

PREDICATE-MOVEMENT, QUANTIFICATION, EVENTS AND PROPERTIES

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Abstract

What domains does Haitian Creole quantify over, and how? It is argued that Haitian predicate movement for the purpose of contrastive stress manifests a +verbal/-verbal asymmetry at both the semantic and the syntactic levels. Semantically, movement of [+V] predicates (e.g. projections of verbs and adjectives) is correlated with quantification over events, whereas movement of [-V] predicates (e.g. projections of prepositions, nouns and wh-predicates) is correlated with quantification over properties. The syntactic locus of the [-V] asymmetry is the launching site of movement: with [+V] predicates, the trace is realized as an overt copy of the fronted predicate; with [-V] predicates, it is a resumptive morpheme, *ye*, that overtly realizes the trace of the fronted projection. Higginbotham's (1985) mechanism for the discharge of event-roles—by INFL(ection), and under government of the predicate head by INFL—would explain why [+V] predicate heads must remain in the governing domain of INFL, with the following side-effect: when 'moved', the [+V] head appears both *in situ* and in fronted positions, for discharge and focus purposes, respectively. As for focused [-V] predicates, they may escape INFL's governing domain and leave behind the resumptive morpheme *ye*: properties, unlike events, do not necessitate discharge through a governing INFL. Corollary: (contrastive) [+V] clefts necessitate stage-level predicates, whereas [-V] clefts are compatible with individual-level predicates.

1. The puzzle

The puzzle that I want to tackle is instantiated in (1) vs. (2).<sup>1</sup> These Haitian sentences are all contrastive clefts<sup>2</sup> in which the predicate is 'fronted' for contrastive focus: the (underlined) focused predicates are contrasted with some other implicit predicate(s) in the domain of discourse. This is similar to contrastive clefts of arguments, as in *It is Mary who won* (not e.g. *Lucy*, nor *Jane*, nor...), where *Mary* is put in focus and contrasted with other potential winners. Going along with Chomsky (1977) among others, I will assume that such clefts are quantificational structures.<sup>3</sup>

- (1)a. Se kreyòl nou ye.  
SE creole IPL YE  
"We are CREOLES (not Frenchmen, say)" [from Boukman Eksperyans (1991)]
- b. Se nan jaden an Bouki ye.  
SE in garden the Bouki YE  
"Bouki is IN THE GARDEN (not in the house, say)"
- (2)a. Se bouke Bouki bouke.  
SE tired Bouki tired  
"Bouki is TIRED (not sick, say)"
- b. Se mache Bouki mache.  
SE walk Bouki walk  
"Bouki WALKED (he didn't run, say)"

<sup>1</sup>For much-needed help with this puzzle, I thank the participants in the Meeting of the Society of Pidgin & Creole Linguistics in Los Angeles, in the Niger-Congo Syntax/Semantics Workshop at BU, and in colloquia at CUNY, the University of Michigan, Wayne State University, UMass Amherst and MIT—in 1992-4. For encouragement and/or enlightening feedback (some to be addressed in future papers), special thanks go to Alec Marantz, Barbara Partee, David Pesetsky, Hagit Borer, Jeffrey Heath, Ken Hale, Ljiljana Progovac, Richard Kayne, Victor Manfredi, Yves Dejean, and Enoch. In addition, Jeff, Hagit, Alec and Victor shared their homes with great kindness; and, with Enoch, home is sweet.

<sup>2</sup>Emphatic clefts are outside the scope of this paper.

<sup>3</sup>See Rooth (1992) for one recent attempt at formalizing the semantics of focus.

The puzzle presented by (1) and (2) is multi-faceted. Firstly, note that in (1) the morpheme *ye* occupies the canonical (post-subject) predicate position in Haitian, i.e. the *in-situ* location of the predicate in non-clefted sentences; cf. (3) below. What is *ye* in (1)? In Sections 2 and 3, I will reject the obvious possibility that *ye* is a verbal copula of the kind of English *be* or of French *être*. I will instead argue that *ye* is a resumptive morpheme that overtly realizes the trace of the fronted projection and that *ye* is a pro-predicate of sorts. Also note that not all clefts require the use of *ye*. The predicates in (2) exclude the *ye*-type of clefting illustrated in (1): clefting of *bouke* 'tired' and *mache* 'walk' entails duplication of the predicate, in focus and *in situ*.

But if contrastive clefts all involve quantification via predicate movement, why the contrast between (1) vs. (2)? I.e., why does Haitian use two syntactic strategies for clefting, with *ye* in (1) vs. 'predicate-copying' in (2)? I will argue that this syntactic non-uniformity has semantic correlations. In particular, probing the properties of various types of Haitian clefts (in Sections 3-5) will lead to insights in the domains of quantification recognized by the language. Specifically, predicate movements in (1) and (2) implicate quantification over different domains, which give rise to different syntactic constructs: the syntax of predicate clefts is in lockstep with the semantics of quantification.

## 2 Background: predication in Haitian

Before going into the interesting details of predicate movement, I must first make explicit my assumptions concerning the syntax of predication proper in Haitian. In particular, we need to look at predicative clauses, which in languages like English involve the use of copulative *be*. Recall that a possible analysis of *ye* in (1) is one where it is a copula. I will show here that such an analysis is unlikely given a particular analysis of predication in Haitian.

### 2.1 Basic data: no verbal copula

One important fact to derive from (3) is that Haitian does not contain a verbal copula. In (3a-c), predicates not headed by verbs may—and must, in (3a) and (3b)—be string-adjacent to their subject, without an intervening copula.

- (3)a. Bouki (\*se) bouke  
 Bouki SE tired  
 "Bouki is tired"
- b. Bouki (\*se) nan jaden an  
 Bouki SE in garden the  
 "Bouki is in the garden"
- c. Malis (??se) doktè  
 Malis SE doctor  
 "Malis is a doctor"
- d. Malis \*(se) {yon doktè/doktè a/Aristide}  
 Malis SE a doctor doctor the Aristide  
 "Malis is {a/the doctor/Aristide}"

However, not all kinds of predicates are allowed string-adjacent to their subjects. In (3d) for example, the morpheme *se* MUST occur between subject and predicate. The predicates in (3d) are: nominals occurring with a pre-posed or a post-posed article (*yon doktè* 'a doctor' and *doktè a* 'the doctor', respectively) and a proper name (*Aristide*). I take *yon doktè* to be a Num(ber)P(hrased)<sup>4</sup> and *doktè a* and *Aristide* to be D(eterminer)P(hrased)s.<sup>5</sup>

But, there are clauses where the same predicates in (3d), i.e. DP and NumP predicates, occur without *se*, when the predicate is preceded by a Tense, Mood or Aspect (TMA) marker, the negation marker, or a complementizer. Given that *se* never occurs between subject and adjectival or prepositional predicate, what seems to demand explanation is the presence or absence of *se* with nominal predicates, DP and NumP.

<sup>4</sup>Somewhat in the spirit of Ritter (1991)

<sup>5</sup>See Longobardi (1990) for the view that proper names are DPs in the sense of Abney (1987).

## 2.2 Analysis (DeGraff 1992A,B,C)

Diachronically, Haitian *se* is related to French *c'est* '3S is'. However, as shown in DeGraff (1992B), *se* and *c'est* fulfill radically different functions in their respective synchronic grammars. DeGraff (1992A,B,C)<sup>6</sup> argue that Haitian *se*, unlike French *être*, is not a verbal copula, but that it functions as a resumptive nominal co-indexed with the (moved) subject and spelling out the (ungoverned) trace left by movement of the subject.

The central assumption is that predication at D-structure is realized inside a Small Clause, i.e. the subject is generated internal to XP in (4); see Stowell (1978, 1989) and Burzio (1986) for similar views on predication. At Syntax, the subject moves to Spec(IP) for Case (among other reasons), leaving a trace inside XP.

(4) [IP Subject<sub>i</sub> [I' I<sup>0</sup> [XP t<sub>i</sub>[α ... ] ] ] ]

Assuming a conjunctive definition of the Empty Category Principle (ECP), the trace  $t_i$  left by subject movement must be both antecedent- and head-governed. Antecedent government of  $t_i$  takes place directly from Spec(IP). But head-government is trickier. It depends on the structure of the predicate Small Clause XP. The argument proceeds as follows: (i) In (3a-c), α in (4) = X': the subject starts out in the Spec of the predicate projection, and  $t_i$  is governed by the predicate's lexical head X<sup>0</sup>. (ii) But in (3d), α in (4) = XP: the subject is generated adjoined to DP/NumP, and  $t_i$  is not governed; in this case, *se* is used a "last resort" (in the sense of Chomsky 1991 and Shlonsky 1992), spelling out  $t_i$  and circumventing the potential ECP violation. In other words, *se* is the spell-out of the ungoverned trace left by subject movement.

The following schematizes the subject's D-structure position for the various types of predicates, with SC-SP an acronym for (base-generated) Small-Clause Subject Position:

(5) [AP SC-SP [A' ...A<sup>0</sup> ... ] ]

(3a)

[PP SC-SP [P' ...P<sup>0</sup> ... ] ]

(3b)

[NP SC-SP [N' ...N<sup>0</sup>... ] ]

(3c)

[DP SC-SP [DP...[D' ...D<sup>0</sup>...]] ]

(3d) w/doktè a & Aristide

[NumP SC-SP [NumP...[Num' ...Num<sup>0</sup>...]] ]

(3d) w/yon doktè

It is for reasons of (genitive) Case assignment, *inter alia*, that Spec(DP) and Spec(NumP) are not available as the base position of the subject, forcing DP and NumP to be generated adjoined to their predicates.<sup>7</sup>

How do the structures in (5) interact with occurrence of *se*? The differences shown in (3) *vis-à-vis* between AP/PP/NP and DP/NumP predicative sentences—(3a-c) vs. (3d)—revolve around the structures in (5). In (3a-c), the subject trace of the AP, PP and NP Small Clauses is in Spec of the predicate phrase and is head-governed by the predicative head. Movement of the subject to Spec(IP) leaves a trace which obeys the ECP; thus, movement is string-vacuous. In (3d), the subject trace of the DP and NumP Small Clauses is in a position adjoined to the predicate phrase and is not head-governed by the head of the predicate, assuming that m-command, as defined in (6), is a necessary condition for head-government.

(6) X m-commands Y iff (Aoun & Sportiche 1983):

∇ φ, φ a maximal projection, if φ dominates X then φ dominates Y.

In DP and NumP adjunction structures, schematized in (7), SC-SP, the position of the subject trace, is not governed by X<sup>0</sup>, given that it is not m-commanded by X<sup>0</sup> (XP, which is made up by the segments XP<sub>1</sub> and XP<sub>2</sub> dominates X<sup>0</sup>, but not SC-SP):<sup>8</sup>

(7) [XP<sub>1</sub> SC-SP [XP<sub>2</sub> ...X<sup>0</sup>... ] ]

<sup>6</sup>The reader should consult these references for more detailed argumentation and further data on Haitian predication; here space limits us to a condensed version of the analysis.

<sup>7</sup>This falls in line with the generalization that specifiers of (all?) functional projections, e.g. Spec(CP) and Spec(IP), are landing sites for movement and are generated empty.

<sup>8</sup>Chomsky (1986: 7): "α is dominated by β if it is dominated by every segment of β". Also see May (1985: 57).

To recapitulate, *se* in (3d) is a resumptive nominal the presence of which is necessitated by failure of head-government of the subject trace, adjoined to DP or NumP. otherwise the ECP would be violated by the null trace. When not needed, this resumptive nominal produces ungrammaticality.<sup>9</sup>

### 2.3 Predictions

The sort of explanation above, based on (failure of) head-government, predicts the following. If the subject trace is head-governed from outside the predicative Small Clause, then *se* is no longer needed, independently of the structure of the predicate projection. And indeed an outside head-governor of SC-SP renders *se* superfluous with DPs and NumPs. Compare (3d) vs. (8-10):

- |     |   |      |  |
|-----|---|------|--|
| (8) | Malis te yon doktè.<br>Malis ANT a doctor<br>"Malis was a doctor"   | (10) | Kimoun ki {yon doktè/doktè a}?<br>who KI a doctor doctor the<br>"Who is a/the doctor?" |
| (9) | Bouki pa yon doktè.<br>Bouki PA a doctor<br>"Bouki is not a doctor" |      |  |

What (8-10) show is that *se* is not needed with nominal predicates when there is an 'outside' head-governor. This outside governor may be a TMA marker, as in (8), the negation marker *pa* in (9)<sup>10</sup> or the complementizer *ki* in (10). Summing up the analysis, *se* is the nominal spell-out of an ungoverned subject trace. Crucially, Haitian does not make use of a verbal copula for predication.

### 3. The syntax of *ye*

Having explicated the syntax of predication in Haitian, let us now go back to the syntax and semantics of predicate movement. Let us start with cases of predicate movement involving the morpheme *ye*. As we discussed regarding (1) and (2), not all instances of predicate movement involve *ye*. *Ye* surfaces in post-subject position when the clefted predicate is nominal or prepositional, cf. (11).<sup>11</sup> We also get *ye* with *wh*-predicates, cf. (12)

- |        |   |      |   |
|--------|---|------|---|
| (11)a. | Se ( <u>yon</u> ) <u>doktè</u> Malis ye.<br>SE a doctor Malis YE<br>"Malis is A DOCTOR (not a nurse, say)"        | (12) | {Kouman/Kote/Kisa/Kimoun} Malis ye?<br>how where what who Malis YE<br>"{How/Where/What /Who} is Malis?" |
| b.     | Se <u>nan jaden an</u> Bouki ye.<br>SE in the garden Bouki YE<br>"Bouki is IN THE GARDEN (not in the house, say)" |      |   |

What is the relationship between *ye* and the predicate in focus position? That *ye* occurs in questions and that Haitian (*wh*-) questions generally involve movement suggests that *ye*-clefts might also involve movement. That the constructions in (11) do involve movement is adduced by Piou (1981) (also see Koopman 1983 for similar facts in Vata). Piou shows that predicate clefts (both with *ye* and with the 'copying' strategy) obey typical constraints on *wh*-movement such as subjacency. E.g. in (13), adapted from Piou, long-distance clefting of the predicate *nan jaden an* 'in the garden' is allowed with a bridge verb like *di* 'say', but forbidden when the embedded verb is a non-bridge verb like *chichote* 'whisper'. This is shown in (13b) and (13c).

<sup>9</sup>For those speakers who use *se* in (3c), I must assume that, in their grammars, apparently-bare NP predicates are actually headed by a null determiner

<sup>10</sup>See DeGraff (1993) for a comparative study of sentential negation in Haitian and French which corroborates the present analysis.

<sup>11</sup>In (11), we find *se* occurring clause-initially in cleft sentences. This *se*, which uniformly precedes the cleft constituent irrespectively of the category of this constituent, is to be distinguished from the *se* which occurs in (3d)-like clauses between subject and predicate. I argue in DeGraff (1992d) that that clause-initial *se* in clefts is in Spec(IP).

- (13)a. Li kwè yo di/chichote se nan jaden an Bouki ye.  
3S believe 3P say/whisper SE in garden the Bouki YE
- b. Li kwè se nan jaden an yo di/\*chichote Bouki ye.  
3S believe SE in garden the 3P say/whisper Bouki YE
- c. Se nan jaden an li kwè yo di/\*chichote Bouki ye.  
SE in garden the 3S believe 3P say/whisper Bouki YE
- "S/he believes that they said/whispered that Bouki is IN THE GARDEN"

If the fronted predicates in (11) are indeed moved to focus position from a base-generated post-subject position, what about *ye*? Would it have been generated as a (verbal) copula linking the predicate to its subject? That *ye* is a base-generated verbal copula does not seem plausible. Indeed *ye* is never found in clauses where the predicate remains in its canonical (post-subject) position; cf. (3b), (3d) and (11) vs. (14).

- (14)a. \*Malis ye yon doktè. cf. (11a)  
Malis YE a doctor  
["Malis is a doctor"]
- b. \*Bouki ye nan jaden an. cf. (11b)  
Bouki YE in jaden the  
["Bouki is in the garden"]

Furthermore, predicate clefts do not allow *se* in post-subject position:

- (15)a. \*{Kouman/Kote/Kisa/Kimoun} Malis se?  
how where what who Malis SE  
["{How/Where/What /Who} is Malis?"]
- b. {Kouman/Kote/Kisa/Kimoun} Malis (\*se) ye (\*se)?  
how where what who Malis SE YE SE  
["{How/Where/What /Who} is Malis?"]
- (16)a. \*Se (*yon*) doktè Malis se.  
SE a doctor Malis SE  
["Malis is A DOCTOR (not a nurse, say)"]
- b. Se (*yon*) doktè Malis (\*se) ye (\*se).  
SE a doctor Malis SE YE SE  
["Malis is A DOCTOR (not a nurse, say)"]
- c. \*Se nan jaden an Bouki se.  
SE in garden the Bouki SE  
["Bouki is IN THE GARDEN (not in the house, say)"]
- d. Se nan jaden an Bouki (\*se) ye (\*se)  
SE in garden the Bouki SE YE SE  
["Bouki is IN THE GARDEN (not in the house, say)"]

Finally, analyzing *ye* as a verb is incompatible with my assumptions about the syntax of predication in Haitian. In (3), the non-cleft, predicative structures corresponding to (11) do not contain a  $V^0$  node which would accommodate *ye* qua verb, i.e. (*yon*) doktè 'a doctor' in (3d) and nan jaden an 'in the garden' in (3b) predicate over *Bouki* without the intermediacy of a copulative verb.

The data above point to the generalization that *ye* is entailed by movement of (certain) predicates, as further supported by e.g. the fact that the examples in (11) and (12) turn ungrammatical if *ye* is omitted.

#### 4 Further properties of predicate movement

##### 4.1 A [+V]/[-V] asymmetry

Although *ye* is obligatory with movement of certain predicates, it is, on the contrary, ruled out when clefting another class of predicates (as hinted at in (2)). Descriptively, the predicates requiring *ye* in clefts are *wh*-, nominal and prepositional predicates. Those excluding *ye* are adjectival and verbal predicates. This split can be recast along the [-V]/[+V] feature: [-V] predicates are clefted with *ye*, [+V] predicates are clefted without *ye*. When clefting a [+V] predicate, either verb or adjective, it is a copy of the cleft verb or adjective that must appear *in situ*, not *ye*:

- (17)a. Se bouke Bouki bouke.  
SE tired Bouki tired  
"Bouki is TIRED"
- b. Se damou Bouki damou Boukinèt.  
SE in.love Bouki in.love Boukinèt  
"Bouki is IN LOVE with Boukinèt"
- c. Se vòlè Bouki vòlè lajan leta.  
SE steal Bouki steal money state  
"Bouki STOLE state money"

*Ye* is not compatible with clefting of [+V] predicates:

- (18)a. \*Se bouke Bouki *ye*.  
SE tired Bouki YE  
["Bouki is TIRED"]
- b. \*Se damou Bouki *ye* Boukinèt.  
SE in.love Bouki YE Boukinèt  
["Bouki is IN LOVE with Boukinèt"]
- c. \*Se damou Boukinèt Bouki *ye*.  
SE in.love Boukinèt Bouki YE  
["Bouki is IN LOVE WITH BOUKINÈT"]
- d. \*Se vòlè Bouki *ye* lajan leta.  
SE steal Bouki YE money state  
["Bouki STOLE state money"]
- e. \*Se vòlè lajan leta Bouki *ye*.  
SE steal money state Bouki YE  
["Bouki STOLE STATE MONEY"]

Conversely, [-V] predicates cannot use the predicate copying strategy:

- (19)a. \*Se [yon doktè] Bouki [yon doktè]  
SE a doctor Bouki a doctor  
["Bouki is A DOCTOR"]
- b. \*Se [nan (jaden an)] Bouki [nan jaden an]  
SE in garden the Bouki in garden the  
["Bouki is IN THE GARDEN"]

To summarize, Haitian uses two strategies for predicate clefts. With [-V] predicates, the entire predicate projection is fronted and *ye* is 'left behind'. With [+V] predicates, it is the predicate head that is fronted with a 'copy' of the head surfacing *in situ*.<sup>12</sup>

#### 4.2 A predicate/argument asymmetry

However, there is one characteristic which is shared by all predicate clefts, whether +V or -V: the position vacated by predicate movement, in (11), (12) and (17), cannot remain phonetically null. This is clearly shown in (20):

- (20)a. \*Se [dokte]; Bouki t<sub>i</sub>.  
SE a doctor Bouki  
["Bouki is A DOCTOR"]
- b. \*Se [nan jaden an]; Bouki t<sub>i</sub>.  
SE in garden the Bouki  
["Bouki is IN THE GARDEN"]
- c. \*Se [bouke]; Bouki t<sub>i</sub>.  
SE tired Bouki  
["Bouki is TIRED"]
- d. \*Se [damou]; Bouki t<sub>i</sub>; Boukinèt.  
SE in love Bouki Boukinèt  
["Bouki is IN LOVE with Boukinèt"]
- e. \*Se [vòlè]; Bouki t<sub>i</sub>; lajan leta.  
SE steal Bouki money state  
["Bouki STOLE state money"]

Interestingly, with respect to the phonetic realization of traces, Haitian exhibits a predicate/argument asymmetry. Movement of arguments, unlike movement of predicates, may leave a trace (*t<sub>i</sub>*) in the position of extraction:

- (21)a. Kimoun; Bouki damou {t<sub>i</sub>/\*kimoun<sub>i</sub>/\*ye<sub>i</sub>}?  
who Bouki in love who YE  
"Who is Bouki in love with?"
- b. Se Boukinèt; Bouki damou {t<sub>i</sub>/\*Boukinèt<sub>i</sub>/\*ye<sub>i</sub>}.  
SE Boukinèt Bouki in love Boukinèt YE  
"Bouki is in love WITH BOUKINÈT"

<sup>12</sup>With morphemes that are ambiguously adjectival or nominal, like *malad* 'sick' or 'sickly person', we get both possibilities, as in (i) and (ii).

- (i) Se *malad* Bouki *ye*.  
SE sick Bouki YE  
"Bouki is A SICKLY MAN (not a healthy man, say)"
- (ii) Se *malad* Bouki *malad*.  
SE sick Bouki sick  
"(At present) Bouki is SICK (he's not resting, say)"

Cf Fauchois (1982) and Damoiseau & Saint-Louis (1986) for further data and comments on predicates that participate in both *ye*-clefts and 'predicate-copying' clefts. In Damoiseau's words (p. 109):

la compatibilité avec la structure [...] *se x li ye* [i.e. *ye*-clefts] va de pair avec le trait 'qualité permanente', alors que les mêmes monèmes révèlent par ailleurs — et notamment quand ils fonctionnent au sein de la structure [...] *se x li x* [i.e. *pr* predicate-copying clefts] — un signifié qui présente à la fois les traits 'passager' et 'permanent'.

These meaning differences are by and large predicted by my account; see §5.

- c. *Kisa*; Bouki vòlè {*t*<sub>i</sub>/\**kisa*<sub>i</sub>/\**ye*<sub>i</sub>}?  
 what Bouki steal what YE  
 "What did Bouki steal?"
- d. Se [*lajan leta*]<sub>i</sub>; Bouki vòlè {*t*<sub>i</sub>/\*[*lajan leta*]<sub>i</sub>/\**ye*<sub>i</sub>}.  
 SE money state Bouki steal money state YE  
 "Bouki stole STATE MONEY"

What the data suggest so far is that predicate movement in Haitian is somehow more constrained than argument movement. The former, but not that latter, must not leave a null trace.<sup>13</sup> Instead of null predicate traces, we get the following: On the one hand, with [-V] predicates, as in (12) and (11), it is *ye* which occurs in the site of extraction of the predicate projection. On the other hand, with [+V] predicates, as in (17), the predicate head is duplicated (in focus position and *in situ*).<sup>14,15</sup>

## 5 A stage-/individual-level asymmetry

### 5.1 Why two cleft strategies?

DeGraff (1992d) proposed that *ye* is a *pro*-predicate which spells out the trace left by movement of non-verbal predicates, i. e., *ye* is a resumptive *pro*-form that phonetically realizes the trace left by  $\bar{A}$ -movement of a prepositional, nominal or interrogative predicate.

Now, going back to a central question asked at the beginning of this paper, Why is *ye* restricted to occur with only [-V] predicates? This is all the more surprising given that there exists a general ban on null predicate traces in Haitian; see (20). When displaced, all predicates, whether [+V] or [-V], must leave some overt residue in the launching site of movement. But then why not have a uniform strategy to realize predicate traces, with *ye* being used across the board?

Given the distribution of *ye*, let's assume that it realizes a particular type of variable, ranging over a particular domain, the domain of entities being quantified over by the cleft construction. I will argue that it is precisely the nature of the quantification domains that gives rise to the two syntactic strategies for Haitian clefts. This forthcoming argument relies on one central assumption about the semantics of contrastive clefts. Namely, contrastive predicate clefts are asymmetric with respect to their domains of quantification: cleft [-V] predicates quantify over properties whereas cleft [+V] predicates quantify over events (I use 'event' in the spirit of Kratzer 1988).

<sup>13</sup>That HA predicate movement is more constrained than argument movement is not idiosyncratic: both English and French also manifest restricted predicate movement, as in (i) and (ii), respectively. In both languages, clefting of arguments is freer than clefting of predicates:

(i)a. It's Mary that Jane likes.

(ii)a. C'est Marie que Jean aime.  
 3S+is Marie COMP Jean love  
 "It's Mary that Jean loves"

b. ??It's in the garden that Mary is.

b. ??C'est au jardin que Jean est.  
 3S+is at the garden COMP Jean is  
 "Jean is IN THE GARDEN (not in the house, say)"

c. ??It's tired that Jane is.

c. ??C'est fatigué que Jean est.  
 3S+is tired COMP Jean is  
 "Jean is TIRED (not sick, say)"

d. ??It's a doctor that Mary is.

d. ??C'est un médecin que Jean est.  
 3S+is a doctor COMP Jean is  
 "Jean is A DOCTOR (not a nurse, say)"

<sup>14</sup>It is tempting to think of *ye* as a general *pro*-predicate. However, *ye* occurs only when the predicate has moved; it does not occur, say, as the counterpart of the English *pro*-form *so* (or *one*):

(i) \*Malis se *yon doktè* epi Bouki *ye* tou.  
 Malis SE a doctor and Bouki YE too  
 ["Malis is a doctor and so is Bouki."]

<sup>15</sup>I explore further distinctive properties of *ye* in DeGraff (1992d).



At this point, this assumption seems rather arbitrary. But previous work on Haitian clefts along with some novel empirical observations remove some of this arbitrariness. Larson and Lefebvre (1991), in an illuminating paper, note an interesting asymmetry with respect to predicate-clefting in Haitian. Briefly, only a restricted class of predicates can be clefted for contrastive purposes, as shown by the contrast in (22): only predicates denoting temporary characteristics ('stage-level' predicates in the terminology of Kratzer 1988), like *mache* 'walk' in (22a), can participate in contrastive predicate clefts. Predicates denoting permanent, intrinsic, properties (Kratzer's (1998) 'individual-level' predicates) cannot be contrastively clefted; see (22b).

- (22)a. Se *mache* Bouki *mache* al lekòl.  
SE walk Bouki walk go.to school  
"Bouki WALKED to school (he didn't run to school, say)"
- b. \*Se *konnen* Malis *konnen* Franse.  
SE know Malis know French  
"Malis KNOWS French (he's not faking it, say)"

However, Larson and Lefebvre did not study the behavior of *ye*-clefts and, crucially, what they did not notice is that this stage-level vs. individual-level asymmetry within predicate clefts (as exemplified in (22)) seems to hold only for [+V] predicates. At the heart of my own analysis is the observation that [-V] clefts are not so restricted to stage-level predicates, even when focusing is for contrastive purposes. Witness (23): the clefted predicates there do not denote temporary characteristics. Indeed, the [-V] predicates [NP *moun Texas*] 'Texan' in (23a) and [PP *an beton*] 'made of concrete' in (23b) denote permanent, intrinsic properties; they are individual-level predicates being set in contrast with [NP *moun Maine*] 'person from Maine' (23a) and [PP *an bwa*] 'made of wood', respectively.

- (23)a. Se *moun Texas* Bush ye, li pa moun Maine.  
SE person Texas Bush YE, 3S NEG person Maine  
"Bush is a TEXAN, he is not from Maine"
- b. Se *an beton* kay sa a ye, li pa an bwa.  
SE in concrete house this the YE, 3S NEG in wood  
"This house is made of CONCRETE, not of wood"

The contrast between (22) and (23) is at the core of my account. As Larson and Lefebvre's data in (22) show, contrastive clefts are not possible with [+V] individual-level predicates; see (22b). But as the data in (23) suggest, contrastive clefts are possible with [-V] individual-level predicates. In Larson and Lefebvre's analysis, (22b) is ungrammatical because ([+V]) predicate clefting entails quantification over events. If such an analysis holds for (22), then contrastive clefting of [-V] predicates, as in (23), must involve mechanisms distinct from quantification over events. But before speculating further on what these mechanisms may be, I need to digress into the semantics of 'quantification over events'.<sup>16</sup>

## 5.2 An excursion into the domain of events

Insights from Davidson (1967) have led Kratzer (1988), among others, to propose the now familiar distinction between stage-level predicates, as those in (24a), and individual-level predicates, as those in (24b); cf. Carlson (1977) and Milsark (1977).

- (24)a. stage-level predicates: *see, walk, give a talk, hungry, tired, on fire, etc.*
- b. individual-level predicates: *know, resemble, tall, intelligent, Haitian, etc.*

Stage-level predicates hold at particular moment in time and space; they predicate over space-time zones (cf. Lemmon 1967). Individual-level predicates denote 'intrinsic characteristics' of their subjects; unlike stage-level predicates, they do not depend on spatio-temporal specifications. Cf. note 18.

One of Davidson's (1967) major insights was that 'action verbs' can be analyzed as introducing an event variable, the *x* in (25b) which is Davidson's logical representation for (25a).

<sup>16</sup>For more extensive discussions, see Davidson (1967), Lemmon (1967), Castaneda (1967), Lewis (1975), Milsark (1977), Carlson (1977), Kratzer (1988), Partee (1991A,B) and their references.

(25)a. I flew my spaceship to the Morning Star.

b. (  $\exists x$  ) ( Flew ( I, my spaceship, x ) & To ( the Morning Star, x ) )

In (25), the predicate *fly* introduces an event variable *x* which can be 're-used' as an argument of the prepositional predicate *to the morning star*.

Data from Carlson (1977) and Milsark (1977) show that this event variable, which is introduced by stage-level predicates but not by individual-level ones, is semantically and syntactically active. For example, in Carlson (1977), the stage/individual split participates in the interpretation of bare plural subjects:

(26)a. Soldiers are available. (existential interpretation)

b. Soldiers are brave. (generic interpretation)

Bare-plural subjects may receive an existential interpretation when the predicate is stage-level (Carlson's 'event reading'), as in (26a), but they are interpreted generically when the predicate is individual-level (Carlson's 'characteristic reading'), as in (26b).<sup>17</sup>

The stage vs. individual distinction is also active in existential 'there'-constructions (Milsark 1977). Only stage-level predicates enter this construction:<sup>18</sup>

(27)a. There are people hungry.

b. \*There are people tall.

The event variable introduced by stage-level predicates is also used in quantification. E.g., Lewis (1975) argues that 'adverbs of quantification' may quantify over events qua special cases of 'cases':

(28)a. Riders on the 13th Avenue line seldom find seats.

b. Caesar seldom awakes before dawn.

What does *seldom* quantify over in (28)? In (28a), *seldom* quantifies over *riders on the 13th Avenue line*. But the interesting case here is (28b) where *seldom* quantifies over events of Caesar's awakening: of such events, few of them are such that they occurred before dawn.

Finally, Kratzer (1988) shows that stage-level predicates may provide the crucial variable needed to satisfy the ban on vacuous quantification (whereas such an event variable is absent with individual-level predicates). Kratzer assumes Heim's (1982) tripartite quantification structures:

(29)  $O:x$  [R(estrictor) ...  $x$  ... ] [N(ucleus) ...  $x$  ... ]

In (29), the RESTRICTIVE CLAUSE (or restrictor) sets the stage for quantification: when evaluating the NUCLEUS with respect to the OPERATOR, only look at the variable(-tuple) *x* for which the restrictor holds. In other words, the restrictor restricts the domain of the operator *O*. Because of the ban on vacuous quantification, there must be an *x* for *O* to quantify over. In light of this, and assuming that stage-level predicates (unlike individual-level ones) introduce an event variable, Kratzer explains the following paradigm:

(30)a. \*When(ever) Mary knows French, she knows it well.

b. When(ever) a Moroccan knows French, she knows it well.

c. When(ever) Mary knows a foreign language, she knows it well.

d. When(ever) Mary speaks French, she speaks it well.

<sup>17</sup>But see Diesing (1992) for further subtleties in the interpretation of bare plurals.

<sup>18</sup>Milsark (1977: 12-13) calls stage- and individual-level predicates states and properties, respectively:

States [are] conditions which an entity finds itself and which are subject to change without there being any essential alteration of the entity. [...] Properties [are] descriptions which name some trait possessed by the entity and which is assumed to be more or less permanent, or at least to be such that some significant change in the character of the entity will result if the description is altered.

Throughout (29), *when(ever)*, is an unselective quantifier and it must bind a variable. In (30a), there is no variable to be bound: neither the proper names *Mary* and *French*, nor the individual-level predicate *know* introduce variables. This lack is repaired in (30b-d). In (30b) and (30c), the indefinite noun phrases *a Moroccan* and *a foreign language* introduce variables ranging over Moroccans and foreign languages, respectively; cf. Heim (1982) on the interpretation of indefinites. But in (30d), it is the stage-level predicate *speak* which introduces the needed variable (*x* in (31d)), one ranging over events of *Mary speaking French*. This is summarized as follows:<sup>19</sup>

- (31)a. \*Always: $x$  [R knows (Mary, French) ] [N knows-well (Mary, French)]  
 b. Always: $x$  [R Moroccan ( $x$ ) & knows ( $x$ , French) ] [N knows-well ( $x$ , French) ]  
 c. Always: $x$  [R foreign-language ( $x$ ) & knows (Mary,  $x$ ) ] [N knows-well (Mary,  $x$ ) ]  
 d. Always: $x$  [R speaks (Mary, French,  $x$ ) ] [N speaks-well (Mary, French,  $x$ ) ]

### 5.3 Back to clefts and to Haitian

Let us re-analyze Larson and Lefebvre's insights on ([+V]) Haitian clefts using Heim's tripartite structures. To make matters more explicit, I will follow Castaneda's (1967) suggestions, and split (Davidsonian) *n*-place predicates into conjuncts separating the various arguments. Following Parsons (1990), I will use predicates headed by terms like Agent, Theme, etc., which explicitly indicate the roles played by the event participants. E.g., (25b) would be re-written as follows:

- (32)  $(\exists x)$  (FLEW ( $x$ ) & Agent ( $x$ , 'I') & Patient ( $x$ , 'my spaceship') & To ( $x$ , 'the Morning Star') )

Now if we take an argument cleft, we have the following translation:

- (33)a. It is  $Mary_i$  [ who $_i$  t $_i$  won ].  
 b.  $\forall x$  [R 'x in context' & WIN ( $e$ ) & Agent ( $e$ ,  $x$ ) ] [N  $x$  = 'Mary']

(33b) reads as: For each individual  $x$  in the context of discourse,<sup>20</sup> if  $x$  won, then  $x$  is *Mary*. I.e., *Mary* is the (only) one who won.

Given Larson and Lefebvre's insights, we can take the logical structure of predicate clefts to be parallel to that of argument clefts. In Larson and Lefebvre's analysis, clefting of [+V] predicates entails quantification over event variables. In Heim's framework, this gives the representation in (34b):

- (34)a. *Se mache $_i$*  [ *Bouki mache $_i$*  ].  
 SE walk Bouki walk  
 "Bouki WALKED (he didn't run, say)"  
 b.  $\forall e$  [R 'e in context' & Agent ('Bouki',  $e$ ) ] [N WALKING ( $e$ ) ]

In (34b), the stage-level predicate *mache* 'walk' provides the variable of quantification. If the clefted [+V] predicate in (34b) was replaced by an individual-level predicate, e.g. *konnen* 'know', there would be no (event) variable to quantify over (since individual-level predicates do not introduce event variables) and the cleft would violate the ban on vacuous quantification, thus the ungrammaticality of (22b).

But now what about the grammaticality of (23), where individual-level [-V] predicates are clefted? Larson and Lefebvre's account does not take into account data like (23), thus does not consider the contrast between (22) and (23). Given our current assumptions, the inescapable conclusion seems to be that these clefts do not quantify over events. What do they quantify over? Given the meanings of these data, they must involve quantification over properties:

<sup>19</sup>Also see Partee (1991A,B) and references therein.

<sup>20</sup>The 'context' in (33b) is a discourse-dependent subset of the quantification domain. The elements of this subset are presupposed at the time of utterance. The context in (33b) is a subset of individuals, the set of presupposed potential (or 'alternative') winners, e.g. {*Mary*, *Lucy*, *Jane*, ...}. Cf. Rooth (1992).

- (35)a. Se moun Texas; [ Bush ye<sub>i</sub> ].  
 SE person Texas Bush YE  
 "Bush is a TEXAN (he is not from Maine, say)"
- b.  $\forall P$  [R 'P in context' & P ('Bush')] [N P = TEXAN ]

- (36)a. Se [an beton ]<sub>i</sub> [ kay sa a ye<sub>i</sub> ]  
 SE of concrete house this the YE  
 "This house is made of concrete (not of wood, say)"

- b.  $\forall P$  [R 'P in context' & P ('this house')] [N P = CONCRETE ]

Take (35a) for example. The tripartite formula in (35b) translates its meaning as follows. Given various properties *P* in the context of discourse, which properties may hold of Bush (presumably, in the context of utterance, all such *P*s are related to Bush's place of birth), if *P* holds of Bush, then *P* is the property of being a Texan. The contrastive reading emerges as the Texan property (which holds of Bush) is contrasted with every other property in the context of discourse which could (but does not) hold of Bush.<sup>21</sup>

A summary is in order: Clefts of [+V] predicates entail quantification over event via the binding of the event variable introduced by stage-level predicates. Clefts of [-V] predicates entail quantification over properties; no event variable is needed in such clefts.<sup>22,23,24</sup>

#### 5.4 The basis for [+V]/[-V] syntactic asymmetries in Haitian clefts

One question is still unanswered: How is this [+V]/[-V] semantic asymmetry in quantification domains correlated with the syntactic asymmetry presented by predicate-copying (for [+V] clefts) vs. the use of *ye* (for [-V] clefts)? My (sketch of a) solution will use one of Higginbotham's (1985) mechanisms for discharge of thematic roles (including event roles). I adopt Higginbotham's twin assumptions that it is the inflection node (INFL) that discharges the event role of the predicate head and that such discharge takes place only when INFL governs the predicate. These assumptions directly predict the syntactic asymmetry in Haitian clefts. Indeed, [+V] predicate heads (which have an event role to be discharged by INFL) must be governed by INFL, even when focused by clefting. In the latter case, this forces [+V] predicate heads to remain *in situ* for discharge purposes, while a copy of the head surfaces in fronted position for focus purposes. On the contrary, [-V] predicate clefts quantify over properties, not events, and [-V] predicates (prepositional, nominal and *wh*-phrases) need not introduce an event variable. Therefore, [-V] predicates can escape the government domain of INFL, and leave the resumptive pro-predicate *ye* in the extraction site. Presumably, the use of *ye* is more 'economical' than predicate-copying, making *ye* obligatory with [-V] predicate clefts.<sup>25</sup>

<sup>21</sup>Other (apparent?) cases of quantification over properties include the following from Williams (1983: 426):

- (i) John became everything we wanted. (cf. John became a doctor, a father, etc.)
- (ii) John is everything I despise.
- (iii) At one time or another, John has been everything.

Also see Higginbotham (1986).

<sup>22</sup>This explains the meaning differences between (i) and (ii) of note 12.

<sup>23</sup>Arguably, this [+V]/[-V] asymmetry *vis-à-vis* domains of quantification (events vs. properties, respectively) may be related to the proposed cognitivist universal that verbs prototypically refer to physical actions, and nouns, to physical objects (cf. Langacker 1987), with the added assumption that objects may be described via a listing of their properties.

<sup>24</sup>What about the clefting of stage-level PP predicates, as in (1b)? Note that locative PPs like *nan jaden an* 'in the garden' inherently specifies a location in space. If one takes the view that the event variable introduced by [+V] stage-level predicates ranges over spatio-temporal coordinates (Lemmon's (1967) 'space-time zone'), then it seems reasonable to assume that stage-level locative PPs need not introduce an extra spatio-temporal specification in the form of an event variable; that is, the locative PP directly provides half the value for the spatio-temporal coordinate, with tense providing the other half via the content of the inflection node (cf. Kratzer (1988: 41-44) for related remarks on tense). In this case, (1b), like (36a), entails quantification over properties.

<sup>25</sup>For different analyses of (aspects of) predicate clefting in Ha, see Faine (1937), Fèrère (1974), Pompilus (1978), Kihm (1990), P.ou (1981), Déprez and Vinet (1992), Manfredi (1991), Fauchois (1982), etc.

## 6. Epilogue

I have argued that Haitian clefts quantify over three distinct domains, namely, properties, events and (basic) individuals. Each type of quantification gives rise to a distinct syntactic construct. When quantifying over properties, predicate clefting leaves the pro-predicate *ye* in the extraction site, as in (11). When quantifying over events, predicate clefting duplicates the predicate head *in situ* and in focus, as in (17), due to the twin demands of discharge (*à la* Higginbotham 1985) and focus, respectively. When quantifying over individuals, argument clefting leaves a null trace in the argument's base position, as in (21). The correct characterization of the correspondence between the syntax and the semantics of quantification in clefts constitutes an exciting avenue of research.<sup>26</sup> And the final words go to Partee (1991A: 439):

Determining what a given language quantifies over, and how, is one important source of evidence about the basic domains that are recognized in the semantics of that language.

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<sup>26</sup>In addition, if quantification over properties proceeds as outlined in (35) and (36), then Haitian (and other natural languages) would allow SECOND-ORDER quantification. In other words, natural languages' variables of quantification may range over logical predicates, i.e. over sets of individuals. Cf. Williams (1983: 426-34) and Higginbotham (1986: 43-45) and references therein on whether natural languages instantiate second-order quantification. Cf. note 21 above. Also see Partee (1987) for how 'type-shifting' might account for apparent cases of second-order quantification.

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