP movement occur in Fongbè, and ultimately in JC. Moreover, the scope properties of completive constructions follow from a VP-movement analysis: the marker encoding completive aspect c-commands the trace of its VP complement.

No additional structure is needed to account for the scope properties of completive constructions under the analysis adopted here: That the completive marker takes scope over the VP which precedes it is a natural consequence of the movement hypothesis since according to the structure in (116), the marker encoding completive aspect c-commands the trace of its VP complement.

Recall that the ungrammaticality of sentences (99), (101b), (103) and (105) was argued by da Cruz (1995) to stem from these sentences being serial verb constructions. Recall also that postulating this analogy is not the only option available. Notice now that the ungrammaticality of (99), (101b), (103) and (105) repeated here as (120), (121), (122) and (123) follow from the structural analysis in (114): Structure (114) leaves no space for an element to intervene between the VP in [Spec,CompletiveAspP] and *fó/vò* in CompletiveAsp°, which gives a syntactic account for (120) through (123):

**Kòkú* [_{Spec AspCompletive} wà àzo ó] [? *Kòkú*] [_{AspCompletive°} *fó*]
 Kòkú do work DET Kòkú finish
 ‘Kòkú finished doing the work’

**Asíba ná* [_{Spec AspCompletive} *sá sèn dó hòn ó*] [? *ná*] [_{AspCompletive°} *fó*]
 Asíba IRR pass on paint put door DET IRR finish

**Asíba má* [_{Spec AspCompletive} *sá sèn dó hòn ó*] [? *má*] [_{AspCompletive°} *fó*]
 Asíba NEG pass on paint put door det NEG finish

The ungrammaticality of sentence (105) repeated as (123) follows from feature incompatibility: the VP *mò Báyi*: “see Báyi” does not bear the feature [+completive] and therefore cannot occupy the specifier position of the Completive Projection:

²² I refer the reader to Aboh (1998) for details.

**Kòkú* [_{Spec}CompletiveAsp [*mò Báyi* [-completive]] [_{CompletiveAsp°} *fó*]²³

Kòkú see *Báyi* finish

‘*Kòkú* finished seeing *Báyi*’

The very motivation for movement of a VP to [Spec, CompletiveAspP] is explainable in terms of the presence of the completive aspect marker in CompletiveAsp° endowing this projection with a [+completive] feature. This feature is strong in Fongbè since the specifier of the CompletiveAsp projection in this language must be morphologically realised at S-structure. The [+completive] feature is less strong in JC, so that the filling of [Spec,CompletiveAsp] may optionally occur at the level of Logical Form.

In short, leftward movement of the VP to [Spec,CompletiveAspP] has the theoretical advantage of accounting for the particularities of completive aspect constructions, while retaining an underlying structural consistency between markers of aspect both cross-linguistically, as well as within the internal grammars of languages such as Fongbè and JC.

3.1.3. Problem for the VP-movement analysis

The analysis proposed here still faces the problem of accounting for the optionality of VP-movement to [Spec,CompletiveAspP] in JC. However, this would be a problem for the alternative analysis in da Cruz (1995) also: indeed if the surface order were to be the determining factor in the development of a syntactic apparatus for linguistic elements, then one would have to postulate completely different underlying structures for pre- and post-verbal completive *done*, although the two are semantically equivalent.

The fact that younger speakers of JC use VP-final *done* more rarely than preverbal *done*, and more rarely than the older generations, may be an important point for the IP-internal VP-movement hypothesis: Possibly, the originally strong [+completive] feature emerging from substratum influence has entered into competition with a weak [+completive] feature resulting from superstratum influence. The optionality attested between pre- and post-verbal *done* in JC would be the result of the availability of both of these options of the completive feature. What seems to be happening at present is that the use of the strong option of the feature has become less common than the weak one. More specifically, the weak [+completive] feature is now more predominant than the strong one in the grammar of JC, implying that VP movement to [Spec,CompletiveAspP] is no longer forced at Surface-Structure. This analysis makes the prediction, therefore, that in future generations, VP-

²³ Recall that preverbal *done* cannot occur with a [stative] VP either: *Im done see mi*: S/he has already seen me; **S/he has finished seeing me*.

movement to [Spec,CompletiveAspP] may eventually cease to exist, as the weak option of the completive feature takes over entirely. Indeed this is already the case in JC varieties which oscillate between the mesolect and the acrolect.

3.2.1. Multiple base generation of Anterior tense

The fact that the adverb *aredi* can occur in a sentence medial as well as a sentence final position can be accounted for in two ways: either it is directly generated in these two positions, or movement has taken place past it. This section briefly sketches these two analyses and argues that the movement hypothesis is the more favourable of the two.

If *aredi* is the specifier of a functional projection as argued in Cinque (1999), then to generate it in two different positions implies that its corresponding functional projection can be generated in two different positions. However, as Cinque (1999, 22) notes: “it would make little sense to generate functional projections twice, once to the left, and once to the right of the verb (and its complements) (...) (T)he same rigid order of the AdvPs in post-complement position would have to be enforced through a specific principle duplicating the ordering principle for the functional heads in the pre-VP “space””. The uneconomical factor of an analysis generating *aredi* in two different positions renders this approach conceptually unsatisfactory.

On an empirical level, this approach would fall short in accounting for the fact that the two independently generated adverbs cannot occur simultaneously:

**Im aredi nyam di whole a i' aredi*

S/he already eat the whole of it already

‘S/he already ate the whole of it already’

Indeed where adverbs are generated in two different positions this is indicated by the fact that their simultaneous presence does not render the sentence unacceptable:

John **twice** knocked on the door **twice**

(Cinque 1999, 27)

3.2.2. Movement of (extensions of) VP across Anterior

The fact that adverbs like ‘already’ and its analogues in other languages can occur either sentence-medially or sentence-finally without yielding any perceptible change in interpretation seems best captured by the analysis whereby movement of the VP or of its extensions can occur across this adverb. This type of movement is demonstrated in Cinque (1999, 22) for Italian:

(125) a. *A Natale, credo che avesse completamente perso la testa di GIA*

‘At Christmas, I think he had completely lost his mind already’

b. *A Natale, credo che avesse di già [completamente perso la testa]*



Cinque (1999, 22) explains that “(u)nder this alternative, we can account for the ‘scope under reconstruction’ property typical of movement (whereby *completamente* is under the scope of *di già* to its right), and at the same time derive the apparent subversion of the relative order of the AdvPs, otherwise unexpected in a non wh-type movement because of the ensuing Relativized Minimality violation. Given that the AdvP *di già* is crossed over not by the AdvP *completamente* directly, but by a larger phrase containing *completamente*, no Relativized Minimality violation takes place.”

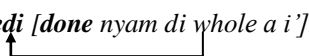
Notice that the relative order between *aredi* [anterior] and *done* [completive] was established as illustrated in (126):

T [anterior] > Asp [+completive]

This accounts for the grammaticality of (127a) and the ungrammaticality of (127b)

- a. *Im aredi done nyam di whole a i'*
 S/he [anterior] [completive] eat the whole of it
 ‘S/he already finished eating it all’
- b. **Im done aredi nyam di whole a i'*

Notice that although this fixed order cannot be subverted when both *aredi* and *done* precede the verb and its complements, it can be once *aredi* occurs in a post-VP configuration, as expected under the movement hypothesis illustrated in (128):

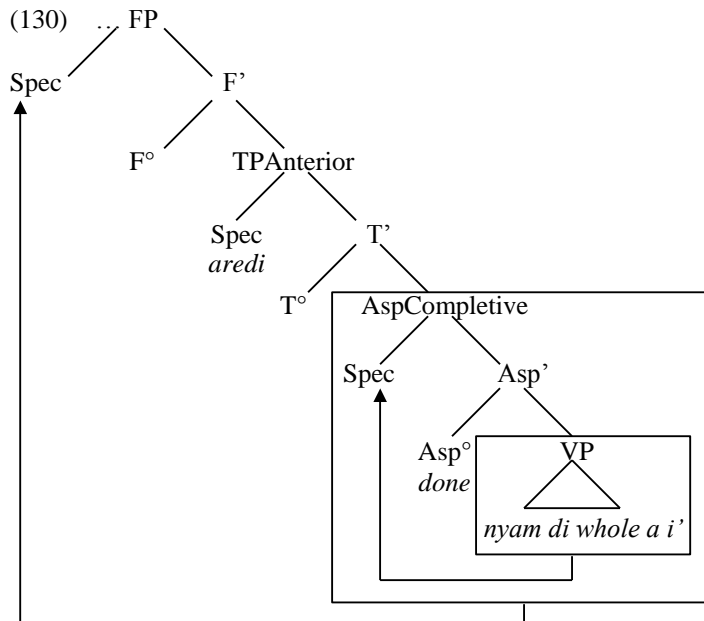
- a. *Im aredi [done nyam di whole a i']*

- b. *Im [done nyam di whole a i']_i aredi t_i*
 S/he [completive] eat the whole of it already
 ‘S/he finished eating it all already’

Now consider the data in (129) which at first sight presents counter-evidence for Cinque (1999) where it is argued that functional projections respect the same fixed order in both pre- and post-VP configurations respectively: in (129) both *done* and *aredi* follow the VP yet the order established between the two in a pre-VP configuration (127) is subverted:

- Im nyam di whole a i done aredi*
 S/he eat the whole of it [completive] [anterior]
 ‘S/he finished eating it all already’

Under the VP-movement hypothesis established for completive *done*, however, this can be accounted for: in (129) movement has occurred in two steps: firstly, the

VP has moved to [Spec, Completive], then the entire AspPCompletive has moved on to the specifier of a functional projection preceding TPAnterior²⁴:



Notice also that the successive movement illustrated in (130) accurately accounts for the scope facts of this sentence: Firstly the VP is interpreted as being in the scope of completive aspect although it is situated on its right at S-structure: what is *completed* is the act of eating something. Since *done* is generated in CompletiveAsp°, it c-commands the trace of the VP so that its taking scope over this VP is to be expected. Secondly, the entire CompletiveAspP is in the scope of [Spec,TPAnterior] realised by *aredi*, although this projection also surfaces to the right of [Spec,TPAnterior]: what has *already* taken place is the completion of the act of eating something.

²⁴ Notice that VP-movement past AspCompletive° could also potentially take place to the specifier of a functional projection FP situated to the left of AspCompletiveP. However if movement of the complement of CompletiveAsp° is triggered by the need to check a strong completive feature, then it is most plausible that this movement takes place to [Spec,AspCompletiveP] where the completive feature is located. Movement to the specifier of a FP such as that located to the left of Anterior Tense, which gives rise to a particular focus on the adverb crossed, could then be reserved for the purpose of focussing clause internal adverbs.

Again, since *aredi* c-commands the trace of CompletiveAspP, then it follows that the scope properties evoked here are derived under reconstruction.

4. Overt functional structure of JC: evidence for the framework in Cinque (1999)

Cinque's (1999) structure given in (19) is repeated in (131) with bold letters applied to the evidence drawn from JC:

- (131) [*Frankly* Mood_{speech act} [*fortunately* Mood_{evaluative} [*allegedly* Mood_{evidential} [*probably* **Mod_{epistemic}**: *shuda, wuda, maita, mosa, kuda* [*once* **T(Past):did** [*then* **T(Future):wi** [*perhaps* Mood_{irrealis} [*necessarily* **Mod_{necessity}**: *mos* [*possibly* Mod_{possibility} [*willingly* Mod_{volition} [*inevitably* **Mod_{obligation}**: *haffi* [*cleverly* **Mod_{ability/permission}**: *kyan* [*usually* Asp_{habitual} [*again* Asp_{repetitive(I)} [*often* Asp_{frequentative(I)} [*quickly* Asp_{celerative(I)} [*aredi* **T(Anterior) done1** [*no longer* Asp_{terminative} [*still* Asp_{continuative} [*always* Asp_{perfect(?)} [*jus* **Asp_{retrospective}** [*soon* Asp_{proximative} [*briefly* Asp_{durative} [*characteristically* (?) [*? Asp_{generic/progressive}*: **a** [*almost Asp_{prospective}*: **go** [*completely Asp_{completive(I)}*: **done2** [*tutto* Asp_{PICompletive} [*well* Voice [*fast/early* Asp_{celerative(II)} [*completely* Asp_{SgCompletive(II)} [*again* Asp_{repetitive(II)} [*often* Asp_{frequentative(II)}: **reduplicated verb** ...

JC fits harmoniously into Cinque's (1999) structure: (131) illustrates that one does not contradict the other. It must be noted, however, that this language does not at first sight provide direct evidence for separating T past from T future²⁵, nor for separating Mod obligation from Mod ability/permission. If each of the members of these pairs of markers in JC were to be inserted under different heads such as that implied by (131), then their mutual exclusion could not be explained in terms of competition for the same position. In light of (131), therefore, the impossible co-occurrence of *did/wi* and *haffi/kyan* in JC remains to be explained. Markedness theory may, once developed, provide a means for accounting for these facts.

²⁵ It is not entirely clear that the data given in (Cinque 1999) from Guyanese Creole can really be taken as evidence for the structure T past > T future either: *Jaan bin gu riid*: J. PAST FUT read 'J. would have read' (Cinque 1999, 59, taken from Gibson 1985, 585). Indeed *gu* here looks like JC *go*, the Asp [prosp] marker. Consider that *wuda* and [past] + [prosp] may be found to yield a similar interpretation in JC also: *Jan did go riid/ Jan wuda riid ... bot mi stap 'im*: 'John was going to read/ would have read ... but I stopped him'.

5. Conclusion

This paper has concentrated on exploring the clausal structure of a basilectal variety of JC. In such varieties, there is an absence of morphological verbal inflection. Inflection is articulated by means of independent inflectional particles, or TMA markers. Manifestations of TMA markers, like that of morphological inflection and adverbs, may serve the generative linguist as a key source of evidence in identifying clausal functional projections (Pollock (1989), Belletti (1990), Cinque (1999)).

A recent framework (Cinque (1999)) postulates a good 30 functional projections in the clausal domain. The data from JC discussed in this work give direct overt evidence for over a third of these projections. Future research of the notion of markedness may prove insightful in determining if the functional structure here attested for JC is entirely present in all clauses of the language through marked or default values. Pursuing this line of reasoning, it becomes conceivable that JC exploit the entire array of functional structure postulated by the framework (Cinque 1999). If this rich functional structure is ultimately proven present in every clause through default values, the articulation of inflection in this language, and all languages, would prove to be much richer than that which is overtly manifested.

The framework here adopted (Cinque (1999)) is highly restrictive in that the numerous functional projections postulated are argued to universally respect a rigidly fixed order. The overt evidence for functional clause structure provided by JC proves directly hierarchically compatible with this rigid order: There is a transparent systematic match between markers in JC and the fixed hierarchy of functional projections postulated by the framework. Surface differences in the structures can be accounted for in terms of IP-internal movement. This work therefore upholds the universality of the architecture of the clause as provided by Cinque (1999).

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