

Verb allomorphy and the syntax of phases

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In a number of French-related creoles a distinction is made between long and short forms of verbs. We argue that the alternation is a reflex of French inflectional morphology that has survived the creolization process, showing that the result is a long-short opposition of verb forms, similar to the formal variation in the learner varieties, and therefore ultimately due to learner strategies in the acquisition of French as a second language. We further discuss the potential role of substrate and argue that the alternation started out as a phonological/prosodic phenomenon (as it basically still is in Haitian Creole). We conclude that the alternation (or verb allomorphy) can be seen as a morphological reflex of the Spell-Out domain at the vP-level.

1. Introduction

In a number of French-related creoles a distinction is made between long and short forms of (some classes of) verbs, as shown in (1) through (3) for Louisiana Creole, Haitian Creole, and Mauritian Creole respectively:

- (1) a. Fo tuzhu kupe zerb-la. (Louisiana Creole)
FO always cut grass-DET
'It's always necessary to cut the grass.'
- b. Fo to kup tuzhu zerb-la.
FO 2SG cut always grass-DET
'You always have to cut the grass.'
- (2) a. Mwen fé kabann lan rapid-rapid maten an. (Haitian Creole)
1SG make bed the fast-fast morning the
'I made the bed very quickly this morning.'
- b. Kabann lan fét rapid-rapid maten an.
Bed the made fast-fast morning the
'The bed was made very quickly this morning.'

- (3) a. Mo pe mǎze. (Mauritian Creole)
 1SG ASP eat
 ‘I’m eating.’
 b. Mo pe mǎz dipen.
 1SG ASP eat bread
 ‘I am eating bread.’

This paper deals with the following issues:

- (4) a. where does this alternation come from?
 b. what are the grammatical underpinnings of this alternation?
 c. where do these underpinnings come from?
 d. theoretical implications.

I argue that the alternation is the reflex of French inflectional morphology that survived the creolization process, showing that the result is a long-short opposition of verb forms, much akin to the formal variation in the learner varieties, therefore ultimately due to learner strategies in the acquisition of French as a second language (Section 2). The alternation is shown to correlate with syntactic properties. Interestingly, the syntactic correlate differs in (almost) each French creole. Thus, as we show in Section 3, it correlates with the finiteness of the verb in Louisiana Creole (Rottet 1992). In Haitian Creole as well as Mauritian Creole, on the other hand, it has been argued to depend on the theta-theoretic status of the phrase following the verb, basically argument vs. adjunct (DeGraff 2001; Seuren 1990; Sycia 1992). Whereas the factor determining the grammatical underpinning of this alternation might come from the superstrate language in the case of Louisiana Creole (see Becker & Veenstra 2003 for arguments that only late adstrate influence is involved here), superstrate influence cannot account for the other pattern. Therefore, it can only be due to either substrate influence or universal processes in creolization. We discuss the potential role of substrate influence in Section 4. In the rest of the paper we mainly focus on the pattern as found in Mauritian Creole. We argue that the alternation started out as a phonological/prosodic phenomenon (as it basically still is in Haitian Creole). We propose that Mauritian Creole has gone one step further than Haitian Creole and has grammaticalized the long/short alternation to only superficially mark the argument/adjunct distinction. We argue that the form of the verb is determined at each Phase (Chomsky 2001). If the verb ends up in the final position of a Phase, it will be spelled out in the long form. Two contexts are identified where this occurs: (i) when the internal argument has undergone leftward movement; (ii) when there is no internal argument. Adjuncts, on the other hand, are merged after completion of the Phase, and therefore do not induce the short form. Thus, the alternation (or verb allomorphy) can be seen as a morphological reflex of the Spell-Out domain at the vP-level.

2. Second language acquisition

There is general agreement in SLA that verbal morphology constitutes a major acquisition problem for adult learners (Meisel 1994; Prévost & White 2000; Schlyter 2002). The following presentation of the acquisition of verbal morphology in French learner varieties is based on the findings of the ESF-project “Second Language Acquisition of Adult Immigrants” (Klein and Perdue 1992, 1997; Dietrich, Klein, and Noyau 1995; Starren 2001). The study included L2 learners of French whose L1s were Moroccan Arabic and Spanish.

In untutored L2 acquisition learners have to segment and analyze the lexical and functional information encoded on the verb mainly on the basis of oral input. The learners’ task is especially difficult in the acquisition of French for two basic reasons. First, there are a number of homophonous forms that carry different values (e.g., tense, aspect, mood, person, and number). Second, relevant functional information is often encoded in a preverbal cluster consisting of an auxiliary and one or more clitic pronouns, which is in most cases perceived as a single prosodic unit (Dietrich et al. 1995). We limit the discussion to the first problem area. The distinction of morphological variants of a verb has been retained in the orthographic representation of French, but the number of audibly distinctive forms in colloquial French is severely reduced (Harris 1987). This can be illustrated by the present indicative forms of the class of -er verbs, exemplified by the verb *parler* ‘to speak’. The majority of French verbs belongs to this conjugation class, as shown in (5):

(5)	1SG	je parle	/parl/
	2SG	tu parles	/parl/
	3SG	il/elle parle	/parl/
	1PL	on parle	/parl/
	1PL	nous parlons	/parlõ/
	2PL	vous parlez	/parle/
	3PL	ils/elles parlent	/parl/

There is no audible contrast between the singular forms and the third-person-plural form. Furthermore, the unambiguous first-person-plural marking -ons/õ is rare in casual speech as the function of the subject pronoun *nous* ‘we’ has largely been taken over by the originally impersonal pronoun *on* (literally ‘one’). As a consequence, only the second-person-plural form is distinctive. The same holds by and large for the other verbal paradigms of French (Veenstra 2003).

As can be seen in the paradigm in (5), the verb appears either in the root form or with a final /-e/. The latter form has two more functions. First, it serves as an infinitive that appears, for instance, in frequently used periphrastic verb constructions including ‘*je viens de parler*’ (literally ‘I come from speaking’, ‘I just spoke’) or ‘*je vais parler*’ (‘I am going to speak’). Second, it carries the value of a past participle that is required in French in a broad range of compound verb constructions like the *passé composé*

(e.g., 'j'ai parlé, literally I have spoken, 'I spoke'). Thus, a form like /parle/ can have the following functions:

- | | | | |
|-----|---------|-------------|------------------------|
| (6) | /parle/ | vous parlez | 2PL present indicative |
| | /parle/ | parlé | past participle |
| | /parle/ | parler | infinitive |

The conclusion is that the multifunctionality of a single form confronts the learner with a serious problem in form-function-assignment. In the remainder of this section we discuss how the learners of the ESF project cope with this problem.

In the Basic Variety of both the Moroccan and the Spanish learners, verbs mainly appear in two formal variants with respect to their endings: as a short form V-/i/ or as a long form V-/e/. Some verbs show up in both forms but the variation does not have any functional value. The same observation has been made for Swedish-speaking learners of French (Schlyter 2002):

- (7) a. et après la-dame l'autre /lerogard/ la-dame le-volur
and after D-lady D.other look D-lady D-thief
- b. et après charlot /irogarde/ la-dame
and then Charly look D-lady
(Klein & Perdue 1992:242, 243)
- (8) a. la police /jer/ à-la-fille (...)
D-police look.for-D-girl
- b. et après (...) la-dame /ele(er)e/ à-la-maison
and then D-lady look.for-D-house
(Klein & Perdue 1992:238, 247)
- (9) a. tous les deux après /ipart/ à-la-campagne
both of them then depart to-D-countryside
- b. /leparti/ tou les deux à-la-campagne
depart both of them to-D-countryside
(Klein & Perdue 1992:247)

The variation in the forms is not motivated by person or number marking. The examples in (7) and (8) all have a third person singular subject, but the examples in (9) have a third person plural subject. It can also be excluded that the different forms express a temporal contrast. In the following examples, the same form refers to states/events situated in the present (10a), the future (10b) and the past (10c):

- (10) a. et maintenant /rest/ la-France la-femme
and now live D-France D-wife
- b. /ileparti/ le-maroc et après /res/ la-dame du maroc
depart D-Morocco and then stay D-lady from Morocco

- c. le-maroc; /res/ le-maroc avec les enfants
 D-Morocco; stay D-Morocco with D-children
 (Noyau et al. 1995: 162–164)

The examples illustrate a general trait of the Basic Variety: temporal relations are not expressed by means of inflectional morphology (cf. Dietrich et al. 1995; Klein & Perdue 1997). Starren (2001) shows that the verb suffix *-e* is not the context that shows acquisitional progress. Instead, the overt marking of temporal information etc. emerges on a newly created protoauxiliary:

- (11) SUB AUX V- $\{\emptyset, e\}$

We propose that at this stage in the creolization process a target shift takes place from French to the Basic Variety (see Becker & Veenstra 2003 for details). The proto-auxiliary can be seen as the fore-runner of the TMA system. It functions as a kind of bottleneck where the different continuities (from the superstrate as well as substrate languages) pass through on their way into the creoles.

In summary, we can say that at the stage of L2 acquisition identified as the Basic Variety the learners' output exhibits formal variation in the verb forms, but they do not have attached to it the functions found in the target language. In essence, there exists formal variation without functional differentiation, i.e. the co-existence of various morphological forms without appropriate functions. Within such a highly variable system, there are two possibilities: either you get rid of this functionless variation, or you use and reinterpret it. As we show in the next section, both options can be found in the different French-related creoles.

3. Long/short opposition in French-related Creoles

Corne (1999:132) observes that verb forms in the Lesser Antillean Creoles (the different varieties as spoken in Guadeloupe, Martinique, St. Lucia, Dominica, a.o.) are invariable, and what little variation there is has no semantic correlates. In a number of other creoles, however, the long/short opposition have survived. It basically comes in two guises: (i) in some creoles, it is a Tense distinction (present/past); (ii) in other creoles, there is a context-sensitive rule that deletes the *-e* when the following element is selected by the verb.

The first pattern is found in Louisiana Creole. As Neumann (1985) and Rottet (1992) show, long and short verb forms have different temporal/aspectual (TMA) interpretations. The short form occurs in the (habitual) present, the second person imperative and in the complement of 'fo' (a predicate derived from 'il faut que' 'it is necessary that':

- (12) a. Sop-la frem a sez-er.
 Shop-DET close at six-o'clock
 'The shop (always) closes at six o'clock.'
- b. Sop-la freme a sez-er.
 Shop-DET close at six-o'clock
 'The shop closed at six o'clock.'

In addition to this interpretative difference, the long/short opposition also correlates with V-to-I movement:

- (13) a. Mo pa monzhe/*monzh. Negation Placement
 ISG NEG eat (Rottet 1992:268)
 'I did not eat.' OR 'I have not eaten.'
- b. Mo monzh/*monzhe pa.
 ISG eat NEG
 'I don't eat.'
- (14) a. Fo tuzhu kupe/*kup zerb-la. Adverb Placement
 FO always cut grass-DET (Rottet 1992:266)
 'It is always necessary to cut the grass.'
- b. Fo to kup/*kupe tuzhu zerb-la.
 FO 2SG cut always grass-DET
 'You always have to cut the grass.'

An additional argument for the correlation between the long/short opposition and V-to-I movement is the incompatibility of short forms and preverbal TMA markers. If these markers are present, only the long form can surface:

- (15) Le klosch ap sone/*son aster. TMA marker
 DET bell ASP ring now (Rottet 1992:267)
 'The bells are ringing now.'

Thus, we arrive at the following structures for Louisiana Creole.

- (16) a. [TP DP V-Ø [VP <V> DP]]
 b. [TP DP [VP V-e DP]]

The second pattern is found in Haitian Creole and Mauritian Creole. The broad generalization that emerges from the studies of Corne (1981), Seuren (1990), Baker & Syea (1991), and Syea (1992) on the long/short opposition in Mauritian Creole, is that verb syncope applies whenever the verb in question is followed by some material of its own VP. Elements that induce this rule of syncope include direct objects, indirect objects, measure phrases, selected adverbials, etc. The relevant factor is argumenthood. Arguments induce the short form, adjuncts the long one:

- (17) a. Pyer ti manz/*manze min. [Theme]
 Peter TNS eat Chinese.noodles
 'Peter ate Chinese noodles.'
- b. Pyer ti manze/*manz Rozil. [Locative]
 Peter TNS eat Rose-Hill
 'Peter ate at Rose-Hill.'

If Locatives are arguments, the short form appears, as in (18):

- (18) Pyer ti al/*ale Rozil. [Locative]
 Peter TNS go Rose-Hill
 'Peter went to Rose-Hill.'

The application of this syncope-rule is post-syntactic. If the object of a verb undergoes wh-movement, the verb spells out as the short form, exemplified in (19):

- (19) Question: Ki Pyer ti manze/*manz?
 What Peter TNS eat
 'What did Peter eat?'
- Answer: Pyer ti manz/*manze dipen.
 Peter TNS eat bread
 'Peter ate bread.'

Thus, we arrive at the following structure for Mauritian Creole:

- (20) a. [TP DP [VP V-Ø XP_{ARG}]]
 b. [TP DP [VP V-e (XP_{ADJ})]]

DeGraff (2001) summarizes the pattern for Haitian Creole as follows. The long verb-form shows up when the object of a verb is questioned, or the verb is the last overt element in the VP. The short verb-form appears when the verb is followed by its complement. Thus, Haitian Creole has a pattern reminiscent to that of Mauritian Creole. But there are reasons to believe that they are not (necessarily) identical. Factors that complicate the picture in Haitian Creole are: (i) the status of the object: full NPs, but not pronominal objects, induce the short form; (ii) emphasis which disfavors the occurrence of the short form; (iii) there appears to be variation among the different dialects of Haitian Creole. In Mauritian Creole, on the other hand, the distribution of the long and short forms is categorial and not subject to dialectal variation.

Whereas the factor determining the grammatical underpinning of this alternation might come from the superstrate language in the case of Louisiana Creole (see Becker & Veenstra (2003) for arguments that only late adstrate influence is involved here), superstrate influence cannot account for the other pattern. Therefore, it can only be due to either substrate influence or universal processes in creolization.

4. Conjoint/disjoint opposition in Bantu languages

The long/short alternation in Mauritian Creole is reminiscent of the conjoint/disjoint (CJ/DJ) distinction in Bantu languages (Meeussen 1959; Creissels 1986). Speakers of Bantu languages have been argued to be part of the substrate group for Mauritian Creole. Setting aside potential problems involved in the precise determination of the relevant substrate language due to the absence of precise demographic evidence, (e.g. who, when, from where, see Arends 2007 for a recent assessment of some of the difficulties involved in socio-historic research on contact languages in general), Makhuwa, Yao, Mwera and Bemba are among the Bantu languages that have been suggested (see Baker & Corne 1986).

The CJ/DJ distinction refers to verb allomorphy found in some tense-aspect paradigms that is conditioned by the verb's relation to other elements in the clause. The DJ-form is obligatory used when the verb is clause-final, while the CJ-form needs some clause-internal constituent to follow the verb. Thus, in Kinyarwanda the CJ-form cannot occur in intransitive contexts (21d). The presence vs absence of the DJ-form here marks an aspectual distinction (habitual vs nonhabitual), compare (21a) and (21c):

- | | | | | | |
|------|----|---------------------------------------|------------|----|--------------------|
| (21) | a. | A-kora | mu-mulimá. | CJ | Kinyarwanda |
| | | AGR-work | LOC-farm | | (Cadiou 1985:65f.) |
| | | 'She works on the farm.' | | | [habitual] |
| | b. | A-ra-kóra. | | DJ | |
| | | AGR-DJ-work | | | |
| | | 'She is working/about to work.' | | | |
| | c. | A-ra-kóra | mu-mulimá. | DJ | |
| | | AGR-DJ-work | LOC-farm | | |
| | | 'She is working/at work on the farm.' | | | [non-habitual] |
| | d. | *A-kora. | | CJ | |
| | | AGR-work | | | |

The CJ/DJ opposition is considered a classic topic in Bantu linguistics, and its description, characterization, analysis and explanation is still one of the most vexing problems. There appears to be a bewildering amount of variation among the different languages (cf. Schadeberg 2004 for an overview). Thus, Meeussen (1959:251) notes for Kirundi that it marks a thematic/categoric distinction:

- | | | | | | |
|------|----|------------------------------|------------|---------|----|
| (22) | a. | Imuúngu | zi-rya | ig0ti. | CJ |
| | | 9.termite | 9-eat | 11.door | |
| | | 'The termite eats wood.' | | | |
| | b. | Imuúngu | zi-ra-rya' | uruugi | DJ |
| | | 9.termite | 9-DJ-eat | 11.door | |
| | | 'The termite eats the door.' | | | |

Creissels & Robert (1998), on the other hand, argue that the distribution of the DJ and CJ forms are the result of the interplay between structural and information-structural factors, schematically summarized in (23) and exemplified in (24) for Setswana:

- (23) $V_{\text{CONJOINT}} \quad X \quad || \quad [X = \text{part of clause \& (part of) Rheme} \sim \text{COMMENT}]$
 $V_{\text{DISJOINT}} \quad || \quad X \quad [X = \text{post-clausal \& Theme} \sim \text{TOPIC}]$
- (24) a. Mphó ó-tsámaile. DJ Setswana
 ‘Mpho_{THEME} has gone.’ (Creissels 1996; McCormack 2006)
 b. ó-tsámaile Mphó. DJ
 ‘He has gone, Mpho_{THEME} that is.’
 c. Gó-tsámailé Mphó. CJ
 ‘There has gone Mpho_{RHEME}’ [locative inversion to focus subject]

Another line of research links the opposition to Focus. Givón (1975) and, more recently, Ndayiragije (1999) and Güldemann (2003), have all argued that it is directly related to Focus. The verb appears in the CJ-form if the element immediately following the verb is in focus:

- (25) a. Ba-ya-dlal-a phandle DJ Zulu
 1.SBJ-ya-play-FV outside (Buell 2006)
 ‘They’re playing outside.’
 b. Ba-dlal-a phandle CJ
 1.SBJ-play-FV outside
 ‘They’re playing OUTSIDE.’

Interestingly, the only Bantu language that has been mentioned as a possible substrate language of Mauritian Creole, and for which we found reliable data, is Makhuwa (van der Wal 2006). According to her description, there is a strong correlation with Focus:

- (26) a. The verb appears in its conjoint form when a focal element occupies the Immediate After Verb (IAV) position;
 b. The verb appears in its disjoint form when the IAV position is empty.

As shown in the previous section, the long/short opposition in Mauritian Creole is related to the argument/adjunct distinction, and not to Focus. Thus, the following example can be an answer to the out-of-the-blue question ‘What happened?’, showing that Focus on the object is not involved:

- (27) Pyer ti manz dipen. (Mauritian Creole)
 Peter TNS eat bread
 ‘Peter ate bread.’

Buell (2006) has also argued against the Focus-analysis on the basis of Zulu. He discusses two different Focus-analyses. The first type is the analysis as proposed by van der Wal (2006) for Makhuwa:

- (28) THE POSTVERBAL TERM FOCUS HYPOTHESIS (Creissels 1996)
 The element following a conjoint form is in focus, while the element following a disjoint form is not in focus.

Evidence against this analysis comes from broad focus contexts. Although the object in the answer in (29) is not in focus, the verb still appears in the CJ-form:

- (29) Question: Kw-enzek-e-ni? CJ Zulu
 17.SBJ-sing-FV-what (Buell 2006)
 ‘What happened?’
 Answer: Ngi-cul-e i-ngoma CJ
 1s.SBJ-sing-FV DET-9.song
 ‘I sang a song.’ [no focus on the object]

The other type of analysis has been advanced by Güldemann (2003):

- (30) THE VERB FOCUS HYPOTHESIS
 The verb appearing in a disjoint form is in focus, while a verb appearing in a conjoint form is not.

Buell (2006) shows that focused verbs in Zulu can occur in the CJ-form:

- (31) A-ngi-dans-i kahle, kodwa ngi-cul-a kahle. CJ
 NEG-1s.SBJ-dance-FV well but 1s.SBJ-sing-FV well
 ‘I don’t dance well, but I sing well.’ [verb focus]

The conclusion is that in Zulu there is no strict correlation with Focus. Buell (2006) argues that the CJ/DJ distinction relates to different phrase structure configurations, a proposal at least going back to van der Spuy (1993), and reminiscent of Creissels & Robert (1998) (see (23) above):

- (32) a. [V_{CONJOINT} X]_{AgrSP} (Y)
 b. [V_{DISJOINT}]_{AgrSP} (X) (Y)

If a constituent is adjacent to the verb in the AgrSP-domain, it surfaces in the CJ-form, otherwise the DJ-form is chosen.

In summary, we have seen there is considerable variation between the different Bantu languages with respect to the CJ/DJ alternation. There does not seem to be a direct parallel in any of the Bantu languages with Mauritian Creole, only a partial one at best. In Zulu, there is an adjacency requirement between the verb and an object in a certain domain, reminiscent of the pattern in Mauritian Creole. Two remarks are pertinent here: (i) the adjacency in Zulu is in derived positions, not in base-generated

positions; (ii) the adjunct/argument distinction does not play a role. In Mauritian Creole, on the other hand, there has to be adjacency between the verb and its argument within the VP domain, since it does not have V-movement (Adone 1994). In Makhuwa, one of the substrate languages of Mauritian Creole, the CJ/DJ opposition is closely linked to Focus, unlike Mauritian Creole. Thus, the grammatical underpinnings of the alternation in Mauritian Creole and the Bantu languages, Makhuwa in particular, is just not similar enough to enable us to come up with a realistic scenario on the emergence of the long/short opposition in Mauritian Creole in terms of substrate influence.

5. Phonological origin of the alternation and phase syntax

Neither superstrate nor substrate influence seems to have played an important role in the emergence of the grammatical underpinning of long/short alternation. The superstrate language only provided the raw material. The role of the substrate languages seems to be even less important. On the other hand, we argued in Section 2 that universals of second language acquisition have played an important role in the emergence of the long/short alternation. The enslaved population consisting of second-language learners picked up a phonetic alternation from the input (superstrate language) without the appropriate functions. We have shown that in Basic Varieties of French we find a similar situation. The acquisition of the form precedes the acquisition of the function. Whereas beyond the Basic Variety, learners seem to eventually converge on the properties of the target language (French), this has not happened in the case of the French-related creoles. At the moment that the superstrate language stopped playing an important role as the target language in the colonial setting (target shift from superstrate language to the Basic Variety thereof, Baker 1990; Becker & Veenstra 2003 for details), the alternation began to lead its own life, but in essence was only a highly variable pattern of phonetic/phonological variation.

We propose that the ultimate origin of the alternation lies in its phonological nature. A number of studies have shown that semantic factors play an important role in phonological phrasing, especially argument/adjunct asymmetries (Gussenhoven 1983, 1992; Selkirk 1984; Uhmann 1991; Winkler 1997; etc.). If a head-argument structure is in focus, accent can be realized on the argument only, but if a head-adjunct structure is in focus, accent must be realized on the head and the adjunct (examples from German):

- (33) a. Hans ist [VP [im Zelt] [V geblieben]]_F argument
 (Hans ist) (im Zélt geblieben)
 ‘Hans stayed in the tent.’
- b. Hans hat [VP [im Zelt] [VP geraucht]]_F adjunct
 (Hans hat) (im Zélt) (geráucht)
 ‘Hans smoked in the tent.’

The head-argument configuration constitutes a phonological phrase, whereas the head-adjunct configuration does not. We could interpret this for French-related creoles as follows. If the verb receives the accent, it surfaces in the long form, otherwise the short one surfaces. This captures the distribution of the long and short form:

- (34) a. V ARG [V ARG] (V ARG*) short form of V
 b. V ADJ [V] [ADJ] (V*) (ADJ*) long form of V

The pattern as exhibited by Haitian Creole can be taken strong evidence for such a direct relationship between accent placement, argument/adjunct asymmetries and the long/short alternation. As DeGraff (2001) shows, prosodic factors play an important role in the long/short alternation in Haitian Creole. Thus, full NPs induce the short form, but not pronominal objects. The latter are phonological clitics and cannot receive the accent, therefore, the accent must be realized on the verb, hence the long form has to surface. Furthermore, emphasis disfavors the occurrence of the short form. The pattern of Mauritian Creole is different in one important respect: here prosodic factors do not seem to play a role.

We, therefore, propose that Mauritian Creole has gone one step further than Haitian Creole and has grammaticalized the long/short alternation to only superficially mark the argument/adjunct distinction. In particular, we argue that the form of the verb is determined at each Phase. We hereby follow recent proposals by Chomsky (see Chomsky 2000, 2001, 2005) in assuming that the syntactic derivation is split up into Phases, where each phase is identified by a particular category that is merged (little *v*, C and D have been argued to be the relevant categories). On the construction of each phase, the complement of the phasal head is spelled out, so it is this category that is interpreted by the A-P component of the grammar.¹ If the verb ends up in the final position of a Phase, it will be spelled out in the long form. Two contexts are identified where this occurs:

- i. when the internal argument has undergone leftward movement, as in (35d);
- ii. when there is no internal argument, as in (35a). Adjuncts, on the other hand, are merged after completion of the Phase, and therefore do not induce the short form (35b):

Spell-out @ *v*-Phase

- (35) a. Mo pe mǎnze. long form intransitive V [*v*P *v*+V]
 b. Mo pe mǎnze Rosil long form V+ adjunct [*v*P *v*+V]
 c. Mo pe mǎnz dipen short form V+ object [*v*P *v*+V DP]
 d. Ki Pye ti mǎnze? long form V+ wh-object
 [*v*P WH [*v*P *v*+V <WH>]

1. See Adger (2006) and Legate (2003) for more details.

When the vP-Phase plays such an important role in the long/short alternation, the question arises whether we also see such effects at other Phase edges, e.g. the CP-Phase. The following data indicates that this is indeed the case. If the embedded is a full CP (36a) or an embedded full infinitive (36b), the matrix verb surfaces in the expected long form. These Spell-Out domains have been sent out to the A-P interface and do not count anymore in the derivation. Embedded bare infinitives, on the other hand, have not been sent off yet (due to the missing CP-level), therefore are still syntactically active and induce the short form, as in (36c):

- (36) a. Mo pāse ki zot pu vini dime. (Syea 1992)
 1SG think that 3PL MOOD come tomorrow
 'I think that they will come tomorrow.'
- b. Mo pa kone kuma pu eksplik tua sa.
 1SG NEG know how FOR explain 2SG DEM
 'I don't know how to explain this to you.'
- c. Zot kon kwi dipen.
 3PL know bake bread
 'They know how to make bread.'

The long/short alternation in Mauritian Creole can then be best analysed as a morphological reflex of a Spell-Out domain at the Phase level. As such, it can be construed as an argument in favour of the Multi-Spell-Out architecture of Uriagereka (1999).

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