The architecture of the clause in Jamaican Creole[*]

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'The most striking differences between the folk speech of Jamaica and the educated speech are not in the sounds, still less in the vocabulary – they are in the grammar, the functional patterns into which the words fall. It is also in this respect that the most fundamental influence from African backgrounds is to be seen, and that is why Jamaican folk speech is not a dialect in the same sense that the rural speech of Devonshire or Lancashire, say, are dialects of English. Those who would hold that Jamaican folk speech is not to be considered a type of English at all, but a new and different language, will find their strongest arguments here (…)'

Frederic G. Cassidy *Jamaica Talk* (1961)

1. Introduction: Grammatical properties of JC

A structural property which is common amongst creole languages is their lack of overt morphological inflection. Bailey (1966) observes that : "One of the most striking features to be noted in any study of the Creole languages is that (…) their inflectional content is exceedingly meagre, so that the grammatical information is carried almost entirely by the syntactic system". We will see that Jamaican Creole is not an exception to this generalisation.

1.1. Absence of morphological inflection for nouns

Nouns in JC are exempt of morphological structural case. To start with lexical DPs, we see that they appear in the same form regardless of whether they are assigned Nominative or Accusative case:

(1)   **Di gyal** nuh tan good none-at-all
        The girl [neg] behave good [neg] at all
        'The girl doesn't behave well at all'

(2)   Im nuh gi **di gyal** nutn
        S/he [neg] give the girl nothing
        'S/he doesn't give the girl anything'

        The situation is similar for pronominal DPs[1]:

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(3)   **Im** tink seh dat no right
       S/he think that that [neg] right
       'S/he thinks that that's not right'

Here, the pronominal DP in subject position, *im*, bears abstract Nominative case. The same form can also be used in the object position, i.e. where Accusative case is assigned:

(4)   Jan like **im**
       John like him/her
       'John likes him/her'

Im, the 3rd person singular pronoun, is therefore used in the canonical subject position and in the canonical object position. This is true for pronominals in general: the following nicely illustrates the formal ambiguity between Nominative and Accusative 1st and 3rd person plural pronouns in JC:

(5)   **Wi** nuh like **dem** an' **dem** nuh like **wi**
       We [neg] like them and them [neg] like we
       '**We** don't like **them** and **they** don't like **us**'

JC also lacks overt evidence for inherent case: The example below illustrates that the unique lexical/pronominal form seen to bear abstract Accusative and Nominative case, preceded by a pronoun *fi*, may also express inherent case:

(7)   A **fi di gyal** yaad dat
       [foc] for the girl home that
       'That's the girl's home'

(8)   A **fi Mi/yu/Im/Wi/Uno/Dem** yaad dat
       [+foc] for me/you/him/we/you[+plural]/them yard that
       'That's my/your/his/our/your[+plural]/their home'

Here *fi*+*DP*(lexical or pronominal) functions as a possessor.

1.2. Absence of morphological inflection for verbs

Verbal morphological inflection is radically absent from the grammar of JC. In this language, verbs do not agree for person/number:

(9)   Mi/yu/Im/Wi/Uno/Dem   nuo betta
        I/you/S/he/We/You[+plural]/They   know better
        'I/you/S/he/We/You[+plural]/They know better'

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[1] Indeed DPs in varieties closest to the basilect do not make gender distinctions. However in some mesolectal varietites where the influence from the acrolect is more prominent, one can find *shi* as the third person singular feminine pronoun [+Nom], and *har* [+Acc].

The verb stem is not altered in the expression of tense, mood and aspect. Instead, the expression of these concepts relies solely on the insertion of independent pre-verbal markers. These middle-field markers are not affixes as they can be separated from the main verb by adverbs:

(10)   'im did really gwaan so?
        S/he [+past] really go+on so
        'S/he really behaved like that?/ Did S/he really behave like that?'

1.3. The scope of this study

The fact that JC expresses tense, mood and aspect through TMA markers is crucial for the present study: The latter will concentrate on exploring two aspects of these markers: Firstly, it will examine to what extent a hierarchy exists amongst these inflectional particles in JC. Secondly, once a hierarchy emerges, it considers to what extent the organisation of TMA markers in JC proves structurally compatible with a very recent and highly restrictive framework (Cinque (1999)). The background for this framework as well as the framework itself are discussed in Chapter 2.

2. THE ARCHITECTURE OF THE CLAUSE

2.1. The Split-Infl Hypothesis

Linguists working within a generative framework are, by definition, trying to render explicit those principles which underlie natural language. These principles must be sufficiently detailed to account for possible cross-linguistic variation, while remaining as simple and economical as possible so as to account for rapid, effortless acquisition by the child. This tension is at the core of generativists' investigation.
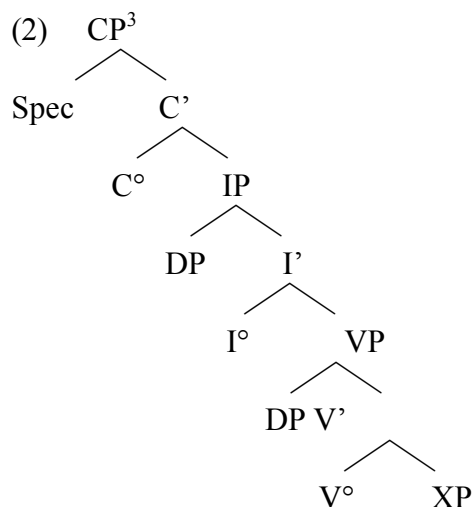
        One instance of abstract representation which meets the demands of such a tension is the X' schema, illustrated (for head-initial languages[2]) below:

(1)   XP
       / \
     YP   X'
          / \
        X°   ZP
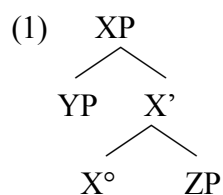
The X' schema has the merit of unifying structure across categories. Under X'-theory all constituents are endocentric, i.e. they are projections of a unique head X. The schema also expresses the idea that properties of the head percolate to the projection, such that the nature of the head determines the nature of the projection. The X'-schema also implies a further hierarchical organisation in constituent structure. This analysis accounts for a variety of linguistic constraints, and has therefore been widely adopted in the analysis of clause structure.

        The structure in (2) below illustrates a first application of this analytic tool to both lexical and functional categories of sentential structure:

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[2] However c.f. Kayne (1994) for a possible extension of this X° initial approach to all language types.

(2)   CP³
```
            CP³
           /  \
        Spec    C'
               /  \
             C°    IP
                  /  \
                DP    I'
                     /  \
                   I°    VP
                        /  \
                      DP    V'
                           /  \
                         V°    XP
```

As can be observed in (2), there are basically three layers in a clause: the lexical layer VP, the inflectional domain, and the 'periphery' which links the clause to either a higher clause or to the context.

Although this analysis is essentially on the right track, it has had to be elaborated into a more articulate structure on the basis of both conceptual and empirical shortcomings: Conceptually, it is undesirable to associate a single X° with independent sets of features such as tense and agreement. Empirically, the splitting of this projection is forced so as to accommodate word order variations such as those found between French and English:

(3)a. Heidi (*eats) **often eats** bammy while in Jamaica
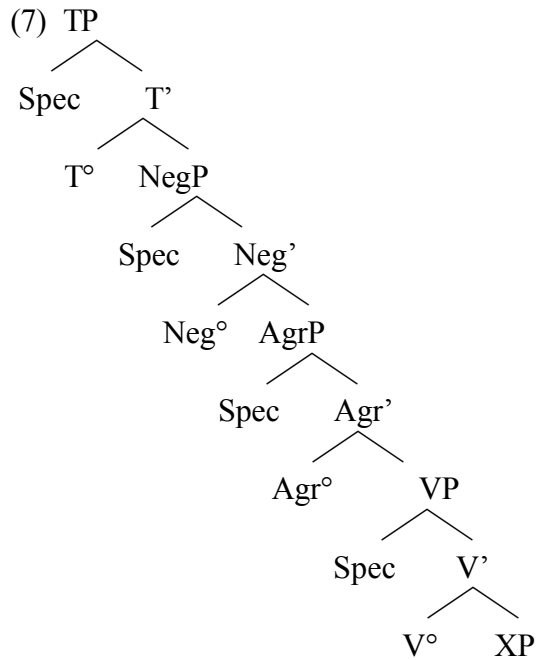   b. Heidi does (*eat) **not eat** bammy in Switzerland

(4)a. Heidi **mange souvent** (*mange) du bammy pendent qu'elle est en Jamaïque
        Heidi eats   often   (*eats)   of bammy while   that she is in Jamaica
   b. Heide ne **mange pas** (*mange)   de bammy en Suisse
        Heidi ne eats   not (*eats)   of bammy in Switzerland

(5)   To (*eat) **not** (*eat) **often eat** bammy is a big deal for some

(6)a. (*manger) ne pas **souvent manger** du bammy est toute une histoire pour certains
         (*to eat) ne not often   to eat   of bammy is all   a   story   for   some
   b. Ne pas **manger souvent** du bammy est toute une histoire pour certains
        Ne not to eat   often   of bammy is all   a   story   for   some

Movement past sentential negation *pas/not* differs from movement past adverbs, here *souvent/often*: A French finite lexical verb must move past both *pas* and *souvent*, whereas a French non-finite verb cannot move past *pas*, although it optionally moves across *souvent*. None of these instances of movement are open to the English lexical verb, finite or not. This insight has brought about the development of the functional structure of the IP (Pollock (1989)). Infl having always been associated with both tense and agreement, the first step towards its decomposition logically gave rise to two discrete projections TP and AgrP (Pollock (1989)). The latter approach is referred to as the Split-Infl Hypothesis:

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[3] I abstract away from the CP layer in the present paper.

(7) TP
```
(7)  TP
       /\
    Spec   T'
          /\
        T°   NegP
             /\
          Spec  Neg'
               /\
            Neg°  AgrP
                  /\
               Spec  Agr'
                     /\
                  Agr°   VP
                         /\
                      Spec  V'
                            /\
                          V°   XP
```
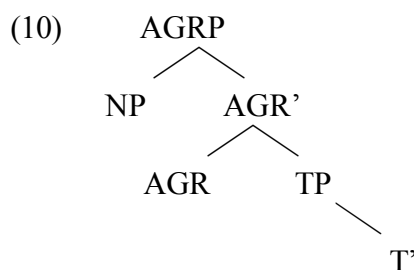
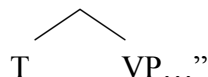In light of the structure in (7) above, the data in (3) through (6) can be accounted for as follows:

(8) [TP FrV[+fin] [NEGP *not/pas* [AGRP FrV[-fin] [VP *often/souvent* [VP EngV[+/-fin]; FrV[-fin]

If a general property of U.G. is that deep, underlying structures are identical across languages, then it follows that derived surface orders are the result of syntactic movement. If in the course of this movement the head 'picks up' morphological inflection, then applying Baker's Mirror Principle (1985) leads to a further modification of the clause structure in (7): Consider the sequencing of the Tense *er* and agreement *ò* in the following example from Italian:

(9)   Parl – er – ò   (Belletti (1990))
       I will speak (order of affixes: T, future; AGR, 1 person singular)

Belletti (1990) argues that "the respective order of tense and agreement features in the verbal morphology of Italian is the order T…AGR. We now have a simple but straightforward answer to the question concerning the respective order of T and AGR in the hierarchical tree structure of the clause: T must be lower than AGR. We then come to the conclusion that, putting aside the possible existence of other (intervening) functional heads, the structure of the sentence in Italian as well as in the related languages is as in (10):

(10)   AGRP
```
(10)      AGRP
           /\
        NP   AGR'
             /\
          AGR   TP
                  \
                   T'
```

```
        ╱╲
      T      VP…"
```

In striving to obtain their goal of accurately describing the linguistic system in the most generally applicable manner, syntacticians must constantly develop their theories. A recent tendency in the development of clause structure has led to the postulation of additional functional projections to those in (10). 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 heads such as Tense, Modality and Aspect, as summarised in the next section.

2.2. Cinque (1999)

Cinque (1999) draws on three important sources in the development of universal, hierarchically organised functional projections in the clausal domain:

(11)a. Adverbs
    b.   Bound functional morphemes
    c.   Free functional morphemes

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. In Chapter 3, I focus on determining the order of the TMA markers in JC, and examining to what extent this is compatible with Cinque's universal clause structure. Before tackling this, however, I summarise a few key arguments drawn from Cinque (1999) in favour of adopting his very rich, "at first sight, outrageously rich" (Cinque (1999: 106) functional clause structure.

As mentioned above, Cinque (1999) develops an elaborate articulation of INFL partially on the basis of evidence from adverbs. In essence, his starting point is the establishing of a hierarchy of classes of adverbs based on the observation that certain adverbs (each representative of a class) necessarily precede others. For example, consider the following data from French which examines the position of *déjà* in relation to *pas* and *plus*:

(12)a. Si tu n'as *pas déjà* mangé, tu peux le prendre
            'If you have not already eaten, you can take it'
(12)b.   * Si tu n'as *déjà pas* mangé, tu peux le prendre
            'If you have already not eaten, you can take it'

(13)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:

(14)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:

(15) a. Ne dormir plus
     b.   Ne plus dormir

(16) a. *Ne dormir pas
     b.   Ne pas dormir

The data above can be accounted for in terms of the following syntactic analysis:

(17)   [_   [pas   _   [plus … dormir]]]

                     X

This argumentation upholds both a hierarchical organisation of adverbs, the latter's status as XPs[4], as well as the presence of intervening X° positions where, for example, a lexical verb [-fin] can occur.

Apparent counterexamples to a fixed order hypothesis are carefully dealt with in Cinque (1999), and shown not to contradict a unique canonical order of AdvPs. An instance of an apparent counterexample is the possibility for certain adverbs to be inverted:

(18) a. Il n'a *plus jamais* rien su d'elle
         'He hasn't any longer ever learnt anything about her'
     b.   Il n'a *jamais plus* rien su d'elle
         'He hasn't ever any longer learnt anything about her'

Data with respect to lexical infinitives proves insightful in accounting for the subversion of orders in (18): Although the infinitive may sit in between *plus* and *jamais* (19a), it is impossible to have the infinitive between *jamais* and *plus* (19b):

(19) a.   Il ne veut *plus* parler *jamais* d'elle
         'He doesn't ever any longer want to speak about her'
     b.   *Il ne veut *jamais* parler *plus* d'elle

The different interactions of the lexical infinitive with respect to the two possible orders of *plus* and *jamais* can be explained if *plus* is analysed as being generated in the specifier position of a functional projection higher than the functional XP whose Spec is occupied by *jamais*. In this way, when *plus* and *jamais* occupy their base positions, i.e. when *plus* precedes *jamais*, movement of the infinitive may use the head of either of these projections, or even of the projection above *plus*, as its host. This is why the infinitive may precede, intervene between, or follow *plus* and *jamais*. Not all of these options are open to the infinitive when the inverted order of *plus* and *jamais*, i.e. <*jamais plus*> occurs. Indeed under this perspective, in order for *jamais* to precede *plus*, it has to move to the Spec of *plus*, which leaves no room for an infinitive to intervene between the two adverbs:

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

(19)c. Il ne veut [*jamais$_i$ plus*] t$_i$ parler d'elle
        'He doesn't want any longer ever to speak about her'

     In the light of this reasoning, the possibility for an inverted order of adverbs, such as that found for *plus* and *jamais*, does not imply a lack of hierarchy. Moreover, examples such as these in fact uphold the positioning of adverbs in the Spec of rigidly ordered functional projections.

     The hierarchy of AdvPs proposed in Cinque (1999) on the basis of evidence from Romance (Italian and French), is shown to hold cross-linguistically. A consideration of Germanic languages (English and Norwegian), a Slavic language (Bosnian/Serbo-croatian), a Semitic language (Hebrew), a Sino-Tibtan language (Chinese), and Albanian reveal a striking consistency in the ordering of adverb classes.

     It is worth noting that, as was the case for the ordering of adverbs within a single Romance language, there are occasionally apparent variations of adverbial orders from one language to the next, but upon closer examination these variations can be shown to be consistent with the single overall order found to obtain for Romance. An example of apparent cross-linguistic variation in the ordering of adverbs may be found between English and Romance *always/sempre* and *any longer/più*: "while in Italian (Romance) *(non..) più* '(not..) any longer' was seen to precede *sempre* 'always', English would seem to show the opposite order (…) The appearance is however deceiving" (Cinque (1999: 33). Indeed the data below illustrates that the apparent subverted order in English is only found when *always* precedes the verb and its complements while *any longer* follows them (20), and not when these adverbs both precede the verb and its complements (21a and b):

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

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

In this way "when both a*lways* and *(not..) any longer* appear before the verb, their order is just like that found in Italian (Romance)" (Cinque (1999: 33). The apparent subversion of the order of adverbs in (20) can therefore be analysed as follows:

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

Where XP movement of *[always win his games]* across *any longer* gives rise to a slight focus on the latter adverb.

     In Chapter 3, section 3.5.4. as well as in Chapter 5 section 5.1. I will consider the apparently exceptional syntactic behaviour of the completive particle *done* in JC. It will be reasoned along the lines of Cinque (1999) that what seems to be an exception to the overall ordering can be derived through movement, such as that seen for the data in (20) through (22) above. This analysis will be extended to the adverb *aredi* in Chapter 5 section 5.2.

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

(23)   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

Cinque (1999) presents both conceptual and empirical reasons for locating each of these adverbs "in the (unique) Spec positions of distinct maximal projections" (Cinque 1999: 44).

Conceptually, it is desirable to keep the system restrictive, and a system which only allows either adjunction or specifiers is more restrictive than one which admits both. Considering that there are arguments for locating at least some adjunct XPs in Spec, it would be favourable to do away with adjunction (c.f. Cinque (1992; 1994) and Sportiche (1993)). It is also theoretically advantageous for the rigid relative order of AdvPs to be a consequence of the system, which is the case once they are analysed as entering in a Spec/head agreement relation with a fixed order of functional heads, but is not the case under the adjunction hypothesis. Furthermore, "the fact that AdvPs are arguably on left branches is something that would have to be stipulated under the adjunction hypothesis, while it follows under the "location-in-Spec" hypothesis."

Empirically, Cinque (1999: 45-51) locates the presence of one head position to the immediate left, and one to the immediate right of each AdvP through the careful observation of active past participle movement and finite verb movement in Italian. Note that the fact that adverbs do not block this head-movement is further evidence for their analysis as XPs (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.

Evidence of bound functional morphemes comes in different forms: One is that given by 'non-closing' agglutinating suffixes (i.e. suffixes which do not typically close off the word, but rather allow further affixation onto themselves). Cinque (1999) considers suffixes of this kind from Korean, Turkish, Una, Tauya, and Chinese, and uses them to derive the relative order of functional heads through application of the Mirror Principle. The order below is thus arrived at by transitivity of the partial orders attested in these languages (Cinque 1999: 55):

(24) $\text{Mood}_{\text{speech act}} > \text{Mood}_{\text{evaluative}} > \text{Mood}_{\text{evidential}} > \text{Mod}_{\text{epistemic}} > \text{T(Past)} > \text{T(Future)} > \text{Mod}_{\text{root}} > \text{T (Anterior)} > \text{Aspect}_{\text{perfect}} > \text{Aspect}_{\text{progressive}/} \text{Aspect}_{\text{completive}} > \text{Voice} (> \text{V})$

The validity of this order is further tested on the other form of evidence of bound morphemes: that of bound inflectional (as opposed to agglutinating) suffixes from both head-initial and head final languages. On the one hand, 'head-initial' languages such as English or Spanish "where no (successive leftward movements of lower portions of the clause plausibly take place (Kayne 1994) (…) provide *direct* evidence for the relative order of the corresponding functional heads"(Cinque 1999: 57). Extracts such as those in (25a,b) thus imply the order in (26)

(25)a. English: These books ha*ve* be*en* be*ing* re*ad* all year
     b.   Spanish: Esos libros h*an* est*ado* si*endo* le*ídos* todo el año

(26) Tense > $\text{Aspect}_{\text{perfect}}$ > $\text{Aspect}_{\text{progressive}}$ > Voice (> V)

Under the hypothesis that there is a universal hierarchy of functional heads, then 'head-final' languages with successive leftward movement of nonheads such as Hindi and

German expectedly should reflect the mirror image to that observed in head initial languages. As witnessed by the data below, this prediction is borne out:

(27)a. Hindi: Kis-ko raam-ne socaa   ki siitaa-ne dekhaa   thaa   (Mahajan 1990,39)
                  Who   Raam   thought that Sita   see-ANT be-PAST
                  'Who did R. think that S. had seen?'

     b.   Raam roTii khaataa rahtaa thaa   (Mahajan 1990,78)
                  Raam bread eat   PROG be-PAST
                  'R. used to keep on eating bread'

(28) German: …daβ 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'

The evidence of inflectional suffixes found in the two different language types indeed does depict reversed orders. In this way: "head-final languages provide the same evidence as English (and Spanish) for the order of functional heads (…)" (Cinque 1999: 58)

Evidence of free functional morphemes is typically found in creoles as well as in many West African languages such as those of the Kwa group. These particles behave differently to bound functional morphemes in that they disallow the head immediately below them to adjoin onto them or raise past 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 **T**ense - **M**ood/modal − **A**spect, wherefore the reference to these as TMA markers. With respect to the general claim on the sequence of these markers, Cinque (1999: 59) notes 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. Secondly, there are occasional claims in the literature for the order Modal > Tense rather than Tense > Modal". Cinque's careful analysis of data from head-initial Guyanese Creole, Haitian Creole, Sranan and Gungbe leads to a refinement of this claim. For example, Guyanese Creole provides evidence for co-occurring aspectual particles:

(29) Shi a aalweez/neva de a sing   (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.

Guyanese Creole also gives insight for the postulation of various positions for modals:

(30) Jaan shuda bin kyaan get fu gu   (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 above example 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. This structural distinction for varying sorts of modals is furthermore interpretationally supported: Whereas epistemic modals are "concerned with the speaker's deductions or opinions", root modals, "in contrast to epistemic (…) are strictly subject oriented. Volition,

obligation, ability, or permission are properties attributed to an (animate) subject". (Cinque 1999 : 79)

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[5]: 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 below[6]:

(31) $Mood_{speech\ act}$ > $Mood_{evaluative}$ > $Mood_{evidential}$ > $Mod_{epistemic}$ > 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 another considerably powerful argument in favour of adopting this universal functional make-up of the clause emerges: an observation of the two independently established hierarchies, namely that of AdvPs and that of functional heads, proves that they generally match semantically from left to right:

(32)   [*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* $Asp_{durative}$ [*charcteristically* (?) [? $Asp_{generic/progressive}$ [*almost* $Asp_{prospective}$ [*completely* $Asp_{completive(I)}$ [*tutto* $Asp_{PlCompletive}$ [*well* Voice [*fast/early* $Asp_{celerative(II)}$ [*completely* $Asp_{SgCompletive(II)}$ [*again* $Asp_{repetitive(II)}$ [*often* $Asp_{frequentative(II)}$ …

Cinque (1999: 77) writes that "In many cases a transparent specifier/head relation between a certain adverb class and the right-adjacent functional head is immediately recognizable. This makes it plausible to assume that such a relation should hold across the board, even in those cases where a functional head apparently finds no corresponding adverb class to its left, or when an adverb class finds no corresponding appropriate functional head to its right(...) It could simply be that we have failed to recognize the existence of the relevant adverb class, or of the relevant functional head(…)".

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 (32) above is a fixed order determined by UG. Therefore Cinque (1999) predicts that no human language should prove incompatible with the hierarchy expressed in (32) or refinements of it. JC is a new territory on which to test Cinque's (1999) clause structure. The next section of this paper will investigate to what extent his decomposition of the extended projection of V proves to hold for JC's articulation of functional particles.

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[5] See data from Kachin, Mizo, Basque (which also shows inflection) and Sanio-Hiowe in Cinque (1999: 65-66).
[6] For the details regarding the distribution of Mood/Mod see Cinque (1997: 119).

3. THE ARTICULATION OF INFLECTION IN JC

Inflectional markers are the overt manifestation of clausal functional heads. This chapter will concentrate on the distribution and combinatory possibilities of the inflectional markers in JC, and where possible, it will also take their corresponding adverbs into account as the overt realisation of the specifiers of these functional projections. The goal of this investigation will be to verify if a rigid order exists among the functional material of the clause, as predicted by the framework summarised in section 2.2. We will see that a hierarchy indeed emerges amongst the inflectional heads (and occasional specifiers) examined. The next step in the investigation then consists in testing to what extent this functional hierarchy is compatible with that established in Cinque (1999). The fact that the articulation of INFL in JC proves compatible with a Cinque type clause structure turns out to provide evidence supporting the hypothesis that the architecture of the clause universally conforms to that postulated in Cinque (1999).

3.1. The preverbal markers

JC exhibits SVO surface order:

(1)   Dem   en/did   nuo dat
         S   V   O
         Them [+past] know that
         'They knew that'

Verbs are not conjugated via inflectional morphology in this language. In the example above, 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. As illustrated in Chapter 1, section 1.2.2. by (11) repeated here as (2), these markers do not agree in tense or number with the subject:

(2)   Mi/yu/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'

        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 (1) and (2). An example of a modal is given in (3), and an aspectual marker in (4):

(3)   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'

(4)   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:

(5)a. *Jan **shuda** en a ron*   Bailey (1966)
      John [+modal] [+past] [+prog] run
      'John 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

      In the rest of section 3, I focus on the distribution and interpretation of the preverbal markers in JC. I begin the discussion in section 3.2., with a consideration of the modal markers in this language, starting with the structurally highest class of modals in 3.2.1., and moving on to the others in section 3.2.1. In section 3.3. I turn to tense particles, specifically to those of past tense in 3.3.1., and to that of future tense in 3.3.2. It then becomes necessary to work out the interaction of different modal types in relation to tense, which is done in section 3.4. Finally, I deal with those particles which are closest to the verb stem, namely markers of aspect, in section 3.5.

3.2.1. Mod(al) 1

      The examples in (5a-f) above 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 (6) below:

(6)   shuda, wuda, maita, mosa, kuda

      A particularity of modals belonging to this class is that they tend to all end in a[7]. A question which immediately arises is : what is the status of modal-associated a? The gloss of a sentence such as that given in (5a) repeated here as (7) for convenience suggests that a modal+a sequence yields an interpretation corresponding to modal+*have*.

(7)   Piita neva shuda tief di mango-dem
       Peter never [+modal] thief the mango-[plur]
       'Peter never shoud've stolen the mangoes'

       At first sight this might imply that a has an independent function to the modal itself, signalling that what follows is to be interpreted in the past, just as the Standard English perfective 'have' does. Reinforcing this idea is the fact that this modal-associated element phonetically resembles the equivalent of English *have* in Creole which is *ha*:

(8)   Wantaim, wan man en **ha** wan gyal-pickni nomo   Bailey (1971)
       One time, one man [past] have one girl-child no-more

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[7] Note, however, that some Standard English modal forms occuring without a are filtering into the mesolect : i.e. *im **cudn** tek i'* : S/he couldn't take it, etc.

'Once upon a time, there was a man who had an only daughter'

(9)   Dem **ha** wan riba doun ya (…)   Bailey (1966)
      'They have a river down here (…)'

      So it may seem a plausible assumption that this *a* is really *ha* once *h* has undergone elision in the liaison resulting from its combined use with these modals:

(10)   [kud/wud/shud/mos/mait/ + [(h->∅)a]]…

      Under this perspective, *a* would be associated with the modal either as a bound morpheme, or as a free marker selected by the modal. However it will be shown below that there are both conceptual and empirical problems raised by these analyses, and which lead to another conclusion.
      The analysis of the element *a* as a bound morpheme may stem from the observation that the modals here considered are not generally used without the final *a*(11a,b), and that these modals cannot be separated from *a* by an intervening element (11c):

(11)a.   ?Jan shud ron
     b.   Jan shud+a ron [8]
     c.   ??Jan shud **really** a ron

      However to consider *a* as a bound morpheme would be conceptually unsatisfactory: indeed if *a* were analysed as a bound morpheme, it would be a grammatical exception because throughout the grammar of JC, there is a radical absence of inflectional morphemes.
      This marker is not likely to be an independent T° [+past] marker because the markers productively used for this purpose are *en/did* in rural and urban areas respectively. Furthermore, the use of *a* is not in complementary distribution with these tense markers:

(12)   Im wuda say dat / im wud**a en/did** say dat
       'S/he would have said that'

      If *en/did* can be used in combination with modals+*a*, then, under this analysis *a* would be a redundant T [+past] marker in the system. In this light, an analysis of modal *a* as a T marker proves uneconomical, and therefore conceptually unsatisfactory.
      The element *a* is not plausibly analysed as an Asp marker either. Indeed if it were taken to encode Asp [+perf], its separation from all other asp markers[9] which follow tense markers (13b) and other modal markers (14b) would be an unexplained distributional fact:

(13)a. Jan **shuda did** love da*t*   *Mod+a > T*
       John Mod+*a* [past] love that
       "John should have loved that"

     b.   Im **did a go** dw i'   *T > Asp*
             S/he [past] [prog] [prosp] do it
             "S/he was going to do it"

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(14) a. Mi **wuda mos haffi** ron   *Mod+a > other Mods*
         Me Mod+*a* must have to run
         "I would have had to run"

   b.   Im **kyan jus** dw i' now   *other Mods > Asp*
         S/he can [retrospective] do it now
         "S/he can only just do it now"

(15) a. =>   Mod + *a* > T > **Asp**
    b.   Mod + *a* > other Mods > **Asp**

Note also, as seen in example (13b) above, that there already exists an *a* aspectual marker realised as *a* which corresponds to the progressive. The modal associated *a* is not in complementary distribution with the aspectual *a*: Recall example (7) repeated as (16), which illustrates their combined use:

(16)   Jan shud**a** en **a** ron   Bailey (1966)
      'John should have been running'

Without the independent marker *a* the progressive interpretation is lost:

(17)   Jan shuda (en) ron
      'John should have run'

Finally, an analysis which considers this modal associated *a* as *ha* or an equivalent having undergone elision would be faced with the empirical problem that the two are distinctive in that they can form a minimal pair: when used alone, *ha* is reserved for expression of the possessive, where *a* cannot occur (18a vs. 18b), and when used with *fi*, it takes on the meaning 'ought to', which *a* cannot do (19a vs 19b):

(18) a. Im mos+**ha** wan a dem
        'S/he must have one of them'
   b.   Im mos+**a**[10] wan a dem
        'S/he must be one of them'

(19) a. Im mos+**ha**+fi dw i'
        'S/he must have to do it'/ 'She surely ought to do it'
   b.   ?im mos+**a**+fi dw i'

This raises doubts as to the original idea that the modal-associated *a* contributes to the past interpretation associated with various sentences containing modal+*a* sequences. That modal-associated *a* encodes past time is not necessarily on the right track as in the absence of markers, the default interpretation with non-stative verbs, in contrast to stative verbs, results as past anyway. This is a common property of creoles, as noted in Cinque (1999: 60): "In most creoles a verb without particles is typically understood as non-past if stative, and past if non-

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[10] We see in example (18b) above, in the absence of a verb, i.e. when this modal+*a* is followd by a DP object, an animate subject is interpreted as *presently* equivalent to this DP, already hinting at the fact that modal *a* is not responsible for past interpretation.

stative". Although it is true that stative verbs which follow modal+*a* sequences may give rise to a past interpretation:

(20)   Good ting Jan neva tell 'im dat, far im **wuda tink** seh im a di bess!
'(It's a) good thing John never told her/him that, for s/he **would have thought** that s/he was the best!'

It is, crucially, also possible for stative verbs to follow these sequences and give rise to a present interpretation. Consider the example below:

(21)   Betta Jan no tell im dat, caw im **wuda tink** seh im a di bess!
'(It's) better that John doesn't tell him that, because he **would think** that he's the best!'

So, in the final analysis, the past interpretation is not *forced* by the presence of this modal *a* element at all. We will come back to the question of default interpretations in sections 3.3. and 4.2.

In light of these considerations, it may be more accurate to analyse these modal+*a* sequences as instances of 'grammaticalization', i.e. the result of two originally syntactically separate elements having undergone a fusion in the Creole to form one unit. The above characteristics of the modal+*a* sequence, i.e. that this *a* somewhat resembles *ha*, and that the modal cannot be separated from this *a*, can then be explained as a consequence of the process of grammaticalization: *ha* and *a* were probably drawn from Standard 'have', used to express possession and in combination with the modal to derive a perfective reading. In the Creole, the expression of possession is delegated to *ha,* while the modal *a* underwent grammaticalization and did not retain its original perfective value. Instead, *a* came to form one single element with the modal, thereby modal+*a* sequences occupy a unique position in the structure. The past or non-past interpretations of the material that follows theses modals are due to other factors such as context or the [+/- stative] nature of the selected VP.

Note that although not explicitly reasoned through in the literature, this is intuitively felt: indeed a reflection of this intuition is attested by the fact that an orthographic separation between the modal and its associated *a* is not attested.

There are different sets of modals in JC. So as to distinguish those modals considered in this section, i.e. modal+*a* modals, we shall from now on refer to them as Mod(al)1.

Modals from different sets can be combined in JC. The first set of modals in the hierarchy of modal markers is Mod1. Modals of the same set cannot be combined amongst themselves:

(22) 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.

We will come back to the semantic content of Mod1 as opposed to Mod(al)s 2 & 3 in section 3.4. where we will turn to their respective distributional properties in relation to tense.

3.2.2. Mod(al)s 2 & 3

As noted in the previous section, certain combinatory possibilities exist for modals in Creole. In the event that the combination of modals takes place(23a, 24a), this combination must respect a certain ordering constraint (23 b-e, 24 b-e):

(23)a. Im shooda muss kyan get tru   Adams (1995)
              'He must surely be able to succeed'

(24)a. dat-de biebi wuda mos hafi priti   Bailey (1966)
              'That baby would have to be pretty'

Otherwise the result is ungrammatical:

(23)b.   *Im muss shooda kyan get tru
    c.   *Im muss kyan shooda get tru
    d.   *Im kyan muss shooda get tru
    e.   *Im kyan shooda muss get tru

(24)b   *Dat-de biebi mos haffi wuda priti
    c.   *Dat-de biebi mos wuda hafi priti
    d.   *Dat-de biebi hafi mos wuda priti
    e.   *Dat-de biebi hafi wuda 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. Bailey[11] (1966) analyses the modals considered here as follows:

(25)   Kuda +   Hafi

                    Mosa
                              Hafi
                    Maita +   ⎫   ⎫
                              Kyan   ⎬   ⎬
                    Shuda   ⎭   ⎭

                  Wuda + (mos) (hafi)

On the basis of these observations, setting aside the semantic constraints on certain modal combinations (e.g. …*kuda kyan*…; ...*mosa mos*…), the positions of Modals in the structure of JC seem to fall in the fixed order below:

(26) [Mod1 *kuda/wuda/shuda/mosa/maita*] > [Mod2 *mos*] > [Mod3 *haffi, kyan*] …

Where, as already attested for Mod1 in section 3.1.1, modals belonging to the same set compete for the same position and consequently cannot be combined amongst each other:

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[11] Certain details irrelevant for this point are omitted.

(27)a. *Im kyan hafi …
   b. *Im hafi kyan …

3.3. Tense

This section considers the tense indicators *en/did* and *wi*. The former markers, *en/did* which will be seen to signal past time, will be discussed in section 3.3.1. The marker *wi* is the contrary time specification to *en/did*, and logically is shown to be incompatible with them in section 3.3.2. The interaction of tense markers with modals is examined in section 3.4.

3.3.1. *Past Tense*

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

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

As mentioned in section 3.2.1., this tense marker is optional in sentences such as that given above: Where non-stative verbs are used, such as in the case of *say* given in (28),even in the event that *en* and *did* were done away with, the interpretation of the sentence would still correspond to the conditional past:

(29) Im wooda say
      'S/he would have said'

Indeed null tense specification is the default mechanism for expressing perfective with non-stative verbs:

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

 This method of expressing past is found in West African languages of the Kwa group such as Gungbe:

(31) Séná xìá   wémà ló   Aboh (1998)
      Sean read-PERF book the
      'Sena read the book'

   Since [-stative] verbs have a default interpretation corresponding to the perfective reading, then the insertion of a [+past] tense marker *did* generally yields an anterior past interpretation.

(32) Jan did nyam di bammi
      John [+past] eat the bammy
      'John had eaten the bammy'

Sebba (1993:150) drawing on Bailey (1966) gives the following distinctions for JC:

(33)a. Mi ron   I run (habitually); I ran
    b.   Mi en ron   I have run; I had run

Note that, as specified above, the lack of markers with [-stative] verbs may also be interpreted as non-past. This may depend on discourse context to a certain extent, or on factors such as the nature of the object:

(34)a.   (Mi a tell yu seh):   Jan nyam nuff **bammy**
              (I [+prog] tell you that):   John eat plenty bammy
              '(I am telling you that) :   John **eats** plenty bammy!'

    b.   (Mi a tell yu seh:)   Jan nyam nuff a **di bammy**
              (I [prog] tell you that:)   John eat plenty of the bammy
              '(I am telling you that:)   John **ate** pleanty of the bammy!'

Here we see that the choice of an object DP [-specific] may give rise to an interpretation [+present habitual], whereas the choice of a [+specific] one implies the meaning [+past]. As a result, the insertion of an indicator of past may express the past habitual nature when the verbal object is [-specific], which is not the case when the object is [+specific], as seen by the contrast between (35a) and (35b):

(35)a.   (Dem taim):   Jan **did** nyam nuff **bammy**
              (Them time):   John [past] eat plenty bammy
              'In those days :   John used to eat plenty bammy'

    b.   ???(Dem taim):   Jan **did** nyam nuff **a di bammy**

The fact that the nature of a verbal object plays a role in the time assigned to the verb has also been observed in French-based creoles such as Haitian: Gadelii (1997:155) notes that DeGraff (to appear) "(…) observes a 'factive' effect with eventive verbs such that when the object is specific, the sentence refers to the past, whereas when the verb takes a generic object, the sentence refers to non-past". The examples given are as follows:

(36)a. Bouki vann chat la
              Bouki sell cat the
              'Bouki sold the cat'

    b.   Bouki vann chat
              Bouki sell cat
              'Bouki sells cats'

As previously noted, the [+/- stative] nature of the verb plays a crucial role in determining the tense in the absence of markers: we have seen above that a non-stative verb without markers has a default interpretation corresponding to past-time. With respect to stative verbs, however, as indicated in section 3.2. the absence of particles usually results in a

non-past interpretation (37a), so that the insertion of the past tense particle becomes necessary to derive a past interpretation with a verb [+stative] (37b):

(37) a. Jan tink seh im a di bess
          John think that he [equative] the best
          'John thinks/*thought that he is/*was the best'

     b.   Jan did tink seh ...
           'John thought that …'

Finally, the temporal adverb chosen may also serve to situate the discourse context and render the use of markers redundant, e.g.:

(38) a. Yestaday, Jan certanly nyam nuff (a di) bammy!
          Yesterday, John certainly eat plenty (of the) bammy
          'Yesterday, John certainly ate plenty (of the) bammy!'

     b.   Yestaday, Jan tink seh im a big man, bot now im nuo seh nutn no go so
           Yesterday, John think that he a big man, but now he know that nothing [neg] go so
           'Yesterday, he thought that he was a grown up, but now he knows that it's not so'

In this way, the definiteness of the object (38a) or type of verb (38b) no longer plays a part in time specification: the past interpretation is already established via *yestaday*.

Therefore the [+/- stative] nature of a verb plays an important role in the temporal specifications assigned to this verb. The default time specification for stative verbs is present, and for non-stative verbs it is past. That is, in the absence of adverbs of past-time reference, the insertion of the pre-verbal markers *en/did* are necessary in order to obtain a past interpretation for [+stative] verbs. This is not the case for [-stative] verbs, which generally give rise to the past interpretation in the absence of these markers. In some cases, however, these markers become necessary for encoding past tense with [-stative] verbs e.g. where [-stative] verbs select a [-specific] object. Aside from these specific circumstances, however, *en/did* combine with [-stative] verbs to yield an anterior past interpretation.

3.3.2. *Future Tense*

The markers *en/did* considered above are tense indicators of past, in contrast to *wi* which is an indicator of futurity:

(39) Jan wi nyam dat
      'John will eat that'

As seen above, future time may be derived through the presence of *wi*. Below we see that futurity may also be expressed by the aspectual *a+go*, which often becomes *ao* in rapid speech:

(40) Im a (g)o nyam dat
      S/he [prog] [prosp] eat that
      S/he is going to eat that

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, and so will be dealt with in section 3.4. along with other asp markers.

3.4. Modals and T

3.4.1. *Mod1 and T*

We have already observed in example (26) repeated here as (43) that mood (Mod1) must precede tense.

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

We can also observe 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. We will examine other aspectual markers in section 3.5., and will see that the behaviour of *a(g)o* is indicative of the entire group of these markers with respect to tense in JC. If we were to take the behaviour of Mod1 as indicative of the behaviour of modals in general with respect to other inflectional particles, considering that we have already seen evidence for Mod1 to precede T, then, grouping each type of marker together and setting aside semantic constraints on syntactic combinations, the ordering constraint on TMA markers in JC at first glance may be thought to be as follows:

(45) [Mod1 *wuda/shuda/mosa/maita*][Mod2 *mos*][Mod3 *haffi, kyan*][T *en/did/wi*][Asp1 *a*

[$_{Asp2}$ (g)o^{12}] [$_V$...]

Where modals form a set which precedes tense, and the latter in turn precedes the set of aspect markers. However the examination of more data reveals that this analysis poses problems, and I will turn to these in the following section. Indeed a consideration of modals from different sets with respect to tense reveals that Mod1 has a specific syntactic behaviour with respect to tense which cannot be extended to Mod2 and Mod3.

3.4.2.   *Mods 2 & 3 and T*

An empirical problem for the analysis in (45) concerns the positioning of Mods 2 and 3 in relation to Tense and Aspect. These modals, unlike Mod1, cannot precede a tense indicator. 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 dw i'
        '(I feel that when the time comes) s/he will be able to do it'

(49) Im wi mos hafi tek dat[13]
        'S/he will be obliged to take that'

This means that they 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) haffi laugh   vs.   Im wi haffi laugh
(51) *(Wen di taim come,)maybe im a (o) kyan dwiit   vs.   Maybe im wi kyan dwiit

A more accurate description of the ordering of TMA markers thus seems to be:

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

It may be conceptually more satisfactory to keep markers of the same type together, as we will see proves to be the case for Asp markers in JC (section 3.5.). With respect to the different modals, however, this is not possible: If, on the one hand, all modals were to originate higher than T°, then the lowering of Mods2 and 3 would violate both HMC, or more generally Relativized Minimality, and ECP. If, on the other hand, all modals were to originate lower in the structure than T, then it is the raising of Mod1 past T which would be ruled out under Relativized Minimality. Therefore the structure in (44) which directly generates Mod1 higher than T°, and Mods2 and 3 lower than T° seems the more appropriate syntactic option.

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[12] Sections 3.5.1. and 3.5.2. deal with progressive *a* and prospective *go* respectively, justifying their separation in the structure.
[13] C.f. also Bailey (1966 : p 44) for more examples.

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'.

As mentioned in Chapter 2, Cinque (1999) has accounted for this distributional variation between different modal types in relation to T in terms of their correspondingly different interpretational values: Recall that 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" (Cinque 1999 : 79).
        In JC, an epistemic and a root version of the same modal exist[14]: *mosa* and *mos*. The semantic contrasts between these two offers new ground where one can test this epistemic/root distinction. In this light, consider the following data :

(54) Jan mosa did haffi tell dem
        'John most probably/more than likely had to tell them' / '*John was obliged to tell them'

(55) Jan did mos haffi tell dem
        'John was obliged to tell them' / '[15] % 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 haffi tell dem?

(57) Jan did mos haffi tell dem?

Jackendoff (1972:103) accounts for the strangeness of epistemic modals in questions by observing that: "(i)f epistemic modals are treated like speaker-oriented adverbs by the semantic component, this restriction will follow automatically".
        Compare the phenomenon evoked here for epistemic vs root interpretations for pre- vs post-T modals respectively with Magloire-Holly's (1982) account for pre- and post-T *dwe* in Haitian Creole:

(58) Zã dwe te maze
        J. must PAST eat
        'J. must (possibility) have eaten'

(59) Zã te dwe maze
        J. PAST must eat

---

[14] *Kuda* has alethic particularities which render it difficult to strike a clear contrast with *kyan*. C.f. Cinque (1999 : 78, 79)

[15]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 (c.f. Leblanc (1989 : 51)

'J. has had to eat'

The above observations give evidence for the structure below:

(60)   Mod epistemic (Mod 1) > T > Mod root obligation (Mod 2)   > Mod root
        ability/permission (Mod3)

3.5. Asp markers

This section turns to aspectual markers which form a group of inflectional particles located closest to the VP, a universally attested distribution for markers of this kind : Cinque (1999 : 90) writes that Bybee's (1983) typological observation upholds that "the order of suffixes appears to be consistent across languages (p.201), with aspect markers closer to the stem than tense and mood markers".

3.5.1. *Progressive Aspect*

I start the discussion of Asp heads with a consideration of progressive *a*, already touched upon in section 3.2. This marker *a* precedes the [-stative] verb so as to give the action or event evoked by this verb an 'on-going' interpretation:

(61)   Jan a nyam i'
       John [+prog] eat it
       'John is eating it'

       We observed in section 3.2. and 3.3. that [-stative] VPs such as [*nyam i'*] are generally interpreted in the past in the absence of markers. In (61) above, the sole use of the particle *a* with this same VP implies that the event described is going on at the time of the utterance. In the presence of *a*, even with projections of [-stative] verbs, a past interpretation has to specified:

(62)   Jan did a nyam uno bammi   (… good ting mi tell im fi stap)
       John [+past] [+prog] eat your[plur] bammy   (… good thing I tell him to stop)
       'John was eating your bammy   (…good thing I told him to stop)'

Therefore the use of the progressive suggests that the verb evokes something in progress, by default at the time of utterance.
       Recall that [+stative] verbs are, by definition, inherently on-going at the time of utterance:

(63)   Jan nuo dat
       John know that
       'John knows that'

 It is not surprising then that the redundant combination of stative verbs with the progressive is banned:

(64)   *Jan a nuo dat

The progressive particle does not combine easily with the markers which precede it in the structure (65a-i) apart from the past tense particle and Mod1 in the presence of the past tense particle (66a,b):

(65)a. *Jan shuda a ron
    b. *Jan wuda a ron
    c. *Jan mosa a ron
    d. *Jan kuda a ron
    e. *Jan maita a ron
    f. *Jan wi a ron
    g. *Jan mos a[16] ron
    h. *Jan haffi a ron
    i. *Jan kyan a ron

(66)a. Jan en/did a ron
    b.   Jan shuda/wuda/mosa/kuda/maita did/en a ron

Like that observed for *did/en*, *a* combines freely with the prospective aspectual marker *go* which follows it, and which I turn to in the next section.

3.5.2. *Prospective Aspect*

In this paper, I refer to the inflectional particle *go* used in combination with progressive *a* as the prospective aspectual marker, along the lines of Cinque (1999). Cinque (1999: 99) explains that: "the term 'prospective aspect' has come to be used for those grammatical forms (affixes, particles, auxiliaries or periphrastic constructions) which mark "a point *just prior* to the beginning of an event" (Frawley 1992, 322). This is for example the case with the English construction "to be going to"/ "to be about to" (Comrie 1976, 64f) or its equivalent in Koban. As clearly seen in Gungbe (…), this aspectual head (immediately) follows the progressive head. It is sometimes analysed as future tense. But such an analysis is not really warranted. As Comrie (1976, 64) points out, between "prospective meaning" (*Bill is going to/is about to throw himself off the cliff*) and "expressions of straight future time reference" (*Bill will throw himself off the cliff*) there is an appreciable difference. If Bill eventually does not throw himself off the cliff, the speaker can be said to have been wrong in the second case, but not in the first."

      As underlined in section 3.3., a reinforcement of the idea that *wi* warrants an analysis as the tense marker for future while *a(g)o* does not is founded on the observation that *wi* is in complementary distribution with *did*, although this is not the case with *a(g)o*:

(67)a. *Im en/did wi nyam i' aaff
    b.   *Im wi en/did nyam i' aaff

(68)   Im **en/did a (g)o** nyam i' aaff, bot mi (en/did) stap im
      'S/he was going to eat it all up, but I stopped her/him'

---

[16] Not to be confounded with the acceptable homophonous *Jan mosa ron* : 'John must have run'.

It is worth underlining that there are two different *go* elements in JC: one which is a pre-verbal marker, and one which is itself a lexical verb of movement. The two can be used in combination with one another:

(69) Y(u) a go go deh?
        You [+prog] [+prosp] go there
        'You're going to go there?'

Here, the first *go* serves to mark future time, while the second *go* is a verb of action. 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:

(70) (Afta wa im seh…)   yu **go pick i' up**?Vs.   y(u) **a go pick i' 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**?'

3.5.3 *Retrospective Aspect*

The marker *jus* referring to 'immediate past' is referred to along the lines of Cinque (1999) as retrospective aspect

(71) Im jus dw i'
        S/he just do it
        'S/he just did it'

Retrospective *jus* is not admitted with stative verbs: when used with the latter it cannot function as a marker of retrospective aspect, but rather is interpreted as 'only', or 'somehow':

(72) Mi (did) jus nuo dat
        I only/somehow ([past] = knew) know that
        *I just previously knew that

3.5.4. *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, becoming equivalent to *entirely* or *altogether*. This usage has been in existence for more than a century: 'We pray to God to take poor nega before Buckra *kill* him *done*; 'Me *feed* him *dun* dis long time' ; 'De bush *cut done*' ; 'Wen she *sell* me *done*' ; 'Teng Gad we *sell* off *dun*.' It is true that one finds the verb *do* used in similar ways, usually dialectically, elsewhere : 'I've done finished it…. He's done bought it' ; what is peculiarly Jamaican is the placement *after* the verb. This idiom may result from ellipsis : 'The bush is cut

and (is) done' or simply from the African predilection for heaping verbs up. In any case, *done* loses verbal force and becomes a modifier of the other verb."

Note that the verbs used in combination with *done* in the examples given by Cassidy (1961) above, where *done* signals completion of the action, are [-stative] verbs. In certain Kwa languages such as Fongbè, a similar phenomenon is found: Da Cruz (1995) underlines that *fó* and *vó* 'finish' also "only combine with accomplishment verbs and with activity verbs which are interpreted as quasi-accomplishments", and when they modify a VP they must follow the latter:

(73) Kòkú wà àzo   ó   fó
      Kòkú do work DET finish
      'Kòkú finished doing the work'

(74) Kòkú dù mòlìnkún   ó   vó
      Kòkú eat rice   DET finish
      'Kòkú finished eating the rice'

The interpretation given by Da Cruz (1995) for sentences such as (73) and (74) above where *fó* and *vó* 'finish' follow the verbal phrase is "X did something, which he has finished doing".
     Therefore Fongbè and JC are indeed similar in that the marker used to express that an action has been completed behaves differently to the other markers of the grammar to the extent that the former follows the VP it modifies (i.e. over which it takes scope), whereas the latter precede it. The crucial difference between the two languages is that whereas the marker [+completive] *must* follow the [-stative] VP in Fongbè, it *optionally* does so in JC. 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 (75) below is therefore ambiguous, giving rise to the interpretations in (75a) and (75b):

(75) 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 (75a) is erased in a post-VP configuration, so the ambiguity observed for (75) no longer obtains in (76) where *done* follows the VP it modifies:

(76) 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, or *fó* and *vó* in *Fongbè*, and the other corresponding to the meaning [+anterior], as given by the adverb 'already' in English.
     I take the syntactic difference attested between these two *done* markers to stem from the fact that the Spec of the former marker *done* (Completion) can host movement of the VP projected by a [-stative] verb, whereas the Spec of the latter *done* (Anterior) is not accessible

to such movement[17]. In other words, if one were to translate the sentence in (77) into JC, one could not say (77a), only (77b):

(77)   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 indeed limited: for example, a VP cannot be found in the specifier of projections for retrospective aspect *jus* (78a,b), progressive aspect *a* (79a,b), or prospective aspect *go* (80a,b):

(78)a.   Im jus nyam i'
   S/he just eat it
     'S/he just ate it'

  b. *Im nyam i' jus

(79)a.   Im a nyam i'
     S/he [+prog] eat it
     'S/he is eating it'

  b. *Im nyam i' a

(80)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* [+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 specifer 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 (81):

(81)   [Intermediate Asp] > [*done* [+completive]] >   VP
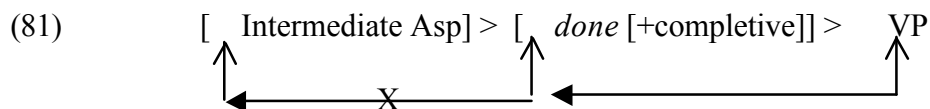
    Indeed, this is confirmed by the example below which overtly illustrates the distribution of this particle [+completive] as used in JC in relation to other inflectional markers:

---

[17] I assume leftward movement of a VP to be possible, in line with Cinque (1999: 190, fn. 26) 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 5.1.

(82) 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 '

(83) Mine! Im **a go done**[18] 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:

(84) 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]. The latter may occur either in a pre- or post- VP configuration, and is only compatible with [-stative] verbs, the former 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 in JC. Consider example (85) below with the verb *nuo*, and the fact that the interpretation in (85a) can be derived, whereas the one in (85b) cannot:

(85) 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)[19] 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 VP-movement hypothesis in combination with 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 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 (86a) and (86b) illustrates:

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[18] 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'*.
[19] In Da Cruz (1995: 368).

(86)a. Im done nuo dat
        S/he done know that
        'S/he already knows that'

    b. *Im [[nuo dat]ᵢ done] tᵢ
        S/he know that done

A single sentence which nicely shows the two separate interpretations of preverbal *done* considered here is given below:

(87)   Im done nuo seh wi done
       S/he [+anterior] know done that we [+completive]
       'S/he already knows that we're finished'

D*one* [+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 Asp 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)".
     Although *aredi* is, more often than not, placed at the end of a sentence (88a-c)[20], it can occasionally be inserted amongst certain of the other markers, as examples (88e-g) illustrate:

(88)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 (88d-f) gives evidence for the structure in (89):

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

Given the respective distributions of *done* [+completive] (84 repeated as 90) and *aredi* [+anterior] with respect to Asp [+prog] (89 above), the projection corresponding to [+anterior] is by transitivity higher in the structure than the one corresponding to [+completive] (91):

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[20] Sentence final *aredi* may possibly be derived through XP movement past this adverb, along the lines of Cinque (1999). I return to this hypthesis in section 5.2.

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

(91) T [anterior] > Asp [+prog] > Asp [+completive]

3.5.5. *Continuative and Frequentative Aspects*

Cinque situates the adverb 'still' and its analogues in other languages 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 modal, and it can also be shown to precede those markers dominated by continuative aspect in Cinque's structure[21]

(92)   Jan wuda/did/mos/kyan > still > a/go chat
          John [Mod1] / T / [Mod2] [Mod3] > still > Asp [prog] Asp [prosp] talk

          Cinque (1999: 207, fn. 51) observes that "(c)ontinuative aspect is found expressed by particles, (…) or (apparently, more often) by reduplication of the verb stem, (cf. Bybee et al. Eds. 1994, 166, who give the Gugu-Yalanji example (93)b, among others):

(93)a. Ko m'ok wiel
          But CONT walk
          'He kept walking'
    b.   yirrka-n-yiirka-y
          keep shouting"

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

(94)   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'

At first sight, repetition of the verb seems to give rise to an interpretation corresponding to continuos aspect.
          Note also that even though progressive aspect is not overtly expressed in the example above, the action referred to by the reduplicated verb is interpreted in the progressive, i.e. non-perfect form. This seems to be a characteristic of continuous aspect: Cinque (1999, 207, fn. 51) underlines that "(s)till (and continuative aspect) appears to be compatible only with non-perfect forms (…)"
          Furthermore, states, continuous by nature, cannot be redefined in terms of continuous aspect:

(95)   John (*continuously) thinks he is the best

---

[21] *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 [+continuative] *still* : *im still done nyam*

If reduplication were an expression of continuous aspect, the fact that stative verbs in JC do not reduplicate would be a natural consequence of the fact that the latter are inherently continuous:

(96)   *Jan nuo-nuo wi business
         John know-know our business

(97)   *Jan tink-tink so
         John think-think so

Whether or not reduplication of the verb in JC directly corresponds to continuative aspect, however, is not so clear-cut: Bailey (1966) 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**' respectively[22]. 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:

(98)   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'

If *still* sits in the Spec of Asp [Continuative], and *a* is the overt realisation of Prog°, then the preverbal copy cannot sit in Asp [Continuative] °.

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

(99)   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, gives evidence for the hierarchy in (100):

(100)   Asp anterior < Asp Continuative < Asp retrospective < Asp progressive <
          Asp prospective < Asp completive < Asp frequentative

3.6.   Hierarchy of TMA markers in JC

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[22] Bold letters are mine.

The relative orders of TMA markers in JC combine to provide evidence for the overall structure in (101):

(101) Mod$_{epistemic}$: *shuda, wuda, maita, mosa, kuda* > T(Past):*did*/T(Future):*wi* > Mod$_{necessity:mos}$ > Mod $_{obligation}$: *hafi* /Mod $_{ability/permission}$: *kyan* > *aredi* Asp$_{Anterior}$ *done1* > *still* Asp$_{continuative}$ > *jus* Asp$_{retrospective}$ > Asp$_{generic/progressive}$: *a* > Asp$_{prospective}$: *go* > *Asp$_{completive}$: done2* Asp$_{frequentative}$: *reduplicated verb*

4. JC AND CINQUE (1999)

4.1. Overt functional structure of JC: evidence for the framework

Cinque's (1999) structure given in (32) is repeated in (1) below with bold letters applied to the evidence drawn from JC as discussed in Chapter 3:

(1) [*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$_{obligation}$:*hafi*** [*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$_{durative}$ [*charcteristically* (?) [? **Asp$_{generic/progressive}$: *a*** [*almost* **Asp$_{prospective}$: *go*** [*completely* ***Asp$_{completive(I)}$: done2*** [*tutto* Asp$_{PlCompletive}$ [*well* Voice [*fast/early* Asp$_{celerative(II)}$ [*completely* Asp$_{SgCompletive(II)}$ [*again* Asp$_{repetitive(II)}$ [*often* **Asp$_{frequentative(II)}$: reduplicated verb** ...

As can be observed in (1) above, the evidence from JC indeed fits harmoniously into Cinque's (1999) structure in 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 future[23], 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 (1), then their mutual exclusion could not be explained in terms of competition for the same position. In light of (1), therefore, the impossible co-occurrence of *did/wi* and *hafi/kyan* in JC remains to be explained. The concepts evoked in the next section may, once developed, provide a means for accounting for these facts.

4.2. Speculations on covert functional structure and markedness theory

It has been observed (e.g. Jakobson (1971)) that language is an articulation of competing forms: forms with marked values, and those with unmarked or 'default' values. Unmarked forms are those which are most widely applicable, and typically associated with zero

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[23] 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 : 72, 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'.

morphology. Marked forms are the less common and more specific of the two, and their use often entails morphological material. For example, a bare noun is typically assigned the unmarked or default value [+singular]. In contrast, if a noun is to be understood as [−singular], it needs to be specifically marked through plural morphology. This section briefly considers the sort of consequences that the application of markedness theory can have on an analysis of functional material in JC, and possibly universally.

Chapter 3 primarily illustrated that the potential overt manifestation of functional clause structure in JC proved compatible with the fixed hierarchy in Cinque (1999) as illustrated by (1). The discussion also underlined that the nature of the verb plays a crucial role in determining the interpretation of many of these functional projections, as well as their potential overt realisation. If one applies a relative rather than absolute notion of markedness, where default values of functional projections could shift as they interact with the lexical core of the clause, then the influence of the [+/-stative] verb on the functional structure may be a consequence of the lexical core of the clause assigning default values to functional projections.

In JC, and perhaps in all languages, functional projections would be allotted a positive or negative value depending on the [+/- stative] quality of the lexical verb. This could potentially explain phenomena such as that in (2): The [+stative] verb *nuo* triggers a positive default value on Asp° [progressive] (2a), and overt material serving to express progressive aspect can be analysed as a redundancy which is banned by the system(2b).:

(2)a.　　　Im nuo dat
　　　　　　S/he know that
　　　　　　"S/he knows that"　　　　i.e. the state of 'knowing' is in progress

(2)b.　　　*Im a nuo dat
　　　　　　S/he [+prog] know that

It would seem then that the insertion of morphological material in a functional projection primarily occurs as a contradiction of the default value of this projection. This follows from the fact that language is an economical system, since it would be somewhat superfluous to overtly specify what is already covertly evident.

Following this reasoning, [-stative] verbs, which assign a negative default value for Asp progressive (3a), combine easily with the progressive aspectual marker (3b):

(3)a.　　　Im nyam di bammy
　　　　　　"S/he ate the bammy" : i.e. the eating is not in progress

(3)b.　　　Im a nyam di bammy
　　　　　　"S/he is eating the bammy"

The idea that the nature of the lexical core of the clause immediately determines characteristics of the functional clausal structure follows logically from the hypothesis that it is the verb which projects the functional structure of the clause as its extended projection.

The default values of functional heads do not seem solely based on their interaction with the lexical core of the sentence, but also on their interaction with other functional heads: the interaction of functional heads amongst themselves could be applied to account for the mutual exclusion of functional particles such as T[+past] and T [+future]:

(4)   *Im did wi nuo dat

If one adopts the structure in (1), then the complementary distribution of *did* and *wi* (4) cannot be accounted for in terms of competition for the same T head. If *did* represents the marked realisation of a positive value on T[past], and *wi* represents the marked realisation of a positive value on T[future], then the incompatibility of these markers may possibly be explained in terms of incompatible simultaneous positive marking of their respective projections. It is as if the marked positive value on T° [past] triggers an obligatory negative value on T[future], expressed solely through absence of morphological material.

A similar approach may be taken to account for the ungrammaticality of (5)

(5)   *Im done [+completive] nuo dat[24]
       'S/he finished knowing that'

If a stative verb such as *nuo* triggers the default positive value on the progressive aspect projection (c.f.2), and the latter in turn triggers the obligatory realisation of a negative value on the completive aspect projection, then it follows that a stative verb can never combine with a marker expressing a positive value for completive such as *done*.

Finally, it is worth noting that with respect to some clausal functional projections, regardless of the nature of the predicate or of other members of the functional level, the default value of the projection is consistent. An illustration of such a consistency is given by modals. For example, along with Cinque (1999 : 128-129), " (f)or the epistemic modal head, I take the case in which the speaker is committed to the truth of the proposition to be the 'default' value. This value is implicit in every statement, and must be otherwise explicitly denied (…) when the speaker does not want to commit himself or herself".

The issue of markedness, if sufficiently developed, could prove relevant for the framework in various respects: The articulation of functional projections attested in JC largely depends on the interaction of these projections with the lexical core and other functional projections of the clause. Language specifically, therefore, relative (rather than absolute) markedness may prove fruitful in accounting for the possible /impossible overt realisation of functional material attested in any one language. On the level of Universal Grammar, an elaboration of the notion of markedness may furthermore uphold the restrictive view that the entire array of functional projections postulated in Cinque (1999) is present in all languages, although no one language has yet been seen to overtly exploit them all. If all these projections are universally structurally present, then this amounts to saying that some must be present covertly, so that their contribution to the overall meaning of any clause would be a consequence of their default values. This paper does not undertake the investigation of these issues, but simply recognises the importance of returning to them in future research.

5. Speculations on IP-internal VP-movement in JC

This chapter returns to the case of the completive aspect marker *done* (section 5.1.) and the adverb of temporal priority *aredi* (section 5.2.) in JC. My goal here will be to try to show that the analysis which proves most satisfactory in dealing with the syntactic behaviour of these elements is one which favours an IP-internal movement of the VP, and of an extended projection of the VP.

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[24] *Done* here obligatorily encodes [Anterior] : 'S/he *already* knows that'.

5.1. **Completive Aspect**

5.1.1. Completive Aspect in JC

As seen throughout this work, TMA markers in JC intervene between the subject and the verb:

(1)   Dem shuda muss   kyan   dw i'
            Subj **Mod1 Mod2 Mod3** VP
            'They should definitely be able to do it'

(2)   Mi did a go say da saim sinting
            Subj **[past] [prog] [prosp]** VP
            'I was going to say that very thing'

(3)   Jan   done   nuo seh im nuh fi gwaan so
            Subj **[anterior]**   VP
            'John already knows that he is not to behave that way'

(4)   Uno jus   done   nyam di bammi?
            Subj **[retrospective] [completive]** VP
            'You all have only just finished eating the bammy?'

In section 3.5.4., it was shown that one marker, namely the marker encoding Asp [completive], behaves differently syntactically with respect to the other markers here considered: *done* [completive] has the distributional particularity of optionally following the VP over which it takes scope[25]:

(5) Uno   jus   nyam di bammi done[26]?
      Subj [retrospective]   VP   **[completive]**
      'You all have just finished eating the bammy?'
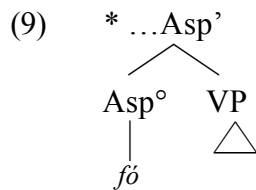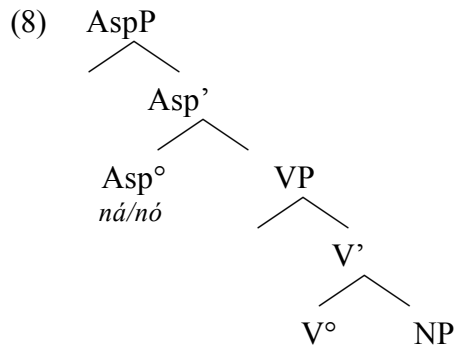
5.1.2. Completive aspect in Fongbè

Analogous patterns related to the completive marker are found cross-linguistically. The African language Fongbè, a Kwa language spoken in Benin, is shown by da Cruz (1995) to use completive markers *fó* and *vò* in a VP-final configuration:

(6) Kòkú wà àzo ó   **fó**
      Kòkú do work DET **finish**
      'Kòkú finished doing the work'

(7) Kòkú kló katake   le   **vò**
      Kòkú wash high stool PL **finish**
      'Kòkú finished washing the high stools'

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[25] It is worth noting that this option is less exploited by the younger generations than pre-verbal *done*.
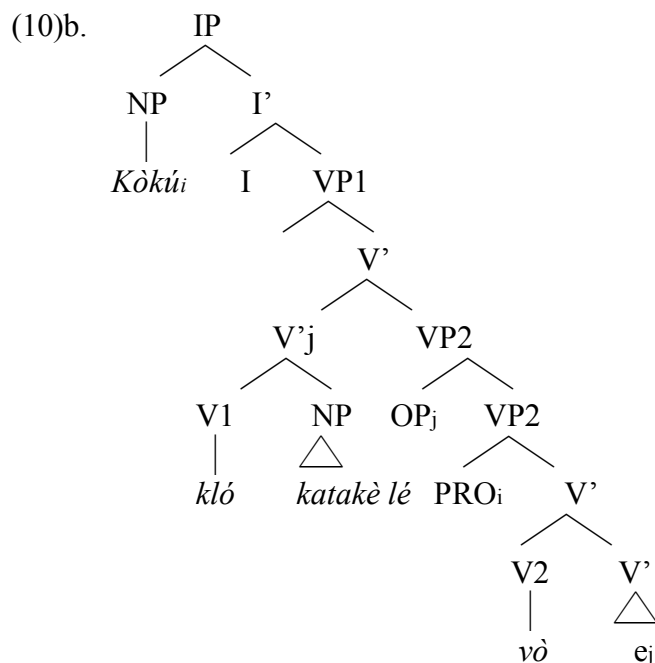
[26] Whether or not there are restrictions on the type of VP which can precede *done* is a topic for future research.

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 (8), and considers this an impossible underlying structure for *fó* and *vò* (9):

(8)   AspP
           Asp'
       Asp°   VP
       ná/nó
                       V'
                   V°   NP

(9)   * …Asp'
       Asp°   VP
         | △
        fó

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 (7), repeated as (10a), is assigned the structure (10b) below:

(10)a. Kòkú kló katake   le   **vò**
        Kòkú wash high stool PL **finish**
        'Kòkú finished washing the high stools'

(10)b.

```
                    IP
                   /  \
                 NP    I'
                 |    /  \
              Kòkúi  I    VP1
                           \
                            V'
                          /    \
                       V'j      VP2
                      /   \    /    \
                    V1    NP  OPj    VP2
                    |     /\       /     \
                   kló  katakè lé PROi    V'
                                         /   \
                                        V2    V'
                                        |     /\
                                        vò    ej
```

Da Cruz (1995) explains his structural 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 that "The analysis of sentences with aspectual verbs *fó* and *vò* as obligatory control constructions has many advantages. The structure in (10b) 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 (11) through (14) below. In both *fó/vò* sentences and serial verb constructions:

(11) "there is only one lexical subject and more than one verb"

(12) "there is only one expression of time and aspect"

(13) one can see that they "only contain one expression of negation"

(14) 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 he 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 constructions[27].

I do not adopt the analysis of da Cruz (1995) in this work, and instead will tentatively propose an analysis along the lines of Cinque (1999) which involves movement[28]. There are various reasons for this choice, which I turn to in the next section. I begin by considering the points in (11) through (14) each in turn below, and trying to show that these properties do not as such determine that *fó* and *vò* are verbs in serial verb constructions rather than aspectual markers. If *fó* and *vò* are indeed markers of aspect, then the particularities of their distribution in the sentence in languages such as JC and Fongbè remain to be accounted for. For the latter point I propose an analysis which deals with the syntactic particularities of such markers in terms of movement of the VP across the completive aspect-head. I base this analysis on an observation of the behaviour of completive aspect in JC, and Guyanese Creole, as well as on the analysis in Aboh (1998) which postulates the presence of IP-internal movement of an extended projection of VP in another Gbe language, namely Gungbe. The VP-movement analysis will be 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.

5.1.3. *An alternative analysis for completive fó and vò in Fongbè*

The observation in (11) 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 following:

(15)   *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 (15). Consider, for example, the contrast between the data in (16a) and (16b,c):

(16)a.Jan a   go   nyam di bammi
       J.   [aspectul verb 1 (progressive)] [aspectual verb 2 (prospective)] VP

(16)b.   *Jan a go Jiemz nyam di bammi
(16)c.*Jan a Jiemz go nyam di bammi

---

[27] 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 hypothsis applied here has implications for a serial verb approach. These implications deserve careful examination which is beyond the scope of this work.
[28] 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.

The contrast in (16) 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 (17a) and (17b):

(17)a. Asíbá ná sá sèn dó hòn ó fó
   Asíbá IRR pass on paint put door DET finish
   Asíbá will finish painting the door'

(17)b.   *Asíbá ná sá sèn dó hòn ó ná fó
   Asíbá IRR pass on paint put door DET IRR finish

However, if (17b) 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 of the same marker twice: In (17b) above, 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 (18b,c):

(18)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 (19) below is assumed to stem from the fact that it is a serial verb construction:

(19)   *Asíbá má sá sèn dó hòn ó má fó
   Asiba NEG pass on paint put door DET NEG finish

However, once again, the ungrammaticality of (19) 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 (20b):

(20)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?'

(20)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 (21) below to be a consequence of its being a serial verb construction which violates a semantic selectional restriction:

(21)   *Kòkú mò Báyì fó
        Kòkú see Báyì finish
        'Kòkú finished seeing Báyì'

Notice, however, that not only lexical verbs, but also markers of aspect commonly show semantic restrictions on the VP they select: recall for example (Chapter 3, section 3.5.2.) that the progressive aspect marker cannot combine with a [+stative] VP:

(22)   *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 above imply necessarily that *fó*/*vò* sentences involve serial verb constructions with obligatory control. Moreover, I believe this analysis has undesirable theoretical shortcomings which I turn to now.

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 (23):

(23)   (Yu nuo wa dat ginal do?)   Im tek mi ackee[29] (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:

(24)   Ajòtó lé xò kãnlìn lé fó
        Thief PL hit animal PL finish
        'The thieves finished hitting the animals'

Da Cruz (1995) explains that the data from Fongbè in (24) 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 (25) taken from Bailey (1966: 42) nicely illustrates:

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

(25)   Jiemz no riid di buk don 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.
        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 DaCruz (1995:372) himself : "(*f*)*ó* 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
(p369)." 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. The example below taken from DaCruz
(1995) illustrates that markers encoding irrealis or habitual aspect select a VP complement
which must surface to their right:

(26)   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 creates 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 (27a,b) just as JC *done* does (28):

(27)a. Fongbé: Kòkú fó 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'

(28) 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 (26) without recourse to control, and lexical verbs in this language also generate their nominal complements to their right(27), 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 *fó* and *vò* is its complement which has simply been generated to the right and has undergone leftward movement. DaCruz (1995) himself touches upon this possible analysis: 'In Fongbè, the NP complement of the verbs *fó/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 will argue to be the case in the next section.

5.1.4. *Towards IP-internal VP-movement in Fongbè and JC*

The VP-movement hypothesis is rejected by da Cruz (1995) for Fongbè for two main reasons: One reason for his rejection of movement of the VP is that "(i)t is impossible to have S-structure sentences like those in (29a,b) in which a VP with a phonological content is on the right of *fó* and *vò*.

(29)a. *Kòkú fó 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 will show 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 (30) and Guyanese Creole (GC) (31) data from Edwards 1991).

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

(31) GC   Somtaim wen you don   wok yu go an bai a dringk
                      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 :

(32) …   AspCompletive
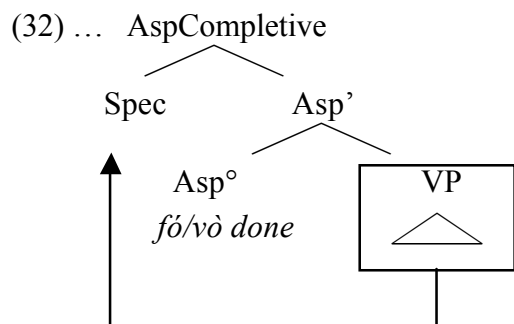
     No additional structure is needed to account for the scope properties of completive constructions under the analysis adopted here: That the completive marker takes scope over the VP which precedes it is a natural consequence of the movement hypothesis since according to the structure in (32) above, the marker encoding completive aspect c-commands the trace of its VP complement.
     Recall that the ungrammaticality of sentences (15), (17b), (19) and (21) 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 (15), (17b), (19), and (21) repeated here as (33), (34), (35) and (36) follow from the structural analysis in (32): Structure (32) 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 (33) through (35):

(33) *Kòkú [Spec AspCompletive wà àzo ó] [**?** Kòkú] [AspCompletive° fó]
          Kòkú do work DET Kòkú finish
          'Kòkú finished doing the work'

(34) *Asíbá ná [Spec AspCompletive sá sèn dó hòn ó] [**?**ná] [AspCompletive° fó]
          Asíbá IRR pass on paint put door DET IRR finish

(35) *Asíbá má [Spec AspCompletive sá sèn dó hòn ó][**?** má] [AspCompletive° fó]
          Asíbá NEG pass on paint put door det NEG finish

     The ungrammaticality of sentence (21) repeated as (36) below follows from feature incompatibility: the VP *mò Báyì:* "see Báyì" does not bear the feature [+completive] and therefore cannot occupy the specifier position of the Completive Projection:

(36) *Kòkú [SpecCompletiveAsp [mò Báyì [–completive]] [CompletiveAsp° fó]
          Kòkú see Báyì finish

'Kòkú finished seeing Báyì'

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.

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.

That this type of movement is plausibly exploited by Fongbè is suggested by the fact that another Kwa language of the Gbe group, namely Gungbe, exploits such IP-internal 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 (37):

(37) Hwé-énenu Asíbá 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 (37) is as follows:

(38)
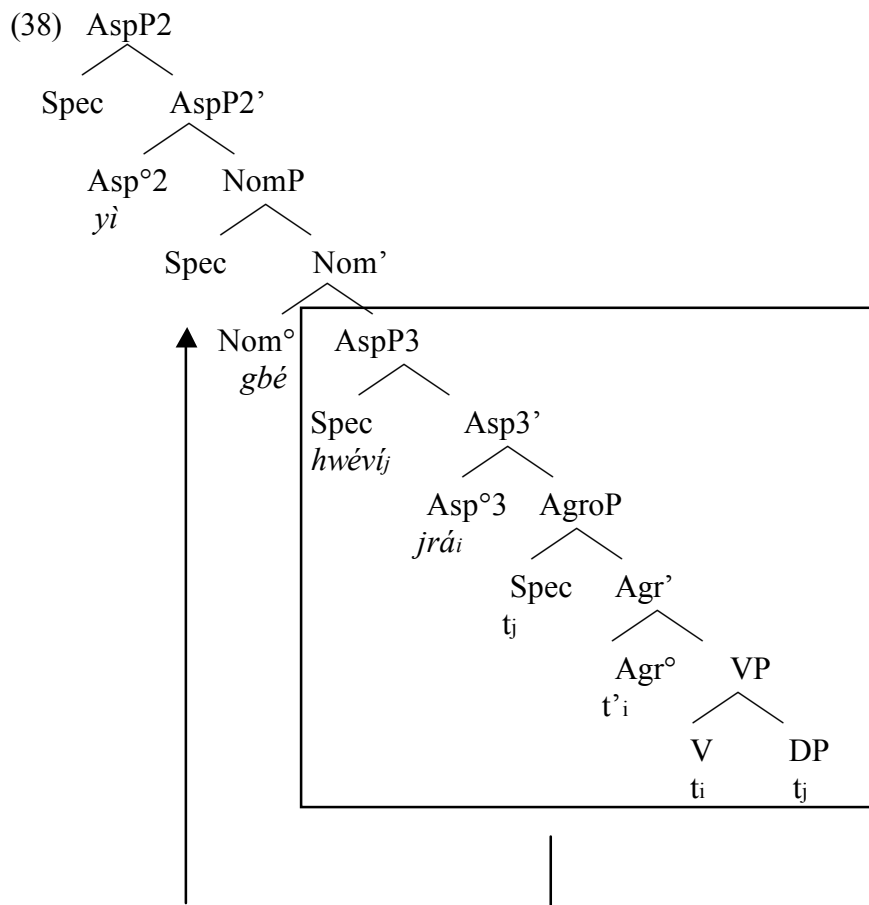
Under the approach in Aboh (1998), aspect verbs like *yì* 'go' select a syntactic unit NomP whose head may be realised by the purpose-marker *gbé*. The internal argument of this marker is a reduced clause: the aspectual projection AspP3. AspP3 is made up of a verb (*jrá* : 'sell') and an object (*hwévi* :fish). The verb undergoes movement through Agr° before landing in Asp°3, and the object moves through [Spec,AgrP] to [SpecAspP3] for the satisfaction of the EPP. 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 in (38) above. *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 nominalization purposes in imperfective constructions, a logical consequence of this movement is that a low tone ` always floats at the end of the sentence[30]:

(39)… tò   [Spec NomP [AspP3 nà   O V]i [Nom° `] ti
        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.

5.1.5. *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 pre-verbal *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-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.

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[30] I refer the reader to Aboh (1998) for details.

5.2. Anterior Tense

5.2.1. *VP (and extensions of VP) movement across Anterior Tense*

In section 3.5.4., I touched upon the syntactic behaviour of the temporal adverb *aredi* in JC. I underlined that "(a)lthough *aredi* is, more often than not, placed at the end of a sentence (40a-c), it can occasionally be inserted amongst certain of the other markers, as examples (40e-f) illustrate:

(40) 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'"

      In footnote 2 of this work, an analysis for sentence final *aredi* was hinted at, although it was not pursued: "Sentence final *aredi* may possibly be derived through XP movement past this adverb, along the lines of (Cinque (1999)". In this section, I return to this hypothesis.
      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. I will touch upon these two analyses below and argue 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) underlines "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.
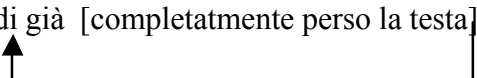   On an empirical level, this approach would fall short in accounting for the fact that the two independently generated adverbs cannot occur simultaneously:

(41) *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:

(42) John **twice** knocked on the door **twice**   (Cinque 1999: 27)

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 :

(43)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 [completatmente perso la testa]

Cinque 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 in section 3.5.4. the relative order between *aredi* [anterior] and *done* [completive] was established as illustrated in (44):

(44) T [anterior] > Asp [+completive]

This accounts for the grammaticality of (45a) and the ungrammaticality of (45b)

(45)a. *Im   aredi   done*[31]   *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:
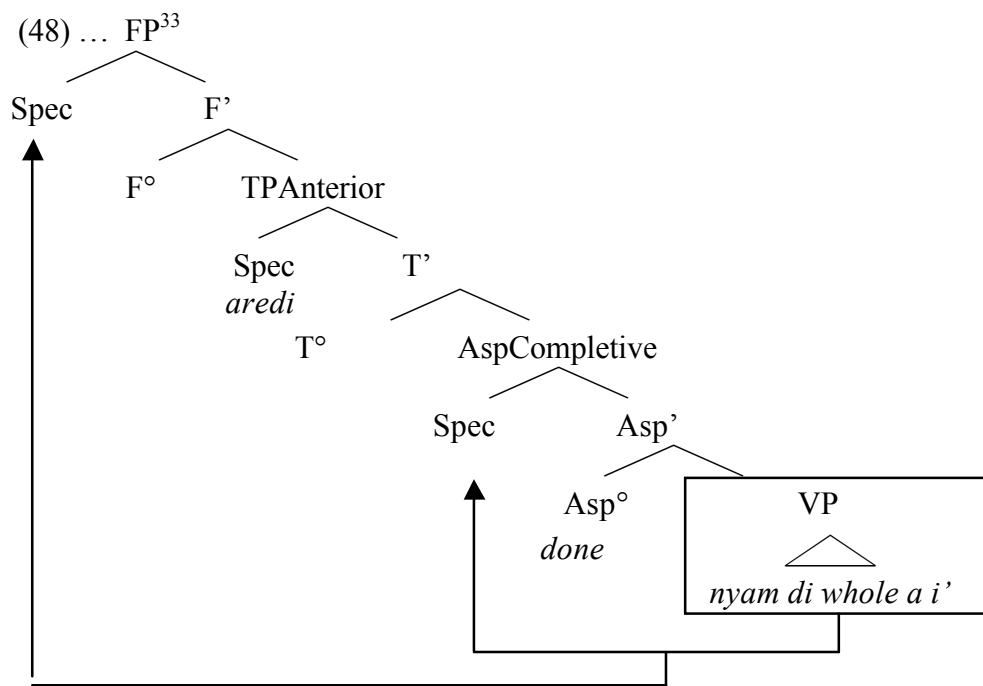
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[31] [Spec,Anterior] *aredi* and Anterior° *done* do not co-occur, perhaps as a reflex of economy.

(46)a. Im **aredi** [**done** nyam di whole a i']

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

Now consider the data in (47) below 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 (47) both *done* and *aredi* follow the VP yet the order established between the two in a pre-VP configuration (44) is subverted:

(47)   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 in section 5.1.4. above however, this can be accounted for: in (47) 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 TPAnterior[32]:

(48) … FP[33]

Spec   F'

        F°   TPAnterior

              Spec   T'
              aredi

                  T°   AspCompletive

                        Spec   Asp'

                              Asp°   VP
                              done
                                     nyam di whole a i'

---

[32] 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 instead of to [Spec,AspPCompletive]. 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,AspPCompletive] 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 (section 5.2.2.) , could then be reserved for the purpose of focussing clause internal adverbs.

[33] Notice that although Anterior° *done* does not license movement of a projection to its specifier, *aredi* does allow movement past it. Investigation as to why this should be so is an object of future research.
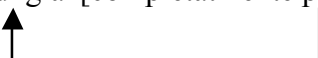
Notice also that the successive movement illustrated in (48) accurately accounts for the scope facts of this sentence: Firstly the VP is interpreted as being in the scope of completive aspect although it is situated on its right at S-structure: what is *completed* is the act of eating something. Since *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 [SpecTPAnterior]: what has *already* taken place is the completion of the act of eating something. Again, since *aredi* c-commands the trace of CompletiveAspP, then it follows that the scope properties evoked here are derived under reconstruction.

5.2.2. *Problem for this analysis of movement*

The syntactic analysis in (48) postulates movement of an extended projection of VP: AsPCompletive, to the specifier of a functional projection FP. The precise nature of the functional projection FP, however, remains to be determined. Cinque (1999) touches on the possibility that this projection be "perhaps created by the movement itself". What can be pointed out is that movement to this projection past TPAnterior here gives rise to a distinct focus on the morphological material in TPAnterior which has been crossed. Consequently, a sentence such as that in (47) is in fact pronounced as illustrated in (49):

(49)   Im nyam di whole a i **done AREDI**
   S/he eat the whole of it [completive] [anterior]
   "S/he finished eating it all ALREADY"

The fact that movement past an adverb gives rise to the focusing of this adverb was also attested for the Italian data in (43) repeated here as (53) for convenience:

(53)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 [completatmente perso la testa]

5.3.   Conclusion

The IP-internal VP-movement hypothesis across CompletiveAsp° based on the framework outlined in Cinque (1999) has been shown in this chapter to allow for a consistent underlying structural apparatus between markers of completive aspect and those of other aspectual markers language-internally as well as cross-linguistically. Meanwhile, this hypothesis accurately captures the particularities of the interpretation and distribution of *done* in JC. Along these lines, IP-internal movement of (an extension of) VP across AnteriorTenseP accounts for the distributional and scope properties of the adverb of temporal priority *aredi*. This chapter therefore highlights the universality of the theoretical approach proposed in Cinque (1999).

6.   CONCLUSION

This study 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 paper 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 clausal 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: Indeed, Chapter 4 (1) illustrates a transparent systematic match between the fixed hierarchy of functional projections postulated by the framework and the rigid order of functional structure in JC. Where this match differs on the surface, the difference can be accounted for in terms of IP-internal movement (Chapter 5). This work upholds, therefore, that the approach provided by Cinque (1999) accurately elucidates universal properties of the functional architecture of the clause.

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