On the nature of French N-words[*]

ERIC MATHIEU

Abstract

The view defended in this paper is that French N-words are inherently negative. We argue that French N-words are not simple (i.e. Negative Polarity Items/pure variables), but negative indefinites: complex XPs consisting of a phonologically null negative operator and an indefinite expression. French negative statements with N-words are instances of scope marking chains in which the null operator is a sub-extracted adjunct. The latter moves to the specifier of a Neg phrase so that negation can take scope over the relevant predicate while the indefinite expression is stranded.

1 Are French N-words pure variables?

The present paper deals with French N-words.[1] French has often been considered a negative concord language. The term 'negative concord' (NC, henceforth) is usually defined as the multiple occurrence within a sentence of two (or more) apparent expressors of negation which in fact express only a single semantic negation (cf. Klima 1964, Labov 1972).

Many recent analyses of N-words in NC languages are semantic in nature and rely on Ladusaw's (1992, 1994) work, whose point of departure is the two ways negation can be expressed in natural languages, either universally or existentially with yet identical truth-conditions:

(1) *Logical representation of general negative statements*

a. $\forall x\,[P(x) \rightarrow \neg\, Q(x)]$ Universal negation

b. $\neg\exists x\,[P(x) \wedge Q(x)]$ Existential negation

[*] I wish to thank Hans van de Koot for his very valuable comments, his patience and ongoing support. I also wish to thank Ad Neeleman, and for their judgements about the data: Dirk Bury, Florian Grandena

[1] The term 'N-word' is a theoretically neutral term introduced by Laka (1990). It encompasses several types of expressions like Dutch *niemand,* Italian *nessuno*, Spanish *nadie* and French *personne*.

Let us call (1a) the strong licensing and (1b) the weak licensing. In a language like English, which has both a Negative Polarity Item (NPI) series (*anyone, anything*) and a negative quantifier specimen (*no one, nothing*), the distinction between (1a) and (1b) is lexically instantiated. English negative quantifiers are interpreted universally whereas NPIs are interpreted existentially.[2] To illustrate, (2a) corresponds to (1a) while (2b) corresponds to (1b):

(2) a. I saw no one.
$\forall$x [person (x) $\rightarrow \neg$ I saw (x)]. (strong licensing)
'For all x, x a person, it is not the case that I saw x.'
b. I didn't see anyone.
$\neg\exists$x [person (x) $\wedge$ I saw (x)]. (weak licensing)
'There is no x, such that x is a person and I saw x.'

The choice between the two distinct structures (1a and 1b) is not lexically instantiated in all languages. According to Ladusaw, N-words in NC languages are lexically ambiguous. They are not inherently negative, but pure variables/NPIs licensed either via universal (under negation) or existential quantification (under negation and other relevant operators). To take a concrete example, this means that a sentence like (3) in French can be interpreted as either (3i) or (3ii):

(3) Je **n'** ai vu **personne**.
I Neghave seen no one
(i) 'For all x, x a person, it is not the case that I saw x.'
(ii) 'There is no x, such that x a person, and I saw x.'

The semantic approach is supposed to account for the fact that N-words in NC languages are compatible with non-negative contexts (e.g. yes-no questions):

(4) Ha telefonato **nessuno**?

---

[2] In the present paper, NPI means weak NPI (e.g. *anything, anyone*) and not strong NPI (e.g. *a red cent, a bit*). A distinction has been in the literature between strong and weak NPIs on account of the fact that strong NPIs are licensed only by a proper subset of the potential triggers for weak NPIs (cf. van der Wouden 1997). The licensing of strong NPIs does appear to be more local than weak NPIs, suggesting that they may involve movement, contrary to weak NPIs. Strong NPIs also appear to be banned from non-negative contexts.

Has called no one
'Has anyone called? (Italian)

Another argument for the pure variable view of NC N-words is that in a NC language, sentences containing multiple negative phrases do not yield double-negation in addition to the NC interpretation. On the basis of these facts, the conclusion Ladusaw and the various analyses based upon his work draw is that only one element represents negation in negative statements in NC languages (see Acquaviva 1993 for Italian, Giannakidou & Quer 1995, 1997 for Greek, Déprez 1997 for French, Peres 1997 for Portuguese).

The negative element is an abstract negative operator in logical form that is triggered by syntactic rules (Quantifier Raising for the strong licensing and Quantifier Construal for the weak licensing), not by any morpheme. The analysis is thus very different from the Neg Criterion analysis (cf. Haegeman & Zanuttini 1991, Haegeman 1995, 1997) according to which there is a close relationship between N-words and Neg heads, the two involving a [+NEG] feature.

On Ladusaw's account, strong licensing is achieved by interpreting the variable contained in the indefinite in the *restriction* of the negative operator. In the case of the weak licensing, the variable is interpreted in the *scope* of the negative operator. On the strong interpretation, the negative abstract operator has implicit quantificational force. It involves a tripartite structure with two arguments (a domain restrictor and a nuclear scope):[3]

(5) a. ∀x, person (x), NOT I saw x (= no (x), person (x), I saw x).
b. NOT ∃x I saw person (x).

Ladusaw's theory is radical in that it claims that neither the preverbal nor the postverbal NC N-word is inherently negative. Other accounts like those of Rizzi (1982), van der Wouden & Zwarts (1993) and Dowty (1994), although they consider *postverbal* N-words as pure variables, nevertheless grant negative status to *preverbal* NC N-words, since subject N-words are never accompanied by a Neg head:

(6) a. Maria *(**non**) ha visto **nessuno**.

[3] The idea that negation forms a tripartite structure was in fact suggested by Heim (1982), but the idea was not fully developed. Apart from Ladusaw (1992), (1994), see Partee (1993) for a development of this idea.

Maria Neg has seen no one
'Maria didn't see anybody.'

b. **Nessuno** (***non)** ha visto Maria.
no one Neg has seen Maria
'No one has seen Maria.' (Italian)

The aim of the present paper is to argue that the semantic analysis outlined above cannot be applied to French. Although it may well be suitable for Italian and other Romance languages like Spanish and Catalan, the semantic account will not work for French, because its N-words do not exhibit quantificational variability. That is, unlike NPIs, they cannot appear in non-negative contexts (a fact often ignored by studies on French N-words). Second, French N-words exhibit strong island effects whereas NPIs do not. Third, French N-words show weak island effects; NPIs do not. Fourth, NPIs can be licensed by superordinate negation while French N-words cannot. Fifth, French N-words can appear sentence initially whereas NPIs cannot. Sixth, French N-words can be used as fragment answers; NPIs cannot. Seventh, French N-words can be modified by adverbs which can typically modify quantificational elements, while this is impossible with NPIs. Eighth, negative statements with multiple N-words can yield a double negation interpretation in addition to the NC reading. Finally, French has, in fact, its own set of NPIs. This means that French N-words should not be lexically ambiguous, since there is a negative quantifier paradigm in addition to the NPI specimen.

The conclusion is thus that French N-words are not pure variables, but inherently negative. We propose that French N-words are complex XPs which can be decomposed into a negative operator + an indefinite expression. NPIs, on the other hand, consist of an indefinite expression only. Several properties of French N-words can then be attributed to movement of the phonologically null Neg operator to the specifier of a Neg phrase so that negation can take scope over the relevant predicate. The indefinite is stranded and the variable it introduces is existentially closed off within the VP.

This is how we proceed. Section 2 introduces the evidence against the claim that French N-words are pure variables. Section 3 provides a tentative analysis of the locality problem posed by French N-words. We gather our conclusions in section 4.

2 Evidence against the claim that French N-words are pure variables

2.1 Non-negative polarity environments

If French N-words were pure variables/NPIs, we would expect that they can appear in non-negative polarity environments. However, they cannot. From this point of view, French N-words are thus unlike NPIs, but similar to negative quantifiers (NQs). English NPIs can occur in many non-negative polarity environments while NQs cannot (UQ = universal quantifier):[4]

(7)	a.	Has anyone/*no one called?	(yes-no question)
	b.	When did you call anyone/*no one?	(WH question)
	c.	If you see anyone/*no one, let me know.	(conditional)
	d.	I doubt anyone/*no one will come.	(adversative)
	e.	I am surprised that he knows anyone/*no one.	(factive)
	f.	Everyone who knows anything/*nothing about this knows it's dangerous.	(UQ)
	g.	Only John saw anything/*nothing.	(only)
	h.	John is richer than anyone/*no one.	(comparative)
	i.	It's the dumbest idea anyone/*no one has had.	(superlative)

The fact that NC N-words can, in some NC languages, occur in some polarity contexts other than negation has led several researchers to uniformly classify NC N-words as NPIs (cf. Laka 1990, Progovac 1994, Suñer 1995). Note, however, that Italian N-words are licensed in fewer non-negative polarity environments than English NPIs:

(8)	a.	Ha telefonato **nessuno**? has phoned no one 'Has anyone phoned?'	(yes-no question)
	b.	*Quando hai chiamato **nessuno**? when have called no one 'When did you call anyone?'	(WH question)
	c.	*Se vedi **nessuno**, fammelo sapere.	(conditional)

[4] NPIs can be licensed by a UQ provided that they are in the *restriction* of that quantifier (as in 7f), and not in its scope: **Everyone will know anything*. This follows from the fact that UQs are monotone decreasing in their restriction, but not in their scope.

if see no one make-me-it know
'If you see anyone, let me know.'

d. Dubito che **nessuno** venga (adversative)
Doubt-I that no one arrives-$_{SUBJ}$
'I doubt anyone will come.'

e. Sono sorpreso che conosca **nessuno**. (factive)
am surprised that he know-$_{SUBJ}$ no one
'I am surprised that he knows anyone.'

f. Tutti quelli che sanno **niente** a proposito di (UQ)
everyone who knows nothing about
questo sanno che è pericoloso.
this knows that is dangerous
'Everyone who knows anything about this knows it's dangerous.'

g. *****Solo Gianni ha visto **niente**. (only)
Only Gianni has seen nothing
'Only Gianni saw anything.'

h. Gianni è più ricco di **nessuno**. (comparative)
Gianni is more rich of no one
'Gianni is richer than anyone.'

i. *È l'idea più stupida che abbia avuto **nessuno**. (superlative)
is the idea more stupid that has had no one
'It's the dumbest idea anyone has had.'

But while Italian N-words show restricted quantificational variability, French N-words behave very much like NQs in that they cannot be licensed in any context but negation. (9a) does not mean 'has anyone called?', but 'has no one called? (I was expecting a call)'. In other words, it presupposes that someone has called whereas its Italian counterpart does not:

(9) a. a téléphoné? (yes-no question)
*__Personne__
no one has telephoned
'Has anyone called?'

b. *Quand as –tu téléphoné à **personne**? (WH question)
when have you called to no one
'When did you call anyone?'

c. *Si tu vois **personne**, fais-le-moi savoir. (conditional)
if you see no one, let-it-me know
'If you see anyone, let me know.'

d. *Je doute que **personne** vienne. (adversative)
I doubt that no one comes-$_{SUBJ}$
'I doubt anyone will come.'

e. *Je suis surpris qu' il connaisse **personne**. (factive)
I am surprised that he knows-$_{SUBJ}$ no one
'I am surprised that he knows anyone.'

f. *Tout le monde qui connaît **rien** à propos de (UQ)
all the people who knows nothing about
ça sait que c' est dangereux.
this knows that it is dangerous
'Everyone who knows anything about this knows it's dangerous.'

g. *Seulement JEAN a **rien** vu. (only)
only Jean has nothing seen
'Only JEAN saw anything.'

h. *Jean est plus riche que **personne**. (comparative)
Jean is more rich than no one
'John is richer than anyone.'

i. *C' est l' idée la plus stupide que **personne** ait eu. (superlative)
it is the idea the most stupid that no one has-$_{SUBJ}$ had
'It's the dumbest idea anyone has had.'

Table 1 gives an overview of the data discussed in the present section:

Context	**English NPIs**	**Italian N-words**	**French N-words**
Yes-no questions	✓	✓	×
WH questions	✓	✓	×
Conditionals	✓	×	×
Adversative predicates	✓	✓	×
Factive predicates	✓	✓	×
Universal quantifiers	✓	×	×
Only	✓	×	×
Comparatives	✓	✓	×
Superlatives	✓	×	×

Table 1

In conclusion: the fact that French N-words cannot appear in polarity environments other than negation is a major blow for the hypothesis that French N-words are pure variables and thus exhibit quantificational variability. The facts presented in this section strongly suggest that French N-words are inherently negative. With these results in hand, let us now turn to movement environments.

2.2 NPIs versus French N-words in movement environments

2.2.1 Strong islands. Sentences with NPIs do not exhibit strong islands effects.[5] (10a) involves a subject island, (10b) an adjunct island and (10c) a coordinate structure:

(10) a. John didn't say that the wife of any of his friends was a solicitor.
b. John didn't hire Mary in order to fire anyone.
c. I didn't see John or any of his friends come in**.**

French N-words, on the other hand, do exhibit clear strong island effects:

(11) a. *Jean **n'** a dit que [la femme d' **aucun** de
Jean Neg has said that the wife of none of
ses amis] était notaire.
his friends was solicitor
'Jean didn't say that the wife of any of his friends was a solicitor.'
b. *Jean **n'** engagé Marie [pour licencier **personne**].
Jean Neg hired Marie for to fire no one
'Jean didn't hire Marie in order to fire anyone.'
c. *Je **n'** ai vu Jean [ou **aucun** de ses amis entrer].
I Neg have seen Jean or no of his friends come in
'I didn't see Jean or any of his friends come in.'

Here again, French N-words behave very much like NQs. The latter cannot take wide scope, i.e. negate the matrix predicate, if embedded in a strong island:

---

[5] On the basis of examples like (i), Progovac (1994) argues that NPIs cannot appear in strong islands:
(i) ?* I am not asking you to prepare this and bring anything.

(12) a. John said that the wife of none of his friends was a solicitor.
b. John hired Mary in order to fire no one.
c. I saw John himself or at least none of his friends come in.

To conclude the present section, we take the evidence that French N-words exhibit strong island effects to suggest that French N-words: 1) involve movement and 2) are inherently negative. Next, we discuss weak islands.

2.2.2 Weak islands. Déprez (1997) notes that French N-words exhibit weak island effects:

(13) *Tu **ne** te demandes QUAND voir **personne**.
you Neg yourself ask when to see no one
'You do not wonder when to see anyone.'
(Déprez 1997:57)

According to Déprez (1997), (13) is ungrammatical, not because *personne* is inherently negative and thus involves movement, but because *personne* is a specific indefinite, which, following Diesing (1992), undergoes QR. The locality effect is made to follow from the fact that QR is clause-bound.

However, as has been shown by Reinhart (1997) the scope of existentials is free. Whereas so-called strong quantifiers, of which UQs are a subset, cannot be extracted from syntactic islands (here the strong quantifiers cannot have the higher existential in their scope) (cf. 14), so-called weak quantifiers, of which existentials are a subset, can take scope over the strong quantifier (the choice of ladies, philosophers and teachers does not have to vary with the higher strong quantifier):

(14) a. Someone reported that Max and *all the ladies* disappeared.
b. Someone will be offended if we don't invite *most philosophers*.
c. Many students believe anything that *every teacher* says.
(Reinhart 1997:338)

(15) a. Everyone reported that Max and *some lady* disappeared.
b. Most guests will be offended if we don't invite *some philosopher*.
c. All students believe anything that *many teachers* say.
(Reinhart 1997:339)

This means that (13) must be ungrammatical for reasons other than the putative clause-boundedness of existentials.

Further evidence for the idea that (13) is ungrammatical, not because QR has applied, but because Neg movement is involved comes from examples like (16b). This example shows that focused elements block the licensing of French N-words even in mono-clausal domains, and as expected it blocks the licensing of French N-words in non-mono-clausal contexts as well (cf. 16a):

(16) a. *Je **ne** demande que SEULEMENT JEAN voit **personne**.
I Neg ask that only Jean see-$_{SUBJ}$ no one
'I don't require that only JEAN see anyone.'
b. *Je **n'** ai SEULEMENT VU **personne.**
I Neg have only seen no one
'I haven't only SEEN anyone.'

In other words, Deprez' proposal cannot account for the ungrammaticality of (16b), since (16b) is a simplex clause.[6]

Finally, we observe that so-called iterative adverbs, typical weak island inducers, also block the licensing of French N-words both in mono-clausal and non-mono-clausal environments (17b involves a mono-clausal domain, so like 16b, it is problematic for Déprez' analysis):

(17) a. *Je **ne** veux qu' il voit BEAUCOUP **personne**.
I Neg want that he see-$_{SUBJ}$ a lot no one
'I don't want him to see anyone a lot.'
b. ?* Je **n'** ai BEAUCOUP vu **personne**.
I Neg have a lot seen no one
'I have not seen anyone a lot (i.e. on many occasions).'

Note that the examples above are completely ungrammatical. At first, this is somewhat unexpected. *Personne* looks like an argument, so if it was *personne* that moved across the intervener, we would not expect any weak island effects. We shall return to this

[6] This also strongly suggests that French N-words are not universal quantifiers (see Giannakidou 2000 for the idea that in some NC languages, e.g. Greek, N-words are UQs and that the locality of N-words follows from this fact, since (UQ) QR is clause-bound).

problem in section 3, where we account for the island effects exhibited by French N-words.

2.3 Superordinate negation

If French N-words were NPIs we would expect that they can be licensed by superordinate, i.e. non-clause mate, negation, just like the English NPI *anyone*:[7]

(18) I met John last night and he didn't mention that he had seen anyone.

However, superordinate negation cannot license French N-words:

(19) *J' ai rencontré Jean hier soir et il **n'** a
I have met Jean yesterday evening and he Neg has
mentionné qu' il avait vu **personne**.
mentioned that he had seen no one
'I met Jean last night and he didn't mention that he had seen anyone.'

The licensing of French N-words by superordinate negation is possible only in restructuring environments or more generally in any context where the embedded clause is infinitival or subjunctive (in 20d and e the higher verb is not a restructuring verb):

(20) a. ?Je **ne** veux qu' il voit **personne.**
I Neg want that he sees no one
'I don't want him to see anyone.'
b. Je **ne** veux voir **personne**.
I Neg want to see no one
'I don't want to see anyone.'
c. Je **ne** l' ai fait rencontré **personne**.
I Neg it have made meet no one
d. Je **n'** ai décidé de voir **personne**.
I Neg have decided C to see no one
'I didn't decide to see anyone.'

[7] Progovac (1994) claims that superordinate negation does not license English NPIs. However, all my informants converge on the judgement that they can.

e. ?Je **ne** demande que tu vois **personne**.
I Neg ask that you see-$_{SUBJ}$ no one
'I didn't ask that you see anyone.'

Next, we turn to the evidence pointing out that French N-words have a certain inherent negative specification.

2.4 French N-words have an inherent negative specification

Further evidence for the claim that French N-words are inherently negative rather than pure variables comes from the fact that, like NQs, French N-words may appear pre- or postverbally without the presence of the Neg head *ne*:

(21) a. **Personne** est venu.
nobody is come
'Nobody came.'/* 'Anybody came.'
b. **Rien** est arrivé.
nothing is happened
'Nothing has happened.'/* 'Anything has happened.'

(22) a. Je fume **pas**.
I smoke not
'I do not smoke.'/* 'I smoke anything.' (non-free choice reading)
b. Je vois **personne**.
I see no one
'I do not see anyone.'/* 'I see anyone.' (non-free choice reading)

English NPIs cannot appear sentence initially, nor can they appear without a negative licensor as shown in the English translation of the above examples.

So, from this point of view, French N-words behave like English, Dutch and German NQs which contribute to negative meaning in isolation:

(23) a. John saw **no one**. (English)
b. Remke heeft **niemand** gezien.
Remke has no one seen
'Remke didn't see anyone.' (Dutch)
c. Carina hat **niemanden** gesehen.

Carina has no one seen
'Carina didn't see anyone.' (German)

The second piece of evidence for the claim that French N-words manifest a certain inherent negative specification comes from elliptical contexts. French N-words can be used as answers to questions, but NPIs cannot:

(24) Speaker A: Qui as-tu vu? Speaker B: **Personne**.
who have-you seen no one
'Who did you see?' 'No one.'/* 'Anyone.'

Thirdly, French N-words can be modified by certain adverbs, such as *presque* 'almost', *pratiquement* 'practically' and *absolument* 'absolutely', whereas NPIs cannot (25a', 25b', 25c'). This was originally shown by Zanuttini (1991):

(25) a. Jean (**n'**) a *presque* **rien** fait.
Jean Neg has almost nothing done
'Jean did almost nothing.'
a.' *John did almost anything.
b. Jean (**n**') a *pratiquement* **rien** fait.
Jean Neg has practically nothing done
'Jean has done practically nothing.'
b.' *John has done practically anything.'
c. Jean (**n**') a *absolument* **rien** fait.
Jean Neg has absolutely nothing done
'Jean has done absolutely nothing.'
c.' *John has done absolutely anything.'

Observe further that Neg statements with multiple N-words are ambiguous between an NC reading and a double-negation interpretation (Larrivée 1995, Corblin 1996). Since double negation is possible, French N-words are clearly negative:

(26) **Personne** a **rien** dit.
no one has nothing said
'No one said anything.'/ 'No one said nothing'
(i) 'There are no x and no y, such that x is a person, and y is a thing, and x said y.' (negative concord)

(ii) 'It is not the case that there are no x and no y, such that x is a person, and y is a thing, and x said y.' (double negation)

From this perspective, French N-words (partly) behave like NQs:

(27) **No one** said **nothing**.
(i) # 'There are no x and no y, such that x is a person, and y is a thing, and x said y.'
(ii) ✓ 'It is not the case that there are no x and no y, such that x is a person, and y is a thing, and x said y.'

Note, however, that negative statements with *ne* and an N-word do not receive a double-negation reading. This suggests that *ne* has no negative content:

(28) Marie (**n'**) a vu **personne**.
Marie Neg has seen no one
'Marie didn't see anybody.'
(i) ✓'There is no x, x a person such that Marie saw x.' (negative concord)
(ii) # 'It is not the case that there is no x, x a person, such that Marie saw x.' (double negation)

This is confirmed by the fact that the Neg head *ne* is neither necessary nor sufficient to mark sentential negation:

(29) a. Je fume **pas**.
I smoke not
'I do not smoke.'
b. *Je **ne** fume.
I Neg smoke
'I do not smoke.'

Finally, it turns out that French has its own set of NPIs. French has the negative quantifier paradigm as well as the NPI series (*qui que ce soit, quoi que ce soit*). Thus the semantic argument for the NPI status of French N-words is seriously weakened: its basic assumption is wrong. French N-words need not be lexically ambiguous. The

strong and weak licensing distinction is lexically instantiated in French. Like English NPIs, French NPIs need a negative marker to be licensed:

(30) a. Je (**n**') ai *(**pas**) vu **qui que ce soit**.
I Neg have not seen anyone
'I haven't seen anyone.'
b. Je (**n**') ai *(**pas**) vu **quoi que ce soit**.
I Neg have not seen anything
'I haven't seen anything.'

French NPIs do not exhibit strong or weak island effects and can be licensed by superordinate negation:

(31) a. Jean **n'** a dit que [la femme de
Jean Neg has said that the wife of
qui que ce soit] était notaire.
anyone was solicitor
'Jean didn't say that the wife of anyone was a solicitor.'
b. Jean **n'** a engagé Marie [pour licencier **qui que ce soit**].
Jean Neg has hired Marie for to fire anyone
'Jean didn't hire Marie in order to fire anyone.'
c. Je **n'** ai vu Jean [ou **qui que ce soit** entrer].
I Neg have seen Jean or anyone come in
'I didn't see Jean or anyone come in.'

(32) J' ai rencontré Jean hier soir et il **n'** a mer
I have met Jean yesterday evening and he Neg has not
mentioned that he had seen anyone
'I met Jean last night and he didn't mention that he had seen anyone.'

French NPIs behave like English NPIs in that they can occur in non-negative polarity environments:

(33) a. Si tu vois **qui que ce soit**, fais-le-moi savoir. (conditional)
If you see anyone, let-it-me know
'If you see anyone, let me know.'

b. Je doute que **qui que ce soit** vienne. (adversative)
I doubt that anyone comes-$_{SUBJ}$
'I doubt anyone will come.'

2.5 Interim conclusion

To summarise, we have shown that French N-words are inherently negative. Table 2 groups the findings of section 2:

Distribution	**NPIs**	**French N-words**
Can appear in non-negative contexts	Yes	No
Can appear in strong islands	Yes	No
Can appear in weak islands	Yes	No
Can be licensed by superordinate negation	Yes	No
Can appear sentence initially	No	Yes
Can be used as fragment answers	No	Yes
Can yield double negation interpretation	No	Yes
Can be modified by adverbs	No	Yes

Table 2

In the next section, we provide a morphological breakdown of French N-words and we account for the island effects exhibited by them.

3 Alternative analysis

3.1 A phonologically null negative operator

We argue that French N-words are complex XPs consisting of an indefinite expression and a phonologically null negative operator while NPIs consist of an indefinite expression only. Let us call French N-words 'negative indefinites' and NPIs 'simple indefinites':

(34) a. Personne [Op_{NEG} indefinite]
b. Rien [Op_{NEG} indefinite]

(35) a. Anyone/qui que ce soit [indefinite]
b. Anything/quoi que ce soit [indefinite]

According to the theory we develop, the operator is part of the N-word: French N-words are thus negative expressions which can license themselves.[8] We further argue that the null Neg operator raises to the Spec of a Neg phrase so that negation can take wide scope over the relevant predicate (in minimalist terms it moves to check the [+NEG] feature of Neg).[9] The null Neg operator is a subextracted element which creates a split-DP configuration. The fact that bare operators can be subextracted is a typical feature of so-called split constructions (see Honcoop 1998 and Mathieu in prep. for further details). The null operator and bare operator movement in general are driven by economy conditions. Movement of the Neg operator is a necessary syntactic operation so that the sentence is interpreted as a negative statement.

While the Neg operator raises, the indefinite is stranded. The variable that the indefinite contains is then existentially closed off within the VP:

(36) $[_{NegP}\ Op_i \quad Neg \quad [_{VP}\ \exists x \quad ... \quad [t_i\ x]]]$.

Note that in the case of single Neg constructions, there is, in fact, no negative concord instantiated. As we have already shown, the Neg head *ne* is neither necessary nor sufficient to mark sentential negation. The sole function of the Neg head *ne* is thus to indicate the *scope* of negation. French is therefore not a strict NC language. By a strict NC language we mean one in which the Neg head is inherently negative (examples: Italian, Spanish, Slavic languages, Greek). In French, NC is instantiated only in the case of multiple N-word constructions:[10]

(37) **Personne** (**n'**) a **rien** dit.
no one Neg has nothing said

[8] The crucial difference between Rowlett's (1998), (1998b) null Neg operator and ours is that, whereas we assume that the operator is part of the N-word, he does not. On his account, French N-words are pure variables. His theory cannot, however, explain the lack of quantificational variability exhibited by French N-words, nor can it explain their inherent negative specification or the fact that multiple Neg constructions can lead to double-negation. Our approach is more in line with Haegeman & Zanuttini (1991), and Haegeman (1995, 1997). However, we discuss herein intervention effects not addressed by them.

[9] The Neg feature may thus be universally strong. In West Flemish, N-words move overtly (cf. Haegeman & Zanuttini 1991, Haegeman 1995, 1997) while in French we have movement of a phonologically null operator. We therefore have an interesting parallel with WH constructions, since if Watanabe (1993) is correct, Q is universally strong.

[10] This point was explicitly made in Moritz & Valois (1994).

'No one said anything.'

We assume here either a process of absorption by which the operator of the object N-word moves to the operator contained in the subject N-word contains (the two operators are transformed into a unary operator, cf. Haegeman & Zanuttini 1991) or unselective binding of the lower N-word by the highest N-word.

Postulating a null Neg operator accounts for the fact that French negative indefinites exhibit strong island effects. It also accounts for the fact that French N-words cannot appear in non-negative environments and finally for the fact that they have a certain intrinsic negative specification.

Although we grant negative status to French N-words, the contention we make is that French N-words nevertheless differ from English, Dutch and German NQs in that they are inherently negative by way of the null Neg operator not by their intrinsic quantificational force. We decompose French N-words into a negative expression + an indefinite expression whereas English, Dutch and German N-words form one semantic unit (see de Swart 1996 for evidence that Dutch and German N-words cannot be decomposed as negation + indefinites).

Let us now account for the weak island effects noticed earlier. Suppose that the trace left after movement of the null Neg operator is non-referential, i.e. that the null bare operator is an adjunct, and that movement of the Neg operator is A'-movement. Then the trace needs a local antecedent. Antecedent-government is local, island effects are thus expected. On the assumption that WH, focused elements and iterative adverbs all involve A'-specifiers, on the relativized minimality account (cf. Rizzi 1990), these elements are expected to block movement of the phonologically null Neg operator.

If correct, the idea that the Neg operator leaves behind a non-referential trace explains why (13), (16) and (17) are completely ungrammatical.

Note that (13) is as ungrammatical as the examples in (38), both of which involve adjunct N-words:

(38) a. *Tu **ne** te demandes QUAND **plus** fumer.
you Neg yourself ask when no longer to smoke
'You're not wondering when to smoke anymore.'

b. *Tu **ne** te demandes OÙ **guère** aller.
you Neg yourself ask where hardly to go
'You're not wondering where to hardly go.'

As is well known, extraction of arguments from weak islands is much better than extraction of adjuncts. In (13), (16) and (17), *personne* looks very much like an argument, but it nevertheless involves an adjunct operator. If *personne* raised as a whole complex XP, then we would not expect the intervention effects. But because the null operator must raise for convergence and because this operator has adjunct-like properties, the sentences in (13), (16) and (17) are completely ungrammatical.

If correct, our analysis shows that Rizzi's (1994) theory of scope marking chains can be extended to French negative constructions. On Rizzi's account, scope marking chains are always non-referential, so always show the effects of (overt) adjunct extraction. To show what we mean by this, let us look at the kind of scope-marking chain discussed by Rizzi.

In some of the dialects of German where partial WH movement is possible, either the WH phrase raises to matrix Spec-CP or it moves only half way to an intermediate Spec-CP position. In the latter case a non-contentive WH word, i.e. *was* ('what', glossed below as WH) moves from an underlying position to matrix Spec-CP:[11]

(39) a. [$_{CP1}$ **Wen**$_i$ glaubt Uta [$_{CP2}$ t_i' dass Karl t_i gesehen hat]]?
whom believes Uta that Karl seen has

b. [$_{CP1}$ **Was**$_j$ glaubt Uta t_j [$_{CP2}$ **wen**$_i$ Karl t_i gesehen hat]]?
WH believes Uta whom Karl seen has

'Who does Uta believe that Karl saw?'

As noticed by Rizzi, A'-specifiers like negation create intervention effects (cf. 40a). Note that (40b and c), where adjunct XPs are involved are as ill formed as (40a):

(40) a. *[$_{CP1}$ **Was**$_j$ glaubst du NICHT t_j [$_{CP2}$ **mit** **wem**$_i$ Hans
WH believe you not with whom Hans
t_i gesprochen hat]]?
spoken has

'Who don't you believe that Hans has spoken to?'

b. *[$_{CP1}$ **Was**$_j$ hast du NICHT t_j gesagt,[$_{CP2}$ **wie**$_i$ sie t_i

[11] Rizzi (1994) follows McDaniel (1989) in claiming that the non-contentive WH element and the contentive WH phrase in intermediate Spec-CP form an S-structure chain. Thus, on this account, the non-contentive WH element is base-generated in matrix Spec-CP and is connected to the contentive WH phrase directly. However, there is evidence that non-contentive WH elements originate from an underlying Case position, and are connected to the contentive WH phrase indirectly rather than directly (cf. Horvath 1997). This is why I choose to indicate that the non-contentive WH element has moved in the examples I introduce.

WH have you not said how she
geschlafen hat]]?
slept has
'How did you not say that she slept?'

c. *[$_{CP1}$ **Was**$_j$ hast du NICHT t_j gesagt, [$_{CP2}$ **warum**$_i$
WH have you not said why
sie t_i nicht kommt]]?
she not comes
'Why did you not say that she does not come?'
(Rizzi 1994:369)

According to Rizzi, the link (*was, mit wem*) cannot be established via binding, regardless of whether the intermediate WH phrase is an argument or an adjunct. This is because the expletive *was* does not carry an argumental θ-role at any level of representation. The examples in (40) are therefore ungrammatical because movement is required, but blocked.

To sum-up the present section so far: we have put forward the hypothesis that the trace left by the null Neg operator does not bear a referential index, and that antecedent-government is thus required. Although not discussed by Rizzi, we propose that French negative dependencies are split constructions/scope marking chains involving extraction of an adjunct.

The generalization is that bare operator (e.g. Was, Op_{NEG}) extraction, whether null or overt, behaves very much like adjunct extraction (e.g. *how*):

(41) a. WHAT$_i$ … t_i? +ref
b. HOW$_i$ … t_i? -ref
c. Was$_i$ … t_i? -ref
d. Null Op_{NEGi} … t_i? -ref

More remains to be said, however, because not all A'-specifiers are interveners. Adverbs like *toujours* and *souvent* do not create intervention effects:

(42) a. Je **ne** vois SOUVENT **personne**.
I Neg see often no one
'I often don't see anyone.'

b. Je **ne** vois TOUJOURS **personne** avant onze heures du matin.
I Neg see always no one before eleven hours of morning
'I always don't see anyone before eleven in the morning.'

The same kind of problem arises in the case of partial WH movement:

(43) a. [$_{CP1}$ **Was**$_j$ sagst du OFT t_j [$_{CP2}$ **wen**$_i$ Hans t_i liebt]]?
WH say you often who Hans loves
'Who do you often say that Hans loves?'

b. [$_{CP1}$ **Was**$_j$ sagst du IMMER t_j [$_{CP2}$ **wen**$_i$ Hans t_i liebt]]?
WH says you always whom Hans loves
'Who do you always say that Hans loves?'

On the reasonable assumption that *souvent* and *toujours* occupy A'-specifier positions, (42a and b) should be ill formed (the same goes for 43a and b). Since (42a and b) are grammatical, the notion of A'-specifier as being relevant for relativized minimality is thus problematic. An alternative account is required. The fact that an alternative analysis is necessary is strengthened by (44) (I assume a structure for this example where the direct object c-commands the indirect prepositional object, cf. Larson 1988):[12]

(44) Je **n'** ai donné **aucun** **cadeau** à TOUT LE MONDE.
I Neghave given no gift to all the people
'I gave everyone no gift/I didn't give any gift to everyone.' $*\neg\exists>\forall;\forall>\neg\exists$

(44) is not ungrammatical; it has a reading according to which the UQ takes wide scope over negation. However, it lacks the interpretation according to which the UQ takes narrow scope with regard to negation. The interpretation that is missing is one that would imply that I gave a gift to some people, but not others. This interpretation is, on the other hand, readily available if a simple indefinite and *pas* are used:

(45) Je **n'** ai **pas** donné un cadeau à TOUT LE MONDE.
I Neghave not given a gift to all the people
'I didn't give everyone a gift.'

[12] Note that the wide scope for negation is also lacking in the case of NPIs (cf. Linebarger 1987). This means that negative dependencies involving weak NPIs are not totally unconstrained. Importantly though, they are less constrained than negative constructions involving N-words.

(44) involves a scope island. The prototypical cases of scope islands were originally noticed by de Swart (1992) and involve WH constructions of the type discussed by Obenauer (1983):

(46) a. [**Combien** **de** **livres**]$_i$ ont-ils TOUS lus t_i?
how many of books have they all read-$_{AGR}$
b. **Combien**$_i$ ont-ils TOUS lu [t_I **de** **livres**]?
how many have-they all read of books
'How many books have they all read?'

(46a) is ambiguous whereas (46b) is not. In (46a) the UQ can take wide scope: we ask for all persons how many books they have read. This is the so-called pair-list reading: John read 3, Mary read 5, Peter read 7. Under the narrow scope interpretation, we ask for a simple number, i.e. how many books are such that everyone has read them. This is the so-called individual reading. On the other hand, (46b) has only the reading according to which the UQ takes scope over the WH phrase. The interpretation according to which the WH phrase takes wide scope is not available. In other words, (46b) cannot be answered by: '5'. It can be answered only by: John read 3, Mary read 5, Peter read 7.

We find the same scope blocking effects in other types of split constructions. Recall that in German partial constructions negation blocks the licensing of the partially moved contentive WH phrase. But, while intervening negation in the partial WH movement alternative leads to complete ungrammaticality, intervening UQs lead only to a lack of ambiguity (this was originally noted by Beck 1996). (47a) is ambiguous while (47b) is not. The individual reading is not available in (47b):

(47) a. [$_{CP}$ **Wen**$_i$ glaubt JEDER [$_{CP}$ t_i' dass Karl t_i gesehen hat]]?
who believes everyone that Karl seen has
b. [$_{CP}$ **Was**$_j$ glaubt JEDER t_j [$_{CP}$ **wen**$_i$ Karl t_i gesehen hat]]?
WH believes everyone whom Karl seen hat
'Who does everyone believe that Karl saw?'

In the next section we provide an account of weak island/intervention effects in terms of scope. Our theory of weak islands/intervention effects is inspired by ideas from Szabolcsi & Zwarts (1993) and Williams (1994).

3.2 A solution in terms of scope

3.2.1 The Scopal ECP. Traditionally, the ECP is conceived of as a condition that restricts scope possibilities by constraining the movement of scope-taking elements. Williams (1994) reverses the usual relation between scope and the ECP. He proposes that the ECP restricts movement possibilities through the theory of scope. The rationale behind the scopal ECP is thus that you can move as high as you can take scope. [13]

Williams makes two proposals about linguistic scope. He first suggests that the scope of an NP is marked at S-structure by indexing a phrase containing that NP as the scope of the NP:

(48) John [saw everyone$_i$]$_{S:i}$

In (48), S is marked as the scope of *everyone*. The *:i* index on the dominating S serves as a lambda abstractor, and as such, marks a scope. Williams' (1994) theory thus follows his previous work on scope (Williams 1986) where LF is eliminated. Quantifiers are interpreted in situ at S-structure (pre-Spell-Out) and scope assignment is achieved without movement. On this account, a variable is not identified with an empty category, but with an A-position with an index *i*; the quantifier is the determiner in the position of the variable; and the scope is the phrase bearing the index *:i*.

The second proposal Williams makes concerns the typology of linguistic scope. He distinguishes three sorts of linguistic scope: head scope, adjunct scope, and quantified argument scope (equivalent of QR) and postulates three scope rules corresponding to the three kinds of linguistic scope found in natural language: the Head Scope Rule, the Adjunct Scope Rule, and the Quantified Argument Scope Rule.

The scope of a head is restricted to its projection:

(49) [... X ...]$_{XP}$ The scope of X is XP

In (50), *believe* has scope over its complement, giving rise to narrow scope readings for quantified NPs contained in it. The verb *believe* does not have scope extending

[13] cf. Kayne's (1981) extension of the ECP from S-structure empty categories to variables in general; the idea being that the scope of quantifiers in subject position must be 'local' in the same way WH traces in subject position must be locally bound. See also Huang (1982) for another proposal for the extension of the ECP to LF.

beyond the range of its projection. For example, it does not have scope over its subject:

(50) John *believes* that everyone left.

The scope of an adjunct is its sister (or a projection of its sister):

(51) $[XP\ YP]_{YP}$ The scope of XP is YP.

To illustrate, in (52) *always* modifies *tell*, not *think*. As pointed out by Williams (1994:55-56), *always* cannot be construed by 'any stretch of the imagination' to have scope over the matrix clause yielding the following interpretation: 'Every time is such that John thinks that Mary at that time tells funny jokes':

(52) John thinks that Mary [$_{VP}$ *always* [$_{VP}$ tells funny jokes]].

The scope of an argument is not limited in this way. In (53) *someone* can be interpreted in its 'surface' position or higher up in the tree, taking scope over *everyone*:

(53) Everyone loves *someone*. $\exists>\forall;\forall>\exists$

In sum, the Head Scope Rule assigns the projection of the head as scope of the head, the Adjunct Scope Rule assigns the phrase adjoined-to as the scope, and the Quantified Argument Scope Rule (QASR, henceforth) applies to arguments only.

Arguments can take wide scope because they have two relations to the sentence in which they occur, a theta-theoretic one (assigned under sisterhood) and a scope relation (assigned by the QASR). An adjunct has no scope relation to the sentence independent of its theta-theoretic modification relation. This has the following consequence. When an argument has moved it can be assigned scope in its derived position by the adjunct scope rule (the QASR cannot apply to a displaced argument, since the moved element is no longer in an argument position). In other words, the scope of a moved argument is the sister of that displaced argument. This forms the basis for part (b) of the scopal ECP (cf. 54 below), according to which the movement of the phrase and the scope assigned to it coincide.

An adjunct by contrast cannot be reassigned scope in its derived position. A displaced adjunct cannot be licensed by the Adjunct Scope Rule, since if that rule

were to apply to it in its displaced position, it would simply be assigned a new scope (or a new modification relation) [14], and the adjunct would not be perceived to have moved in the first place.

Since a displaced adjunct cannot be licensed by the Adjunct Scope Rule, an adjunct must be licensed by antecedent-government. This means that an adjunct can move higher than its scope as long as it can be 'connected' to its scope position via antecedent-government. This forms the basis for part (a) of the Scopal ECP, i.e. the analogue of the antecedent-government condition:

(54) *Scopal ECP*
   a. The movement of the phrase and the scope assigned to the phrase do not coincide (analogue of antecedent government).
   b. The movement of the WH phrase and the scope assigned to the phrase coincide (analogue of lexical government).

The scopal ECP predicts that an argument can be moved out of a WH island, because an argument can be assigned long scope by the QASR and hence be sanctioned by (54b). However, an adjunct, which is not assigned long scope, can only be sanctioned by (54a) and so cannot escape weak islands:

(55) a. $[_{CP}$ What:i C:i do you wonder $[_{CP}$ how C $[_{VP}$ to fix t:i]]]?
   ↓scope of argument

   b. *$[_{CP}$ How$_i$ C:i do you wonder $[_{CP}$ what C $[_{VP:i}$ to fix t_i]]]?
   ↑scope of adjunct

To paraphrase Williams: in (55a) the argument is assigned the matrix C as its scope. This scope coincides with the movement, and so (55a) is grammatical despite the fact that the movement is not subjacent. But in (55b) the scope of the adjunct is restricted to the embedded VP. In addition, the movement is not subjacent, because the embedded Spec-CP is filled. Consequently, (55b) cannot be sanctioned by either (54a) or (54b), and so is ungrammatical.

One crucial assumption which we need to introduce at this point concerns the scope of WH. Following Williams, we make a distinction between the scope of WH and the

[14] Modification refers to the semantic relation between an adverb and an IP or a VP or between an adjective and a noun (Jackendoff 1972).

scope of the phrase contained in that WH phrase. While WH can freely take widest scope, the phrase contained in the WH phrase may have its scope fixed. The well-known example *Who knows when John left how?* shows the difference between the scope of WH and the scope of the phrase that bears it. *How* can have only adjunct scope: it modifies *left*, so *left* is its scope. But WH can have as its scope either the embedded or matrix S, giving the well-known ambiguity of such examples.

Following Williams, we reduce antecedent-government to a set of independently motivated constraints on scope the Nested Scope Constraint and the Constraint on Skolem Dependence.

(56) a. *Nested Scope Constraint* (NSC)
XP_i ... [... YP :i ...]:k XP depends on *k*. (where :i is the scope of XP and :k the scope of YP).
b. *Constraint on Skolem Dependence* (CSD)
A lower-order term cannot depend on a higher-order term.

We deal with the NSC first and then we turn to the CSD.

3.2.2 The Nested Scope Contraint (NSC). Suppose indefinites are ambiguous. They can either introduce an existential quantifier, which takes scope, and which binds a variable ranging over individuals or introduce a Skolem function.[15] In case a Skolem function is introduced, the indefinite does not generate its own quantifier and does not give rise to a quantifier ranging over individuals. Instead, the indefinite is construed as a function, yielding a so-called pair-list reading.[16]

To take the previous paragraph more slowly consider the case where a question involves both an argument WH phrase and a UQ:[17]

---

[15] Skolem functions, which are used to capture narrow scope of existentials, are more complex than simple choice-functions as used by Reinhart (1997, 1998). The choice of value for Skolem functions varies with the choice of value for some bound variable (cf. Reinhart 1998). Skolem functions take two arguments while choice-functions take only one.

[16] The contention that indefinites are ambiguous between a quantificational and a non-quantificational use differs both from the traditional idea in generative grammar that indefinites *always* generate an existential quantifier (cf. May 1977, 1985 – basically the Russellian account) and the idea that they *never* generate an existential quantifier (cf. Heim 1982 who treats indefinites as pure variables).

[17] Examples (57) and (59) are inspired by Kiss (1992) and Szabolcsi & Zwarts (1993).

(57) **Qu**$_i$'est-ce que chaque étudiant a lu t_i?
what that each student has read
'What did each student read?'
(i) 'WH f SK(f), [∀x, student (x) [x read f(x, books)]].' →∀>WH
= 'Which pair <x, y>, x a student, y a book, x read y.'
(ii) 'Which x, x a book, is such that every student read x.' →WH>∀
(iii) 'Taking for granted that every student read the same book, what was this book.' → Independent scope.

(57) is three-way ambiguous: reading (i) asks for a set of pairs: 'John read Perfume; Mary read One Hundred Years of Solitude; Peter read To the Lighthouse'. Readings (ii) and (iii) both ask for a single book that was read by everyone, but they differ as to what else each student might have read. For example, if 'John read Perfume and War and Peace, Mary read Perfume and The Name of the Rose, Peter read Perfume and Foucault's Pendulum', reading (ii) is felicitous and the answer is 'Perfume'. Reading (iii) presupposes that each student has read just one book, and the question asks for the identification of that book.

Evidence for the claim that an indefinite does not quantify over individuals on the pair-list interpretation comes from the fact that weak islands block pair-list readings (cf. Longobardi 1985, Cinque 1990):

(58) a. **Qu**$_i$'est-ce que chaque étudiant a lu t_i?
what that each student has read
'What did each student read?' ∀>WH;WH>∀
b. **Qu**$_i$'est-ce que tu te demandes SI chaque
what that you yourself ask whether each
étudiant a lu t_i
student has read?
'What did you wonder whether each student read'? *∀>WH;WH>∀

Whereas both the wide and narrow scope for WH are available in (58a), only the wide scope for WH is possible in (58b). This is because on the narrow scope for WH, the variable does not come with a referential θ-role, so it cannot penetrate weak islands.

Suppose now that adjuncts introduce Skolem functions, but cannot introduce an existential quantifier. The hypothesis that adjuncts introduce Skolem functions explains why a question like (59) can receive a pair-list reading, while the hypothesis that

adjuncts do not introduce an existential quantifier explains why the individual interpretation (in which each child behaved the same way) is not available:[18]

(59) **Comment**$_i$ chaque étudiant s' est comporté t_i?
how each student him is behaved
'How did each student behave?'

(i) *'WH f SK(f), ["x, student (x) [x behaved f (x, behaviours)]].'* →∀>WH
= 'Which pair <x, y>, x a student, y a behaviour, x behaved y.'

(ii) *'What was the common element in the students' non-uniform behaviour.* →*WH >∀

(iii) *'Taking for granted that each student behaved the same way, what was it like.'* →Independent scope.

In (59) the adjunct is dependent on the UQ. Reading (59i) asks for a set of pairs: 'John behaved wickedly; Mary behaved badly; Peter behaved well'. (59iib) and (59iii) both ask for a single behaviour that was produced by everyone, but they differ as to what other behaviour each student might have produced. Reading (59iii) presupposes that each student has behaved identically, and the question asks for the identification of that common behaviour. The answer would be: 'well'. This is the independent scope where the quantifiers are independent of each other. Genuine wide scope for the adjunct, where the adjunct introduces an existential quantifier is, however, not possible. Suppose 'John behaved wickedly and strangely, Mary behaved badly and strangely, Peter behaved well and strangely', reading (59ii) would be felicitous if the answer was 'strangely', but this reading is not available.

In sum, what the above examples and discussion have shown is that the scope of adjuncts is fixed. Standard weak island effects can be derived from that fact. The NSC takes care of traditional weak islands as follows:

(60) a. *How$_i$ do you wonder WHAT John repaired t_i?
b. *How$_i$ did NO ONE behave t_i?
c. *How$_i$ didN'T you behave t_i?
d. *How$_i$ did ONLY JOHN behave t_i?

[18] See also Aoun & Li (1993), chapter 6 on QP/adjunct WH interaction.

Because the scope of the adjunct WH phrase is fixed locally, it is contained in the scope of *what*. Here *how* is understood to modify *repaired, repaired* is therefore its scope. Since the scope of *what* contains this scope, the NSC requires that *how* be dependent on *what.* But *how* cannot depend on *what.* This follows from the CSD (see next section). The examples in (61) are well formed, because UQs and frequency adverbs are suitable c-commanding scopal antecedents onto which the Skolem function introduced by the adjunct can depend. This, again, follows from the CSD as we shall see:

(61) a. How$_i$ did EACH STUDENT behave t_i?
b. How$_i$ did he OFTEN react t_i?
c. How$_i$ did he ALWAYS react t_i?

How moves to Spec-CP so that the sentence is interpreted as interrogative (the strong WH feature on C is checked).

(62) is well formed because the scope and the position of the WH phrase need not match. Argument WH phrases are not subject to the NSC. The scope of *what* is not limited to the VP and therefore does not need to depend on the WH phrase *how*:

(62) What$_i$ do you wonder HOW to repair t_i?

To recapitulate, the NSC prevents adjuncts from moving across scope taking elements on which they cannot depend. This has the effect that their distribution is much more constrained than that of arguments, which are not subject to it.

3.2.3 The Constraint on Skolem Dependence (CSD). In natural language we identify first-order terms, second-order terms, third-order terms (adjuncts), and, of a higher order still, operators (such as WH). First-order terms correspond to first-order entities like discrete objects and individuals. Second-order terms correspond to second-order entities (state of affairs, events, processes, activities, some adjuncts, in other words, predicates of which universal quantifiers are a subset). Third and higher order terms correspond to third or higher order entities (concepts, propositions).

According to the CSD an element of a lower order cannot depend on an element of a higher order (*how* cannot depend on WH, focus, Neg, etc.), only on elements of the same or of a lower order. Elements of a higher order can depend on operators of the same order (an operator can depend on another operator as in multiple questions) or of a lower order (a UQ over a lexical predicate). Some examples are given in table 3:

1	Type of term	Type of predicate	2	Example
↑	Operators		↓	WH, focus, Neg
↑	Third-order term	Predicates over sets of sets of individuals	↓	Iterative adverbs
↑	Second-order term	Predicates over a set of individuals	↓	*Every, each*, frequency adverbs, adjuncts
↑	First-order term	Lexical predicates	↓	Boy x

Table 3

1 = order relation (e.g. an operator is of a higher order than a predicate over a set of individuals).
2 = dependency relation (e.g. Neg can depend on an adjunct, but an adjunct cannot depend on Neg).

Now the theory is in place, this is how we account for the blocking effects in French negative dependencies.

Recall that we must distinguish between the scope of the Neg operator and the stranded indefinite. The latter is a scopeless element and thus behaves very much like an adjunct. Like an adjunct, it only introduces a Skolem function, and not an existential quantifier. This means that the N-word is regulated by the NSC. The N-word can depend on an intervening frequency adverb because scopeless elements/adjuncts and frequency adverbs are of the same order (↵ = depends on; ↓ = the element on which the N-word depends):

(42) a. $[_{IP}$ Je **ne**$_k$ I vois$_j$ $[_{NegP}$ Op$_i$ t$_k$ $[_{VP}$ SOUVENT $[_{VP}$ t$_j$ $[$t$_i$ f(x) **personne**]]]]].

‘I often don’t see anyone.’

b. $[_{IP}$ Je **ne**$_k$ I vois$_j$ $[_{NegP}$ Op$_i$ t$_k$ $[_{VP}$ TOUJOURS $[_{VP}$ t$_j$[t$_i$ f(x) **personne**]]]]].

‘I always don’t see anyone before eleven in the morning.’

On the other hand, the N-word cannot depend on *WH*, *seulement JEAN* or *beaucoup.* This is because the intervening element is of a higher order than the stranded indefinite. (13), (16) and (17) are repeated here with relevant (partial) derivations:

(13) *$[_{NegP}$ Op$_i$ $[_{VP}$ $[_{CP}$ QUAND voir [t$_i$ f(x) **personne**]]]].

'You do not wonder when to see anyone.'

(16) a. *[$_{NegP}$ Op$_i$ [$_{VP}$ [$_{CP}$ que SEULEMENT JEAN voit [t$_i$ f(x) **personne**]]]].
'I don't require that only JEAN see anyone.'

b. ?[$_{NegP}$ Op$_i$ [$_{VP}$ SEULEMENT VU [t$_i$ f(x) **personne**]]].
'I haven't only SEEN anyone.'

(17) a. *[$_{NegP}$ Op$_i$ [$_{VP}$ [$_{CP}$ qu'il voit [$_{VP}$ BEAUCOUP [$_{VP}$ [t$_i$ f(x) **personne**]]]]]].
'I don't want him to see anyone a lot.'

b. ?*[$_{NegP}$ Op$_i$ [$_{VP}$ BEAUCOUP [$_{VP}$ vu [t$_i$ f(x) **personne**]]]].
'I have not seen anyone a lot (i.e. on many occasions).'

Universal quantifiers being arguments can always take wide scope (according to the Quantified Argument Scope Rule). This explains why in (44), the reading according to which the universal quantifier takes wide scope over negation is available. In other words, negation can depend on universal quantifiers, negation being of a higher order than universals:

(44) ... [$_{NegP}$ Op$_i$ [$_{VP}$ donné à TOUT LE MONDE **[**t$_i$ f(x) **aucun cadeau**]]].
'I gave everyone no gift/I didn't give any gift to everyone.'

However, for universal quantifiers, there is no non-scopal interpretation. This means that they cannot be subordinated to another scopal element. This explains why the reading according to which negation takes wide scope over the universal in (44) is not available. This reading is available in (45), presumably, because in this instance, the Neg operator *pas* has not moved, it may well be an adjunct (it is certainly not an argument), but it is base-generated in Spec-NegP, so no island effects are expected:

(45) Je **n'** ai **pas** donné un cadeau à TOUT LE MONDE.
I Neghave not given a gift to all the people
'I didn't give everyone a gift.'

In summary, we have shown that the N-word can depend on some intervening scopal elements, but not others. This follows from the NSC and the CSD, the set of conditions on scope to which the antecedent-government condition can be reduced.

4 Conclusions

The present paper addressed the following question: are French N-words inherently negative or pure variables? I hope to have shown that much of the evidence points to the idea that French N-words are inherently negative and not pure variables.

By way of summary, I revert to the nine types of evidence provided: 1/ unlike NPIs, French cannot appear in non-negative contexts; 2/ French N-words exhibit strong island effects whereas NPIs do not; 3/ French N-words show weak island effects whereas NPIs do not; 4/ NPIs can be licensed by superordinate negation while French N-words cannot; 5/ French N-words can appear sentence initially whereas NPIs cannot; 6/ French N-words can be used as fragment answers whereas NPIs cannot; 7/ French N-words can be modified by adverbs which can typically modify quantificational elements, while this is impossible with NPIs; 8/ negative statements with multiple N-words can yield a double negation interpretation in addition to the NC reading; 9/ French has, in fact, its own set of NPIs, so French N-words need not be lexically ambiguous as argued by Ladusaw (1992, 1994).

We advocated the view that French N-words consist of a phonologically null negative operator and an indefinite expression. We argued that the null Op moves to the specifier of a negative phrase so that negation can take scope over the relevant predicate. Postulating a null operator accounts for the fact that French N-words exhibit strong islands, for the fact that they cannot appear in non-negative contexts and finally for the fact that they manifest a certain inherent negative specification. We have also argued that, although French N-words have negative import, they nevertheless differ from English, German and Dutch negative quantifiers, in that they are negative by way of the null Neg operator, not by their intrinsic quantificational force.

We developed an account according to which weak island/intervention effects follow from the scopeless properties of the stranded indefinite. We have explored some of the technical issues with regard to scope that such an analysis raises, and construed a theory of locality and weak islands in terms of function dependence.

References

Acquaviva, P. (1993) *The Logical Form of Negation: A Study of Operator-Variable Structures in Syntax*. PhD dissertation, Scuola Normale Superiore, Pisa.

Acquaviva, P. (1999) Negation and operator dependencies: evidence from Italian. *Lingua* 108: 137-174.

Aoun, J. & Y. A. Li (1993) *Syntax of Scope*. Cambridge, MA: MIT Press.

Beck, I. (1996) Quantified structures as barriers for LF movement. *Natural Language Semantics* 4: 1-56.

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

Cinque, G. (1991) *Types of A'-Dependencies*. Cambridge, MA: MIT Press.

Corblin, F. (1996) Multiple negation processing. *Theoria* 62, 3: 214-260.

Déprez, V. (1997) Two types of negative concord. *Probus* 9: 103-143. Also in Forget, D., P. Hirschbühler, F. Martineau & M-L. Rivero (eds.). *Negation and Polarity: Syntax and Semantics*. 53-74. Amsterdam: John Benjamins.

Diesing, M. (1992) *Indefinites*. Cambridge, MA: MIT Press.

Dowty, D.R. (1994) The role of negative polarity and concord marking in natural language reasoning. In Harvey, M. & L. Santelmann (eds.). *Proceedings from Semantics and Linguistic Theory IV*. 114-144. Ithaca: Cornell University.

Giannakidou, A. (2000) Negative ... Concord? *Natural Language and Linguistic Theory* 18: 457-523.

Giannakidou, A & J. Quer (1995) Two mechanisms for the licensing of negative indefinites. In Gabriele, L., D. Hardison & R. Westmoreland (eds.). *Formal Linguistics Society of Mid-America* (FLSM). Indiana University Linguistics Club (IULC).

Giannakidou, A. & J. Quer (1997) Long distance licensing of negative indefinites. In Forget, D., P. Hirschbühler, F. Martineau & M-L. Rivero (eds.). *Negation and Polarity: Syntax and Semantics*. 95-113. Amsterdam: John Benjamins.

Haegeman, L. (1995) *The Syntax of Negation*. Cambridge: CUP.

Haegeman, L. (1997) On the syntax of N-words and the Neg Criterion. In Forget, D., P. Hirschbuhler, F. Martineau & M-L. Rivero (eds.). *Negation and Polarity*. 115-137. Amsterdam: John Benjamins.

Haegeman, L. & R. Zanuttini (1991) Negative Heads and the Neg Criterion. *The Linguistic Review* 8: 233-251.

Heim, I. (1982) *The Semantics of Definite and Indefinite Noun Phrases*. PhD dissertation. University of Massachusetts, Amherst.

Honcoop, M. (1998) *Dynamic Excursions on Weak Islands*. The Hague: Holland Academic Graphics.

Horvath, J. (1997) The status of 'WH-expletives' and the partial WH-movement constructions of Hungarian. *Natural Language and Linguistic Theory* 15: 509-572.

Huang, C.-T. (1982) *Logical Relations in Chinese and the Theory of Grammar*. PhD dissertation, MIT.

Jackendoff, R. (1972) *Semantic Interpretation in Generative Grammar*. Cambridge, MA: MIT Press.

Kayne, R. (1981) ECP Extensions. *Linguistic Inquiry* 14: 93-133.

Klima, J. (1964) Negation in English. In Fodor, J. & J. Katz (eds.). *The Structure of Language*. New-Jersey: Prentice Hall.

Labov, W. (1972) Negative Attraction and Negative concord in English Grammar. *Language* 48: 773-818.

Ladusaw, W. (1992) Expressing negation. In Barker, C. & D. Dowty (eds.). *Semantics and Linguistic Theory* (SALT) II *Proceedings*. Columbus, Ohio: The Ohio State University.

Ladusaw, W. (1994) Thetic and categorical, stage and individual, weak and strong. *Semantics and Linguistic Theory* (SALT) IV *Proceedings*. Ithaca, NY: Cornell University Press. Reprinted in Horn, L. R. & Y. Kato (eds.) (2000) *Negation and Polarity*. 233-242. Oxford: Oxford University Press.

Laka, I. (1990) *Negation in Syntax: On the Nature of Functional Categories and Projections*. PhD dissertation, MIT.

Larrivée, P. (1995) Quantifieurs négatifs et double négation. In Larrivée, P. et al. (eds.). *Actes des Neuvièmes Journées de Linguistique, Centre International de Recherche en Aménagement Linguistique*. 207-217. Québec City.

Larson, R. (1988) On the double object construction. *Linguistic Inquiry* 19: 335-392.

Linebarger, M.C. (1987) Negative polarity and grammatical representation. *Linguistics and Philosophy* 10: 325-387.

Longobardi, G. (1985) Connectedness, scope, and C-command. *Linguistic Inquiry* 16: 163-192.

Mathieu, E. (in prep) *The Syntax of Non-Canonical Quantification: A comparative Study of Split Constructions* (provisional title). PhD thesis, University of London.

May, R. (1977) *The Grammar of Quantification*. PhD dissertation, MIT.

May, R. (1985). *Logical Form: Its Structure and Derivation*. Cambridge, MA: MIT Press.

Moritz, L., D. Valois (1994) Pied-piping and specifier-head agreement. *Linguistic Inquiry* 25, 4: 667-707.

Obenauer, H-G. (1983) Une quantification non-canonique : la quantification à distance. *Langue Française* 58: 66-88.

Partee, B. (1993) On the 'scope of negation' and negative polarity. In Hajicová, E. (ed.). *Functional Description of Language*. 179-196. Prague: Charles University.

Peres, J. (1997) Extending the notion of negative concord. In Forget, D., P. Hirschbühler, F. Martineau & M-L. Rivero (eds.). *Negation and Polarity: Syntax and Semantics*. 289-310. Amsterdam: John Benjamins.

Progovac, L. (1994) *Negative and Positive Polarity: A Binding Approach*. Cambridge: CUP.

Reinhart, T. (1997) Quantifier scope; how labor is divided between QR and Choice-Functions. *Linguistics and Philosophy* 20, 4: 335-397.

Rizzi, L. (1982) *Issues in Italian Syntax*. Dordrecht: Foris.

Rizzi, L. (1990) *Relativized Minimality*. Cambridge, MA: MIT Press.

Rizzi, L. (1994) Argument/adjunct (a)symmetries. In Kayne, R. S., G. Cinque, J. Koster, J-Y. Pollock, L. Rizzi & G. Zanuttini (eds.). *Paths Towards Universal Grammar: Studies in Honor of Richard S. Kayne*. 361-376. Washington, DC: Georgetown University Press.

Rowlett, P. (1998a) *Sentential Negation in French*. Oxford: Oxford University Press.

Rowlett, P. (1998b) A non-overt operator in French. *Probus* 10: 185-206.

Simpson, A. (1995) *WH-Movement, Licensing, and the Locality of Feature-Checking*. PhD dissertation. London, SOAS.

Suñer, M. (1995) Negative elements, island effects and resumptive No. *The Linguistic Review* 12: 233-273.

de Swart, H. (1992) Intervention effects, monotonicity and scope. *Proceedings of SALT 2, Vol.2*. 387-406. Columbius, Ohio: Ohio State University.

de Swart, H. (1996) Scope ambiguities with negative quantifiers. In Von Heusinger, K. & U. Egli (eds.). *Proceedings of the Workshop on Reference and Anaphoric Relations*. 145-164. Universität Konstanz.

Szabolcsi, A. & F. Zwarts (1993) Weak islands and algebraic semantics of scope taking. *Natural Language Semantics* 1, (3): 235-284.

Szabolcsi, A. & M. den Dikken (1999) Islands. *Glot International* 4, 6: 3-8.

Valois, D. (1997) Neg-movement and WH-movement. In Forget, D., P. Hirschbuhler, F. Martineau & M-L. Rivero (eds.). *Negation and Polarity*. 341-355. Amsterdam: John Benjamins.

van der Wouden, T. & F. Zwarts (1993) A semantic analysis of negative concord. In. Lahiri, L & A. Z. Wyner (eds.). *SALT III: Proceedings of the Third Conference on Semantic and Linguistic Theory*. 202-19.

Van der Wouden, T. (1997) *Negative Contexts: Collocation, Polarity and Multiple Negation*. London: Routledge.

Watanabe, A. (1993) Subjacency and S-structure movement of WH-in situ. *Journal of East Asian Linguistics* 1: 255-291.

Williams, E. (1994) *Thematic Structure in Syntax*. Cambridge, MA: MIT Press.

Zanuttini, G. (1991) *Syntactic Properties of Sentential Negation: A Comparative Study of Romance Languages*. PhD dissertation, University of Pennsylvania.