## Revue québécoise de linguistique



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Volume 18, Number 2, 1989

Le créole haïtien

URI: https://id.erudit.org/iderudit/602654ar DOI: https://doi.org/10.7202/602654ar

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Publisher(s)

Université du Québec à Montréal

**ISSN** 

0710-0167 (print) 1705-4591 (digital)

Explore this journal

#### Cite this article

Lumsden, J. S. (1989). On the Distribution of Determiners in Haitian Creole. Revue québécoise de linguistique, 18(2), 65–93. https://doi.org/10.7202/602654ar

#### Article abstract

The paper provides more precise data on the distribution of determiners in Haitian creole. It proposes that there are two independent constraints on the distribution of these functional categories. In Haitian, as in English, Hungarian, Turkish and Hebrew, a specific determiner is necessary to the realization of genitive Case. Moreover there is a general constraint on processing which forbids the insertion of two identical functional category signals in a linear sequence. This processing constraint can be seen in at least on other language (Fon).

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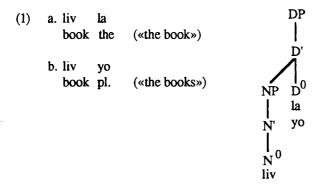
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# ON THE DISTRIBUTION OF DETERMINERS IN HAITIAN CREOLE

John S. Lumsden

## 1. Introduction\*

The determiner<sup>1</sup> of the Haitian noun phrase is normally the last element in the noun phrase string (with the exception of extraposed material). Representing this in the structure of the DP-hypothesis (cf. Brame 1982, Fukui and Speas 1986, Abney 1986, and for Haitian, Lefebvre and Massam 1988), one may say that the determiner phrase in Haitian is head final:



The complements of nouns in Haitian follow the head of the noun phrase. Thus they may appear between the noun and the determiner. It is notable that there

I would like to thank my informants, Jean-Robert Placide, Serge-Antoine Jean-Louis, Rollande Gilles and Christiane Soti who listened with patience and answered with care. This paper is part of a larger project on the morphology and syntax of Haitian creole, financed by the «Conseil de Recherche en Sciences Humaines du Canada», the «Fonds d'Aide aux Chercheurs et à la Recherche» (Québec Government), and the «Fonds Institutionnel de Recherche» (Université du Québec à Montréal).

<sup>1.</sup> It should be noted that the interpretation of the definite determiner in Haitian is more specific than the English gloss would suggest (cf. Lefebvre 1982). The Haitian determiner is deictic as well as definite, both in plural and in singular form.

is no phonological signal indicating the Case of noun phrase complements in Haitian (presumably genitive Case — see Gilles 1988 for discussion). The only indication of the relationship between head and complement is word order, as illustrated in the following examples:

Given this linear order, it follows that in noun phrases where there are embedded NP complements which have their own determiners, one would expect to find a series of determiners at the end of the phrase. But in fact, these series are *not* grammatical in Haitian:

In Lefebvre (1982) and Lefebvre and Massam (1988), the ungrammaticality of examples like those in (3) is described as the consequence of a surface filter which forbids a linear sequence of determiners. The filter has the following form:

# (4) The Double Determiner Filter \* DET DET

In this paper, I shall examine the Haitian noun phrase in some detail in an effort to clarify the status of this filter and also to give an account of the assignment and realization of genitive Case in Haitian noun phrases. I suggest that a filter account raises problems for an explanation of language acquisition. I shall

point out some grammatical phrases which are violations of the filter as it has been stated and I will provide a more precise picture of the structures which are relevant to the filter. I shall reformulate the Double Determiner Filter as a more specific concept and I will suggest that this concept is a universal in the processing of natural languages and not merely a particular aspect of Haitian syntax.

I will argue that a great deal of what has been seen as the effect of the Double Determiner Filter is actually a part of the mechanism for the assignment and realization of genitive Case in Haitian. I will show that genitive Case realization in Haitian has much in common with Case realization in nominals in Hungarian, in Turkish, in the Anglo-saxon genitive construction in English and in the Hebrew construct state nouns.

#### 2. The Facts and the Filter

## 2.1 Which Determiner Does Appear?

Given that a linear series of determiners is not grammatical, a further question arises immediately: when there is a structure which has the potential of having more than one determiner, which of these determiners can be realized on the surface and which must be omitted? As it turns out, the realization of one or the other determiner is not completely optional; there is a systematic pattern to the phenomenon<sup>2</sup>. The interpretation of the examples below shows that the *most embedded* determiner in the underlying syntactic structure is the one which is visible on the surface:

- (5) a. jouet timoun yo = «the toy(s) of the children» toy child pl. (not «the toy(s) of the child»)
  - b. bato peche yo = «the boat(s) of the fishermen» boat fisherman pl. (not «the boat(s) of the fisherman»)
  - c. koulè pòt pyès yo = «the colour(s) of the door(s) of the rooms» colour door room pl.(not «the colour(s) of the door(s) of the room»)

This observation is more precise than the data found in the preliminary analyses. Lefebvre (1982), for example, states that «si deux DET contigus ne peuvent être réalisés en surface, l'un ou l'autre de ces deux DET peut être réalisé» (p.50).

The same point can be demonstrated for both determiners (yo and la) by using them in constructions with the quantifier yon «one». As the following examples show, yon is incompatible with yo (presumably because the words have opposite specifications for number and definiteness) and with la (presumably because of opposite specifications for definiteness):

- (6) a. \*yon kay yo one house pl.
  - b \*yon kay la one house the

When yon appears with the most embedded complement in a noun phrase where there is a determiner, the phrase is ungrammatical. But yon may be used with any of the other complements or with the matrix noun, and the resulting phrase is perfectly grammatical:

- (7) a. \*Mwèn renmen koulè pòt kay yon doctè a

  I like colour door house one doctor the

  ##«I like the colour of the door of the house of the one doctor»
  - b. Mwèn renmen koulè pòt yon kay doctè a
     «I like the colour of the door of one house of the doctor»
  - c. Mwèn renmen koulè yon pòt kay doctè a
     «I like the colour of one door of the house of the doctor»
  - d. Mwèn renmen yon koulè pòt kay doctè a
     «I like one colour of the door of the house of the doctor»
- (8) a. \*Mwèn te twouve lank bato yon pechè yo I past find anchor boat one fisherman pl. ##«I found the anchor of the boat of one fishermen»
  - b. Mwèn te twouve lank yon bato pechè yo
     «I found the anchor of one boat of the fishermen»
  - c. Mwèn te twouve yon lank bato pechè yo
     «I found one anchor of the boat of the fishermen»

## 2.2 Two Exceptions

The pattern described above has two systematic exceptions.

First, when the most embedded noun phrase is a proper noun or a noun expressing a familial relation (e.g. papa, etc.) or a noun belonging to the class of «Bare-NP adverbs» describing space or time (cf. Larson 1985), the determiner belongs to the *next highest* noun phrase. This can be seen in the interpretation of the examples in (2) (which I repeat below for the convenience of the reader):

- (2) a. liv Jan yo book John pl. («John's books»)
  - b. machin papa ou a car father your the («the car of your father»)

The same exception is demonstrated in the constraints on the distribution of yon, exemplified in (9). In contrast with the examples in (7b) and (8b), the phrases in (9a) and (9c) are ungrammatical because yon appears with the second most embedded noun phrase — the phrase which includes the interpretation of the determiner:

- (9) a. \*Mwèn renmen koulè pòt yon kay Jan a «I like the colour of the door of one the house of John»
  - b. Mwèn renmen koulè yon pòt kay Jan a
     «I like the colour of one door of the house of John»
  - c. \*Mwèn te twouve lank yon bato papa m yo
     «I found the anchor of one the boats of my father»
  - d. Mwèn te twouve yon lank bato papa m yo
     «I found one anchor of the boats of my father»

An account of these systematic exceptions will be provided in Sections 3.5./3.6. I will argue that these examples reveal much about the nature of Case realization.

The second exception to the general pattern arises from the possibility of noun-noun compounding and thus is only an apparent exception. Haitian has a

productive process which combines two nouns into a single lexical head (cf. Brousseau 1988). Aside from the interpretation, there is no overt signal that this lexical process of compounding has taken place (and recall that there is no overt signal of the syntactic head-complement relation). So the following sentences are ambiguous:

- (10) a. Mwèn te pentire eskalye lekol yo

  I past paint stairs school pl

  «I painted the stairs of the schools» or «I painted the school-stairs»
  - b. Ou te achte kès liv yo
    you past buy case book pl.
    «You bought the case(s) of books» or «You bought the book-cases»

Since the head of the compound is on the left, a careless reading of these examples would suggest that the determiner does not have to bear on the most embedded noun phrase. But in fact when these phrases are so interpreted, there is no such embedded phrase — the two nouns are compounded to head a single noun phrase. Therefore, examples like (10) are only an apparent exception to the general patterns noted above.

#### 2.3 What's in a Filter?

The precise patterns in the distribution of the determiners in Haitian noun phrases raises an immediate technical problem for an analysis which seeks to account for the ungrammaticality of determiner sequences by means of a «surface filter». It is not enough to say that two contiguous determiners are forbidden — one must add that it is possible to realize only the most embedded of the two, with certain exceptions, etc. Alternately, given the directionality of Haitian noun + complement sequences, one might say that only the leftmost of the two determiners is realized, etc. But how is this to be stated if the filter is to be a simple constraint on surface representations?

One may raise another and more general complication for the notion «surface filter». If the filter is particular to a language or a group of languages, then it must be part of the grammar which is learned. But the nature of a filter is such that

it forbids certain sequences — to learn the filter would require negative evidence. It is clear, however, that negative evidence is in short supply in the process of language acquisition. Few people tell their children not to say something; rather, they provide examples of what is said. Thus, any filter which is pertinent to the grammar of natural language may be expected to be a universal. We must ask if it is true that no language ever allows sequences of determiners.

The answer is clear. Even when considered only for Haitian, the filter which has been proposed is certainly too strong. There *are* grammatical sequences of determiners in Haitian, as may be seen below:

- (11) a. Lari bò kay ou yo a gen anpil twou street near house your pl. the has many holes «The street near your houses has many holes» or «A street near these your houses has many holes»
  - b. Mwen we polis la ki te arete avoka mwen yo a

    I see police the who past arrest lawyer my pl. the

    «I see the policeman, the one who arrested my lawyers» or «I see the
    policeman who arrested these my lawyers»
  - c. Ou te wè [nèg [ki te vini an] yo]?

    you past see man who past came the pl.

    «Did you see the men who came (as we knew they would)»

    (from Frantz Joseph 1988, p.205)

It should be noted that in some dialects, the interpretation of the examples here is ambiguous. In (11b), for instance, the definite determiner a may specify the relative clause (see Lefebvre1982, Lefebvre and Massam 1988, for discussion of the use of determiners with clauses), but it may also be seen as a precision on the phrase avoka mwèn yo. In this latter interpretation, it seems that one noun phrase includes two determiners (i.e. both the singular and the plural) to emphasize the deictic content of the phrase.<sup>3</sup> The sentence in (12) (a spontaneous example) shows that it is even possible to find sequences of more than two determiners:

<sup>3.</sup> Lefebvre (1982) discusses a dialect which allows both plural and definite determiners in a single phrase, but with the opposite order (i.e. la yo).

(12) M pral jete [tout liv ki sou [tab ou yo a] yo]

I will throw down all book which on table your pl. the pl.

«I am going to throw down all the books which are on these, your tables»

While the examples in (11) and (12) are direct violations of the surface filter as fomulated in (4), of course this is not to say that there is no constraint on the realization of determiners in Haitian! The examples which do have sequences of two or more determiners have very particular properties. First, in all examples of grammatical sequences of determiners, the two determiners are either part of the same noun phrase (e.g. avoka mwèn yo a «these, my lawyers») or else the embedded noun phrase is not a complement of the matrix noun phrase, but rather it is the complement of a preposition phrase or it is embedded in a relative clause. As was shown in (3) (repeated below), no sequence of determiners is possible as a consequence of noun phrases directly embedded within noun phrases:

I conclude that it is the particular relationship between nouns and their noun phrase complements which forbids these sequences of determiners.

On the other hand, it is notable that there is *never* a sequence of two *identical* determiners. Compare (13) with the examples in (11) and (12):

- (13) a. \*Lari bò kay ou yo yo gen anpil twou «The streets near your houses have many holes»
  - b. \*Mwèn wè polis la ki te arete avoka mwèn la a
     «I see the policeman, the one who arrested my lawyer»
  - c. \*M pral jete tout liv ki sou tab ou yo yo
    «I am going to throw down all the books which are on your tables»

Presumably the examples in (11) and (12) have the same structure as those in (13). It is minimally the sequence of *identical* determiners which makes the difference in grammaticality. I conclude that the impossibility of sequences of identical determiners has nothing to do with hierarchy. This constraint would seem to apply to a *linear* sequence of determiners.

There are two distinct phenomena involved in the constraints on the distribution of determiners in Haitian. One has to do with the relation between nouns and their nominal complements. The other has to do with a linear series of identical determiners. I will discuss each of these in turn in the sections which follow.

## 3. Genitive Case and Functional Categories

In the Haitian structures which are combinations of nouns and their nominal complements, no sequence of determiners is grammatical. It seems likely that this constraint is a consequence of some relation between nouns and their complements (e.g. theta-role and Case assignment). Therefore it is interesting that recent analyses have brought to light a relationship between functional categories and the assignment and realization of Case.

## 3.1 Agreement in Hungarian and Turkish and the DP-hypothesis

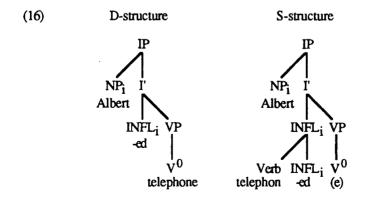
In Hungarian NPs, the matrix noun must bear an inflectional affix which reflects the person and number of the possessor argument. Szabolcsi (1987) argues that this Agreement marker in Hungarian NPs assigns Nominative Case to the possessor argument.

c. a Peter kalap-ja the Peter:Nom hat -3sg «Peter's hat» Similarly, Kornfilt (1984) shows that the Agreement marker in Turkish NPs is crucial to Genitive Case-marking in that language:

(Genitive with Agreement) «a piece of cake»	parça- <u>si</u> piece-3sg	bir a	1- <u>n<i>i</i>n</u> -Gen	pasta- cake	a.	(15)
(Ablative without Agreement) «a piece of cake»	parça piece	bir a	- <u>dann</u> -Abl	pasta- cake	b.	
(no Genitive without Agreement)	c. *pasta- <u>ni n</u> bir parça					
(no Agreement without Genitive)	d. *pasta- <u>dann</u> bir parça- <u>si</u>					

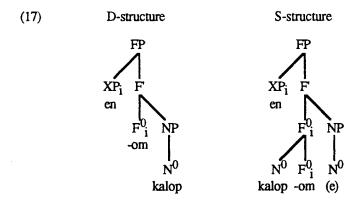
This phenomenon of Possessor/Noun Agreement in NPs seems quite parallel to Subject/Verb Agreement in clauses. It would thus be natural to suppose that the two constructions involve parallel structures. What then, is the structure of Subject/Verb Agreement constructions? In the GB framework, for example, the analysis of these structures involves a functional category — INFLection, the head of the clausal phrase.

The pertinent structure is illustrated in (16). Agreement is the «feature sharing» relation between INFL and the category in the specifier of the INFL phrase (i.e., the subject). It is this Agreement which marks Nominative Case on the subject NP. The verb phrase is the complement of the INFL phrase and the verb is associated with INFL at S-structure through head-movement (cf. Chomsky 1981 for extensive discussion).



Looking for a parallel to this clausal structure, one may suppose that the Agreement marker in Hungarian and Turkish noun phrases is the head of a functional category phrase — a phrase which dominates the lexical category (i.e. the NP), just as the INFL phrase dominates the VP. But this structure is a departure from the standard view of noun phrase structure (where the determiner phrase appears in the specifier position of the NP). The suggestion that the determiner phrase dominates the noun phrase (proposed in Brame 1982) is commonly known as the «DP-hypothesis».

The «DP-hypothesis» structure in (17) might represent the Hungarian example in (14)a. The noun phrase appears as the complement of the functional category. The noun undergoes head-movement and adjoins to the affix. At S-structure, the possessor phrase appears in the specifier position of the functional category. It is the Agreement between the possessor and the head of the functional category which permits Case marking of the possessor<sup>4</sup>:



A theory which provides for a parallel between clausal structures and nominal structures is desirable not only because Subject/Verb Agreement and Possessor/Noun Agreement are parallel, but also for the many other similarities which have often been observed in traditional grammars and which have been discussed in generative theories since Lees 1960. Moreover, this perspective sheds light on various constructions which have remained puzzling in the standard account of nominal phrases.

<sup>4.</sup> Note in passing that Szabolsci extends the parallel between clausal and nominal phrases by analysing the article az as a kind of noun phrase complementizer.

#### 3.2 Genitive Case in Modern Hebrew

The role of the functional category in Case marking in nominal structures is not always displayed with Agreement markers. In Ritter 1988, for example, the construct state in Modern Hebrew has been argued to involve a particular functional category which assigns genitive Case to a phrase in the specifier position of its complement NP.

Nouns appear in the construct state in Hebrew when they are immediately followed by a genitive phrase. It is well known that (in contrast to the non-construct state noun) construct state nouns cannot appear with the definite determiner (a clitic). This is illustrated in the following examples:

(18) a. non-construct: ha-bayit vs. bayit the house

b. construct: beyt ha-mora

(the) house (of) the teacher

c. \*ha-beyt ha-mora

In fact, the construct state displays several other interesting properties (see Ritter 1988 and Borer 1984 for discussion). Ritter accounts for the lack of determiner with the construct state noun (and for other properties of these constructions) by postulating a determiner<sup>5</sup> for Modern Hebrew which assigns genitive Case to the phrase in the specifier position of its complement noun phrase. The head of the determiner phrase is realized by head movement of the matrix noun. The combination of the moved noun and the genitive-assigning determiner provides the unique phonological shape of the construct state noun. The S-structure of a Hebrew noun phrase with a construct state noun is illustrated below:

<sup>5.</sup> In her paper, Ritter suggests that this genitive assigning determiner may be lexical when it is definite. The clitic ha- «cliticizes down» onto the genitive phrase at S-structure.

(19)  $\begin{array}{c|c} DP & NP \\ \hline N^0 & D^0 & NP \\ \hline beyt_i & & & \\ \hline D' & N^0 \\ \hline D^0 & NP \\ ha & & \\ \hline N^0 \\ mora \end{array}$ 

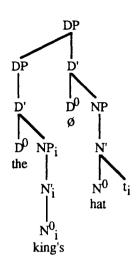
It seems that in Hebrew, functional categories are also pertinent to genitive Case marking. Moreover, the «DP-hypothesis» allows an account of the construct state noun phrases which shows that they are, after all, not so different than nominal phrases in other languages.

### 3.3 Genitive Case in English

Abney 1986 also provides arguments in favour of the «DP Hypothesis». He suggests that in the construction known as the «Anglo-Saxon genitive» there is a phonologically null functional category which heads the nominal phrase. The noun phrase is the complement of this functional category and the complement of the noun phrase appears in the specifier position of the (null) functional category phrase. This specifier position is the realization of genitive Case. Presumably the genitive complement phrase was assigned a theta-role and Case within the matrix noun phrase at D-structure (cf. Chomsky,1986A). The genitive phrase is moved to the specifier of the functional category phrase at S-structure.

The S-structure of the Anglo-Saxon genitive construction is given in (20). The indices show the chain of movement:

## (20) The king's hat



Abney's analysis has a number of advantages. For example, it provides a striking parallel between the structure of determiner phrases and the structure of sentences (inflection phrases) and so explains why they both allow active and passive realizations of similar argument structures (e.g. the well known patterns of pairs like **destroy/destruction**, cf. Lees 1960). Furthermore, the analysis claims that the specifier position of the null functional category projection is not a thetaposition and so explains why it may be filled with phrases which have a variety of theta-relationships in the relevant noun phrase (e.g. Claire's destruction of the theory, the theory's destruction, yesterday's theory, Claire's theory, etc.). Moreover, since specifier positions in general can only contain one element (cf. Chomsky 1986B), the theory provides for the lack of iteration of complements in this position (e.g. \*yesterday's Claire's theory).

Another explanation which is offered by this kind of analysis is of particular interest here. There are no grammatical sequences of determiners as in the following examples:

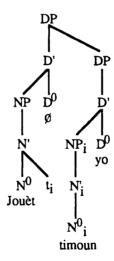
- (21) a. \*the the king's hat
  - b. \*a the king's hat
  - c. \*a any king's hat
  - d. \*the a king's hat ...etc.

It would be difficult to explain this fact, if the Anglo-Saxon genitive construction did not already involve a functional category. But Abney's analysis provides a direct explanation — the matrix noun phrase has a functional category; the null determiner. Presumably this element is incompatible with the overt articles, etc. The parallel with the facts of Haitian is striking.

#### 3.4 The Null Determiner in Haitian

The general pattern of distribution of determiners in Haitian noun phrases can be accounted for quite simply through the postulation of a phonetically null determiner which permits an NP appearing in its specifier position to realize genitive Case. Aside from the obvious differences in word order, the Haitian structure suggested by this hypothesis would be quite parallel to the structure of the Anglo-Saxon genitive in English as in Abney 1986. The pertinent S-structure is illustrated in (22):

(22) Jouèt timoun yo toy child pl.



The matrix noun (jouèt) is dominated by the projection of the null determiner ( $\emptyset$ ). The possessor argument (timoun yo) is generated in the projection of the matrix noun and then extraposed to the specifier position of the null determiner (leaving a trace ( $t_i$ )).

The obvious advantage of this analysis is that it not only explains why a series of embedded noun phrase complements is allowed only one overt determiner, it also explains why that overt determiner must be pertinent to the most embedded noun phrase. All the noun phrases which have genitive complements must have the null determiner in order to allow those complements to realize Case. Only the most embedded noun phrase has no complement and thus may appear with an overt determiner. Moreover, the analysis also predicts that there can be sequences of overt determiners in Haitian — but only when the null determiner is not needed to realize genitive Case (cf. the examples in (11) and (12)).

There is another advantage to this analysis. The examples in (23) demonstrate that the noun **repons** accepts complements which have different theta-roles. The examples in (24) show that these complements are allowed only one at a time. If both must be expressed, then one must appear in a prepositional phrase:

- (23) a. M tande repons kesyon an
  I hear answer question the
  «I heard the answer to the question»
  - b. M tande repons pwofesè a

    I hear answer professor the
    «I heard the answer of the professor»
- (24) a. \*M tande repons kesyon mwèn pwofesè a «I heard the professor's answer to my question»
  - b. \*M tande repons pwofesè kesyon mwèn an
  - c. M tande repons pwofesè a *sou* kesyon mwèn an «I heard the professor's answer to my question»

Since genitive Case is realized in the *specifier* position of the null determiner, the proposed null determiner provides the basis of an explanation for the fact that Haitian noun phrases normally allow only one nominal complement at a time. As was mentioned above, quite generally specifier positions only permit one element at a time (c.f. Chomsky 1986B).

Thus the present analysis provides a considerable improvement over the filter account of determiner distribution in Haitian. Like the filter, this analysis predicts that no noun phrase with a Genitive argument may have an overt determiner. In addition, the analysis correctly predicts that the overt determiner which does appear in noun phrases with embedded NP arguments will be associated with the most embedded noun (a fact not predicted by filter). Moreover, with this method of Genitive Case marking, noun phrases should only be able to realize one Genitive argument (also not predicted by filter). Furthermore, the analysis predicts correctly that sequences of determiners should be possible when the pertinent determiners are not involved in the realization of genitive Case (again, not predicted by filter). Although much remains to be investigated, the hypothesis that genitive Case is realized in Haitian by means of a null determiner provides a natural explanation for the broad characteristics of the pertinent constructions.

Note, however, that the particular facts which are found when noun phrase complements are proper names etc., raise difficult questions for this kind of analysis. As illustrated in examples (2) and (9) above, the determiner which appears in these constructions does not determine the most embedded noun phrase—when the most embedded phrase is a proper name, the determiner belongs to the next highest noun phrase. Nonetheless, the noun phrase which is a proper name is still a complement of the noun phrase in which it is embedded. Since this upper noun phrase may have an overt determiner, it is not immediately obvious how the embedded proper noun may realize genitive Case. Only the null determiner signals the genitive Case of a phrase in its specifier position.

This contradiction might be an indication that one should abandon the otherwise elegant and explanatory hypothesis of a null determiner in Haitian noun complement structures. But I would rather argue that this anomaly is an indication of the precise nature of the notion «Case realization». In the following sections, I will present an analysis of these exceptional genitive complements in Haitian. I will show that their exceptional status can be understood in a theory which provides for Case realization through the structures of the DP-hypothesis.

### 3.5 On the Derivation of Functional Category Positions

Most generative theories implicitly or explicitly describe syntactic positions as matrices of syntactic features (see especially Chomsky 1965). These theories must then provide an account of how these matrices of features are generated in each environment, in each derivation.

Here, I shall adopt the theory proposed in Lumsden 1987. The distinction between functional and lexical categories is central in that theory. Lexical category phrases (i.e. noun, verb, preposition, and adjective phrases) are defined by categorial features (i.e. [+/-N, +/-V]). Lexical category phrases are directly related to the semantic representation (i.e. they can have reference or be predicates). In contrast, functional category phrases (e.g. determiner, complementizer and inflection phrases, etc.) are defined by grammatical features (e.g. Case features, features of definiteness, plurality, etc.). These phrases are indirectly related to the semantic representation through their structural relation to the lexical category phrases.

I suppose that the D-structure representation is organized on the basis of the semantic representation (i.e. the GF-theta relations) and therefore includes all of the pertinent *lexical* category phrases (i.e. since these are linked to the semantic representation). These matrices of categorial features originate in the representation through the insertion of lexical entries into the D-structure representation. That is, the categorial feature matrices are listed in a particular entry in the lexicon and the use of this lexical entry involves the instantiation of these listed matrices in the syntax. These matrices provide the building blocks of lexical category phrases.

Besides their matrix of categorial features, verbs and prepositions ([-N] categories) derive from lexical entries which may also include a matrix of grammatical features. That is, these lexical entries may include a «subcategorization frame» in the form of a matrix of grammatical features. Such lexical entries are the source of *two* positions in the syntactic representation. They define the lexical category phrase (i.e. «verb» or «preposition») in the matrix of categorial features. They also define a functional category phrase in the «subcategorized» matrix of grammatical features. This functional category will head the syntactic complement of the lexical category. Thus the functional

categories of the phrases which are the objects of verbs or prepositions are generated in the syntax through the insertion of the lexical entry of the relevant verb or preposition.

The functional categories of adjuncts have a quite different origin. These matrices are *not* generated through lexical insertion at D-structure. Rather, they are inserted into the representation by contextual rule, during the derivation from D-structure to S-structure. Since this rule of insertion follows the assignment of certain marked values of Case features, one effect of this distinction is that the functional categories of adjunct phrases can realize only the unmarked value of these Case features (see Lumsden 1987, for extensive documentation of this fact). Furthermore, since the rule of insertion is defined with a context, these adjuncts are constrained to appear in specific environments.

There are exceptions to these general properties of adjuncts. As discussed in Larson 1985 (and also the references cited there), there is a class of nouns in English (in fact, in all languages) which may appear in an adverbial function in environments where there is no obvious Case assigner (e.g. no adjacent verb or preposition). These are the nouns which describe the time and space of the event of the proposition (e.g. in English, yesterday, way, etc.) — the «Bare-NP» adverbs. Lumsden 1987 points out that this class of nouns is also an exception to the general rule that adjuncts may realize only the default value of certain Case features. In languages where overt Case markers make Case distinctions easy to see, it is apparent that these Bare-NP adjuncts (but only these) may realize the marked value of Case.

Larson provides evidence which shows that this class of nouns must be lexically specified (that is, their specific properties must be listed in the lexicon). He proposes that these «Bare-NP» adverbs include in their lexical description some property (a «feature») which allows them to assign Case to themselves. But this suggestion does not account for the fact that this class of adjuncts may exceptionally realize the marked Case values.

The two exceptional patterns (i.e. the freedom in distribution and the appearance of marked Case features) may be explained at once through the hypothesis that these nouns derive from lexical entries which provide two matrices

of syntactic features to each representation. Each lexical entry of this class of nouns has a matrix of categorial features which defines a noun phrase and also a matrix of grammatical features which defines a functional phrase. Since the lexical entry (containing both the categorial and the grammatical feature matrices) is inserted at D-structure before the assignment of the marked value of Case features, this explains why these adjuncts may bear the marked value of Case. Moreover, since the *nominal* lexical entry provides the functional category feature matrix which allows Case realization, these adjuncts do not have to be adjacent to a verb or preposition in order to realize Case.

Thus Lumsden 1987 argues that nominal phrases which are the direct arguments of verbs or which appear under prepositions are supplied a functional category through the lexical insertion of the verb or preposition at D-structure. Adjuncts of manner etc. are supplied a functional category by a rule which inserts such a category in a specific environment between D- and S-structure. Bare-NP adjuncts are supplied a functional category from the insertion of their own lexical entry at D-structure. This theory about the derivational origin of functional category matrices provides an immediate explanation for the peculiar distribution of determiners in Haitian noun phrases which was discussed above.

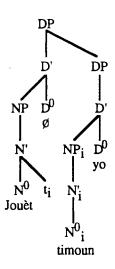
#### 3.6 Genitive Insertion

The functional categories which are associated with nominal complements in noun phrases are not provided to the representation by the noun which assigns the thetarole (in contrast with the functional categories which are associated with the complements of verbs or prepositions). In general then, these functional categories must be inserted by rule.

I propose the following rule to account for the general distribution of noun phrase complements in Haitian argument phrases:

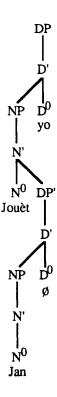
<sup>6.</sup> I presume that like all rules of grammar this is an optional rule, constrained only by the general principles of the grammar.

Noun phrase complements will originate as the NP sister of the noun which assigns them a theta-role. But in order to satisfy the Visibility Convention (c.f. Chomsky 1981), these phrases must be dominated by a functional category which realizes the appropriate Case. Thus these noun phrases must move to the complement position of the functional category which has been inserted into the representation to the right of the null determiner. Therefore, all nominal phrases which have genitive Case complements must appear with the null determiner to provide for this realization of Case. The use of the null determiner yields the S-structure described in (22) (repeated below):



The exceptional distribution of proper names and Bare-NP adverbs and names of familial relations in Haitian follows from an exceptional property which must be ascribed to these nouns in the lexicon. In terms of the theory of Lumsden 1987, this would be to say that these nouns come from lexical entries which include two syntactic feature matrices — the categorial feature matrix defining the NP and a grammatical feature matrix defining the functional category which dominates that NP. Since these lexical entries provide their own functional category phrase along with the lexical category phrase, these nouns can realize Case anywhere. There is no need for the inserted functional category from the rule described above in (25). Proper names are in phrases which remain in position as the sister of the noun which assigns them a theta role:

(26) Jouèt Jan yo toy John pl.



This analysis will explain another peculiar fact about Haitian noun phrase complements. More than one complement in a noun phrase is possible — but only if these are proper names etc.:

(27) repons Jan lendi yo answer John Monday pl. «John's answers of Monday» c.f. \* repons pwofesè lendi yo

This fact follows directly from the present analysis. Since these noun complements do not have to appear in the *specifier* position of the null determiner in order to to realize their Case, more than one complement is allowed.

In fact, the analysis has further implications about the distribution of this exceptional class of Haitian nouns. Since in Haitian, proper names have the same exceptional lexical property as do Bare-NP adverbs, this property should manifest itself in their general distribution. This prediction has been borne out in

independent research. In his thesis (1988), Joseph Frantz demonstrates that if they are not direct objects of verbs or subjects of clauses, common nouns need to appear under Case assigning prepositions (e.g. nan in the examples below). Strikingly, proper names and other nouns «of unique reference» are free from this constraint:

- (28) a. \*Alsi al rivyè
  Alsi go river
  - b. Alsi al *nan rivyè*Alsi go (to) river

    «Alsi went to the river»
  - c. Alsi al Rivyè Panyòl
     Alsi go river panyol
     «Alsi went to River Panyol (>Spanish River)»
- (29) a. \*Pol al mache
  Pol go market
  - b. Pol al nan mache
    Pol go (to) market

    «Paul went to market»
  - c. Pol al *Mache Pòspyewo*Pol go market pospyewo (> Poste-Pierrot)
    «Paul went to Pospyewo Market»
- (30) a. \*Jan te ale Ayiti okasyon sa a

  Jan PAST go Haiti occasion that the
  - b. Jan te ale Ayiti nan okasyon **S**22 а Haiti Past go (on) occasion that the «Jan went to Haiti at that time»
  - c. Jan te ale Ayiti lendi Jan PAST go Haiti monday «Jan went to Haiti on Monday»

Where rivyè, mache and okasyon sa a have to appear with nan, Rivyè Panyol, Mache Pòspyewo and lendi do not. The class of nouns which is

exceptional in distribution for genitive Case marking is also exceptional in distribution for other Cases. Thus these exceptions are not evidence against the idea that genitive Case marking in Haitian requires the null determiner. In fact, since they are free from the normal constraints of Case realization in clauses etc., the theory here *predicts* that this class of nouns will also have a unique distribution in noun phrases.

Thus the distribution of determiners in Haitian noun/noun complement structures follows in general and quite simply from the hypothesis that a null determiner is required to realize genitive Case. The peculiar patterns which occur with noun complements which are proper names, etc. require a more detailed account of the notion «Case realization». I have argued that these patterns may be seen to follow from the individual properties which must in any case be associated with this class of nouns. In contrast with common nouns, proper names and names of familial relations and Bare-NP adverbs are inherently determined and it is this property which allows these nouns an exceptional distribution in noun phrases and elsewhere.

## 4. A Processing Constraint

In the following section, I will present a brief account of the more general constraint on the distribution of determiners in Haitian — the constraint which forbids a series of identical determiners.

#### 4.1 Identical Determiners in Haitian

It is notable that the general constraint against sequences of identical determiners must be defined in terms of *linear sequences*. I would argue that this fact indicates that the constraint is an aspect of natural language processing. Following the analysis of functional categories in Lumsden 1987, I suppose that functional category positions in the syntactic tree are generated independently of the phonological signals which appear on the surface in these positions. That is, the phonological forms which appear in functional category positions are inserted in the representation at a relatively late stage in the derivation.

I suggest that this process of insertion is subject to the following constraint:

(31) The «Not Again!» Constraint (NAC)

The insertion of the functional signal «A» cannot be followed immediately by the insertion of the functional signal «A».

Although I have presented it as a restriction on the process of functional category insertion, the constraint could easily be formulated as a filter:

(32) The No-Fun Filter

\*Fun, Fun (where Fun is a specific functional category signal)

But where the filter formulation is an absolutely arbitrary statement, the statement as a processing constraint suggests that there is some mechanical property of the processing mechanism which imposes this restriction. While the latter is also an arbitrary supposition in our present state of knowledge about the processing of linguistic representations, it at least raises an empirical question.

Like the filter, the processing constraint is a negative provision which is not learnable, since only positive evidence is available in the acquisition of natural languages. Therefore, the NAC is presumably a part of the processing constraints of every natural language and not merely an aspect of Haitian. While the universality required of the NAC results in a very strong claim about the surface representations of natural languages, it is difficult to find evidence which bears directly on the point. What is required is a language with a coincidence of word-ordering so that linear sequences of determiners (or other functional categories) are potentially available. Unfortunately, languages with such word-orders are rare. A real test of the validity of the suggested constraint must await the extensive exploration of many natural languages.

## 4.2 Another Language Similarly Constrained

There is at least one other language, however, where there are facts which may be explained by the Not Again! Constraint. The West African language Fon (part of the Kwa family), is one of the substratum languages which were the source of Haitian creole (see Lefebvre 1986). In both Haitian and Fon, the determiner is the final element of the nominal argument string (i.e. the DP). In the noun phrases of

Fon, however, complements generally precede the noun (in contrast with Haitian). Thus Fon noun/noun complement structures do *not* provide potential sequences of determiners. But in Fon, relative clauses follow the noun which they qualify — thus the structure provides the potential for linear sequences of determiners.

As the following examples illustrate, only sequences of *non-identical* determiners are permitted. The parallel examples with identical determiners are ungrammatical:

- (33) a. sunù Dèe Dù dà O IEE

  man that he eat snake the pl.

  «man/men who ate the snake/s»
  - b. sunù Dèe Dù da *IEE O*man that he eat snake pl. the

    «the man who ate snakes»
  - c. \*sunù Dèe Dù dà O O

    «the man who ate the snake»
  - d. \*sunù Dèe Dù dà *lEE lEE* «men who ate snakes»

The ungrammaticality of these examples follows immediately from the NAC proposed above. It is striking that these facts concerning the distribution of determiners are parallel in Fon and in Haitian. Both languages forbid linear sequences of identical determiners. Moreover, the comparison of the two languages confirms the division of the phenomena which was proposed above on the basis of the Haitian data alone. In Fon, there is no independent constraint on the distribution of determiners in the context of genitive Case realization.

#### 5. Conclusion

I have shown that in Haitian noun phrase structures, only the most embedded nominal complement may appear with an overt determiner. I have argued that this fact follows from the particular realization of genitive Case in Haitian. Genitive Case is realised by a phrase in the specifier position of a null determiner. The

analysis suggests that these structures in Haitian are quite parallel to noun phrase structures in Hungarian, in Turkish, in English and in modern Hebrew. I have argued that the particular properties of noun phrase complements which are proper names. etc. provide evidence for a more specific formulation of the notion «Case realization»

I have shown that Haitian does not allow any linear sequences of identical determiners (although sequences of non-identical determiners are acceptable). I suggested that this fact follows from a processing constraint which forbids the insertion of linear sequences of identical functional category signals (i.e. a more specific formulation of the \*DET DET filter). This constraint is not obviously learnable and so should be a universal. In at least one other language (Fon), the effects of the constraint may also be seen in the distribution of determiners.

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