SOME REMARKS ON THE DIACHRONY OF FRENCH NEGATION
(Algumas Observações sobre a Diacronia
da Negação em Francês)

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ABSTRACT: *Based on the history of negation in French, this paper proposes a parametrization of how languages may morphologically express the logical structure of negation provided by UG. It is argued that the change of French negation is driven by a general economy principle governing language acquisition, which favors shorter chains over longer ones. It is also claimed that this change correlates with a change in the determiner system which leads negative chains to develop from indefinite chains*
KEY WORDS: *French Negation, Syntactic Change, Determiner System, Economy*

RESUMO: *A partir da história da negação em francês, este artigo propõe uma parametrização da maneira como as línguas expressam morfologicamente a estrutura lógica da negação produzida pela Gramática Universal. Argumenta-se que a mudança na negação em francês é provocada por um princípio de economia regendo a aquisição da linguagem que favorece cadeias mais curtas em detrimento de cadeias mais longas. Propõe-se também que essa mudança está relacionada com uma mudança no sistema dos determinantes, que leva as cadeias negativas a se desenvolverem a partir das cadeias indefinidas.*
PALAVRAS-CHAVE: *Negação em Francês, Mudança Sintática, Sistema de Determinantes, Economia*

1. Introduction

The purpose of this paper is to draw attention to a fairly well-known aspect of the history of French, and attempt to account for it in terms of straightforward and independently-motivated assumptions about the relationship between logical representations and morphophonological expressions. The phenomenon concerns the development of certain aspects of the French negation system, essentially the fact that negation

in Modern French is typically marked by two elements, a preverbal clitic *ne* in combination with a postverbal substantive negation: [1]

(1) a. Jean **n'**a **pas** vu Marie.
     b. Jean **n'**a **rien** fait.
     c. Jean **n'**a **jamais** dit cela.
     d. Jean **n'**a **aucun** espoir de gagner.
     e. Jean **n'**a vu **personne**.
     f. Jean **n'**a **plus** d'argent.

The Old French (OF) system was quite different to this, as we shall see below. So, our investigation of the history of French must account in a natural way for the changes; in doing this, then, we are essentially proposing at least a partial account of the mode of cross-linguistic (and therefore diachronic) variation in the relation between the logical and the morphological.

The paper is organised as follows: in Section 2 we introduce our assumptions about the representation of negation in general, comparing English, French and Italian. The presentation adopts and adapts recent ideas of Déprez (1997), Haegeman (1995) and Zanuttini (1997). Section 3 presents the OF data and an analysis. The analysis relies on ideas about language change proposed elsewhere (Clark & Roberts (1993), Roberts (1993, to appear), Roberts & Roussou (to appear).

2. Negation Synchronically

My approach follows that of Haegeman (1995) in relying extensively on the notion of negative-chain (although it differs from Haegeman's in various ways, as will become apparent below). I define chains as follows (see Manzini (1995)):

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[1]   The "substantive" negation is postverbal only in finite clauses. It precedes a (main-verb) infinitive. I attribute this to the operation of verb-movement in finite clauses – see Pollock (1989).

(2) a. (α, β) is a well-formed chain iff:
    i. α asymmetrically c-commands β;
    ii.   There is some feature F such that α and β share F;
    iii. There is no ψ such that ψ asymmetrically c-commands β but not α.
    b.   If $(\alpha_1 ... \alpha_n)$ is a well-formed chain and $(\beta_1 ... \beta_m)$ is a well-formed chain and (α_n, β_1) satisfies (2a) then $(\alpha_1 .... \beta_m)$ is a chain.

In a neg-chain, F is the feature [Neg]. For present purposes, I read (2a,iii) as a relativised condition, i.e. for ψ to break the chain, ψ must be specified as [Neg], and not a member of the chain.[2]

My approach differs from Haegeman's, however, in that I follow Déprez (who follows Ladusaw (1992)) in taking negative elements to be indefinites and in taking the cross-linguistic variation in the morphosyntactic realisation of negation to be connected to intrinsic properties of negative words and negative operators, rather than to the position and the structure of NegP.

Before presenting a brief sketch of an analysis of English, it is necessary to introduce some general assumptions. First, I define sentential negation as follows (cf. Acquaviva (1996: 298)):

(3) Sentential negation = closure of the temporal variable by a negated existential.

The existential in question I take to be introduced as a facet of the temporal representation. I take a sentence like (4) to have the temporal representation in (5):

(4) John left.
(5) $\exists t[t > t_o]$ (AT (e,t) & leave (e,j))

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[2]   A number of technical points arise here, which I will gloss over. The intuition behind the locality condition in (2a,iii) is that like intervenes in chain-formation for like; this is of course the idea behind Relativised Minimality (see Rizzi (1990, Chapter 3)). However, one can classify features such that members of given class act as interveners for other members of the same class (again, Rizzi (1990) does this): a simple way to do this is to state that [F] is an intervener for both [+F] and [-F]. I have avoided this in the text presentation, partly for simplicity and partly because it plays no real role in the case of negation. Negation seems to be a monovalent feature: I know of no reason to posit [+Neg] and [-Neg]. (2a,iii) is of course the Minimal Link Condition of Chomsky (1995).

(5) states that there is a time t, which precedes the speech time to, and the event of John leaving took place at t. In neo-Reichenbachian terms we can take T to provide the Reference Time which gives the restriction on the temporal quantifier. A naive first approximation is thus that the Past feature of T is interpreted as $[t > t_o]$ (cf. Stowell (1998)). The Speech Time is contextually given, presumably via C, as in Enç's (1987) theory of T-anchoring. The temporal quantifier is associated with C. AT may correspond to an aspectual head (giving a punctual reading here, as opposed to other aspectual operators one may imagine). AT relates the Event Time to the Speech Time and the Reference Time; the Event Time is an argument of the predicate, cf. Higginbotham (1985).

(5)   relates to the structure of (4) as follows:

(6) $\exists t[t > t_o]$ (AT (e,t) & leave (e,j))
    C T   Asp   V

The existential in C is thus what is negated, giving rise to sentential negation. This implies that sentential negation must be interpreted as having scope over C, a matter which has a number of implications which I will leave aside here. Since negation is not realised in C in all languages (although it might be in some), this implies that scope properties cannot be directly read off morphosyntax. This is of course an entirely standard observation.

The negation is realised by a negative morpheme associated with T or C. T and C together form a chain (this is necessary for the interpretation in (5) to be derived from the structure of (4)). Negated arguments are realised by a (T, D) chain, interpreted as "for no x .. x". The negation is given along the lines to be described directly. The variable is supplied by the negated argument; I take this to imply that negated arguments are indefinites, i.e. weak DPs in the sense of Milsark (1974). The quantification is supplied by the chain (C, T) (recall that the existential is structurally located in C) and the quantifier-variable relationship is established by the (T, D) chain.

Languages differ along lines determined by the parametrisation operator, which assigns a diacritic (written *) randomly to the functional features in the lexicon. The diacritic forces the morphophonological realisation of functional material (by Move or Merge). This idea is developed in full in Roberts & Roussou (1997).

Following a standard paradigm for work on language change in generative grammar initiated by Lightfoot (1979), I assume that change is initiated when (a population of) language acquirers converge on a grammatical system which differs in at least one parameter value from the system internalised by the speakers whose linguistic behaviour provides the input to those acquirers. As the younger generation replaces the older one, the change is carried through the speech community (subject to the vicissitudes of history). More specifically, Clark & Roberts (1993, – C&R henceforth) propose that the parameter-setting device (i.e. the language acquirer) is computationally conservative, in that there is a built-in preference for relatively simple representations. For present purposes, this implies that "shorter", non-composed chains are preferred "longer", composed ones. Put more technically, $CH = (F, G)$ will be preferred, other things being equal, over $CH = ((F,G), G,H))$. This idea plays a central role in our discussion of the development of the French negative words illustrated in (1).

Finally, I propose the following recoverability condition on chains:

(7)   Recoverability of chains:
      $CH = (\alpha_1 ... \alpha_n)$ with $\alpha_i = F^*$ is a well-formed chain iff:
      (i) $[_{\alpha_i} F^*]$ which asymmetrically c-commands all $[_{\alpha_{j>i}} G^*]$;
      (ii) CH is interpreted as an F-chain;
      (iii) G^* is interpretatively identified with F^*.

(7iii) implies that if G^* is not interpretatively identified with F^*, then G^* heads its own chain, i.e. it breaks the F-chain, following (2a,iii). (7) requires all neg-chains to have an overt negative morpheme in the structurally highest phonologically realised position ((7i,ii)), and all other overt negative morphemes in the chain to be interpreted as part of a single negation ((7iii) = (2a,ii)). For the simple case of a single negated argument, the (T, D) chain required for negation then has three possible realisations:

(8)   a. (T^*,D)
      b. (T, D^*)
      c. (T^*, D^*)

I assume that the chain (T, D), i.e. where neither T nor D is realised by an overt negative morpheme, is ruled as a negative chain, since

negation, as an inherently marked property in relation to positive polarity, must be morphologically marked in order for the chain to be identified as negative. The other possibilities are instantiated parametrically in various languages, as I will now describe.[3]

2.1. English

In this section, I briefly describe salient points of English negation. The purpose of this is not to give anything like an exhaustive treatment of the situation in English, but rather to illustrate some of the mechanisms introduced in the previous section.

The basic paradigm regarding the expression of negation in English is summarised by the following examples:

(9) a. I saw nothing.
     b. I didn't see anything.
     c. I didn't see nothing.
     d. *I saw anything.

In (9a), negation is not realised on T but on D – this is thus a case of (8b): (T, D*). Note that we can fairly straightforwardly take *no* to be a D, with *thing* the NP complement. The impossibility of DPs like **no a man, *no the man, *no many linguists, *no every man, *no no man* supports treating *no* as a D (but see Acquaviva (1995) for a different interpretation of this fact). Note that the *no*-words of English are weak in Milsark's sense (and in Barwise & Cooper's (1981) sense, cf. (10b)):

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[3] I understand the notion of markedness along the lines sketched by Cinque (who takes it from Jakobson (see Cinque (1997:214)) in regarding unmarked values as, in a sense, underspecified. What is needed is a feature hierarchy. Functional heads, as features F, G, H ..., can come with various further feature specifications f, g, h ... (I will write the subfeatures with lower case and potentially autonomous functional features with upper case). We can then treat unmarked values of functional heads as simply the autonomous functional feature F, while the marked value will have a further subfeature, giving F+f. In the case in point, T is the autonomous functional feature, and f=neg is a marked subfeature. We can then add to (7) the requirement that marked subfeatures must be identified. An unmarked feature (e.g. positive polarity) can be entirely absent from the representation, but will be "read in" at LF by convention. On the other hand, the marked feature has to be syntactically present and recoverable in the sense of (7) in order to be interpreted. See also Giorgi & Pianesi (1998) for similar ideas.

(10) a.   There is noone in the garden.
    b.   Nothing is a thing.

(9a) thus receives the interpretation "There is no x, x a thing, such that I saw x". I take no view on how the scopal properties of this or other operators are determined (or on more complex and ambiguous cases like Klima (1964)'s *I will force you to marry noone* – cf. Kayne (1998) for a recent treatment).[4] The NP-denotation provides the restriction on the quantifier denoted by the (T, D) chain. So (9a) is interpreted as follows:

(9a') $\neg\exists x$ [thing(x)] $\exists t$[PAST(t)] (AT (e,t) & see (e,I,x))
    D   NP   T-chain

Both existentials are introduced under closure; in fact we can assume that a single operator in C unselectively binds both variables, thanks to composition of the (T, D) chain and the T-chain). I will return to this point in the next section.

In (9b), clausal negation is overtly realised as *n't*.[5] This element combines with *anything* to form a single negation. So here we have the chain (T, D), where T is *n't* and D is *any*. Clearly, *n't* morphologically realises the negative property of the chain on T, in conformity with (7), i.e. this is an example of (8a): (T*, D). *Any*, on the other hand, is not intrinsically negative, as its appearance in non-negative environments shows (e.g. *Did you see anyone? etc.). It is clea*r that any-DPs are weak:

(11) There isn't anyone in the garden.

The interpretation of (9b) is illustrated in (12):

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[4]   It is natural to contemplate a QR-like operation, but see Kayne (1998). Note that linking the interpretation of negative arguments to T-chains makes possible an account based on "restructuring" phenomena if these are seen as involving extended T-chains as in Roberts (1997). Kayne (1998) also notes a connection between scope of negation and clitic-climbing, cf. also Déprez (1997).

[5]   A full consideration of the position and nature of *not/n't*, negative contraction and the mechanism triggering *do*-support would go beyond the scope of this paper. See Roberts (1998) for some proposals.

(12) $\neg\exists x$ [thing(x)] $\exists t$[PAST(t)] (AT (e,t) & see (e,I,x))
       n't   DP/NP   T-chain

*n't co*mbines with *anything* to form a single negation. So here we have the chain (T, D), where T is *n't* and D is *any*. *n't* morphologically realises the negative property of the chain on T, in conformity with (7). As with *nothing*, the NP *thing* gives the restriction, the D provides the variable, the (T, D) chain the quantifier-variable relation. And so (9b) is interpreted as "There is no x such that I saw x", like (9a).

(9c) can only be interpreted as double negation (in Standard English). This is because both *no* and *not/n't* introduce negation. Because of this, where *not/n't* is realised higher in the chain, *no* cannot be interpreted (see (2a,iii)/(7iii)). But *no* must be interpreted as negative, hence, by (2a,iii)/(7iii), it must head a separate neg-chain, hence double negation.[6]

Finally, (9d) is an example where the licensing condition on *any* is not met. *Any* must form a chain with a downward-entailing operator, such as negation ((9b)), Q, *if*, the restrictive clause of *every* or the comparative operator. If *any* does not form such a chain, it simply cannot be interpreted.

So, we see that English allows negation to be realised either on T or on D. In Standard English, the true negative D *no* is inherently negative, and as such incapable of forming a chain with a c-commanding negative element. For this reason, Standard English lacks negative concord. On the other hand, *any* requires an operator to license it, one of the possible licensors being clausal negation. We see how different lexical items instantiate the possibilities for realising negation listed in (8), and how these interact with the well-formedness conditions on chains given in (2) and (7).

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[6] Varieties of English where (9c) is grammatical are those where *no* does not have to be interpreted as negative, and hence the *no*-DP can join the neg-chain and a single-negation interpretation results. In terms of the idea to be proposed in (15) below, we must treat such dialects as having the noun *nothing* rather the determiner *no* and the noun *thing*. It may be significant in this connection that the word for "nothing" in many non-standard varieties of English corresponds to *nought* (*nowt* /naʊt/ in Northern British English (cf. Yorkshire "Eat all and say nowt, sup all and pay nowt")).

2.2. Romance N-words and negative concord

As is well-known, the modern Romance languages show negative concord (NC). The Standard Italian paradigm is illustrated in (13):

(13) a. Non ho visto nessuno.
    b. Nessuno (*non) mi ha visto.
    c. Non mi ha visto nessuno.
    d. *Ho visto nessuno.
    e. Non ho detto niente a nessuno.

In (13a), the N-word *nessuno* functions like polarity *any*.[7] It forms a chain with *non*, which is part of the T-chain, giving CH = (T*, D*), i.e. (8c). Again, the DP provides the variable, and the (T, D) chain provides both the quantifier and the quantifier-variable relation.

In (13b), *nessuno* identifies the chain as a neg-chain. Since it c-commands T (being in the subject position SpecAgrSP or SpecTP), *non* cannot appear. *Non* cannot appear for exactly the reason that *no* cannot appear in the English example (9c): it must be interpreted as introducing its own negation and cannot do so when it is c-commanded by a Neg* element (the D of *nessuno*). *Nessuno*, on the other hand, as (13a) shows, is not obligatorily interpreted as introducing its own negation, although it must be so interpreted when it heads a chain, following (7i) (this is also why it is interpreted as negative in isolation – cf. Zanuttini (1991, 1997)).

In (13c), on the other hand, the "freely inverted" subject does not c-command T; instead, *non* appears as the head of the chain and *nessuno* appears lower in the chain, as in (13a).

Putting these observations together with what we saw in the previous section, we have:

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[7] In fact, non-negative nessuno can appear in other polarity-licensing contexts, reinforcing the similarity with any (Rizzi (1982:122)):

(i) Mi chiedo se Gianni abbia contattato nessuno.

(ii) Mi chiedo se nessuno abbia contattato Gianni.

As these examples show, there is no subject-object asymmetry here. It is clear that +Wh *se* licenses *nessuno*.

(14) a. Items which obligatorily introduce negation: *not, non, no*+NP
     b. Items which optionally introduce negation: Italian n-words.
     c. Items which never introduce negation: *any*+NP.

It follows from (7) that the items in (14a) must head their own neg-chains, that the items in (14b) will be interpreted as negative exactly when they head their own neg-chains and not otherwise, and that the items in (14c) will never head their own neg-chains. Items like those in (14c) are not properly negative, as is of course the case with *any*. Naturally, we would like to find a correlate for the distinction between negative words like (14a) and those like (14b). One possibility is that morphemes whose entire content is negation are those of type (14a). To put it another way, if a morpheme expresses negation without expressing a restriction it is of type (14a). This is clearly true for *not, non* and English *no.* Now, if functional heads must express logical content like negation (see von Fintel (1995), Roberts & Roussou (to appear)), then (15) follows:

(15) Negative functional categories obligatorily introduce negation; negative lexical categories optionally do so.

It is clear that *not, non* are clausal functional elements (perhaps of category Neg, obviously the negative functional category par excellence), and always compose with the T-chain as we saw in the previous section. *No* is of category D, as we saw. *Nessuno* must now be treated as being of category N, as in Déprez (1996) (although it forms a chain with D, and hence the composed chain $((T,D)(D,N))$ has the properties we observed – cf. (2b)). Strictly speaking then, we never have (T^*, D^*) in a single chain, but rather (T^*, D^*, N^*) (where D^* indicates that D attracts N). (15) is relevant for the analysis of the development of French negation, as we shall see in Section 3.

What we have said so far allows (13d), on a par with English *I saw nobody*. So we need to add a further observation about Italian: if T heads the neg-chain, it must be realised by *non*. In other words, Italian has (T^*, D^*) and (D^*, T), but neither (T, D^*) nor (D^*, T^*).

(13e) illustrates the fact that branching neg-chains are allowed, as long as each can be interpreted as headed by *non*. The branching chains give a multiple-quantification interpretation "there is no person x and no thing y such that I said x to y".

Turning now to Modern French, we find a situation which is substantially the same as that in Italian, which one important difference. Compare the following with (13):

(16)   a.   Je n'ai vu personne.
       b.   Personne ne m'a vu.
       c.   Je n'ai pas vu Marie.
       d.   *Je n'ai pas vu personne.
       e.   Personne ne m'a pas vu.

(16a) looks exactly like (13a); we can analyse *ne* as the instantiation of negation in the T-chain, and *personne*, like *nessuno*, as the realisation of the negated argument in the neg-chain. This implies that *personne* resembles *nessuno* in optionally introducing negation, and so, following the proposal in (15), we should treat it as a noun (note also that *personne* is like *nessuno* in containing both the negation and the restriction). We thus have the chain (T*, D*, N*) here, as in (13a) (again D* attracts N).

On the other hand, (16b) differs minimally from (13b) in that clausal negation *ne* is required.[8] This implies two things, given the above discussion: first, negation is always realised in the T-chain in French and, second, *ne* is a sentential negation of type (14b). The first conclusion is unproblematic; the second might appear to contradict (15) but in fact it does not, as the claim is that *ne* is either negative or expletive, but never has further content.

(16c) illustrates the well-known double expression of negation in French. This is allowed by our system; clausal negation simply has two realisations in one chain. (16d) is ungrammatical because no well-formed chain can contain all of *ne, pas* and *personne*. The chain (*ne, pas, personne*) cannot receive a well-formed interpretation as a single negation; since both *pas* and *personne* must introduce their own negation. For the same reason *pas* and *personne* cannot form a chain independently of *ne*. The chain (*ne, personne*) violates the locality condition on chains (2,a,iii).[9]

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[8]   *Ne* is most frequently omitted in spoken French and in informal written French. In the relevant registers, though, *ne* is required here.
[9]   What is not clear why *personne* cannot head its own chain, giving rise to a double-negation reading. I leave this question aside here.

Finally, in (16e), which according to Déprez (1997: 114), is "very marginal" and " ... always ha[s] a double negation reading", *personne* heads its own chain, as does *ne*. It is unclear, however, what the difference is between this example and its ungrammatical Italian counterpart in (13b).

The above remarks, although they leave a number of questions open, are sufficient to illustrate the ideas and mechanisms that I will exploit in the account of the diachronic development of certain negative words in French. The central ideas are the definition of chains as in (2), the recoverability condition in (7), the possibilities of parametric variation see in (8) and the generalisation in (15) (which may follow from the characterisation of functional categories as elements which must express logical content).

3. The diachronic development and loss of Neg-dependencies

The basic observation about earlier stages of French that we are interested in here is summarised by the following quotation from (Foulet (1990: 244)):

> "Si *ne* est la négation essentielle du vieux français et n'a besoin d'aucun secours étranger pour exprimer l'idée négative, il est vrai pourtant que depuis longtemps on aime à la renforcer par une série de mots dont l'emploi est parfois bien curieux. Ces mots, à une exception près, ... tiennent leur valeur négative uniquement de leur association avec *ne*, et il est impossible de les employer au sens négatif sans les faire précéder ou suivre de *ne.*"

> [Although *ne* is the essential negation in Old French and needs no extra help to express the idea of negation, it is nevertheless the case that from an early stage there is a preference to reinforce it with a series of words whose usage is sometimes rather curious. These words, with one exception, ... take their negative value purely from their association with *ne*, and it is impossible to use them with a negative meaning without *ne* preceding or following them – my translation].

This phenomenon is illustrated by the following examples, which I have translated directly into Modern English on the basis of Foulet's translations into Modern French and his comments:

(17) *Nul* ("any"):

a.   Cuidiez vous, se me disiiez
     vostre conseil celeement
     que jel deïsse a **nule gent**.   (*La Chastelaine de Vergi* 318-20; Foulet,
     p. 245)
     "Do you think, if you tell me your advice secretly that I would tell to
     (just) anyone"

b.   Estre morte o lui me fust mieus
     que vivre si que de mes ieus
     ne le veïsse **nule foiz**.   (*La Chastelaine de Vergi* 805-7; Foulet, p. 246)
     "To be dead or him(?) would be better for me than to live if I didn't see
     him any time with my eyes."

(18) *Aucun* ("some"):

a.   **Aucuns** se sont aati ...(le Bossu, *Le Jeu de la Feuillée* 438; Foulet, p. 246)
     "Some people have boasted.."

b.   k'il **n'**aient de vous **aucun bien** (*Le Jeu de la Feuillée* 671; Foulet, p. 247)
     "That they won't have any good(s) from you"

(19) *Plus* ("more"):

je n'ai or **plus d'argent**   (*Le Jeu de la Feuillée* 554; Foulet, p. 249)
I haven't got more money (vs. ModFr "I haven't any money")

(20) *Onques* ("(n)ever"):

a.   conment qu'il **onques** en aviegne   (*Courtois d'Arras* 66; Foulet, p. 252)
     "how it might ever happen"

b.   Et dist li dus: "Ce n'avint **onques**: .. (*La Chastelaine de Vergi* 349;
     Foulet, 252)
     "And the duke said: 'That didn't ever happen'"

(21) *rien*, still could be a feminine noun:

a.   Douce **riens** por cui je chant (Muset, *Chansons* VIII, 44; Foulet, p. 273)
     "Sweet one for whom I sing"

b.   ... li feus,
     qu'il **ne** pooit por **riens** estaindre
     (Huon le Roi, *Le Vair Palefroi* 204-5; Foulet 279)
     ".. the fire that he couldn't put out for anything"

It seems clear that all the above words were indefinites, interpreted as having existential quantificational force (*plus* must have been a scalar quantifier of some kind). As indefinites, these elements interact scopally with negation, and as such are able to be interpreted in or out of the

scope of negation. It seems, then, that these elements were neither n-words nor negative quantifiers in Old French (OF). In fact, the only such element in OF appears to have been *nient* ("nothing"), which has subsequently disappeared.

Diachronically, these elements turn into n-words witht he properties described and analysed in Section 2 (except *onques*, which disappears and is replaced by *jamais*, a compound of *ja* ("ever") and *mais* ("more"), both of which were like the items in (17-21) in OF). In terms of the general account of negation given in Section 2, this implies that these elements underwent a diachronic change such that forming a chain with the clausal negation became obligatory. They become, in the new chain, elements which introduce negative quantification and a restriction on that quantifier, e.g. *rien* now means "for no x, x a thing" while in OF it meant "for some x, x a thing" or, in terms of the Kamp/Heim approach to indefinites (see below) "x, x a thing". In terms of the typology in (14), the OF elements were of type (14c), and the Modern French ones are of type (14a), since they obligatorily introduce negation (note that the generalisation regarding the expression of a restriction given in the text below (14) is formulated as a one-way implication, and so it allows an element to express a restriction and still be of type (14a)).

There are various technical ways to think of this change: as the loss of independent quantificational force, as the loss of the ability to undergo QR at LF, as the loss of an interpretable ∃-feature (in terms of the feature system in Chomsky (1995, Chapter 4)), or, in terms of the theory of indefinites in Heim (1982), as the loss of the ability to be bound under existential closure by a non-negated existential. The account that I will now propose relies on this last idea.

Let us suppose, following Kamp (1981), Heim (1982) and much subsequent work (notably Diesing (1991)), that indefinites are free variables bound under existential closure. The system for negation sketched in Section 2 is one in which chains are the structural entities which receive an interpretation (whether or not this happens at a dedicated level of representation). As we saw there, an example like (9b), repeated here, has a logical form like (22):

(9b)   I didn't see anything.
(22) $\neg \exists x$ [thing(x)] $\exists t$[PAST(t)] (AT (e,t) & see (e,I,x))

Here the quantifier-variable relations are structurally manifested as chains. The existential quantifiers are introduced by closure. Clearly, we would want an example containing a simple indefinite to have a similar structure and interpretation, presumably along the lines indicated in (23):

(23) a. I saw a thing.
     b. $\exists x$ [thing(x)] $\exists t$[PAST(t)] (AT (e,t) & see (e,I,x))
           DP/NP   T-chain

Let us suppose, concretely (and *contra* Diesing (1991)), that the existential which binds the variable introduced by the indefinite occupies the C-position.[10] This implies that the chain which licenses the indefinite links C to the object D via the T-chain giving the composed chain ((C, T), (T, D)) (as described in Section 2). As we saw in Section 2, the negative chain links the negative morpheme to the D. The negative chain is (T, D). If we assume that shorter chains are always preferred over longer ones (or simple chains over composed ones), as a matter of computational conservatism on the part of the language-acquisition device (cf Clark & Roberts (1993)), then we can see that (T, D) is preferred over ((C, T), (T, D)). So acquirers will naturally interpret indefinites in the scope of negation as actually in the negative chain, and hence as part of the expression of negation. This is our proposal for what changed in the history of French. We can summarise it as follows:

(24) $CH_{Indefinite} = ((C, T), (T,D)) > CH_{Neg} = (T, D)$

This change is a consequence of the general preference on the part of language acquirers for relatively simple chains.

What was just described may not be the whole story, though. Another facet of the development of these elements is indicated by Déprez (1995). She puts together several interesting observations. First, that Modern

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[10] Or more precisely, perhaps, to a Mood (or Fin, in the terminology of Rizzi (1997)) position in C; note that the properties of this position, since it marks the realis/irrealis distinction, are important for existential generalisation and substitution of identicals, and so are naturally thought of as related to how Ds are interpreted.

French DPs (almost) always require an article (*Zinedine a marqué *(des) buts*). Second, this was not the case in earlier French. The following is a 16th-century example cited by Déprez (1995: 53):

(25) Tu as exemple de ce vice en infinis endroits
      You have example(s?) of this vice infinite places

Déprez concludes "an attractive conjecture is that the use of bare *rien* and *personne* in environments from which bare NPs gradually disappeared, survived by ... undergoing incorporation into the obsolete empty indefinite determiners which preceded them" (p. 54). Given (15) and the fact that these items are obligatorily negative in Modern French, we conclude that they were reanylsed as members of D. This may also explain why these elements no longer bear N-features, if we think that such features are attributes of Nouns that derive from the interaction of N with the functional positions inside DP. Pure Ds thus lack such features.

In other words, French lost a class of null indefinite determiners; these were replaced by *un(e)*, *des* and, for generic plurals (corresponding to bare plurals in English and many other languages) the plural definite article *les*. Following tzhe general approach in Longobardi (1994), we can suppose that French Ds developed the property of always having to be filled. In terms of Roberts & Roussou (1997), French developed D*. Positive D satisfies this property by Merge; certain negative Ds by Move, i.e. the earlier bare indefinites, *rien, personne*, and those illustrated in (17-21), innovated N-to-D movement, as Déprez suggests.

There is also the null article in negative complements: *Jean n'a pas mangé [e de pommes]* (cf. Kayne (1984)). This is the only case of a null D in Modern French; significantly, it is negative. The devellopment of this construction supports our approach. In OF, this construction did not exist (see the detailed discussion in Foulet (1990: 73ff.)). A simple negative indefinite lacked an article altogether (which is why, in our terms, *un(e)* did not become an n-word:

(26) je ne nourriroie trahitor   (*Ch.* 1223-4; Foulet (1990: 73))
      "I would not feed [a] traitor"

Null indefinite articles could also appear in non-negativ contexts in OF:

(27) S'avïons palefrois et seles   (*V.P.* 527-8; Foulet (1990: 63))
     If we had horses and saddles

So this D changed in the same way as those in (17-21), and, we presume, for the same reason.

We can tie the development of French negation to the development of the D-system more tightly in terms of the following conjecture: French lost ((C, T), (T, D)) for indefinites. Negative indefinites were reanalysed as (T*, D*) (*Jean n'a vu personne*) or (T*, D) (*Jean n'a pas mangé de pommes*) and positive indefinites as (T, D*). This took place presumably due to developments in the determiner system itself, combined – in the case of negation – with the existence of the more elegant shorter chain (T*, D). Note that all of the new chains are identified by phnologically overt material (i.e. they contain F*); this factor too may have played a role in the reanalysis if we assume that overt PF-identification of the properties is preferred by acquirers over purely abstract chains of the type (F, G). (This implies that there is a certain cost to the LF "reading in" of unmarked features alluded to in fn. 3).

4. Conclusion

In this paper I have sketched a general account of negation, and attempted to describe how a number of indefinite nouns in OF became n-words in Modern French. The account relies on the idea that negative chains develop naturally from indefinite chains, in that (where clausal negation is morphologically realised on T) negative chains are more local than indefinite ones. The fact that in OF many indefinite chains had no overt exponent at all may also have played a role. Finally, as observed by Déprez (1995), this change interacts with a more general development in the French D-system, such that, with one (negative) exception, there are no empty Ds in Modern French. In the last analysis, then, as Déprez (1996) has observed, fully understanding the development of French negation involves understanding the development of the D-system, i.e. the general development of a requirement that D be phonologically realised.

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