On the status of wh-chains with a spelled-out foot

NÉLIA ALEXANDRE

Abstract

The syntax of wh-questions has been largely investigated for several languages, basically focusing on their movement operations. In this paper I resort to wh-questions in Cape Verdean Creole (CVC) to illustrate a further syntactic aspect of these constructions, namely, the formation of resumptive and defective wh-chains. I suggest that these two chains are distinct from one another and, digging into their formal properties and assuming Boeckx's (2003) theory of resumption, I argue for a movement analysis of defective wh-chains.

1. Introduction

Languages are known to diverge w.r.t. wh-questions formation, for this is a field with substantial variation. Creole languages, specifically, also display several fronting strategies with independent formal properties from one another[1]. The goals of this paper are twofold. First, I will present a (brief) description of the strategies exhibited in Cape Verdean Creole (variety of Santiago, hereafter CVC) to form wh-questions. This description will allow me to distinguish resumptive wh-chains from defective wh-chains. Second, I intend to argue for a movement analysis of defective wh-chains within the framework of the Copy Theory of Movement and embracing Boeckx's (2003) proposal.

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[1] See Muysken (1977 and 1980), for Papiamentu, Veenstra & den Besten (1995), for Haitian, Jamaican, Krio and Saramaccan, Alexandre (2007), for Capeverdean Creole, and Holm & Patrick (2007), for a comparison between 18 Creole languages of different lexical bases, a.o.

2. Fronting strategies for wh-questions in CVC

When forming wh-questions, CVC exhibits three strategies that yield different non-trivial chains. The (null) gap strategy [wh … ∅] applies to questioned Subjects (SBJ) and Direct Objects (DO), as in (1), and it leaves at the foot of the chain a non-spelled out trace of the moved element *kenha*/*ki librus* 'who/which books'.

(1) a. [DP/SBJ Kenha]ᵢ ki ~~[kenha]ᵢ~~ fla   ma kel   mininu-li
          who   that   say(PFV) that DEM boy-PROX
          e   runhu?
          be   bad[2]
          'Who said that this boy is bad?'
     b. [DP/DO Ki librus]ᵢ ki   Djon   kunpra   ~~[ki librus]ᵢ~~?
          which   books   that   Djon   buy(PFV)
          'Which books did John buy?'

A resumptive strategy is available whenever a wh-question involves a non-
-trivial chain [wh … es], as in (2). This strategy occurs exclusively in syntactic islands, and the pronominal form *es* 'them' obligatorily agrees in number with the questioned element *ki mudjeris* 'which women'[3].

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[2] The glosses used here follow the instructions of "Leipzig Glossing Rules: conventions for interlinear morpheme-by-morpheme glosses" (2004), in (http://www.eva.mpg.de/lingua/pdf/LGR04.09.21.pdf), according to which:

DEM = demonstrative	NEG = negation	PROX = proximal
DIST = distal	PFV = perfective	SBJ = subject
DO = direct object	PL = plural	SG = singular
IPFV = imperfective	POSS = possessive	1,2,3 = person

[3] Two of my informants (out of ten) seem to accept *el* inside syntactic islands, judging as grammatical a sentence as *Ki mudjeris ki dja bu atxa un omi ki papia ku-el?* (cf. (2) in the text). Such a fact led me to propose in the course of my investigation (2007: 49) that, in CVC, these questions involved no wh-movement and that there was two distinct kinds of resumption: one ending with a invariable pronoun (*el*) and the other filling the foot of the chain with a variable (*es*) pronominal form. A more fine-grained analysis of my corpus, eliciting the same data to more three new informants and observing their judgments of other wh-constructions, showed me that (i) the new informants found ungrammatical the presence of an invariable pronoun *el* in syntactic islands, and (ii) the two informants who accepted it systematically rejected resumption with a variable pronoun, even in restrictive relative clauses (construction in which the resumptive strategy is widely employed). I cannot explain this behavior in a definite way, for the judgment task should be extended to more informants in order to see if there is a group that behaves in this manner, opposed to the group that distinguishes the use of *el* from *es*. At this stage, I can only suggest that the grammar of those two informants does not seem to have resumptive *es* in its array of pronouns.

(2) [Ki   mudjeris]$_i$ ki   dja   bu   atxa   (Complex NP Island)
     which women   that already 2SG   find(PFV)
     [$_{DP}$ un omi [$_{CP}$ ki   papia   ku-[es/*el]$_i$]]?
     a man   that talk(PFV) with-3PL/3SG
     Lit.: 'Which women is that you found a man that talked with them?'

CVC disposes of a third strategy, that I will first call 'pronominal', which consists of spelling out a 3SG pronoun after a preposition, irrespectively of the number marking on the fronted element, yielding a non-trivial chain [wh … el], as (*ki mininas$_i$ … el$_i$*) in (3).

(3) [$_{DP}$ Ki mininas]$_i$ ki   bu   papia   [$_{PP/OBLNucl}$ ku-[el/*es]$_i$]
     which girls   that 2SG   talk(PFV)   with-3SG/3PL
     na festa?
     in party
     Lit.: 'Which girls is that you talked with him in the party?'
     'Which girls did you talk to at the party?'

This last strategy will be the standpoint of this paper for two main reasons. First, it has been described within the resumptive strategy, not being distinguished from the chain [wh … es]. Second, some properties of the 'pronominal' strategy seem to refute the Copy Theory of Movement.

In the following sections I will present some characteristics of the 'pronominal' strategy of CVC in order to discuss whether this strategy is a kind of resumption or not, and to review some aspects of the theoretical framework that, within the Minimalist Program, accounts for wh-movement constructions.

3. The 'pronominal' strategy of CVC

To form wh-questions using a 'pronominal' strategy is not an idiosyncrasy of CVC. In fact, the strategy is attested in other Portuguese-based Creoles, as Santome (spoken in the island of São Tomé), as well as Vata, Edo, Palauan, Irish, Hebrew, a.o.

(4) [Kê   inen   mwala]$_i$ ku   Zon fla   ku   Santome
     which 3PL   woman   KU   Zon say   that
     bô   fla   ku-[ê]$_i$?
     2SG   talk   with-3SG
     Lit.: 'Which women is that Zon said that you talked with him?'
     'Which women did Zon say you talked to?'   (Tjerk Hagemeijer, p.c.)

Nevertheless, this strategy does not occur in Portuguese, and therefore must not be taken as a transfer from the Portuguese grammar into CVC.

(5)   *[Que   escolas]$_i$ é   que   a   Maria   trabalha   [**nele**]$_i$?
    which   schools   be   that DET Maria   work(IPFV) in-it
    Lit.: 'Which schools is that Maria works in it?'
    'Which schools does Maria work in?'

The 'pronominal' strategy only occurs when a PP is questioned. As sentence (6) shows, when a DP is questioned, a null gap must occur, excluding the overt pronoun *el*.

(6)   [Ki   mudjeris]$_i$ ki   [$_{DP/SBJ}$ **--/*el**]$_i$ fase   un   katxupa
    which   women   that 3SG   do(PFV) DET   katxupa
    sabi?
    good
    '*Which women did she do a good katxupa?'

Moreover, the 'pronominal' strategy seems to be in complementary distribution with PP pied-piping[4], as in (7).

(7)   [$_{PP}$ Ku ki   mininas]$_i$ ki   bu   papia ~~[ku ki mininas]~~$_i$ na
    with   which   girls   that 2SG   talk(PFV)   in
    festa?
    party
    'With which girls did you talk in the party?'

Notice further that CVC does not allow for an English Preposition-stranding type of strategy.

(8)   *[Ki   skolas]$_i$ ki   Maria   ta   trabadja   [$_{PP}$ na ~~[ki skolas]~~$_i$]?
    which   schools that Maria   IPFV   work   in
    'Which schools does Maria work in?'

I will argue that Preposition-stranding is not allowed in CVC because preposition incorporation is not available in the language[5]. As we can observe from (9)-(10) below, in CVC, verbs and prepositions do not assign the same Case to their complements, selecting distinct pronominal object forms (specifically, clitic versus nonclitic pronouns).

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[4] A strategy involving pied-piping does not seem to be the preferable choice of, at least, my own informants, since they usually rephrased sentences like (7) into the pronominal strategy.

[5] Recall that according to Baker's (1988) theory, lexical categories, such as prepositions, can be incorporated by other lexical heads, namely, by a verb. After being incorporated by a verb, the preposition and the verb form a complex derived verb that governs anything which was governed by the preposition before it became incorporated (cf. Government Transparency Corollary, Baker, 1988: 64).

(9)   Djon **fase-l** / *****fase el**.
       Djon do(PFV).3SG
       'Djon did it.'

(10)   Djon   papia   **ku-el** / *****ku-l**.
       Djon   talk(PFV) with.3SG
       'Djon talked with him.'

We also have to assume that preposition incorporation is not available in CVC because the language allows for the 'pronominal' strategy to apply to non-theta marked adjuncts. According to Baker's (1988) incorporation theory, the incorporation of non-theta marked adjuncts is ruled out, given that a verb may only incorporate those words which it properly governs. Baker's theory predicts, therefore, that a sentence like (11) should be ungrammatical in CVC, contrary to fact.

(11)   [DP Kusé]i ki   bu   kebra   karu [PP/OBLAcess ku-[el]i]?
       thing   that 2SG   break(PFV)   car   with.3SG
       Lit.: 'What is that you broke the car with it?'
       'What did you break the car with?'

Note also that the 'pronominal' strategy does not show up in syntactic islands. In these contexts, a 'true' resumptive pronoun pops up instead of *el* (see example (2) above and endnote 3.).

Another property of the strategy being described is the nature of the complementizer that occurs in wh-questions in CVC. The topmost Cº is always filled with *ki* 'that', the complementizer of wh-questions, relative clauses, nominal and adjectival complements, but not the complementizer of verbs (cf. 12). I will account for this difference assuming that *ki* has a [D] feature.

(12)   Djon odja   [CP **ma/*ki** Maria   kunpra   kes   sukrinha-la].
       Djon see(PFV)   that   Maria   buy(PFV) DEM   sugar-DIST
       'Djon saw that Maria bought those sweets.'

Then, *ki* [+D, +wh] is the goal for a wh-DP probe and not for a PP. Considering (13) below, *ki omis* cannot survive in SpecCP1 because it cannot check its [+D, +wh] features against a [-D, -wh] complementizer (*ma* 'that'), and it is forced to go up to the next SpecCP to reach its goal:

Agree

(13) [CP2 [Ki omis]ᵢ [C°[+D, +wh]   **ki]**   bu   fla [CP1 [ki omis]ᵢ [C°[-D, -wh]
which men   that   2SG   say(PFV)
ma] Maria   ka   ta   badja [PP ku-[DP[+D, +wh] el]ᵢ]]?
that   Maria   NEG   IPFV   dance   with-3SG
Lit.: 'Which men is that you said that Maria doesn't dance with
    him?'
'Which men did you say that Maria doesn't dance with?'

Finally, I will defend that the 'pronominal' strategy involves the (Merge/Agree) Move operation because (i) *el* behaves like a wh-gap, and (ii) it shows sensitivity to islands. The next two sections will deepen this topic.

3.1. El is a variable (a wh-gap)

It has been widely shown that only wh-gaps (i.e. syntactic variables) can license parasitic gaps in the narrow syntax. As we can see in (14) *el* licenses parasitic gaps, just like null wh-gaps would do (cf. 15), but not resumptive pronouns in syntactic islands (cf. 16). Therefore, if only variables in the narrow syntax can license parasitic gaps, then *el* is a syntactic variable.

(14) [Ki   mudjeris]ᵢ ki Djon papia   ku-[**el**]ᵢ [CP sen
which women   that Djon talk(PFV) with.3SG without
e   konxe *pg*ᵢ]?
3SG   know
Lit.: 'Which women is that Djon talked with him without knowing?'
'Which women did Djon talk with without knowing?'

(15) [Ki   kuadru]ᵢ ki bu kunpra [ki kuadru]ᵢ [CP sen odja *pg*ᵢ]?
which picture that 2SG buy(PFV)   without see
'Which picture did you buy without looking?'

(16) *[Ki   mudjeris]ᵢ ki Djon atxa   (Complex NP Island)
which women   that Djon find(PFV)
un omi [CP ki papia   ku-[**es**]ᵢ] [CP sen e   konxe *pg*ᵢ]?
DET man that talk(PFV) with.3PL   without 3SG know
'*Which women did Djon find a man that talked with them without knowing?'

Assuming that *el* is a variable, it must behave according to Principle C of the Binding Theory, i.e. in (17) *el* cannot be c-commanded by the co-referential NP *Djon ku Maria* that is within the scope of the wh-phrase that has been displaced – *ki mininus*.

(17) [Ki   mininus]ᵢ ki [Djon   ku   Maria]ⱼ   fla
      which   boys   that Djon   and   Maria   say(PFV)
      [CP ma   bu   papia   ku-[**el**]ᵢ/*ⱼ]?
      that   2SG   talk(PFV)   with.3SG
      Lit.: 'Which boys is that Djon and Maria said that you talked with
      him?'
      'Which boys did Djon and Maria say that you talked with?'

Note that although *el* assumes the form of a 3SG pronoun, it is neither a
'true' pronoun, since it cannot be coordinated (compare (18) with (19)), nor a
'standard' resumptive one, as sentence (20) shows not allowing *el* to be extracted
out of a coordinated conjunct[6], contrary to resumptive pronouns in (21):

(18) *Ki   otoris   ki Maria   ta   kre   papia
      which   authors   that Maria   IPFV   want   talk
      d'[Coord **el**   **ku Veiga**]
      of.3SG   and Veiga
      na si   diskursu?
      in POSS.3SG   speech
      Lit.: 'Which authors is that Maria wants to talk about him and Veiga
      in her speech?'

(19) Josi   odja   [Coord **el**   **ku**   **Maria**] na   iasi.
      Josi   see(PFV)   3SG   and   Maria   in   hyace
      'Josi saw him/her and Maria in the 'bus'.'

(20) *Ki otoris ki Maria ta kre papia d'[Coord **el y di Veiga**] na si diskursu?

(21) [Ki   mininus femia]ᵢ ki Maria   ta   (Complex NP Island)
      which   boys   female that Maria   IPFV
      konxe   un   omi   ki   ka   ta   papia
      know   a   man   that NEG IPFV   talk
      ku-[Coord [**es**]ᵢ   **y**   **ku   tudu   kes   mosu groseru**]?
      with.3PL   and   with all   DET   boy   rude
      Lit.: 'Which girls is that Maria knows a man that does not talk with
      them and with   all the rude boys?'

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[6] Ross (1967) proposed the Coordinate Structure Constraint as in (i):
(i) In a coordinate structure, no conjunct may be moved, nor may any element
contained in a conjunct be moved out of that conjunct.

The distinct behavior of *el* in (20) from *es* in (21), w.r.t. possibility of extraction out of coordinated conjuncts, proves that the mechanism of the 'pronominal' strategy involves wh-movement and displays a syntactic variable while the strategy where *es* occurs does not.

3.2. The 'pronominal' strategy shows sensitivity to syntactic islands

In the Principles and Parameters framework, the elements that are displaced through either long or successive-cyclic wh-movement leave behind a (null) trace/copy. A sentence involving this kind of displacement is grammatical only if its trace is identified by an Empty Category Principle (ECP), as defined in Cinque (1990: 49):

(22) "A nonpronominal EC [empty category] must be properly head--governed by a   head nondistinct from [+V]".

The 'pronominal' strategy of wh-questions in CVC does not allow for wh--argument extraction (i.e., long movement) in strong islands, as in (23).

(23) *[Ki   librus]$_i$ ki   [$_{CP}$ papia d'[el]$_i$] é difisi? (Nominative Island)
which books   that   talk   of.3SG be difficult
Lit.: 'Which books is that to talk about it is difficult?'
'Which books is it difficult to talk about them?'

Argument extraction out of a weak island is also ruled out in CVC, contrary to European Portuguese (EP) or English, for instance (cf. (24)-(26), respectively).

(24) *[Ki   batukaderas   di   Pó   di   (Wh-Island)
which   batuku.players   of   Pó   di
Tera]$_i$ ki   Djon   sabe
Tera   that   Djon   know(IPFV)
[$_{CP}$ [pamodi]$_j$ ki   Maria   ka   ta   papia
why   that   Maria   NEG   IPFV   talk
ku-[el]$_i$ [pamodi]$_j$]?
with-3SG
Lit.: 'Which batuku players of Pó di Tera is that Djon knows why Maria doesn't talk with him?'
'$^{??}$Which batuku players of Pó di Tera does Djon know why Maria doesn't talk with?'

(25) Com   quem   é   que   o   João   não   sabe   EP
with   who   be   that   DET   João   NEG   know
quando   a   Maria   falou?
when   DET   Maria   talk
'$^{??}$With whom didn't João know when Maria talk?'

(26) $^{??}$What didn't John know when Mary ate?

Being more accurate, the argument extraction is forbidden in CVC if the element displaced is the complement of a preposition or an Object extracted out of a Double Object Construction inside a wh-island, as in (27), but the language allows for Subject and Direct Object extraction in the same syntactic contexts (cf. (28) and (29), respectively).

(27) *[Ki   mininus]$_i$ ki   Zé   purgunta   Manel   (Wh-Island)
       which boys   that Zé   ask(PFV)   Manel
       [$_{CP}$ [pamodi]$_j$ ki   Maria da ~~[ki mininus]~~$_i$ bafatada   ~~[pamodi]~~$_j$]?
       why   that Maria give(PFV)   slap
       Lit.: 'Which boys is that Zé asked Manel why Maria gave a slap'.
       '?Which boys did Zé ask Manel why Maria beat?'

(28) [Ki   fidjus   di   Nha Xepa]$_i$ ki   Djon purgunta Manel
       which sons   of   Mrs. Xepa   that Djon ask(PFV) Manel
       [$_{CP}$ [pamodi]$_j$ ki   ~~[ki fidjus di Nha Xepa]~~$_i$ ka   ta   odja
          ~~[pamodi]~~$_j$]?
       why   that   NEG IPFV see
       Lit.: 'Which sons of Mrs. Xepa is that Djon asked Manel why do not see?'
       'Which sons of Mrs. Xepa did Djon ask Manel why don't they see?'

(29) [Ki   mininus]$_i$ ki   Zé   sabe   [$_{CP}$ [ki   dia]$_j$
       which boys   that Zé   know(IPFV) which   day
       ki Maria   odja ~~[$_{DP/DO}$ ki mininus]~~$_i$ na praia di   mar ~~[ki dia]~~$_j$]?
       that   Maria   see(PFV)   in beach of   sea
       Lit.: 'Which boys is that Zé knows which day is that Maria saw in the beach?'
       '$^?$Which boys does Zé know when Maria saw in the beach?'

Considering such facts, it seems that CVC treats the complements of prepositions (even when they are selected by the verb) and the primary objects of Double Object Constructions as adjuncts, corroborating the complement--adjunct asymmetry put forward by Huang (1982).

In addition, the 'pronominal' strategy of wh-questions in CVC exhibits sensitivity to successive-cyclic movement, excluding non-argument extraction out of islands, as in (30)-(31).

(30) *[Ki   mininas]$_I$ ki   Djon ta   konxe   (Complex NP Island)
       which girls   that Djon IPFV know
       [$_{DP}$ un   omi [$_{CP}$ ki   ka   ta   studa [$_{PP/OBLAcess}$ ku-[el]$_i$]]]?
       DET   man   that NEG IPFV study   with-3SG
       Lit.: 'Which girls is that Djon knows a man that doesn't study with him?'

(31) *[Ki   mudjeris]ᵢ ki Djon   ka   sabe   (Wh-Island)
     which   women   that Djon NEG   know(IPFV)
     [CP [ki dia]ⱼ   k'e   ta   bai djanta ku-[el]ᵢ [ki dia]ⱼ]?
     which   day   that-3SG IPFV go diner with-3SG
     Lit.: 'Which women is that John does not know when is he going to
     diner with him?'

Compare these sentences with the ones produced by the 'silent' gap
strategy, which does not also allow successive-cyclic movement in strong (32)
or weak islands (33).

(32) *[Pamodi]ᵢ ki Djon ta   konxe [DP un omi (Complex NP Island)
     why   that Djon IPFV know DET   man
     [CP [pamodi]ᵢ ki ka   ta   papia   ku   mudjeris
     That   NEG   IPFV   talk   with   women
     [pamodi]ᵢ]]?
     '*Why does Djon know a man that doesn't talk with women?'

(33) *[Pamodi]ⱼ ki Djon sabe   [CP [ki fidju di Nastasi]ᵢ (Wh-Island)
     why   that Djon know(IPFV) which son of Nastasi
     ki [ki fidju di Nastasi]ᵢ   more [pamodi]ⱼ]?
     that   die
     '*Why does Djon know which Nastasi's son died?'

Taking *el* to be a wh-gap spelled out, the ungrammaticality of (32) and
(33) is an expected output.

4. The Copy Theory of Movement does not account for the 'pronominal' strategy

The chain [wh … el] involved in the 'pronominal' strategy of CVC wh-
questions seems to challenge some Minimalist Program principles. According
to Chomsky (1995 and thereafter), the Copy Theory of Movement treats
traces as copies of the displaced items. When the movement is overt, i.e.
before Spell-Out, these copies have to be deleted in the phonological
component but remain available for interpretation at the conceptual-
intentional system (i.e. in the Logical Form component). Constructions
involving displacement of a given wh-element apply the operation Move, as
in (34), and adapted from Chomsky (1995: 250).

(34) a. Copy an element α from K
     b. Merge α with K
     c. Form chain
     d. Delete α

Following this procedure, the derivation of a sentence like (35) should obtain the chain in (36b) and not the one in (36c), which exhibits an apparently superfluous element *el* in the foot of the chain that does not appear in the same form of its head (e.g. *ki mininas*).

(35) [Ki   mininas]ᵢ ki bu   fla   ma
       which girls   that 2SG   say(PFV) that
       Djon   papia   [ku-[el]ᵢ]   na   festa?
       Djon   talk(PFV) with-3SG   in   party
       Lit.: 'Which girls is that you said that Djon talked with him in the party?'

(36) a. [$_{CP2}$ [Ki mininas]ⁱ ki bu fla [$_{CP1}$ ~~[ki mininas]~~ⁱ ma [$_{TP}$ Djon papia ku *el*ⁱ na festa]]].
     b. *CH = (*ki mininas*, *t´*, *t*)
     c. CH = (*ki mininas*, *t´*, *el*)

Therefore, I assume that the Copy Theory of Movement raises two potential problems. First, the chain (*ki mininas*, *t´*, *el*) violates the Inclusiveness Condition, because the spelled out foot is not a perfect copy of the head[7]; and second, the operation Delete (or Chain Reduction in Nunes' 2004 terms) does not apply to the foot of the chain, leaving it 'visible' at the interface.

5. The Defective Copy Theory of Movement

The data presented so far show that the discontinuous object [wh … el] behaves differently from the object [wh … es]. Based on their distinct properties (cf. table I.), I will call the first 'defective chain' and the second 'resumptive chain'.

Recall that resumptive chains have received two main opposite analyses: a non-(wh-)movement approach (e.g. Engdahl, 1985), and a (wh-)movement view (e.g. Boeckx, 2003).

Basically, the traditional non-movement approach of resumption argues for a kind of Last Resort device, which goal is to render acceptable linguistic outputs. In this perspective, the wh-Operator is base-generated in SpecCP position, c-commanding from there the resumptive pronoun and circumventing syntactic island effects.

Contrary to the orthodox perspective of resumption, Boeckx (2003: 25) proposes an analysis in which "RPs [Resumptive Pronouns] are stranded portions of the moved phrases they 'associate with'". According to his

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[7] Nunes (2004) assumes that (perfect) copies are part of the initial array of Numeration.

proposal, resumptive pronouns are left stranded, yielding a subextraction configuration like the one in (37)[8], and "stranding (i.e., resumption) takes place due to a [Principle of Unambiguous Chain] PUC violation that requires overt Case/Φ-feature checking and overt Operator movement" (id., p. 37).

(37)
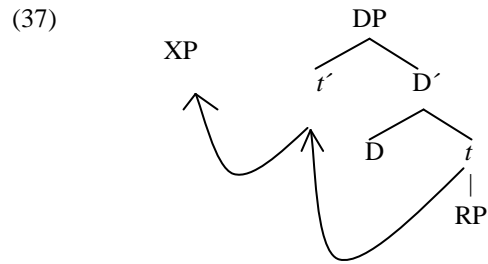
Assuming Boeckx's (2003) proposal in (37), the chain formed by the 'pronominal' strategy in (36) above – (*ki mininas*, *t´*, *el*) – proceeds as in (38), abbreviating superfluous steps:

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[8] From Boeckx (2003: 56).

(38)

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                    CP
        Ki mininas^i      C´
                      C          TP
                      |
                      ki      bu^j        T´
                                      T          VP
                                      |
                                      fla^k    V          CP
                                            |
                                          fla^k   ki mininas^i   C´
                                                            C          TP
                                                            |
                                                            ma    Djon^w      T´
                                                                        T          VP
                                                                        |
                                                                      papia^y    V          PP
                                                                              |
                                                                            papia^y    P          DP
                                                                                    |
                                                                                    ku   ki mininas^i    D´
                                                                                                    D          NP
                                                                                                    |
                                                                                                   (el)    ki mininas^i
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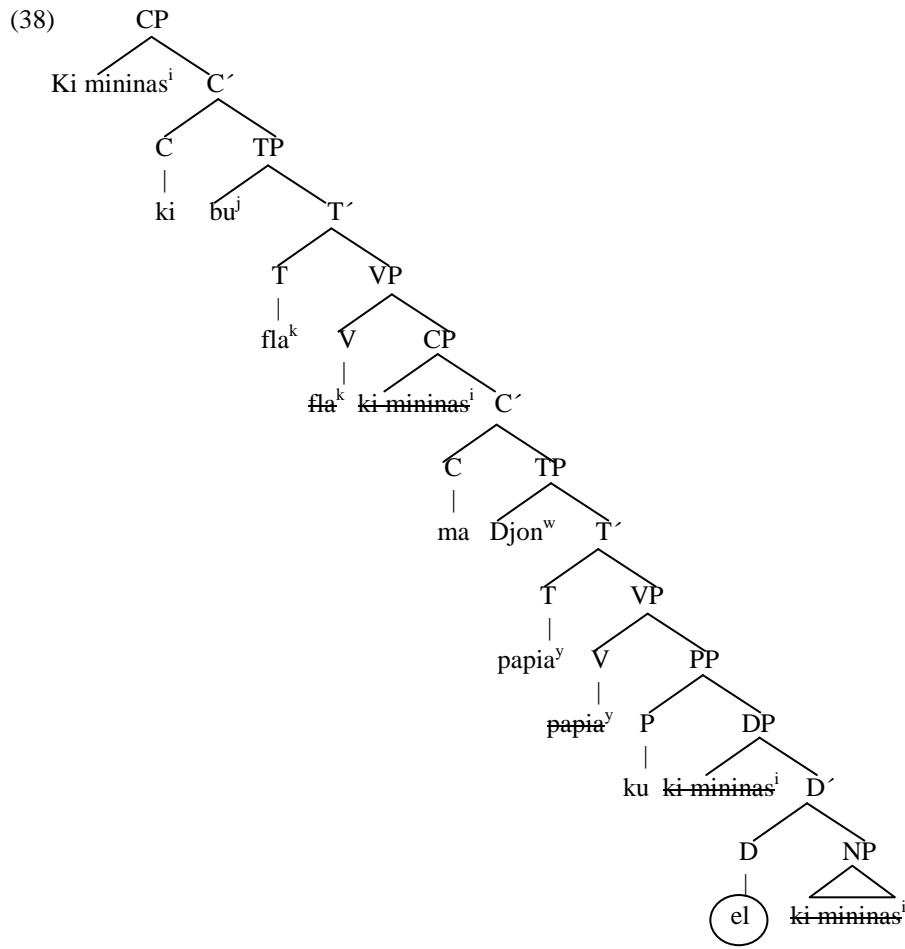
As (38) shows, the problems raised by the Copy Theory of Movement disappear if we assume Boeckx's (2003) proposal to account for the 'pronominal' strategy of wh-questions in CVC[9]. Namely, the fact that *el* is

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[9] Boeckx (2003: 35) also remarks that the structure put forward for resumption is also similar to the structure of clitic doubling advanced by Cechetto (2000, ap. Boeckx). In fact, CVC displays other doubling strategies, which strengthen this kind of 'doubling' approach of the 'pronominal' strategy. See (i) for Subject topicalization and (ii) for a Clitic Left Dislocation structure.

(i) Ami   **N**   ka   ta   papia   ku   mininu   runhu.
     1SG   1SG   NEG   IPFV   talk   with   boy   bad
     Lit.: 'I, I do not talk with bad boys.'

(ii) Maria   ku   Tareza,   N   odja-**s**   na sinema.
     Maria   and   Tareza   1SG   see(PFV)-3PL   in cinema
     'Maria and Tareza, I saw them at the cinema.'

now part of the initial array of Numeration, being selected by the preposition *ku* 'with' and assuring that the preposition is not left alone; and the fact that *el* and *ki mininas* are no longer the same category, but distinct categories.

However, there are two issues that call for clarification. First, some of the properties listed in table I, specifically, the ability to license parasitic gaps, the occurrence of principle C effects and the sensitivity to islands, which I have assumed to be a characteristic of 'defective' chains, contrary to what is observed in 'resumptive' chains, must be attributed to the null gap at the right of the Dº *el*, since it is the null variable that displays these properties and not *el* itself. Second, to follow Boeckx's (2003) path amounts to accept that the 'pronominal' strategy is a type of resumption.

In what concerns the first topic, I will suggest that the (apparent) spelling out of the foot of a wh-chain (wh$_i$ … *el*$_i$) is obtained through a mechanism of 'defective copying' that runs as follows: as a 3SG pronominal form, *el* is not fully specified (i.e. its set of φ-features is not complete) and behaves like an expletive pronoun post-lexically inserted. In this case, *el* must receive, in Spell-Out or in the PF component, but not before that stage, the correspondent phonological matrix. As CVC does not allow for preposition incorporation, *el* is a later on inserted expletive that prevents the derivation from crashing. A partial Agree relation between the head of a nontrivial chain and *el* operates then. More accurately, a partial Match operation, in the sense of Pesetsky & Torrego (2004)[10], according to whom only φ-features matter and not their value.

Take sentence (36) to observe how this work, focusing on the relevant steps of a wh-question, in (39).

(39) a. *Numeration*
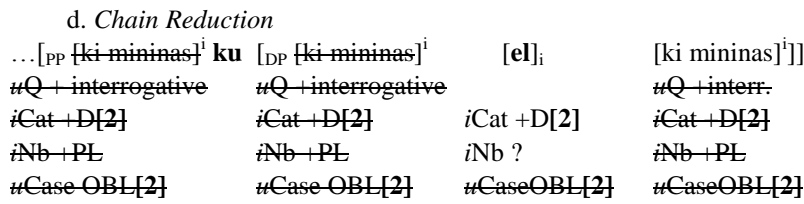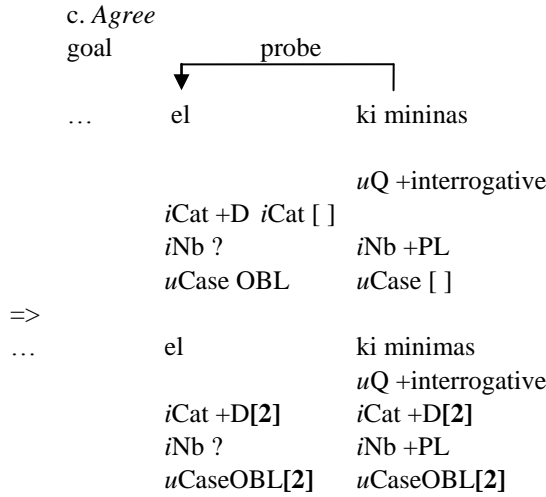   [$_{C°}$ ki, *i*Q [ ], *u*Cat +D, *u*Nb [ ]]
    [$_{NP}$ ki mininas, *u*Q +interrogative, *i*Cat [ ], *i*Nb +PL, *u*Case [ ][11]]

    b. Merge / el insertion
    [$_{DP}$ el, *i*Cat +D, *i*Nb ?, *u*Case [ ]]

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[10] Pesetsky and Torrego (2004) invoke a Match Condition that stipulated that agreement between θ-features is only possible when all other features of the probe are present on the goal.

[11] Note that the Case feature begins as unvalued because the NP *ki mininas* did not establish yet a relation with the preposition *ku*.

c. *Agree*
goal   probe

…   el   ki mininas

                         *u*Q +interrogative
      *i*Cat +D   *i*Cat [ ]
      *i*Nb ?   *i*Nb +PL
      *u*Case OBL   *u*Case [ ]
=>
…   el   ki minimas
                         *u*Q +interrogative
      *i*Cat +D**[2]**   *i*Cat +D**[2]**
      *i*Nb ?   *i*Nb +PL
      *u*CaseOBL**[2]**   *u*CaseOBL**[2]**

d. *Chain Reduction*
…[PP ~~ki mininas~~][i] **ku** [DP ~~ki mininas~~][i]   [el][i]   [ki mininas][i]]]
~~*u*Q + interrogative~~   ~~*u*Q +interrogative~~   ~~*u*Q +interr.~~
~~*i*Cat +D**[2]**~~   ~~*i*Cat +D**[2]**~~   *i*Cat +D**[2]**   ~~*i*Cat +D**[2]**~~
~~*i*Nb +PL~~   ~~*i*Nb +PL~~   *i*Nb ?   ~~*i*Nb +PL~~
~~*u*Case OBL**[2]**~~   ~~*u*Case OBL**[2]**~~   ~~*u*CaseOBL**[2]**~~   ~~*u*CaseOBL**[2]**~~

Dissecting (39), we observe that *ki mininas* occurs in the Numeration with a bundle of θ-features and Case in the complement position of the preposition *ku*. As some of its formal features are uninterpretable (Q and Case), and Cat is interpretable but unvalued, *ki mininas* functions as a probe seeking for an Agree/Match relation with a proper goal. Since the preposition *ku* cannot fulfill *ki mininas* needs, it must move out of the PP, doing it through SpecPP. However, the preposition in CVC cannot be left alone (because the language does not allow incorporation) and the PP cannot be pied-piped because the derivation involves a complementizer (*ki*) specified for *u*Cat +D. Therefore, the complement of the preposition must be filled with morphophonological material and *el*, an expletive-like element, is the good candidate for a [*i*Cat +D, *i*Nb: ?] and *u*CaseOBL category.

Nevertheless, this 'defective' mechanism does not have range over the strategy applied to wh-questions inside syntactic islands, where only *es* can occur if the antecedent is [+PL], or over one of the processes involved in (restrictive) relative clause formation in CVC. That is the reason why I still claim that the syntactic objects [wh … el] and [wh … es] have to be set apart, representing different mechanisms of displacement.

In a brief exposition, I will assume that in restrictive relative clauses of CVC, *es* is a genuine resumptive pronoun for it can occur outside islands. In fact, when a PP outside an island is relativized, there are two possible

strategies available for relative clause formation: PSST (in (40)) and resumption (in (41)).

(40) [DP [Sais   konsetu operasional]i [CP ki   N   sa ta   ben tráta
              six   concept operational   that 1SG PROGR come deal
       d[**el**]i]].
       of-3SG
       Lit.: 'Six operational concepts that I have been dealing with it.'
       'Six operational concepts that I have been dealing.'
       (Silva, 2005: 180)

(41) [DP [Kes   mudjeris]i [CP ki   Djon   paxona   pa-[**es**]i]]
       DET   women   that Djon   fall.in.love(PFV)   for-3PL
       imigra   pa   Purtugal.
       immigrate(PFV) to   Portugal
       Lit.: 'The women that Djon fell in love for them immigrated to
           Portugal'.
       The women that Djon fell in love for immigrated to Portugal'.

Because of similar facts, it is now commonly assumed that there must be different kinds of resumption[12]. I showed in the previous sections that *el* is the output of a 'defective copying' procedure and I will argue that the element in the object [wh … es] is a 'true' resumptive pronoun (i.e. in its orthodox sense), being the product of a non-wh-movement operation.

Some facts support this proposition. First, PP pied-piping is forbidden in relative clauses formation (while the strategy is in complementary distribution with the 'pronominal' one in wh-questions), as in (42), suggesting that these constructions of CVC constitute a less permissive environment for movement.

(42) *Kel   mesa **riba di ki**   Djon po   jaru tene
       DET   table over of which Djon put(PFV) jar   have
       pé   kebradu.
       foot   break.du
       'The table over which Djon put the jar has a broken leg.'

Second, the fact that *es* can be bound by a DP when the pronoun occurs in a coordinated conjunct (cf. (21) above and (43) for a relative clause) proves that the strategy it is involved in does not imply Move.

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[12] In fact, McCloskey (2006: 111) claims that "resumptive pronouns outside islands are formed by movement, but those inside islands are not. It follows in turn that both mechanisms (movement and base-generation) must be available within the same language, and the fact that the two outcomes are formally indistinguishable becomes very puzzling". One of the goals of my proposal is to unpuzzle McCloskey's observation.

(43) N   ka   odja   [DP [kes mininu femia]i ki Djon
     1SG   NEG   see(PFV)   DET   boy   female   that Djon
     paxona
     fall.in.love(PFV)
     pa [Coord [**es**]i y   pa tudu kes   mudjeris ki   ta   badja
     for   3PL and for all DET   women   that IPFV dance
     sabi]].
     well
     Lit.: 'I didn't see the girls that Djon fell in love for them and for all
     the women that dance well'.

Sentence (43) must be analyzed as the output of a (simple) Merge operation and the syntactic object [wh … es] formed by it is an A´-binding nontrivial chain, whose foot (*es*) is present since Numeration.

6. Concluding remarks

In CVC, the 'pronominal' strategy used to form wh-questions yields an output that shares the doubling character of resumption, although a closer analysis highlights its different properties (a topic often neglected in the literature). Based on the distinct behavior of *es* in a nontrivial chain like (*ki mininas*$_i$, *es*$_i$) and *el* in (*ki mininas*$_i$, *el*$_i$), and assuming Boeckx's (2003) theory of resumption as stranding, I called the first nontrivial chain ''true' resumptive' and the second 'defective' chain. I believe that this is an elegant account of the 'pronominal' strategy in CVC, but other types of theoretical approaches must not be excluded.

Table I. Defective versus resumptive chains

	Defective chains	**Resumptive chains**
Agreeing forms [wh[PL] … es]	*	✓
Extraction out of conjuncts	*	✓
Licensing parasitic gaps	✓	*
Principle C effects	✓	*
Sensitivity to islands	✓	*

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References

Alexandre, N. (2007) Interrogativas em Crioulo de Cabo Verde: com movimento explícito / implícito ou sem movimento?. In *Textos Seleccionados do XXII Encontro Anual da Associação Portuguesa de Linguística* (M. Lobo & M. A. Coutinho, editors), pp. 41-55. Lisboa: APL.

Alexandre, N. (in prep.) Wh-Constructions in Capeverdean Creole: Extensions to the Copy Theory of Movement, Ph.D. Diss., Universidade de Lisboa.

Baker, M. (1988) *Incorporation: a Theory of Grammatical Function Changing*, Chicago: Chicago University Press.

Boeckx, C. (2003) *Islands and Chains – Resumption as Stranding*, Linguistics Today, vol. 63, Amsterdam: John Benjamins.

Chomsky, N. (1995) *The Minimalist Program*, Cambridge, Mass.: MIT Press.

Cinque, G. (1990) *Types of A´-Dependencies*. Cambridge, Mass.: MIT Press.

Engdahl, E. (1985) Parasitic gaps, resumptive pronouns, and subject extractions. *Linguistics*, **23:1**, 3-44.

Holm, J. & Patrick, P. (2007) *Comparative Creole Syntax: Parallel Outlines of 18 Creole Grammars*. Plymouth: Battlebridge.

Huang, J. (1982) Move WH in a language without WH movement. *The Linguistic Review*, **1**, 369-416.

McCloskey, J. (2006) Resumption. In *The Blackwell Companion to Syntax* (M. Everaert & H. van Riemsdijk, editors), pp. 94-117. Oxford: Blackwell Publishing.

Muysken, P. (1977) Movement rules in Papiamentu. In *Amsterdam Creole Studies I* (P. Muysken, editor), pp. 80-102. Amsterdam: Instituut voor Agemene Taalweten-schap.

Muysken, P. (1980) Three kinds of movement in Papiamentu. In *Studies on Fronting* (F. Jansen, editor), pp. 65-80. Lisse: Peter de Ridder.

Nunes, J. (2004) *Linearization of Chains and Sideward Movement*. Linguistic Inquiry Monograph 43, Cambridge, Mass.: MIT Press.

Pesetsky, D. & Torrego, E. (2004) The syntax of valuation and the interpretability of features. In (http://web.mit.edu/linguistics/people/faculty/pesetsky/Pesetsky_Torrego_Agree_paper.pdf).

Ross, J. (1967) *Constraints on Variables in Syntax*, Indiana: Indiana Univ. Ling. Club.

Veenstra, T. & den Besten, H. (1995) Fronting. In *Pidgins and Creoles – an introduction* (J. Arends; P. Muysken & N. Smith, editors), pp. 303-315. Amsterdão: John Benjamins.

Nélia Alexandre
Faculdade de Letras da Universidade de Lisboa &
Centro de Linguística da Universidade de Lisboa
Alameda da Universidade
1600-214 Lisboa
nelia_alexandre@clix.pt