The Syntax of Non-Canonical Quantification:
A Comparative Study

by

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Abstract

The expected schema for quantificational structures at LF in natural languages is one whereby the semantic restriction is adjacent to the operator with which it is associated: Operator - Restriction - Matrix. However, many constructions in natural languages do not follow this canonical quantification format. The present thesis investigates several cases of non-canonical quantification whereby the semantic restriction is not adjacent to its operator: Operator - Matrix - Restriction. On a descriptive level, it is shown that non-canonical quantification is tolerated as long as no scopal element intervenes between the operator and the in situ semantic restriction. Otherwise scope island effects are exhibited.

The main thesis of this study is that the scope-freezing property of predicative indefinites, which is amply justified on independent grounds, provides the basis for an explanation of the intervention effects shown in split constructions. The relevant facts are made to follow from the Scopal ECP (cf. Williams 1994) and are thus accommodated in a principled way. I assume that stranded indefinites do not introduce an existential quantifier, but only a so-called Skolem function \( f(x) \), \( f \) being a functional variable and \( x \) an argumental variable. When such a function is introduced, an indefinite has "zero" scope; it behaves like the trace of an adjunct in that its scope is fixed locally.

The various domains of enquiry are French WH in situ, partial WH movement, French negative constructions involving so-called N-words, and constructions with attributive focus particles. All these constructions are argued to be cases of non-canonical quantification. In each case an operator is separated from its noun restrictor and scope island effects arise.

266 words.
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Viens plus bas... Parle bas...

Le noir n'est pas si noir.

Paul Valéry, La Jeune Parque
Abbreviations

ABL  Ablative case
ABS  Absolutive case
ACC  Accusative case
AdvP Adverb phrase
AGR  Agreement
AP   Adjectival phrase
BI   Bahasa Indonesia
CED  Condition on Extraction Domains
CH (f) Choice function
CP   Complementizer phrase
CSD  Constraint on Skolem Dependence
DAT  Dative case
D-linking Discourse linking
DO   Direct object
DP   Determiner phrase
ECP  Empty Category Principle
ED   Existential Disclosure
EPP  Extended Projection Principle
EVP  Extended Verbal Projection
F    Feature
FF   Formal feature
FOC  FOCUS
FUT  Future
FPR  Focus Prominence Rule
GB   Government and Binding Theory
GEN  Genetive
HAB  Habitual aspect
HMC  Head Movement Constraint
IMPF Imperfective aspect
IND  Indicative
Indef. Indefinite
INF  Infinitive
INST Instrumental case
IO   Indirect object
IP   Inflectional phrase
LF   Logical form
MAS  Masculine
MG   Modern Greek
MLC  Minimal Link Condition
MQSC Minimal Quantified Structure Constraint
MP   Minimalist Program
NC   Negative Concord
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<td>Op</td>
<td>(bare) Operator</td>
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<td>φ</td>
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\[ \theta \quad \text{Theta/Thematic} \]
\[ \exists \quad \text{Existential quantifier} \]
\[ \forall \quad \text{Universal quantifier} \]
\[ \neg \quad \text{Negative operator} \]
\[ \land \quad \text{and} \]
\[ \rightarrow \quad \text{if then} \]
\[ \downarrow \quad \text{Depends on} \]
\[ \uparrow \quad \text{order relation} \]
\[ f \quad \text{The element on which } \alpha \text{ depends} \]
\[ x \quad \text{a functional variable} \]
\[ \uparrow \text{ or } \downarrow \quad \text{an argumental variable} \]
\[ \uparrow \text{ or } \downarrow \quad \text{indicates scope} \]
CHAPTER 1

INTRODUCTION

1.1. Canonical versus non-canonical quantification

Many theories of grammar share the assumption that the configuration for quantificational structures at LF - or at the relevant level of representation that serves as input to the semantics - has the tripartite form in (1) whereby a lexical operator and its semantic restriction are adjacent and both located outside the matrix - i.e. nuclear scope:

(1) Operator - Restriction - Matrix

Let us call this kind of quantification canonical quantification. While the surface form of a quantified sentence often matches the schema in (1), a quick survey of just a few languages shows that it is often not the rule for quantified sentences. In many cases, a surface string involves the split of the operator from its restriction leading to a situation whereby the operator is not adjacent to its semantic restriction, the nominal having remained in situ:

(2) Quantifier - Matrix - Restriction
Let us call this type of quantification *non-canonical*, since it does not correspond to the expected LF quantification schema. The term *non-canonical quantification* originates in Obenauer (1983, 1984) where it was used along exactly those lines.

The quintessential case of non-canonical quantification is the *beaucoup de* construction in French. The particular characteristic of expressions like *beaucoup* 'many'/‘a lot’ is that they can occur in determiner positions (cf. 3a) or in adverbial positions as in (3b) (in what follows the DP constituents appear in bold face):

(3) a. Jean a salué **beaucoup de sportifs**. (French)
   Jean has greeted many of sportsmen

   b. Jean a **beaucoup** salué **de sportifs**.
      Jean has a lot greeted of sportsmen

   ‘Jean has greeted many sportsmen.’

Although *beaucoup* is in adverbial position in (3b), many syntactic analyses argue that it continues to function as a kind of determiner. Thus, *beaucoup* has a dual role: it is both an adverb and a determiner. The traditional analysis for (3b) assumes that *beaucoup* has moved from inside the DP to the adverbial position, while a trace is left behind. From its adjunction site, *beaucoup* binds the trace in question:

(4) Jean a **beaucoup**; salué [t; **de sportifs**]. (French)
    Jean has a lot greeted of sportsmen

    ‘Jean has greeted many sportsmen.’
Interestingly, the meaning potential of the split version is impoverished in the sense that while (3a) is ambiguous (between two readings), (3b) is not. Obenauer points out that the adverb *beaucoup* expresses a notion of iterativity. Whereas (3a) corresponds to one greeting event in which many sportsmen are involved or to many greeting events for individual (or small groups of) sportsmen, (3b) lacks the single event reading. (3b) can only mean that there were many sportsmen who were individually (or in small groups) greeted by Jean. Thus, the position of *beaucoup* has effects on interpretation.

The second case of non-canonical quantification introduced by Obenauer is the well-known *combiens de* construction in French:

(5) a. \[CP \text{Combiens de livres}, \text{as-tu lus t}?\] (French)
   
   how many of books have you read

b. \[CP \text{Combiens}, \text{as-tu lu [t de livres]}?\]
   
   how many have you read of books

   'How many books have you read?'

The constituent *combiens de livres* can move as a whole (cf. 5a), or the operator *combiens* can move on its own leaving behind its noun restrictor.\(^2\)\(^3\)

Throughout the thesis, operators which are separated from their noun restriction shall be referred to as 'bare' operators:

(6) **Bare operator**

A bare operator Op is an operator which is detached from its noun restrictor.
While we are on a terminological note, let me point out that constructions which result in the separation of operators from their noun restrictor shall be referred to as split constructions:

(7) **Split construction**

A construction in which an operator Op is split from its noun restrictor.

The term ‘split construction’ is thus shorthand for a structure exhibiting non-canonical quantification. I will sometimes refer to non-canonical quantification simply as split-DP syntax, since typically non-canonical quantification involves two constituents of the same DP becoming discontinuous.

The third type of example introduced by Obenauer is illustrated in (8). This example shows that, in French, certain negative constructions can also split, yielding non-canonical quantification:

(8) a. [Rien d' extraordinaire, n' est arrivé t,]. (French)

    nothing of extraordinary  Neg is happened

b. [Rien, n' est arrivé [ti d' extraordinaire]].

    nothing  Neg is happened of extraordinary

‘Nothing extraordinary has happened.’

In (8a) the whole negation constituent including the noun restrictor has moved to a scope position whereas in (8b), only the negative operator has raised, stranding the noun.
1.2 Non-canonical quantification cross-linguistically

Non-canonical quantification or split-DP syntax is not uncommon cross-linguistically. Beginning with WH questions, it has been noticed that in Dutch and German so-called *wat voor* and *was für* constructions are typical examples whereby the operator is no longer continuous with its noun restrictor.4

(9) a. \[CP \textit{Was für ein} \textit{Werkzeugi} \textit{sucht er ti?}\] (German)

   what for a tool look he

b. \[CP \textit{Wasi} \textit{sucht er [t\textsubscript{i} für ein Werkzeug]}?\]

   what look he for a tool

   ‘What kind of tool is he looking for?’

(de Swart 1992:389)

(10) a. \[CP \textit{Wat voor boeken}i \textit{heb jij ti gelezen}]? (Dutch)

   what for books have you read

b. \[CP \textit{Wat}i \textit{heb jij [t\textsubscript{i} voor boeken} \textit{gelezen}]?\]

   what have you for books read

   ‘What kind of books have you read?’

(de Swart 1992:389)

As in the previous cases of split-DPs, in (9b) and (10b), a bare operator has raised to a scope position leaving the semantic restriction in situ.

In addition, *which*-DPs can split in languages as distinct as Slavic and Mohawk:
(11) a. \[\text{[cp } \text{Jaki numer}, \text{ wykręciłeś tij]?}\] (Polish)

which number you dialed

b. \[\text{[cp } \text{Jaki}, \text{ wykręciłeś [ti numer]]}\]

which you dialed number

‘Which number did you dialed?’

(Corver 1990:330)

(12) a. \[\text{[cp } \text{Čju knigu}, \text{ ty čitaješ tij]?}\] (Russian)

whose book you read

b. \[\text{[cp } \text{Čju, ty čitaješ [tij knigu]]}\]

whose you read book

‘Whose book are you reading?’

(Corver 1990:330)

(13) a. \[\text{[cp } \text{Ka nikáy} \& \text{ kášere i-hs-her-e’ a-hs-hnínú’-]}?\] (Mohawk)

which car \(\text{Ø-2SG-think-IMPF OPT-2SG-buy-PUNC}\)

(Baker 1996:159)

b. \[\text{[cp } \text{Ka nikáy} \& \text{ i-hs-her-e’ a-hs-hnínú’ ne kášere]}?\]

which \(\text{Ø-2SG-think-IMPF OPT-2SG-buy-PUNC NE car}\)

‘Which car do you want to buy?’

(Baker 1996:158)

(14) a. \[\text{[cp } \text{Tinos to vivlio}, \text{ eferes tij]?}\] (Modern Greek)

whose the book brought-\(2SG\)
b. [CP Tinos, dieres [t; to vivlio]]?

    whose brought-2SG       the book

‘Whose book did you bring?’


(15) a. [CP Quali libri, hai letto t,]?  (Italian)

    which-MAS-PL    books-MAS-PL    has-2SG read

b. [CP Quali, hai letto di [t; libri]]?

    which-MAS-PL    has-2SG read of books-MAS-PL

‘Which books have you read?’

(Moro 2000:51)

In French, the exact equivalent of which cannot split; only lequel can split:

(16) a. [CP Lequel des deux livres, as-tu lus t,]?  (French)

    which of two books have you read-AGR

b. [CP Lequel, as-tu lu [t; des deux livres]]?

    which have you read of two books

‘Which of the two books have you read?’

c. [CP Lequel, as-tu lu [t; de livre]]?

    which have you read of book

‘Which book have you read?’
In addition to English-type relatives where the operator is adjacent to the DP, Mohawk (and other languages, e.g. Hindi) has relatives where the operator is in its scope position while the DP has remained in situ, internal to the relative:

(18) a. Sak ra-nûhwe'-s [CP ne ãthere tsi nikáy∧ I: k-ûni-s]. (Mohawk)
    Sak   MAS-SG-like-HAB NE basket which  me 1SG-make-HAB

b. Sak ra-nûhwe'-s [CP tsi nikáy∧ I: k-ûni-s ne ãthere].
    Sak   MAS-SG-like-HAB which  me 1SG-make-HAB NE basket

'Sak likes the kind of baskets that I make.'

(Baker 1996:163)

The idea is that all these constructions are comparable to the adjunct structures that were introduced in section 1.1.

1.3 Further split constructions

The central claim of this thesis is that the following structures can be assimilated to split constructions (in (22), capital letters are used to indicate main stress and brackets + F for focus to indicate the focused constituent):
(19) Tu fais quoi ce soir? (French)
you do what this evening
‘What are you doing tonight?’

(20) Was glaubt Uta wen Karl gesehen hat? (German)
whom believes Uta that Karl seen has
‘Who does Uta believe that Karl saw?’

(21) Je n’ ai vu personne. (French)
I Neg. have seen no one
‘I haven’t seen anyone.’

(22) John was [vp1 advised to [vp2 study [only [dp SYNTAX]F]]].

a. ‘John was advised to study syntax only.’ (narrow focus)
b. ‘John was only advised to study syntax.’ (wide focus)

(19) and (20) have a full movement alternative.5

(23) Qu’ est-ce que tu fais ce soir? (French)
what that you do this evening
‘What are you doing tonight?’
The idea is that all the above constructions, (19), (20), (21) and (22), exhibit non-canonical quantification. In particular, (19) and (21) can be assimilated to split constructions if it is assumed that a phonologically null operator (interrogative and negative, respectively) raises to a scope position while the noun is stranded. The operator is morphologically realised (as qui) in the case of (19), but it is not morphologically realised in the case of (21) (no negative morpheme surfaces).

The so-called partial WH movement or scope-marking construction in (20) can be assimilated to a split structure if it is assumed that the higher WH phrase is a bare operator which is separated from its noun restriction, the latter having remained behind (i.e. in the intermediate Spec-CP position).

The focus particle construction in (22) is ambiguous between a narrow and a wide scope reading for only. On the narrow-focus reading, (22) means something like John was advised to study no subject other than syntax (only takes scope over the lower IP). On the wide-scope interpretation, (22) means something along those lines: John was advised one thing: to study syntax, but he was not advised to study any other subject (only takes scope over the higher IP). This particular reading leaves open the possibility for other subjects to be studied by John, should he wish to. (22) can be assimilated to a split construction if it is assumed that movement of a phonologically null focus operator occurs and that operator is positioned to the appropriate scope position and is thus separated from its noun restrictor (i.e. syntax, the N with which it is associated).
The idea that partial WH movement structures might be split constructions was implicit in Rizzi (1994) and Beck (1996), and was made explicit in Honcoop (1998). Honcoop’s thesis came to my attention late in this study, and it became clear while reading it that his goals were very similar to mine. Ultimately, the analysis proposed in the present thesis will, like that of Honcoop, be in terms of scope, but the position defended here is essentially different from his. In fact, I later argue against his proposal and claim that the approach to split constructions I have in mind has a number of advantages over his analysis.

Honcoop also puts forward the idea that constructions with Negative Polarity Items (NPIs) (i.e. the English translation of example (21)) are cases of split constructions. Again, this came to my attention late, after I entertained the idea that negative constructions in French involving so-called N-words (e.g. personne) might be extended cases of non-canonical quantification. As will become clear later in the thesis, however, negative constructions with NPIs are very different from negative N-word constructions. According to the hypothesis developed in the present study, negative constructions with NPIs are not genuine cases of split constructions.

Finally, as far as I am aware, the claim that French single WH in situ constructions and focus particle constructions are underlyingly split constructions has not been made before.

1.4 The central problem

The central problem addressed in the present thesis is the fact that strings exhibiting non-canonical quantification are more restricted than their canonically quantified counterparts. More specifically, a whole range of scopal elements block the licensing of the operator once it is split from its noun restrictor. Many of the split constructions
introduced in section 1.1 are subject to these intervention effects (potential interveners appear in small capital letters doubly underlined) (cf. de Swart 1992):

(25) a. \[\text{CP } \text{Combien de livres}_i (n') \text{ as-tu} \] (French)

\[\text{how many of books Neg have you}\]

\[\text{PAS lus ti}]?\]

\[\text{not read-AGR}\]

b. *\[\text{CP Combien}_i (n') \text{ as-tu PAS lu [t, de livres]]}\]

\[\text{how many Neg have you not read of books}\]

‘How many books have you not read?’

(26) a. \[\text{CP Was für ein Werkzeug}_i \]

\[\text{what for a tool}\]

\[\text{sucht NIEMAND ti}]?\]

\[\text{look no one}\]

b. *\[\text{CP Was, sucht NIEMAND [t, für ein Werkzeug]}]?\]

\[\text{what look no one for a tool}\]

‘What kind of tools is no one looking for?’

(27) a. \[\text{CP Wat voor boeken}_i \text{ heeft NIEMAND t, gelezen}]? \]

\[\text{what for books have no one read}\]

b. *\[\text{CP Wat}_i \text{ heeft NIEMAND [t, voor boeken gelezen]}]?\]

\[\text{what have no one for books read}\]

‘What kind of books has no one read?’
The constructions introduced in section 1.3 exhibit the same kind of intervention effects. Note, however, that the full movement alternative (when available) does not:

(28) a. \[\text{[CP Qu’est-ce que tu ne fais P\\text{\underline{A}s} t_i] ce soir?}\] (French)

\begin{align*}
\text{what} & \quad \text{that} \quad \text{you} \quad \text{Neg} \quad \text{do} \quad \text{not} \quad \text{this} \quad \text{evening} \\
\end{align*}

b. \[\text{*[CP Tu ne fais P\\text{\underline{A}s} quoi] ce soir?}\]

\begin{align*}
\text{you} & \quad \text{Neg} \quad \text{do} \quad \text{not} \quad \text{what} \quad \text{this} \quad \text{evening} \\
\end{align*}

‘What aren’t you doing tonight?’

(29) a. \[\text{[CP1 Mit wem_i glaubst du N\\text{\underline{I}C\text{\underline{H}}} [CP_2 t_i’ dass Hans t_i]} \] (German)

\begin{align*}
\text{with} & \quad \text{whom} \quad \text{believe you not} \quad \text{that} \quad \text{Hans} \\
\text{gesprochen} & \quad \text{hat}]}? \\
\text{spoken} & \quad \text{has} \\
\end{align*}

b. \[\text{*[CP1 Was glaubst du N\\text{\underline{I}C\text{\underline{H}}} [CP_2 mit wem_i Hans t_i]} \] (German)

\begin{align*}
\text{WH} & \quad \text{believe you not} \quad \text{with} \quad \text{whom} \quad \text{Hans} \\
\text{gesprochen} & \quad \text{hat}]}? \\
\text{spoken} & \quad \text{has} \\
\end{align*}

‘Who don’t you believe that Hans has spoken to?’

(30) \[\text{*[ Tu ne te demandes [CP QU\text{\underline{A}N\text{\underline{D}}}]} \] (French)

\begin{align*}
\text{you} & \quad \text{Neg} \quad \text{yourself} \quad \text{ask} \quad \text{when} \\
\text{voir} & \quad \text{personne}]}.
\end{align*}

\begin{align*}
\text{to see} & \quad \text{no} \quad \text{one} \\
\end{align*}

‘You do not wonder when to see anyone.’
(31) John asked [cp **WHERE** to study only [**SYNTAX**]f]. (unambiguous)

(i) ✓ 'John asked where to study syntax only.' (narrow focus)

(ii) * 'John only asked where to study syntax.' (wide focus)

1.5 The proposal

It is the main thesis of my study that, in a split construction, the stranded noun is a predicative indefinite. It denotes, not an argument, but a property. It is non-referential and its scope is fixed. The relevant facts can then be made to follow from the Scopal ECP (cf. Williams (1994)), and will thus be accommodated in a principled way. The Scopal ECP is in spirit very similar to the semantic account offered by Szabolcsi and Zwarts (1992-1993), yet very different in its technical details. It will be shown that the approach to split constructions proposed here has a number of advantages over analyses that rely on Rizzi's (1990) Relativized Minimality or Honcoop's reduction of weak islands to cases of inaccessibility in cross-sentential anaphora.

The main aspect of my proposal is that stranded indefinites do not introduce an existential quantifier, but only a so-called Skolem function, i.e. a function from individuals to individuals of type <e, e>. When such a function is introduced an indefinite has "zero" scope. In other words, it behaves like an adjunct, i.e. a non-quantificational element that takes scope where it is merged and not beyond.

I have come to notice that there are striking similarities between the semantic properties of the stranded nominals I have been interested in and certain nouns as discussed by van Geenhoven (1998). She has discovered common scope properties between bare plurals (Carlson 1977), incorporated nouns in West Greenlandic (Sadock
1980) and split-topic Ns in West Germanic languages (van Riemsdijk 1987). These constructions and the ones introduced in this thesis can receive a unified treatment. However, the technical details of her analysis differ from mine.

In addition, it will be argued that stranded indefinites have a special discourse function, that of topic. While the full movement correlates with focus (both the operator and the nominal), a split variant correlates with focus on the operator, but a topic reading of the noun.

Finally, to the extent that the conclusions reached in this thesis are sound, they provide evidence against the minimalist stance according to which movement is always feature driven. In split WH constructions of the overt type (*combien de constructions*) the bare operator can presumably check both the WH feature and the strong D or EPP feature of C (since phonological material is pied-piped). I will argue that the non-split alternative which involves movement of the remnant nominal along with its operator is not feature driven, but pragmatically motivated. Thus, although I take many assumptions from the Minimalist Program (MP, henceforth) as given, the theory proposed in the thesis leads to a variant of the MP quite different from the original.

1.6 Theoretical assumptions

Many of the approaches which I challenge in the present thesis make use of some or all aspects of the MP (cf. Chomsky 1995, 2000, 2001). Therefore, I would like to introduce some of the basic components of that particular framework as background for what follows. Needless to say, I cannot do justice to the richness and complexity of the standard minimalist theory, but a rough guide will suffice for our purposes.
The concept of economy is a central tenet of the MP. The model has three essential components related to each other by $C_{HL}$, the computational system: a lexicon, an interface with the production and perceptual system (PF), and an interface with the interpretive system (LF). The intermediate levels of representation assumed in the Government and Binding (GB) approach do not survive: D-structure and S-structure are eliminated. The sole syntactic level of representation is thus LF. As in previous work, LF does not access the Lexicon directly. Since D-structure is gone, phrase-markers are not complete prior to movement operations, instead, lexical items are selected/copied from the Lexicon and arranged in a Numeration. Then, the binary operation Merge applies, creating a structural expression, which can in turn be merged with other structured expressions. Merge thus expresses the recursive nature of language.

The other basic operation of the grammar is Attract F, whereby $F = \text{feature}$. In the MP, movement is never free (Last Resort). The term 'case assignment' of GB parlance is replaced by the term 'Case checking'. Lexical expressions enter the derivation fully clothed (to use Hornstein's 2001 expression). For example, movement of the object DP in a passive construction does not raise to 'get' Case, but to check the $[+\text{NOM}]$ feature of I (more recently the EPP feature of I, since it is possible in some languages to raise even though the object DP is already case-marked, e.g. the quirky case phenomenon in Icelandic).

Certain features of lexical items are interpretable, i.e. legible to the external systems at the interface (e.g. categorial and $\phi$-features of nominals) while others are uninterpretable (e.g. agreement features of verbal elements, Case features of nominals). Let me concentrate on WH features, since in this thesis I am dealing in great part with interrogatives: the WH feature of C is uninterpretable, it is therefore not legible to the
external systems at the interface. On the other hand, the WH feature of the WH phrase that moves to Spec-CP is legible to the external systems at the interfaces, so it is checked but not eliminated.\(^6\) An uninterpretable feature must be eliminated. Therefore, it attracts a relevant feature which can check and delete it. The \([+\text{WH}]\) feature of C thus attracts a WH phrase to its Spec.

A checked uninterpretable feature becomes invisible at LF and PF. If the feature is not checked, the overarching principle of \textit{Full Interpretation} is violated:

\begin{align*}
\text{(34) } \textit{Full Interpretation} \\
\text{An element can appear in a representation only if it is interpretable.}
\end{align*}

Built in the definition of Attract, the Minimal Link Condition (MLC) ensures that each displacement is the shortest possible:

\begin{align*}
\text{(35) } & \text{K attracts F if F is the closest feature that can enter into a checking relation} \\
& \text{with a sublabel of K.}
\end{align*}

(Chomsky 1995:297)

The third operation in the grammar is Move. In the MP, overt movement translates as movement of F + phonological pied-piping of the whole category, while covert movement translates as movement of F alone. A point in the derivation where the phonological features are sent to PF is recognised and dubbed Spell-Out. Spell-Out is said to be an operation, not a level of representation, so no constraint can apply at Spell-Out.
The derivation from the Numeration to LF is assumed to be uniform. Feature movement is the basic movement of the grammar. Movement of both the features and the category is necessary only when a lexical item LI contains a strong feature. When the feature is weak no pied-piping is necessary.

Because LF is the sole syntactic level representation left in the grammar, it follows that this is where universality is encoded. On this view, the differences between languages are a PF phenomenon as determined by properties of morphosyntactic features (strength, etc.). PF is part of the language faculty (phonology is 'realisational' of the syntactic computation up to Spell-Out (the 'overt' syntax)), so differences in word order are expected to be derived from universal principles.

As already mentioned in passing, in Icelandic it is possible for a DP assigned Dative to appear in Spec-IP. So, presumably, the DP does not move to Spec-IP to check a Case feature, but something else. The prime candidate is a strong D feature, renamed EPP feature. The idea is that Case checking involves long-distance agreement rather than movement.

I ignore the recent developments made in the MP with regard to strong and weak phases. In the most recent versions of the MP the locality conditions are still very similar to the locality conditions of previous efforts. The MLC remains unchanged and thus faces the same problems it faced in earlier versions of the MP, e.g. lack of coverage. The MLC can deal with WH, but not with inner or other islands; under minimalist assumptions, there is no feature that WH and Neg share that could lead to a general account of weak island effects. As for strong islands, the Constraint on Extraction Domain (CED) cannot even be formulated in the MP, since the concept of government has disappeared.
Some of the results achieved in this thesis appear incompatible with certain assumptions made in the standard minimalist approach. (a) The theory proposed here views locality effects in terms of scope, not in purely syntactic terms. (b) Following Williams (1986), (1994) and Brody (1995) I assume that Spell-Out applies at LF. In Williams’s theory, LF is eliminated, however:

‘whether or not one regards it as appropriate to say that LF is eliminated in the reduced model depends on how LF is defined. If LF is defined as the result of applying QR or SA [scope assignment] to S-structure, then LF is certainly eliminated; but if LF is whatever structure it is that determines meaning, then of course LF is not eliminated; it is simply identified with S-structure.’ (Williams 1986:267).

Williams thus assumes an enriched S-structure. This level of representation corresponds more or less to LF. Therefore, as in Brody (1995), S-Structure equals LF. Whereas Williams chooses to use the term S-Structure for this level, Brody chooses the term LF. I shall follow Brody in using the latter term. Note that the representational-versus-derivational view of chains is essentially immaterial to my goals. For concreteness’ sake I shall, nevertheless, generally adopt a representational perspective.

(c) In minimalism all types of movement are feature driven (apart, perhaps, from stylistic constructions at PF, as granted by Chomsky). In contrast, I will show that movement is not always feature-driven. In some cases, it is pragmatically motivated. Under standard minimalist assumptions, ‘overt’ split constructions show that the bare operator has checked both the WH and strong D feature of C. On such an account, it is
unclear why the whole WH phrase should ever pied-pipe. Economy should block pied-piping if it is not required for convergence. I shall argue that, at least in the case of split constructions, pied-piping relies on the nominal associated with the WH morpheme being focused. If it is focused, the nominal raises along with the WH morpheme. If the nominal is not focused, it remains in situ. In this case it is a topic. On this view, the notions of focus and topic are not encoded in the syntax, but are extragrammatical.

1.7 Overview of the thesis

Chapter two deals with WH in situ in French single WH constructions. In that chapter, I show that WH-in-situ questions in French do not behave exactly like their displaced counterparts. The scope of the WH phrase in situ is fixed, while the scope of the dislocated WH phrase is not. In that chapter, all the technical machinery that will serve as the basic theory for the remaining chapters is introduced. The Scopal ECP is presented in detail, as well as the formal background theory of Skolem functions, predicative indefinites and the distinction between focus and topic.

Chapter three concentrates on partial-WH-movement constructions in German and Hungarian. I argue that while Hungarian scope markers involve movement, German ones do not. I account for the island effects exhibited by partial-WH-movement constructions in terms of scope. I account for the differences between German and Hungarian with regard to intervention effects in syntactic terms: while the relation between the scope marker and the intermediate WH phrase is an A’-relation in German, it is an A-relation in Hungarian.
Chapter four reopens the debate as to whether so-called N-words in French are negative quantifiers or NPIs. The evidence provided suggests that French N-words are negative quantifiers rather than NPIs. The dependency between the French Neg ne and the N-word in situ is sensitive to intervening scopal elements which suggest that these constructions are further instances of split constructions.

Chapter five deals with focus particle constructions. I provide evidence for the view that attributive focus particles are not base-generated where they take scope, but involve base-generation of a dislocated focus null operator. The island effects that such structures exhibit are accounted for in terms of scope.

Finally, chapter six summarises the findings and points to some interesting issues for further research.

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2 As pointed out by Honcoop (1998) in his analysis of split constructions, not everyone agrees that the indefinite NP in such constructions functions semantically as a restriction on the range of the WH operator. For example, in the case of (5 (a and b)), many researchers would argue that the restriction over which the WH operator ranges is a number. However, like Honcoop (1998), I assume that an indefinite NP functions as a restriction on the range of some operator Op when the indefinite NP is interpreted as a property that restricts the range of possible valuations of the variable quantified over by Op. What this means is that in examples like (5), the operator ranges, not simply over a number, but over a number of books. This is important because it fits with the interpretation one gets for such sentences. (5a) and (5b) are asking how many books, not, say, how many magazines or cats.

3 I will use the term noun restrictor and semantic restriction interchangeably.

4 Split constructions raise a number of theoretical issues, e.g. for structure dependency and compositionality. However, it is customary in the literature to simply acknowledge these constructions (cf. Rizzi 1990). I will follow this trend here. I have, however, more to say about these issues in forthcoming work (cf. Mathieu and Sitaridou 2002). Following ideas by Devine and Stephens (2000), it will be assumed that splitting can be traced back to a paratactic DP consisting of two DPs in apposition, DP1 being a null head nominal and DP2 the stranded nominal. A modifier restricts the null head nominal in DP1 and the null head N is coindexed with the stranded nominal. The idea is thus that split-DP syntax involves discontiguity, rather than discontinuity. Discontiguity or split-DP syntax is possible when a language has null head nominals. In other words, what is split is not a sub-constituent of a DP, but a DP in its own right. So in fact, “splitting” is a misnomer.

5 Note that long DP movement is not possible in all dialects of German.

6 This assumption can be found in Chomsky (2000) rather than (1995, chapter 4).
Note that I am interested in movement of the bare operator and movement of the nominal with which it is associated. If there is a stylistic rule involved in the cases under discussion then it must be the cases like those where the interrogative is split (i.e. when the nominal remains in situ). These split variants are not only used in spoken language, but also in literary genre and poetry (this is true for French, Russian, Polish, Greek, etc.). If we can call a construction 'stylistic', then these cases are primal candidates. The nominal may in fact raise (I will later argue in detail that stranded indefinites are incorporated nouns). This movement is not feature-driven and may thus be called a stylistic rule. However, raising of the nominal after the bare operator has moved to Spec-CP cannot be considered a stylistic rule, since this option is the default option in terms of interpretation (it does not carry any presuppositions). In other words, there is nothing 'stylistic' about it. It nevertheless raises without being attracting by a feature, since the feature of C has already been checked when the bare operator has moved to Spec-CP. One could argue that the nominal is attracted by a focus feature and ends up in the specifier of a focus phrase. But, this is not going to work, since it is generally assumed that questions and focus items compete for the same position (i.e. Spec-Foc, cf Rizzi 1997).
CHAPTER 2

FRENCH WH IN SITU

2.1 Introduction

French has the possibility of fronting a WH phrase or of leaving it in situ in matrix clauses. Single WH-in-situ questions in French are not only used as echo, but also as standard questions asking for new information:

(1) a. Tu fais quoi ce soir?
   you do what this evening
   ‘What are you doing tonight?’

   b. Qui'est-ce que tu fais ti ce soir?
      what that you do this evening
      ‘What are you doing tonight?’

Aoun, Hornstein and Sportiche (1981) and Lasnik and Saito (1992) account for the optionality of French WH movement by suggesting that French has a ‘mixed’ system with regard to the formation of WH interrogatives. On this view, French is like English in that a WH expression can be moved overtly to Spec-CP, and like Chinese in that the WH expression can remain in situ.

It has recently been noticed, however, that, whereas the distribution of WH in situ in Chinese single WH interrogatives is not restricted, the distribution of French WH in situ in the same environment is very limited. In particular, such questions display
intervention effects with a whole range of scopal elements. These effects are systematically absent with the movement alternative. Consider examples (28b/a) from chapter 1 again, repeated here as (2) for convenience. They involve Neg and C, cf. Bošković (1998, 2000):

(2) a. *Tu ne fais pas quoi ce soir?  (French)
you Neg do not what this evening

b. Qui est-ce que tu ne fais pas ce soir?
what that you Neg do not this evening

‘What aren’t you doing tonight?’

(3) a. *Il croit [CP qu’ elle a vu qui]?  (French)
he believes that she has seen who

b. Qui il croit [CP qu’ elle a vu tij]?
who he believes that she has seen

‘Who(m) does he believe that she saw?’

In Chinese, Neg and C do not block the licensing of the WH phrase in situ.³,⁴

(4) Yanhan bu xiquan shenme?  (Chinese)
Yanhan Neg like what

‘What doesn’t Yanhan like?’
On the basis of these facts, I conclude that it is impossible to claim that French has a 'mixed' system with regard to the formation of WH questions. There is something 'special' about French WH in situ. It does not behave like a WH in situ language like Chinese. The aim of this chapter is to explain what is 'special' about French WH-in-situ in single WH environments (French WHi in situ, henceforth). It will be argued that, while Chinese WH1 phrases in situ are pure variables, French WH1 phrases in situ are inherently interrogative, i.e. quantificational. In particular, it will be argued that they form a chain with a phonologically null WH operator.

The chapter is organised as follows: section 2.2 introduces some background notions about WH in situ. Section 2.3 reviews three recent analyses of French WH-in-situ and highlights the problems associated with them. In section 2.4, an alternative solution based on Relativized Minimality is proposed. In view of the fact that the Relativized Minimality account faces some problems, section 2.5 provides a solution to the intervention effects in terms of scope. Section 2.6 discusses the discourse properties of French single-WH-in-situ constructions. Finally, the main conclusions are summarised in section 2.7.
2.2 WH in situ: some background notions

There has been extensive debate in the literature whether or not WH phrases in situ move at LF cross-linguistically. One camp argues that WH phrases in situ move covertly at LF, the other that WH phrases in situ remain in situ at all times. The movement approach to WH in situ dates back to Chomsky (1977) and May (1977), and was developed by Huang (1982) and May (1985), amongst others.

One of the main original arguments for movement of WH phrases in situ at LF is based on the complement-selection properties of verbs such as wonder, believe and know. In English, wonder requires an indirect question complement (cf. (6)), believe takes a non-interrogative propositional argument (cf. (7)), and know allows either type of complement (cf. (8)):

(6) a. John wonders who Mary saw.
   b. *Who does John wonder (that) Mary saw?

(7) a. *John believes who Mary saw.
   b. Who does John believe Mary saw?

(8) a. John knows who Mary saw.
   b. Who does John know Mary saw?

In Chinese, although the WH phrase remains in situ, the counterparts of (6), (7) and (8) receive the same interpretation:
According to the movement theory, the difference between English and Chinese single WH questions is simply that in English WH phrases move overtly, prior to S-structure (or Spell-Out), whereas in Chinese WH phrases move covertly, in the LF component of the grammar (after Spell-Out).

Despite the similarities between English and Chinese questions in terms of distribution, important differences between the two languages have been noticed. One crucial difference concerns subjacency. In English, (overt) extraction of WH phrases is sensitive to subjacency, whereas in Chinese (covert) movement is not (Huang 1982) (abstracting away from WH phrases like ‘why’).\(^3\)
Chinese WH1 phrases in situ thus behave like English WH phrases in situ in multiple-WH-constructions. It has also been observed that multiple-WH-constructions are not sensitive to subjacency:

(14) **Who** wonders **who** bought **what**?

On the basis of these data, Huang (1982) reaches the conclusion that subjacency holds at S-structure and is not operative at LF. Consequently, covert movement is less restricted than overt movement.

However, there are two problems with this claim, one theoretical, the other empirical. As already pointed out in the introduction, under minimalist assumptions, the derivation from the Numeration to LF is uniform. S-structure has been rejected. Spell-Out is not a level of representation, but an operation, which can apply at any point. Therefore, it is impossible for subjacency, or indeed any other condition, to apply at Spell-Out.

The second problem is that there is empirical evidence to suggest that, as argued by Reinhart (1998), subjacency does indeed hold at LF: comparatives and other elliptical constructions yield subjacency effects, indicating that in (15) the associate -
the nominal expression - moves up to 'more'. This movement is not clause-bound, as indicated in (15a), but must nevertheless obey subjacency as shown in (15b):

(15)  

a. More people said that they will vote for Blair in the last poll than for Hague.

b. ?*More people who voted for Blair complained, than Hague.

On the basis of these facts, Reinhart (1997, 1998) takes the view that WH phrases in situ do not obey subjacency simply because they do not move.

Reinhart’s theory is the most recent account in a tradition which views WH phrases in situ as pure variables involving no movement. This approach originates in Baker (1970), according to whom WH phrases in English WH constructions are directly bound by an abstract Q morpheme. Nishigaushi (1986) and Pesetsky (1987) build on this insight by adding the mechanism of unselective binding (Heim 1982). On their view, the Q operator unselectively binds the variable in the WH phrase in situ. Pesetsky’s analysis is nevertheless different from Baker’s and Nishigaushi’s in that it applies only to so-called D(iscourse)-linked WH phrases.

The unselective binding account as envisaged by Pesetsky is criticised by Reinhart (1997, 1998) on the grounds that it cannot yield the right semantics. The argument goes as follows. In (16), if the semantic restriction in situ is left in situ, as indicated in (16a), anything which is not a philosopher could be a value for the variable y:

(16)  

[Who will be offended] [if we invite which philosopher]?

a. ‘For which <x, y>, if we invite y and y is a philosopher, then x will be offended.’

b. ‘For which <x, y>, y is a philosopher, if we invite y, x will be offended.’
Assuming the semantics of questions proposed by Karttunen (1977), according to which questions denote the set of propositions that are true answers to it, a possible answer to (16) is *Lucie will be offended if we invite Donald Duck*. Of course, an answer to a question like (16) naturally requires that the answer involves a philosopher and not an entity which is not a philosopher. (16b), not (16a), is what the question is asking. In (16a), the sentence ends up a necessary truth in every world lacking philosophers, because the semantic restriction *philosopher* occurs in the antecedent clause of an *if*-clause. Clearly, the semantic restriction somehow needs to be pulled out of the *if*-clause in order to obtain the correct semantic interpretation.

So, we are left with a paradox: on the one hand, the semantic restriction needs to remain in situ (because there is no evidence for movement), on the other, it cannot stay there (because of the Donald Duck problem).

To resolve the quandary, Reinhart appeals to a semantic device, i.e. existential closure over a choice function (of type \(<e, t>, e>\). Choice functions have a long tradition in mathematical logic, but have been used only recently in semantics. The choice functions Reinhart (1998) deals with are simpler than the Skolem functions which have been used to capture the narrow scope of existentials and where the choice of value for them varies with the choice value for some bound variable. What is new is the idea that with the help of simple choice functions, specific or referential\(^6\) indefinites can be interpreted without movement, by being existentially closed off.

The Donald Duck problem is solved because in-situ WH phrases can get existential wide scope without moving. They are interpreted outside islands while no movement is involved.
Note that according to Reinhart, indefinites are ambiguous, so the non-specific or non-referential reading (where the indefinite is dependent on a universal quantifier typically yielding pair-list readings) is still achieved via an existential quantifier.

A choice function is a function from a (non-empty) set of individuals (the restriction set) to a member of that set. The restriction set is the argument of the function while the member that is picked out is the range. In this approach, the Russellian uniqueness condition is thus replaced by the principle of choice. Indefinites are not quantifiers, but terms, i.e. entities that refer. On this view, it is not the indefinite that carries existential force but the choice function. I return to Reinhart's (1998) analysis in section 2.4.2.

With the background about WH in situ in place, let us turn to French WH in situ in more detail. The question I want to address is whether French WH phrases in situ in single WH interrogatives involve movement. In addition, the task is to reconsider whether WH phrases in situ in multiple WH environments do indeed raise at LF or whether they remain in situ as argued by Reinhart. I begin, in section 2.3, with an overview and critical discussion of the various existing accounts of French WH in situ. This will lead us to an alternative proposal, worked out in sections 2.4, 2.5 and 2.6.

2.3 French WH in situ: existing accounts

2.3.1 Bošković (1998, 2000)

As already mentioned, Bošković (1998) notices that WH in situ in French is blocked in matrix negative sentences and in embedded tensed clauses, whereas 'overt' movement is not excluded in these environments. The phenomenon appears to be general; a WH
phrase may remain in situ in an infinitival clause provided that the verb does not select an (infinitival) C (see also Denham (2000)):

(17) a. Il a pensé [IP faire quoi]? (French)
    he has thought to do what'

b. Qui' est-ce qu' il a pensé [IP faire t₁]?
    what that he has thought to do

‘What did Jean think of doing?’

The verb décider ‘to decide’ selects the (infinitival) complementizer de, so the in-situ alternative is not possible.⁸

(18) a. *Il a décidé [CP de faire quoi]? (French)
    he has decided C to do what

b. Qui' est-ce qu' il a décidé [CP de [IP faire t₁]]? 
    what that he has decided C to do

‘What did he decide to do?’

Bošković accounts for the optionality of WH movement in French by allowing strong features to be inserted after Spell-Out. In this system, Procrastinate (cf. Chomsky 1995), which disfavours ‘overt’ movement, has been eliminated. Strong features can be inserted after Spell-Out as long as they are inserted at the root of the tree and the element inserted is phonologically null.⁹ When an overt WH complementizer is inserted pre-Spell-Out, ‘overt’ movement occurs. ‘Covert’ movement takes place when a phonologically null WH complementizer is inserted post-Spell-Out. On this view, there
is no need to assume that the +WH feature of French C is sometimes weak, sometimes strong: strength is kept constant.

Although Bošković’s system differs from Chomsky’s (1995) in that it abandons Procrastinate, it nevertheless maintains the minimalist position according to which Move F is the basic uniform characterisation of Move. ‘Overt’ movement is movement of formal features (FF) + pied-piping of the whole category (generalised pied-piping), and ‘covert’ movement is movement of FF alone.

The fact that Neg and C are interveners for FF movement is taken as support for Chomsky’s (1995) intuition that covert movement is an instance of head movement. Following Roberts (1993), Bošković relativises the notion of head. FF_{WH}, the formal feature of the WH phrase in situ, is an ‘A’-head-like object’ unable to cross another A’-head (e.g. Neg or C). Verbs, because they are A-heads, do not interfere with FF_{WH}. Finally, because overt movement is XP movement and not head movement, Neg and C do not create blocking effects.

Further evidence provided by Bošković in support of his proposal comes from the differences between single and multiple-WH constructions in French. In multiple-WH questions intervention effects are absent:

(19) a. **Qui n’a PAS fait quoi?** (French)
   who Neg has not done what
   ‘Who didn’t do what?’

b. **Qui_{1} croit [{CP C - qu’ elle a vu qui_{2}]?**
   who believes that she has seen who
   ‘Who believes that she saw who?’
Bošković argues that, in single-WH constructions, the formal features of the WH phrase in situ raise and adjoin to C, whereas in multiple WH constructions no raising of FF of the WH phrase in situ is necessary. This is because the [+WH] feature on C has been checked by the [+WH] feature of the highest WH phrase. In this case unselective binding suffices. This explains why negation and C do not create intervention effects in multiple WH environments. By contrast, unselective binding is not an option for the WH phrase in situ in matrix single-WH questions, because it would leave the [+WH] feature of C unchecked. In sum, WH phrases sometimes move (namely if necessary for convergence) and sometimes do not (namely if convergence does not require it).

Bošković makes a convincing case for the view that WH phrases in situ in single-WH questions involve movement and are thus quantificational elements. However, some aspects of his approach are problematic. The characterization of F-movement as more restricted than overt movement is incompatible with Chomsky's (1995) uniform characterization of Move as Move F. In the MP, all checking configurations are reduced to the FF-head relation. On the Move F hypothesis, the observation that covert movement is more restricted than its overt counterpart is puzzling, because by the same hypothesis overt movement involves raising of FF as well (accompanied by pied-piping). Bošković (1998, 2000) does not regard this as a problem; on the contrary, he takes his observations as an argument for rejecting the uniform characterisation of Move as Move F.

Bošković and Lasnik (1998) put forward an approach to the cycle which eliminates the challenge posed by the French data to the uniform characterization of Move as Move F. Their proposal involves the elimination of the Extension Condition, which requires that both Merge and Move take place at the root of a tree, ensuring that acyclic movement is ruled out (Chomsky 1995:248, 254). They argue that the
Extension Condition can be dispensed with on the grounds that many of its effects fall out from the notion of feature strength, which is independently needed.

In particular, the introduction in a phrase marker of a strong feature triggers an operation which leads to its immediate elimination:

\[(20) \text{ Suppose that the derivation } D \text{ has formed } \Sigma \text{ containing } \alpha \text{ with a strong feature } F. \text{ Then } D \text{ is cancelled if } \alpha \text{ is in a category not headed by } \alpha.\]

(Chomsky 1995:324).

Consequently, strong features take care of some cyclicity effects. One of the overlaps between strength and the Extension Condition can be seen in super-raising and WH islands. Both the extension condition and (20) are violated if the intervening specifier \((\text{whether and } it)\) are inserted acyclically as in (21):

\[(21) \begin{align*}
\text{a. & ?Whoi do you wonder } \textbf{WHETHER} \text{ John likes } t_i? \\
\text{b. *Johni seems } it & \text{ was told } t_i \text{ that Peter likes Mary.}
\end{align*}\]

(Bošković and Lasnik 1998:1)

The Extension Condition is violated because \textit{whether} and \textit{it} are merged acyclically: they should have been merged at the root of the tree. In (21a), (20) is also violated, because the strong WH feature on intermediate C should have been eliminated straight away by merger of \textit{whether}. Subsequent movement of \textit{who} across the specifier then gives rise to an MLC violation.\textsuperscript{10} Similarly in (21b), the strong feature of embedded I should have been checked by immediate merger of \textit{it}. As before, an MLC violation ensues when \textit{John} raises across the intervening specifier.
One consequence of the idea that the cycle is solely defined in terms of the
definition of feature strength is that acyclic merger of elements with weak features now
becomes a possibility (cf. Bošković and Lasnik (1998)):

(22)  *Acyclic Merge*

Acyclic merger of an element E is in principle possible if E contains no
strong features.

The challenge to the uniform characterization of Move as Move F noted earlier can
now be eliminated by appealing to acyclic merger. According to this account, because
the heads Neg and C are phonologically realised, they must enter the structure before
Spell-Out. However, they do not necessarily have to be present when ‘overt’
movement takes place. Thus (2b), repeated below, can be saved from ungrammaticality
by allowing Neg (assumed to have a weak feature) to be merged acyclically; that is,
after the WH phrase has raised to Spec-CP to check the strong feature of C:

\[
\text{(2) } b. \text{ Qui' est-ce que tu ne fais ↓ ti ce soir?}
\]

\[
\text{what } \quad \text{that } \quad \text{you } \quad \text{Neg } \quad \text{do } \quad \text{this evening}
\]  

On the same reasoning, the intermediate CP in (3b) (also assumed to have a weak
feature) is inserted acyclically after the WH phrase has checked the [+WH] feature of
root C:
(3) b. Qui, il croit [CP ↓ qu' elle a vu tij]?

who he believes that she has seen

‘Who(m) does he believe that she saw?’


First, not only heads block the licensing of WH in situ in French, but also XPs. For example, negative quantificational subjects block the licensing of French WH in situ in single WH constructions:

(23) a. *AUCUN ÉTUDIANT a lu quoi? (French)

no student has read what

b. Qui'est-ce qu' AUCUN ÉTUDIANT a lu tij?

what that no student has read

‘What did no student read?’

In addition, focus markers such as seulement ‘only’ and même ‘even’ and the DPs with which they are associated create intervention effects (this was first noticed in Mathieu 1999):

(24) a. *SEULEMENT JEAN fait quoi? (French)

only Jean does what
b. *Qu’est-ce que SEULEMENT JEAN fait t?*

‘What does only JEAN do?’

(25) a. *MÊME JEAN fait quoi?* (French)

even Jean does what

b. Qu’est-ce que MÊME JEAN fait t?

‘What does even JEAN do?’

So-called iterative adverbs also block the licensing of French WH1 phrases in situ:11

(26) a. *Il a BEAUCCOUP lu quoi?* (French)

he has a lot read what

b. Qu’est-ce qu’il a BEAUCCOUP lu t?

‘What has he often read?’

(27) a. *Il a PEU lu quoi?* (French)

he has little read what

b. Qu’est-ce qu’il a PEU lu t?

‘What has he seldom read?’
(28) a. *Il a TROP lu quoi? (French)
   he has too much read what

b. Qu’est-ce qu’il a TROP lu t’?
   what that he has too much read
   ‘What has he read too much?’

(23a) to (28a) are problematic for Bošković’s analysis because they involve, not a head, but an XP. (23a) to (28a) should be grammatical, since the blocking effects in WH1 in situ questions should stem from A’-(FF) head movement only. On his view, XPs are not expecting to block (A’-) head movement at all.

The second problem is that there appear to be cases where a C head does not block the licensing of French WH1 phrases in situ. These cases involve restructuring contexts. The central feature of restructuring is that processes and dependencies that are normally limited to a single clause can take place across clause boundaries. Following Roberts (1997), it is assumed that restructuring verbs have the special property of triggering raising of T\(^0\) from the lower clause to either the T\(^0\) position or the V position in the higher clause. In other words, a simple predicate is created and a simplex sentence anchors the aspectual reference of the event to the time of the utterance (Stowell 1982). Subjunctive clauses are typical examples of restructuring environments in that they are transparent domains for anaphoric binding (cf. Sigurdhsson 1990, Thrainsson 1990), for the licensing of N-words (cf. Kayne 1984), and, interestingly, also for the licensing of WH1 phrases in situ.\(^ {12} \)
(29) a. Il veut [CP C qu’ elle fasse quoi]? (French)
    he wants that she does~SUBJ what

b. Qui’est-ce qu’il veut [CP C qu’ elle fasse t,]? 
    what that he wants that she does~SUBJ

‘What does he want her to do?’

What appears relevant for the licensing of French WH in situ in embedded clauses is
thus not so much the presence or absence of complementizers, but tense; more
precisely whether the tense is dependent or independent on the tense of the higher
clause (for the idea that the subjunctive has anaphoric properties, see Anderson 1982
and Pica 1984).

The third problem concerns acyclic merge. If Bošković and Lasnik’s analysis is on
the right track, it means that WH movement occurs in one step, without movement to
intermediate Spec-CPs. This is problematic, since it has the undesirable consequence of
eliminating the empirically well-motivated successive cyclicity of WH movement.
Consider (30), a French example involving long WH movement. Here, the
complementizer que undergoes agreement in C (cf. Rizzi 1990) indicating that the WH
phrase has passed through its specifier:

(30) [CP1 Qui, Jean a dit [CP2 t, C qui t, était arrivé]]? (French)
    who Jean has said who was arrived

‘Who did Jean say arrived?’

Further evidence for the idea that WH movement is successive cyclic comes from the
fact that in some languages, e.g. Afrikaans, the WH phrase appears in all the cycles:
(31) \[\text{CP}_1 \text{Waarvoor} \text{ dink u } \text{CP}_2 \text{ waarvoor } \text{ werk ons}?\] (Afrikaans)

wherefore think you wherefore work we

‘What do you think we are working for?’

(du Plessis 1977:725)

Even in languages where no morphological change occurs or where no WH doubling takes place, it is wise to assume that WH movement is successive cyclic. Consider the following English example exhibiting reconstruction of the WH phrase *which picture of himself* to the embedded Spec-CP:

(32) Which picture of himself does John think that Mary likes?

a. \[\text{CP}_1 \text{Which picture of himself does [IP John think [CP}_2 \text{ that Mary likes } t_i]]?\]

   \[\uparrow \underline{\text{CP}_1 \text{Which picture of himself does [IP John think [CP}_2 \text{ that Mary likes } t_i]]\downarrow}\]

b. \[\text{CP Which picture of himself does [IP John think [CP t_i, that Mary likes t_i]]?}\]

   \[\uparrow \underline{\text{CP Which picture of himself does [IP John think [CP t_i, that Mary likes t_i]]\downarrow}\uparrow}\]

In summary, Bošković’s (1998, 2000) account has two serious problems. The first is that not only heads block the licensing of WH in situ, but so do XPs. The second is that C does not always block the licensing of French WH in situ. These facts suggest that the restrictions in French WH1 in situ do not stem from a putative restriction on (A’-) head (FF) movement, since the notion of A’-head is neither necessary nor sufficient to explain the blocking effects in French WH1 in situ questions. Finally, it was demonstrated that Bošković and Lasnik’s (1998) proposal involving acyclic merger is problematic, since it rules out successive cyclicity. Note that their effort to bring the French facts in line with the uniform characterisation of Move as Move F
may not be required, since, as was shown, it is very unlikely that the intervention effects noticed in WH1 in situ questions stem from A’-FF/head movement.

2.3.2 Cheng and Rooryck (2000)

As is well known, French has three strategies to ask yes-no questions: the use of *est-ce que* (cf. (33a)), so-called complex inversion (cf. (33b)) or simply rising intonation (cf. (33c)):

\[(33)\]
\[
a. \text{Est-ce que Jean a acheté un livre?} \quad \text{(French)}
\]
\[
\quad \text{that Jean has bought a book}
\]
\[
b. \text{Jean a-t-il acheté un livre?}
\]
\[
\quad \text{Jean has he bought a book}
\]
\[
c. \text{Jean a acheté un livre?}
\]
\[
\quad \text{Jean has bought a book}
\]
\[
\quad \text{‘Did Jean buy a book?’}
\]

Cheng and Rooryck (2000) argue that the intonation in (33c) is comparable to that in (34); both are claimed to have a rising contour:

\[(34)\]
\[
\quad \text{Marie a acheté quoi?}
\]
\[
\quad \text{Marie has bought what}
\]
\[
\quad \text{‘What did Marie buy?’}
\]
According to them, the distinctive intonation shared by these examples is a reflex of the presence of a root intonational Q-morpheme. This morpheme is underspecified as [Q : ], enabling it to license both root yes/no questions and root WH questions. The Q morpheme in French is similar to the Q morpheme in Chinese in that it checks the Q-feature in C, making overt movement of the WH phrase unnecessary. The underspecified [Q : ] morpheme has a ‘default’ [Q : y/n] interpretation. In cases where a WH phrase is in the scope of the Q morpheme, the WH feature that the WH phrase in situ contains raises at LF to set the value of the underspecified [Q : ] morpheme to [Q : wh]. LF movement of the WH feature does not occur for the purpose of checking the Q feature in C, because the Q feature of C is checked by the intonation morpheme itself:

\[(35)\quad Q\quad Marie\ a\ acheté\quad quoi?\]

\[\text{[Q : ]--------------------- wh}\]

The idea that WH phrases in situ are licensed by the yes-no question operator is supposed to explain a significant property of French WH in situ first noticed by Chang (1997).

Chang observes that in-situ WH1 questions in French are associated with a ‘strongly presupposed context (i.e. event)’. The interpretation of French WH-in-situ questions seeks ‘details on an already established (or presupposed) situation’ (Chang 1997:45). (35) is only felicitous if the speaker assumes the event of Marie’s buying something. What the question is asking for is the details of the purchase (i.e. What exactly did Marie buy?). On this view, WH-in-situ questions in French are presuppositional, whereas fronted WH questions are not. This is why, as noted by
Chang, it is odd to answer (36a) by (36b) whereas (37b) is perfectly legitimate as an answer to (37a):\textsuperscript{14}

(36)  
\begin{align*}
\text{a. Question:} & \quad \text{Marie a acheté quoi?} \\
& \quad \text{(French)} \\
\text{b. Answer:} & \quad \# \text{Rien.} \\
& \quad \text{Nothing}
\end{align*}

(37)  
\begin{align*}
\text{a. Question:} & \quad \text{Qu'est-ce que Marie a acheté?} \\
& \quad \text{(French)} \\
\text{b. Answer:} & \quad \text{Rien.} \\
& \quad \text{Nothing}
\end{align*}

Chang argues that the presuppositional constraint on WH in situ in French is not reducible to the more common notion of D-linking in the sense of Pesetsky (1987). In that study, D-linked questions ask for answers in which the individuals that replace the WH phrases are drawn from a set that is presumed to be salient both to speaker and hearer. French WH1 in -situ questions are not associated with a presupposed answer set. For example, the question in (36a) is not asking for the identification of a particular object out of a list.\textsuperscript{15}

As Cheng and Rooryck (2000) put it: ‘rather it appears that the presupposition crucial for wh-in-situ involves the entire VP: [in (38)] the birthday context leads to a presupposition of buying presents’.\textsuperscript{16}
A. C’est l’anniversaire de Pierre la semaine prochaine. (French)

it is the birthday of Pierre the next week.

‘It’s Pierre’s birthday next week.’

B. Et tu vas lui acheter quoi?

and you will for him buy what

‘And what will you buy for him?’

(Cheng & Rooryck 2000:5)

Cheng and Rooryck note that yes-no questions which are marked only by intonation also require a presupposed context:

(39) a. Are you cooking tonight?

(39b) You’re cooking tonight?

(39a) can be uttered as a neutral question. In contrast, (39b) cannot. Cheng and Rooryck argue that in uttering a question like (39b), the speaker presupposes that the hearer is cooking tonight. The speaker thus expects a positive answer to his/her question. They suggest that the property of the intonation can be made explicit to the extent that (39b), but not (39a), can be followed by tags such as I take it, I assume.17

This question can be uttered when the speaker sees that the hearer is in the kitchen, apparently preparing for dinner.
In sum, both French WH1 in-situ questions and yes-no interrogatives involve rising intonation and presupposition of a given situation. Hence, the conclusion reached by Cheng and Rooryck is that French WH1 in situ interrogatives are licensed by the yes-no operator.

A caveat: it has often been said that questions are generally associated with presupposition. According to this account, a raised WH question would also presuppose a situation with its participants. For example, it is sometimes argued in the literature that the answer by B in (40b) to a question like (40a) is anomalous (cf. Erteschik-Shir 1997):

(40)  a. A. What did he give to Mary?
   b. B. # Nothing, she didn’t get a present.

Mittwoch (1979:402) regards an answer such as the one by B as a ‘correction of the speech act in asking it (the question)’, since a question ‘presupposes that the set which the WH-element stands for is not empty or more formally that there is an answer.’ In fronted questions, the VP is part of the presupposition. The idea that WH questions involve presuppositions originates in Hintikka (1976, 1983). I nevertheless believe that Chang’s observations are essentially correct. A more careful discussion about presuppositions and interrogatives is deferred to section 2.6, in particular section 2.6.3.

The main problem with Cheng and Rooryck’s proposal is their basic assumption: the idea that the intonation in (34) is comparable to the yes-no intonation in (33c). According to my informants, there is no rising intonation in French WH in situ
comparable to what is found in a yes-no question. If there were, it would in fact be very difficult to distinguish information-seeking WH-in-situ interrogatives from echo questions, since echo questions typically receive heavy stress of the WH phrase in situ and/or rising intonation. Default sentence stress does fall on the WH phrase in situ in (34) (more on default stress and the like in section 2.6), but there is no rising intonation comparable to that of yes-no questions. On the information-seeking interpretation, it receives an intonation similar to the one received by the stranded indefinite in *combien de* constructions (main stress falls on *livres*):

(41) **Combien as-tu lu de livres?**

how many have you read of books

‘How many books have you read?’

The intonation is similar to that of right dislocation when the intonation falls on the topicalised element (the difference here is that it is *content*, and not *voisin*, that receives main stress (more on the nature of this particular difference in section 2.6):

(42) **Il n’ est pas content, le voisin.**

he Neg is not happy the neighbour

Literally: ‘He is not happy, the neighbour.’

‘Our neighbour is not happy.’
Like Chang, Cheng and Rooryck remain vague as to how the presuppositions associated with French WH1 in situ arise. I consider to the discourse properties of French WH in-situ questions in section 2.6. in much more detail. There, an analysis in terms of focus versus topic is provided. In addition, the discourse properties of French WH1 in situ will follow from the idea that they introduce a Skolem function.

In conclusion, the argument for assuming that it is the yes-no operator which licenses French WH1 phrases in situ does not stand up to scrutiny: the intonation of yes-no questions is fundamentally different from the intonation of French WH1 in situ questions.

2.3.3 Boeckx (1999)

Boeckx (1999) takes Chang’s basic observation about presupposition as his point of departure. He argues that French WH1 phrases in situ are focused and thus involve (covert) cleft structures. According to him, the question in (43a) is similar to the cleft question in (43b):

(43) a. Tu as vu quoi?  
    you have seen what  
    ‘What did you see?’

b. C’est quoi que tu as vu?  
    that is what that you have seen  
    ‘What is it that you have seen?’

Like (43a), (43b) cannot be answered by nothing (compare (44) with (37) above):
(44) A. C'est quoi que tu as vu? (French)
that is what that you have seen
'What is it that you have seen?'

B. # Rien.
'Nothing.'

On this account, French WH1 phrases in situ, like clefts, involve contrastive focus and thus entail uniqueness and exhaustivity. Following Percus (1997), Boeckx argues that exhaustivity and uniqueness come about in clefts as a result of the presence of a covert definite description. One of the major properties of clefts is also to be found in French WH1 phrases in situ, i.e. presupposition. Thus, a cleft, and a French WH1 phrase in situ, have the same presupposition as a sentence containing the definite description the individual that has property P. Boeckx implements this idea by claiming that French WH1 phrases in situ, as opposed to preposed WH phrases, are headed by an empty D. It is the null D head that makes the WH1 phrase in situ presuppositional.

In sum, Boeckx captures the presuppositional effect by appealing to strong contrastive focus. According to this account, fronted French WH questions involve identificational focus (i.e. weak focus), whereas French in-situ single-WH questions involve contrastive focus (i.e. strong focus).

Although Boeckx takes as his point of departure some of the basic observations made by Chang (1997), his proposal is in contradiction with some of the claims made by that author. Recall that the variable contained in WH phrases in situ in single-WH questions does not appear to range over a restricted set. If French WH phrases in situ in single-WH constructions are contrastively focused, then it must be the case that a set of alternatives is considered. This means that a restricted set of some kind is
involved. However, as has been already pointed out, a question like (1a) need not refer to a restricted set.

(1) a. Tu fais quoi ce soir? (French)
    you do what this evening
    ‘What are you doing tonight?’

As for intervention effects, Boeckx does not address them in his 1999 paper, so it is not clear what his views are on the matter. However, I observe that negation does not block anything in a focus cleft, so the intervention effects in French WH1 in-situ questions in French do not appear to have anything to do with strong focus. Thus, in-situ questions involving negation must be ungrammatical for reasons other than strong focus.  

(45) a. Ce n' est PAS le livre que j' ai acheté.
    it Neg is not the book that I have bought
    ‘It is not the book that I bought (it’s the magazine).’

b. *Ce n' est PAS quoi que tu as acheté?
    it Neg is not what that you have bought
    ‘What is it not that you have bought?’

To summarise so far: none of the accounts proposed for French WH in situ in single-WH constructions is satisfactory. An alternative is thus needed.
2.4 An alternative analysis

2.4.1 Single-WH-in-situ questions: a phonologically null WH operator

The data discussed so far suggest that a distinction between WH phrases in Chinese and French in terms of morphological content should be made. WH phrases in Chinese contain a variable, but no operator. They are polarity items that need an antecedent to be licensed. In other words, they are pure variables which acquire different interpretations when bound by different operators (the same goes for Japanese WH phrases, cf. Kuroda 1965, Watanabe 1993).

To illustrate, in (46a), the WH phrase has an existential reading induced by the yes-no question particle. In (46b) the WH phrase has a universal reading induced by the quantificational element *dou* ‘all’. In (46c), the WH phrase has a negative polarity reading induced by the negation marker *bu* ‘not’:

\[(46) \quad \text{a. Ta gen shei shuohua ma?} \quad \text{(Chinese)}\]

he with whom speak Q

‘Did he speak with someone?’

b. *Shenme* ta *dou* yao.

what he all want

‘He wants everything.’

c. *Ta bu* xihuan *shenme*.

he not like what

‘He does not like anything.’

(Ouhalla 1996:690)
In French, WH phrases cannot receive interpretations other than WH, indicating that WH phrases are not pure variables in that language:

(47) a. *Il a parlé avec qui.  
   (French)  
   he has spoken with whom  
   Intended ‘He spoke with someone.’

b. *Il veut tout quoi.  
   he wants all what  
   Intended: ‘He wants everything.’

c. *Il n’aime pas quoi.  
   he Neg likes not what  
   Intended: ‘He does not like anything.’

I conclude that WH phrases in situ in single-WH questions are quantificational. Let us assume, then, that French WH phrases are complex XPs consisting of not only an indefinite expression but a phonologically null operator as well. The WH morphology/phonology that WH phrases show (i.e. the QU morpheme) is a direct phonological reflex of that operator. Chinese WH phrases, on the other hand, consist of an indefinite expression only:

(48) a. Qui [Op_{WH} indefinite]  
b. Quoi [Op_{WH} indefinite]
The hypothesis put forward is that, in French, the null operator is sub-extracted and undergoes WH movement to Spec-CP, so that the sentence can be typed as interrogative (in minimalist terms, it raises to check the strong WH feature of matrix C). This movement creates a split-DP: while the WH operator raises, the indefinite is stranded. The quantification obtained is thus non-canonical in that the semantic restriction is separated from its operator. It will be shown that these assumptions provide a full explanation for the intervention effects in these in-situ questions.

On the other hand, since Chinese WH phrases consist only of an indefinite expression and no operator, no movement is involved. Instead, they are pure variables bound by an empty operator base-generated in Spec-CP (cf. Aoun and Li 1993a). Chinese WH questions therefore do not involve a split-DP.

A central piece of evidence for the claim that French single-WH constructions involve movement of a null WH operator, and that Chinese single-WH questions do not, comes from the fact that French, but not Chinese WH phrases, exhibit strong island effects (I control for finiteness in the case of French, since French WH phrases in single-WH questions cannot remain in situ in a finite embedded clause):

(50) *Il était contrarié [pour avoir dit quoi]? (French)
he was upset in order to have said what

* ‘What was he upset because he said?’ (adjunct island)
The second type of evidence for the claim that WH phrases in situ in French single-WH constructions involve movement comes from subjacency. Whereas Chinese WH in situ is not sensitive to subjacency (cf. example (12), repeated here), French WH1 phrases are. Hence, in French, both fronted and in-situ single-WH questions show subjacency effects (cf. 52):

(12)  
Ta xiang-zhidao SHEI maile shenme?  
he wonder who bought what  
‘What x, x a thing, he wonders who bought x?’

(52) a. ?QuI est-ce qu’ il se demande qui  
what that he himself wonders who  
a achaté ti?  
has bought  
‘What does he wonder who bought?’  
‘What x, x a thing, he wonders who bought x?’

b. ?Il se demande QUI a acheté quoi?  
he himself asks who has bought what  
‘What does he wonder who bought?’  
‘What x, x a thing, he wonders who bought x?’
Suppose, for the sake of the argument, that the null operator I have postulated in French single-WH constructions is an adjunct and thus leaves a non-referential trace behind. Then, on a Relativized Minimality account (cf. Rizzi 1990), it needs a local antecedent. Antecedent government is local; island effects are thus expected. Similarly, on the assumption that focused elements, negation and iterative adverbs all involve A'-specifiers, these elements are also expected to block movement of the phonologically null WH operator. On the other hand, movement of an entire WH argument involves binding, so no intervention effects are expected.

According to Rizzi, the distinction between arguments and adjuncts is not simply a matter of position in a phrase marker, but of variable type. There are two kinds of variables: referential and non-referential. Variables that are referential can be connected to their operators by binding, a relation unaffected by island barriers:

\[(53) \quad \text{Binding}\]

\[X \text{ binds } Y \text{ iff:}\]

(i) \(X\) c-commands \(Y\);

(ii) \(X\) and \(Y\) are coindexed.

(Rizzi 1990:87)

Variables that are non-referential cannot be connected to their operators by binding; instead they are connected to their operators by antecedent-government, a local relation:

\[(54) \quad X \text{ antecedent-governs } Y \text{ iff:}\]

(i) \(X\) and \(Y\) are non-distinct;
(ii) X c-commands Y;
(iii) no barrier intervenes;
(iv) Relativized Minimality is respected.

(Rizzi 1990:92)

With regard to WH movement, what counts as a barrier for antecedent-government is as follows:

(55) A filled A'-position specifier $\alpha$ blocks antecedent-government between an A'-position $\beta$ that c-commands $\alpha$ and an adjunct trace that $\alpha$ c-commands.

All arguments receive a theta-role but they differ as to whether or not the theta-role is referential. *Who* and *what* are operators whose variable is referential. *How* and *why* are operators whose variable is non-referential. *Where* and *when* are like argument WH phrases in being referential; they can, for example, appear in situ. In sum, a distinction is made between arguments and referential adjuncts, on the one hand, and non-referential adjuncts, on the other.

The assumption that the null WH operator leaves behind a non-referential trace explains why (2a) and (23a)-(28a) are ungrammatical. In those examples, the WH phrase *quoi* looks like an argument on the surface, but it nevertheless involves an adjunct-like element, i.e. the null question operator. Therefore, single-WH constructions with argument WH phrases are correctly predicted to be as ungrammatical as single-WH constructions involving adjunct WH phrases:
The distinction between null-operator movement as adjunct movement and full-WH movement as argument movement is not unlike the well-known distinction between movement of *combien* on the one hand and *combien de livres* on the other. Whereas movement of *combien* leads to blocking effects (it is an adjunct), movement of *combien de livres* does not (it is an argument):

(56) *Tu ne pars PAS comment?* (French)

you Neg leave not how

‘How don’t you leave?’

(57) a. *[{CP *Combien; SEULEMENT/MÊME JEAN} a-t-il [VP lu [DP t de livres]]]?* (French)

how many only/even Jean has he read

[of books]

b. [{CP [DP *Combien de livres]*; SEULEMENT/MÊME JEAN} a-t-il

how many of books only/even Jean has he

[VP lus t[.]]? read-AGR

‘How many books has only/even JEAN read?’

a. *[{CP *Combien; (n')} a-t-il PAS [VP lu [DP t de livres]]]?* (French)

how many Neg has he not read of books

b. [{CP [DP *Combien de livres]*; (n')} a-t-il PAS lus t[.]]? read-AGR

‘How many books has he not read?’
Like the null WH operator, the bare operator *combien* raises to Spec-CP so that the sentence is typed as interrogative (it moves to check the strong WH feature of C). But because it is an adjunct, movement of the bare Op will be sensitive to intervening A'-specifiers. The same goes for the null operator I have in mind.

In sum, I have argued that French WH1-in-situ questions are 'covert' variants of split constructions, where typically the semantic restriction is separated from the operator with which it is associated. Another way to put it is to claim that French WH1-in-situ interrogatives involve scope-marking chains (cf. Rizzi 1994), and as such automatically involve non-referentiality.
Our analysis can thus be seen as an extension of Rizzi's theory of scope-marking chains to new data. On Rizzi's account, scope-marking chains are always non-referential, so always show the effects of (overt) adjunct extraction. To show what this means, let us look at the kind of scope-marking chains Rizzi discusses.

In those 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 scope marker, i.e. WH expletive, was ('what', glossed below as WH), appears in matrix Spec-CP.\textsuperscript{21}

\begin{enumerate}
\item \begin{aligned}
\text{a. } & [\text{CP}_1 \text{ Wen}_i \text{ glaubt Uta } [\text{CP}_2 \text{ t}_i \text{ dass Karl t}_i] \text{ (German)} \\
& \text{gesehen hat}]?
\end{aligned}
\begin{aligned}
& \text{whom believes Uta that Karl}
\end{aligned}
\begin{aligned}
& \text{seen has}
\end{aligned}
\begin{aligned}
& \text{b. } [\text{CP}_1 \text{ Was}_i \text{ glaubt Uta } [\text{CP}_2 \text{ wen}_i \text{ Karl t}_i \text{ gesehen hat}]?]
\end{aligned}
\begin{aligned}
& WH \text{ believes Uta whom Karl seen has}
\end{aligned}
\begin{aligned}
& \text{‘Who does Uta believe that Karl saw?’}
\end{aligned}
\end{enumerate}

As noticed by Rizzi, A'-specifiers like negation create intervention effects, as shown in (62). Observe that (62) is as ill formed as (63a and b), which involve adjunct XPs:

\begin{enumerate}
\item \begin{aligned}
\text{(62) } & *[\text{CP}_1 \text{ Was}_i \text{ glaubst du NICHT } [\text{CP}_2 \text{ mit wen}_i \text{ Hans } \text{ (German)}]}
\end{aligned}
\begin{aligned}
& WH \text{ believe you not with whom Hans}
\end{aligned}
\begin{aligned}
& t_i \text{ gesprochen hat}]?
\end{aligned}
\begin{aligned}
& \text{spoken has}
\end{aligned}
\begin{aligned}
& \text{‘Who don’t you believe that Hans has spoken to?’}
\end{aligned}
\end{enumerate}
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. So, the binder, not just the bindee must have a referential index.

Like partial WH constructions, French WH1-in-situ questions and combien interrogatives can be seen as scope-marking chains. From this perspective, the null Op does not involve movement, but is instead base-generated in matrix Spec-CP. From that position it is linked to a functional variable through antecedent-government - see subsequent sections for more details. It will become obvious that whether or not movement of the operator is involved is not crucial for the account, but I shall often simply choose to use the movement metaphor.

Turning back to Chinese, I assume that in that language the WH operator (base-generated in Spec-CP) is a contentive/substantive element. In Rizzi’s terms, it bears a
referential index. It is thus very different from the null operator postulated for French
WH1-in-situ questions, since it does not bear such an index. (4) and (5) are repeated
here for convenience; (64) is a new example:

(4) Yanhan **bu** xihuan **shenme**? (Chinese)
    Yanhan  Neg  like  what
    ‘What doesn’t Yanhan like?’

(5) Ta renwei [CP -ni maile **shenme**]? (Chinese)
    he  think  you  bought  what
    ‘What does he think you bought?’
    (Ouhalla 1996:678)

(64) Ta **ZHI** XIHUAN shei?
    he  only  like  who
    ‘Who does he only like?’
    (Aoun & Li 1993:207)

In Chinese, the overtly realised WH marker *ne* identifies the features of the non-overt
operator in Spec-CP. In French, no WH marker is available, thus it is the WH feature
of the WH phrase in situ which identifies the features of the null operator. In other
words, whereas the licensing of the Chinese operator is done through binding (the null
operator binds the variable in situ), the identification of the French WH operator is
done through chain formation (antecedent-government in Rizzi’s terms).
To sum up the present section so far: I have put forward the hypothesis that French WH\textsubscript{1}-in-situ questions involve sub-extraction of a null WH operator from the WH phrase, leaving behind a non-referential trace, which therefore requires antecedent-government. In other words, I characterise French WH\textsubscript{1}-in-situ questions as split constructions involving sub-extraction of an adjunct. Thus, bare operators (e.g. non-contentive \textit{was}, \textit{combi\text{ê}en}, null \textit{Op\textsubscript{wh}}) extraction behave very much like adjuncts (e.g. \textit{how}) as regards their referential properties:

\begin{enumerate}
\item What\textsubscript{i} \hspace{1cm} \ldots \hspace{1cm} t\textsubscript{i}? \hspace{1cm} +ref
\item How\textsubscript{i} \hspace{1cm} \ldots \hspace{1cm} t\textsubscript{i}? \hspace{1cm} -ref
\item Was\textsubscript{i} \hspace{1cm} \ldots \hspace{1cm} t\textsubscript{i}? \hspace{1cm} -ref
\item Combi\text{ê}en\textsubscript{i} \hspace{1cm} \ldots \hspace{1cm} t\textsubscript{i}? \hspace{1cm} -ref
\item Null Op\textsubscript{wh}\textsubscript{i} \hspace{1cm} \ldots \hspace{1cm} t\textsubscript{i}? \hspace{1cm} -ref
\end{enumerate}

Now that single-WH interrogatives have been dealt with, the next topic is multiple-WH constructions. The next goal is to decide whether or not WH phrases in situ in such environments are quantificational.

\textbf{2.4.2 Multiple WH questions}

There is evidence that no movement occurs in French multiple-WH questions, since the intervention effects discussed earlier do not obtain in these contexts (example (19) repeated here):
(19) a. *Qui n'a pas fait quoi?* (French)

who Neg has not done what

‘Who didn’t do what?’

b. *Qui croit qu'elle a vu quelqu'un?*

who believes that she has seen who

‘Who believes that she saw who?’

(66) a. *[CP1 Qui a dit qu'aucun étudiant avait lu quoi]?* (French)

who has said that no student had read what

‘Who said that no student had read what?’

b. *[CP1 Qui a dit que seulement Jean avait lu quoi]?* (French)

who has said that only Jean had read what

‘Who said that only JEAN had read what?’

c. *[CP1 Qui a dit que même Jean avait lu quoi]?* (French)

who has said that even Jean had read what

‘Who said that even JEAN had read what?’

d. *[CP Qui a beaucoup lu quoi]?* (French)

who has a lot read what

‘Who has often read what?’
e. \([_{CP} \text{Qui} \ a \ _{PEU} \ lu \ quoi]?\)
   who has little read what
   ‘Who has seldom read what?’

f. \([_{CP} \text{Qui} \ a \ _{TROP} \ lu \ quoi]?\)
   who has too much read what
   ‘Who has read what too much?’

Could it be that the whole WH phrase raises to Spec-CP at LF? Further data suggest that the answer is no: whereas a moved WH phrase in single-WH questions is subject to subadjacency, WH in situ in multiple-WH questions is not. Compare (52b) - repeated here for convenience - with (67):

(52) b. ?Il se demande qui a acheté quoi? (French)
   he himself asks who has bought what
   ‘What does he wonder who bought?’ (individual reading intended)

(67) Qui se demande qui a acheté quoi? (French)
   who himself asks who has bought what
   ‘Who wonders who bought what?’ (pair-list reading intended)

The subadjacency effect or lack thereof in the French data is parallel to that of the English data (13) and (14) repeated here:
(13) $\textbf{What}$, does he wonder $\textbf{who}$ bought $t$?

'What $x$, $x$ a thing, he wonders who bought $x$?'

(14) $\textbf{Who}$ wonders $\textbf{who}$ bought $\textbf{what}$?

Since subjacency must be assumed to hold at LF in the MP (pre- and post-Spell-Out operations satisfy uniformity), the fact that WH phrases in situ do not show subjacency effects in multiple-WH questions indicates that those phrases do not move at LF.

However, if WH phrases in situ in multiple-WH environments do not move, the question as to how multiple questions end up asking one question rather than a set of two needs to be answered. In the absence of movement, one cannot assume the standard process of absorption by which a string of unary operators is converted into a single n-ary operator (cf. Higginbotham and May (1981), Cheng (1991)):

(68) $[Qx, Qy, \ldots] \rightarrow [Q <x, y, \ldots>]$. 

This is because this particular rule of absorption requires both WH expressions to be in Spec-CP. Similarly, Chomsky's (1995) version of absorption is not feasible either, since it involves movement of a bare operator.

A natural alternative compatible with the present analysis is that, following Williams (1986, 1994), absorption is achieved by way of scope assignment. Williams’s (1994) theory follows his previous work on scope (Williams 1986) where LF is eliminated or more precisely where LF = S-Structure:
'whether or not one regards it as appropriate to say that LF is eliminated in the reduced model depends on how LF is defined. If LF is defined as the result of applying QR or SA [scope assignment] to S-structure, then LF is certainly eliminated; but if LF is whatever structure it is that determines meaning, then of course LF is not eliminated; it is simply identified with S-structure.' (Williams 1986:267)

S-Structure thus equals LF according to Williams (he assumes an enriched S-structure). Therefore, as in Brody (1995), I shall refer to this level as LF rather than S-Structure. In other words, there is no distinction between an overt and an covert component. Spell-Out applies at LF.

According to Williams, quantifiers are interpreted in situ 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; the restriction is the \(N'\) in the position of the variable; and the scope is the phrase bearing the index \(i\).

Grammatical dependencies normally attributed to covert processes may therefore have three sources: (a) binding (this is the case of Chinese WH in situ bound by a substantive operator in Spec-CP); (b) null-operator movement/base-generation of a non-referential null operator creating a split construction (French WH in situ; in this case one expects to observe intervention effects); (c) absorption as a by-product of scope assignment.

Following Williams's (1986, 1994), I assume that the scope of an argument NP is marked, not via movement rules, but by indexing a phrase containing that NP as the scope of the NP:
In (69), 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.

For WH structures involving arguments, two scope assignment rules are relevant. A moved argument WH is assigned scope in the same way as an adjunct in situ: its scope is its sister (cf. the adjunction schema in (70a)). An in-situ WH argument is assigned an arbitrarily wide scope (cf. the in-situ schema in (70b)):

\[(70)\]
\[a. \ [Q N']_i [\ldots t_i \ldots]_{S_i} \quad \text{(adjunction schema)}\]
\[b. \ [\ldots [Q N']_i \ldots]_{S_i} \quad \text{(in-situ schema)}\]

If a clause contains two WH phrases, they may both be assigned the same scope (cf. Williams 1986:293):

\[(71)\]
\[a. \ \text{Who saw what} \rightarrow \text{Who}_i [t_i \text{saw what}]_{S_{ij}}\]
\[b. \ = [Q N']_i [t_i \ldots [Q N']_i \ldots]_{S_{ij}}\]

To quote Williams (1986:293): *'If a clause contains two wh's, they will both be assigned the scope (possibly the same) [...]. The binder of t and what is the index i,j on the S that is the scope of these two. That is how multiple questions are interpreted.'*

In short, if one adopts a theory of scope assignment along the lines of that proposed by Williams, a WH phrase in situ may receive wide scope without moving. On such an approach, the lack of subjacency and intervention effects receives a
principled explanation. Since WH phrases in situ in multiple WH questions do not undergo movement, subjacency or other island effects are not expected.

Now recall from section 2.2 that theories of WH in situ that assume that WH phrases in situ do not undergo covert movement face the so-called Donald Duck problem: the restriction of the WH in situ may find itself in the scope of negation and other truth conditional operators, yielding an incorrect semantics.

The way Reinhart (1998) solves the Donald Duck problem is to claim that the question-formation operator binds, not an individual, but a plural variable, that is a choice-function. The choice function selects one member from the restricted set and then the choice function is existentially closed off by an operator taking wider scope than any conditional or negation taking scope over the functional variable.

Williams’s absorption mechanism does not face the Donald Duck problem either, since the argument scope rule Williams proposes fixes the scope of both the operator and its semantic restriction. This means that the entire WH expression in situ can achieve wide scope without movement. In other words, Williams’s scope assignment rule achieves exactly what QR (or existential closure over a choice function) would achieve.

Unless nothing else is added, there is a potential problem for Reinhart’s mechanism and Williams’s scope rule. The problem concerns those examples reviewed earlier in which negation, focus and iterative adverbs block the licensing of French WH1 in situ. For example, if one interprets an indefinite by means of a choice-function variable, the relation of existential generalisation, which binds the variable, must be able to cross LF interveners. Crucially, Reinhart’s proposal implies that all nominal expressions should be able to introduce a choice function. Hence, since nothing prevents a WH in WH1 questions from introducing a choice function, it is no longer possible to understand
why such phrases are sensitive to the intervention of scopal elements. Indeed, all the constructions considered in the present thesis are problematic for the idea that indefinites can introduce choice functions that are existentially closed off at the discourse level. Not only does French WH1 in situ show intervention effects, but so do partial-WH-movement constructions, French negative constructions and attributively used focus-particle constructions (more on these constructions in the chapters to come).

In short, Reinhart’s choice-function mechanism and Williams’s scope rule do not suffice for WH1 in situ: neither mechanism checks the [+WH] feature of C. The idea is thus that WH phrases sometimes move (when required by convergence) and sometimes do not (when convergence does not require it). This is line with Bošković (1998, 2000) and Ackema and Neeleman (1998), amongst others.

In the next section, I review some problems faced by the Relativized Minimality account adopted in the previous section.

2.4.3 Problems for the Relativized Minimality account

So far, I have assumed that French WH1-in-situ questions involve movement of a non-referential operator and I have attributed the intervention effects observed with such questions to Relativized Minimality. This account runs into problems if it is assumed that all and only A’-specifiers are responsible for the weak island effects.

The first problem is that not all A’-specifiers are interveners: so-called frequency adverbs like toujours ‘always’ and souvent ‘often’ do not block the licensing of WH phrases in situ in WH1-in-situ constructions.
(72) a. Tu fais **TOUTOURS** quoi les week-ends? 
   you do always what the weekends
b. **Qu'est-ce que tu fais TOUTOURS** ti les week-ends? 
   what that you do always the weekends
   ‘What do you always do at week-ends?’

(73) a. Tu fais **SOUVENT** quoi les week-ends? 
   you do often what the weekends
b. **Qu'est-ce que tu fais SOUVENT** ti les week-ends? 
   what that you do often the weekends
   ‘What do you often do at weekends?’

The same kind of problem arises in the case of **combien** interrogatives (as noticed by de Swart 1992) and partial WH movement:

(74) a. **[cp Combien, ont-ils SOUVENT lu [ ti de livres]]?** 
   how many have they often read of books
b. **[cp Combien de livres], ont-ils SOUVENT [vp lus ti]]?** 
   how many of books have they often read
   ‘How many books have they often read?’

(75) a. **[cp1 Was, sagst du OFT [cp2 wen, Hans ti liebt]]?** 
   WH says you often who Hans loves
   ‘Who do you often say that Hans loves?’
On the reasonable assumption that *souvent* and *toujours* occupy A’-specifier positions, (72a) and (73a) should be ill formed. The same goes for (74a) and (75a). Since (72a) and (73a), as well as (74a) and (75a), are all grammatical, the notion of A’-specifier as being relevant for Relativized Minimality is thus problematic.

The second problem for the Relativized Minimality account is that quantified phrases such as *exactement cinq étudiants* ‘exactly five students’ or *plus de cinq étudiants* ‘more than five students’ create blocking effects for the licensing of French WH phrases in situ in single-WH constructions:

(76) a. *exactement cinq étudiants* ont fait *quoi?* 
    exactly five students have done what

b. *qu’est-ce qu’* exactement cinq étudiants ont fait *ti?*
    what that exactly five students have done
    ‘What have exactly five students done?’

(77) a. *plus de cinq étudiants* ont fait *quoi?* 
    more of five students have done what

b. *qu’est-ce que* plus de cinq étudiants ont fait *ti?*
    what that more of five students have done
    ‘What have more than five students done?’
On Rizzi's (1990) account, quantifiers such as *exactement cinq étudiants* and *plus de cinq étudiants* do not occupy A'-specifiers, but are adjoined to IP instead. So, it is difficult to see why, from his perspective, (76a) and (77a) are ungrammatical.

I further observe that universal quantifiers (UQs, henceforth), whether in subject or object position, block an otherwise available reading when the WH phrase in a single-WH construction remains in situ. Whereas in (78b) and (79b) either the WH phrase or UQ can take wide scope, the WH phrase cannot take scope over the UQ in (78a) and (79a).23 24

(78) a. **TOUS LES ENFANTS** ont fait quoi? (French)
   all the children have done what
   
   (i) * 'Which x, x a thing, every y, y a child, did x.'
   
   (ii) ✓ 'For which pair <x, y>, every x, x a child, did y, y a thing.'

b. **Qui** est-ce que **TOUS LES ENFANTS** ont fait t?
   what that all the children have done
   
   (i) ✓ 'Which x, x a thing, every y, y a child, did x.'
   
   (ii) ✓ 'For which pair <x, y>, every x, x a child, did y, y a thing.'
   
   'What did all the children do?'

(79) a. Tu as donné **TOUS LES VÊTEMENTS** à qui? (French)
   you have given all the clothes to whom
   
   (i) * 'Which x, x a person, you gave every y, y a piece of clothing, to x.'
   
   (ii) ✓ 'For which pair <x, y>, you gave every x, x a piece of clothing, to y.'
b. A qui, tu as donné TOUS LES VÊTEMENTS ?

to whom you have given all the clothes

(i) ✔ ‘Which x, x a person, you gave every y, y a piece of clothing, to x.’

(ii) ✔ ‘For which pair <x, y>, you gave every x, x a piece of clothing, to y.’

‘To whom did you give all the clothes?’

These are cases of scope islands. The prototypical cases of scope islands were originally noticed by de Swart (1992) and involve split-WH constructions of the type discussed by Obenauer (1983, 1984):

(80) a. [Combien de livres], ont-ils TOUS lus t ?

how many of books have they all read

b. Combien, ont-ils TOUS lu [ t ; de livres]?

how many have they all read of books

‘How many books have they all read?’

(80a) is ambiguous whereas (80b) is not. In (80a) 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 single number, i.e. how many books are such that everyone has read them. This is the so-called individual reading. On the other hand, (80b) 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, (80b) cannot be answered by: ‘5’. It can be answered only by: ‘John read 3, Mary read 5, Peter read 7.’

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The same scope-island effects can be found in German partial-WH-movement questions. Recall that in such structures 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 noticed by Beck 1996). (81a) is ambiguous, while (81b) is not.

The individual reading is not available in (81b):

(81) a. [CP Weni glaubt JEDER [CP t; dass Karl t, (German)
   who believes everyone that Karl
   gesehen hat]]?
   seen has

b. [CP Was; glaubt JEDER [CP weni Karl t, gesehen hat]]?
   WH believes everyone whom Karl seen hat

‘Who does everyone believe that Karl saw?’

(Beck 1996:19)

To summarise the present section, it was shown that the notion of A’-specifier as relevant for Relativized Minimality is problematic. A’-specifiers are neither necessary nor sufficient to block the licensing of French WH1-in-situ questions. In the next section, the antecedent-government condition is reduced to a set of independently motivated conditions on scope.
2.5 A solution in terms of scope

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. Informally, the Scopal ECP says that a dependent element cannot move to a position preceding an item on which it cannot depend.

Note that, on this view, the ECP no longer has anything to say about Superiority effects or why adjunct WH phrases cannot remain in situ. It turns out that the Superiority Condition can be derived from the Weak Cross Over Principle (cf. Williams 1994, Hornstein 1995). As for adjunct WH phrases, it in fact appears that only why cannot remain in situ:

(82) a. *Tu es parti pourquoi? (French)

- you is left why

‘Why did you leave?’

b. *Who left why? (English)

‘Which \(<x, y>\), x a person, y a reason, x left for y.’

In French, (83a) is perfectly grammatical (see Rizzi 1990, Cinque 1991). English (83b) successfully asks for a pair from people to methods of arrival:
The reason why/pourquoi cannot remain in situ may be that it is always base-generated in Spec-CP, so that it never moves from an underlying position (cf. Rizzi 1990).

On a minimalist view, the Scopal ECP is attractive, because it does not rely on the notion of government, which has been abandoned since Chomsky (1995). However, note that government might still be needed in our theory, since French WH1 phrases in situ manifest Condition on Extraction Domains (CED) effects. The Scopal ECP does not account for strong islands. But suppose the CED can be interpreted in terms of scope. Then it can be said that movement out of an XP which has no scope other than the YP it modifies is prohibited (this may in fact not help with subject islands). This, of course, does not follow from anything, so it may have to be postulated as an independent principle.

2.5.1 The Scopal ECP

Williams (1994) makes two proposals about linguistic scope. The first proposal was already introduced in section 2.4.2 when multiple-WH questions were discussed. It was shown in that section that Williams 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.
Thus in (69), S is marked as the scope of *everyone*. The \( \iota \) index on the dominating S serves as a lambda abstractor, and, as such, marks a scope.

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 (the 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:

\[
(84) \quad [ \ldots X \ldots ]_{XP} \\
The scope of X is XP.
\]

In (85), *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 beyond the range of its projection. For example, it does not have scope over its subject:

\[
(85) \quad \text{John believes that everyone left.}
\]

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

\[
(86) \quad [XP YP]_{YP} \\
The scope of XP is YP.
\]

To illustrate, in (87) *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’:

(87) John thinks that Mary \([v_p \text{ always } v_p \text{ tells funny jokes}]\).

The scope of an argument is not limited in this way. In (88) someone can be interpreted in
its ‘surface’ position, but also higher up in the tree, taking scope over everyone:

(88) Everyone loves someone.

In sum, the Head Scope Rule assigns the projection of the head as scope of the head,
the Adjunct Scope Rule assigns the ‘phrase-joined-to’ as the scope, and the
Quantified Argument Scope Rule (QASR, henceforth) assigns as the scope some
containing phrase.

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. (95) below), according to which movement of
the phrase and the scope assigned to it coincide.
In contrast, an adjunct 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\textsuperscript{28}), and the adjunct would not be perceived as having 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 antecedent-government:

\begin{align*}
\text{(89) } \quad \text{Scopal ECP} \\
\text{a. If the movement of a phrase and the scope assigned to it do not coincide, then the phrase must be connected to its trace via (the equivalent of) antecedent-government.} \\
\text{b. If the movement of a phrase and its scope coincide, then its trace can be licensed by (the analogue of) lexical government.}
\end{align*}

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 (89b). However, an adjunct, which is not assigned long scope, can only be sanctioned by (89a) and so cannot escape weak islands:

\begin{equation}
\downarrow \text{scope of argument}
\end{equation}

\begin{align*}
\text{(90) } [\text{cp What:i do you wonder [cp how C [vp to fix t:i]]]?}
\end{align*}
To paraphrase Williams: in (90) the argument is assigned the matrix C as its scope. This scope coincides with the movement of the WH phrase, and so (90) is grammatical despite the fact that the movement is not subjacent. But, in (91) 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, (91) cannot be sanctioned by (89b), and so is ungrammatical.

One crucial assumption which needs to be introduced at this point concerns the scope of WH. Following Williams I make a distinction between the scope of WH and the 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. (92) shows the difference between the scope of WH and the scope of the phrase that bears it:

(92) How did John leave?

* [* [CP How, C: i do you wonder [CP what C [vp, to fix t,]]]]?

How can have only adjunct scope: it modifies leave, so leave is its scope. But WH has scope over the whole sentence.
Following Williams the antecedent-government condition is reduced to a set of independently motivated constraints on scope: the Nested Scope Constraint and the Constraint on Skolem Dependence.

(93) a. *Nested Scope Constraint (NSC)*

\[ \text{XP}_1, \ldots [ \ldots \text{YP} : \text{i} \ldots ] : k \text{ XP depends on } k \] (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.

I deal with the NSC first and then turn to the CSD.

2.5.2 The Nested Scope Constraint (NSC)

Suppose that indefinites are ambiguous: they can be interpreted optionally as either quantificational (in which case an existential quantifier is introduced by the indefinite) or non-quantificational.

Following Williams, I assume that when indefinites introduce an existential quantifier, the quantifier binds a variable ranging over individuals. When indefinites are interpreted as non-quantificational, they introduce a Skolem function: they are scopeless elements.\(^9\)

A Skolem function \( f \) is a function from individuals to individuals, i.e. of type \(<e, e>\). The function is associated with an argument represented by \( x \), giving us \( f(x) \). There may in fact be more than one argument in which case something along those lines is obtained: \( f(x_1, x_2, x_3, \ldots) \). I will call \( f \) the *functional* variable, and \( x \) the *argumental*
variable. The functional variable is bound by a relevant operator (in our case the null operator). As for the argumental variable, the idea is that it can be bound by certain scopal elements or remain free if no such scopal element is available. Whereas $f$ is basically a predicate, the argument is a referential expression, i.e. a term. When a quantifier is present, the argumental variable is dependent on that quantifier. When no quantifier is present, the value for the variable is provided by the context or via inference. The idea is that the argumental variable is akin to a pronoun and therefore it must refer to something already introduced in the discourse. Like a pronoun, a WH phrase in situ does not introduce a new element, but an old one (see section 2.6 for further details about the discourse properties of French WH in situ). The ideas presented here are reminiscent of Chierchia’s (1995) theory of WH questions. I offer a blend of his ideas and Williams’s.

When the indefinite takes wide scope, an existential quantifier is introduced; the quantifier ranges over individuals (cf. (94i)). Where 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 (cf. (94ii)).

(94) Every student read a book.

(i) $\forall x, x \text{ a student}, \exists y, y \text{ a book } [x \text{ read } y]$.

(ii) $\forall x, x \text{ a student}, [x \text{ read } [f(x, \text{ book})]]$.

$f$: a Skolem function from students into the book they read.

Since, in this chapter, I am interested in questions, let me consider the case where a question involves both an argument WH phrase and a universal quantifier.
Quel livre est-ce que chaque étudiant a lu ?

Which book did each student read?

(i) $\forall x, \text{student}(x), \{x \text{ read } f(x, \text{ books})]\}$

$f$: a Skolem function from students into the book they read.

(ii) $\forall x, \text{ student}(x), y \text{ a book, } x \text{ read } y$.

(iii) Taking for granted that each student read one and the same book, what was that book?

(95) 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’. In this case, the indefinite introduces a Skolem function from students into the book they read. The indefinite is not a quantificational element, but a referential expression that is dependent on the preceding c-commanding quantifier. In other words, the questioner is asking the hearer to supply a function with the property that for a student as input, the function will return what the student has read.

Readings (ii) and (iii) both ask for a single book that was read by each student, 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. In the case of (ii), the
indefinite introduces an existential quantifier that takes scope over the universal quantifier. In the case of (iii), there is no scope interaction.

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 1991):

(96) a. *Qui* est-ce que chaque étudiant a lu t? (French)

>What did each student read?

(i)  \( WH f SK(f), [\forall x, \text{student}(x), [x \text{ read } f(x, \text{things})]]. \) \( \rightarrow \forall > \! WH \)

\( f: \) a Skolem function from students into the things they read.

\( = \)  \( For \text{ which pair} <x, y>, x \text{ a student, } y \text{ a book, } x \text{ read } y. \)

(ii)  \( \forall ' \text{Which } x, x \text{ a book, is such that each student read } \rightarrow \! WH > \forall \)

b. *Qui* est-ce que tu te demandes si

>What do you wonder whether each student read?

(i)  \( *WH f SK(f), [\forall x, \text{student}(x), \text{you wonder whether } [x \rightarrow \! \forall > \! WH \text{ read } f(x, \text{things})]]. \) \( \rightarrow \! WH > \forall \)

\( f: \) a Skolem function from students into the things they read.

\( = \)  \( * ' \text{For which pair} <x, y>, x \text{ a student, } y \text{ a thing, do you wonder whether } x \text{ read } y. \)
(ii) ✓ 'Which $x$, a $x$-thing, is such that you wonder whether each student read $x$.'

With *quel livre* instead of *que*, it is somehow easier to obtain the pair-list reading, presumably because *quel livre* is D-linked in the sense of Pesetsky (1987):

(97) **Quel livre** est-ce que tu te demandes si
which book that you yourself ask whether
chaque étudiant a lu ti?
each student has read

'Which book do you wonder whether each student read?'

(i) ✓ 'WH $f$ Skolem$ f$, [ $\forall x$, student$ (x)$, you wonder whether $[x$ read$ f(x, \text{books})]$].'

$f$: a Skolem function from students into the book they read.

= ✓ 'For which pair $<x, y>$, $x$ a student, $y$ a book, do you wonder whether $x$ read $y$.'

(ii) ✓ 'Which $x$, a book, is such that you wonder whether each student read $x$.'

The basic observation is that whereas both the wide and narrow scope for WH are available in (97a), only the wide scope for WH is possible in (97b). This is because on the narrow scope for WH, the variable does not come with a referential $\theta$-role, so it cannot penetrate weak islands.
Further evidence for such a claim comes from parasitic gaps. The pair-list reading disappears not only if the gap is in a weak island (as above), but also when the gap is in a strong island (cf. Hornstein 1995, 2001).^{32}

(98) a. Qu'est-ce que chaque étudiant a classé ti? (French)
what that each student has filed
'What did each student file?'

b. Qu'est-ce que chaque étudiant a classé ti avant que je lise ti?
what that each student has filed before that I read
'What did each student file before I read?'

Suppose now that adjuncts can only introduce Skolem functions, and not existential quantifiers. The hypothesis that adjuncts introduce Skolem functions explains why a question like (99) 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 student shows a common behaviour from a set of behaviours) is not available.^{33}

(99) Comment chaque étudiant s'est comporté ti? (French)
how each student him is behaved
'How did each student behave?'

(i) 'WH f SK(f), f∀x, student (x), f(x behaved f (x), \rightarrow \forall’WH
behaviours)])'.

\( f: \) a Skolem function from students into the behaviour they exhibited.

\( = \) 'For which pair \( \langle x, y \rangle \), \( x \) a student, \( y \) a behaviour, \( x \) behaved \( y \).'

(ii) * 'What was the common element in the students' non-uniform behaviour?'

(iii) 'Taking for granted that each student behaved the same way, what was it like?'

In (99) the adjunct is dependent on the UQ. Reading (99i) asks for a set of pairs: 'John behaved wickedly; Mary behaved badly; Peter behaved well'. In this case, the indefinite introduces a Skolem function. As in (95), (96a) and (97), the questioner is asking the hearer to supply a function from students into the behaviour they exhibited. (99ii) and (99iii) 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 (99iii) 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 interpretation 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 (99ii) would be felicitous if the answer was: 'strangely'.

As in the case of arguments, the pair-list reading will be lost if the gap is in a weak island. This means that, in this case, the sentences are ungrammatical:
(100) a. **Comment**, chaque étudiant s’est comporté t,? (French)

how each student him is behaved

‘How did each student behave?’

‘WH f SK(f), [∀x, student (x), x behaved f (x, →∀>WH
behaviours)]’. 

*f: a Skolem function from students into the behaviour they exhibited.

= ‘For which pair <x, y>, x a student, y a behaviour, x behaved y.’

b. *Comment, Jean se demande SI chaque

how Jean himself asks whether each

étudiant s’ est comporté t,?

student himself is behaved

‘How does Jean wonder whether each student behaved?’

*‘WH f SK(f), [∀x, student (x), Jean wondered whether →*∀>WH
[x behaved f (x, behaviours)]’. 

*f: a Skolem function from students into the behaviour they exhibited.

= * ‘For which pair <x, y>, x a student, y a behaviour, Jean
wondered whether x behaved y.’

In sum, given the NSC, an adjunct cannot cross a scopal element without depending on it. It follows that in those circumstances it must bind a Skolem function and that it can only cross those scopal elements on which that function can depend. The main idea is that the scope of adjuncts is fixed locally, i.e. to where they are merged. Standard weak island effects can be derived from this fact. The NSC takes care of traditional weak islands as follows:
(101)  a. *How, do you wonder WHAT John repaired t_i?

   b. *How, did NO ONE behave t_i?

   c. *How, didn'T you behave t_i?

   d. *How, did ONLY JOHN behave t_i?

Because the scope of the adjunct WH phrase is fixed locally, it is contained in the scope of what (101a), no one (101b), n't (101c) and only JOHN (101d). Here how is understood to modify repaired; repaired is therefore its scope. Since the scope of what, no one, n't and only JOHN contains this scope in the respective examples, the NSC requires that how be dependent on what, no one, n't and only JOHN respectively.

But how cannot depend on what, no one, n't and only JOHN. This follows from the CSD (see next section). In other words, the argumental variable x in SK f(x) cannot be bound by these elements.

On the other hand, the examples in (102) are well formed, because UQs and frequency adverbs are suitable scopal antecedents onto which the adjunct can depend.

This, again, follows from the CSD as will become clear later (the argumental variable can be bound by these elements):

(102)  a. How, did EACH STUDENT behave t_i?

   b. How, did he OFTEN react t_i?

   c. How, 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).
In the case of *combien de* questions, *combien* also moves to Spec-CP so that the sentence is interpreted as interrogative:

(80) a. \[\text{[Combien de livres], ont-ils TOUS lus ti}?, \] (French)
   how many of books have they all read

b. \[\text{Combien, ont-ils TOUS lu [ti de livres]?} \]
   how many have they all read of books
   ‘How many books have they all read?’

Whereas *combien* is an adjunct, *combien de livres* is an argument. (80b) is not ungrammatical, because the stranded indefinite can depend on the intervening universal quantifier.

As for single-WH questions in situ in French, Op moves to Spec-CP so that the sentence is interpreted as interrogative:

(84) a. \[\text{[CP Op C TOUS LES ENFANTS ont fait [ti quoi]?} \] (French)
   all the children have done what
   
   (i) * ‘Which x, x a thing, every y, y a child, did x.’
   
   (ii) ✓ ‘For which pair <x, y>, every x, x a child did y, a thing.’

b. \[\text{Quoi, est-ce que TOUS LES ENFANTS ont fait ti?} \]
   what that all the children have done
   
   (i) ✓ ‘Which x, x a thing, every y, y a child, did x.’
   
   (ii) ✓ ‘For which pair <x, y>, every x, x a child did y, a thing.’
   ‘What did all the children do?’
(85) a. [cp Op; C Tu as donné TOUS LES (French)]
    you have given all the

    VÊTEMENTS [à qui]?

    clothes to whom

    (i) * 'Which x, x a person, you gave every y, y a piece of clothing, to x.'

    (ii) ✓ 'For which pair <x, y>, you gave every x, x a piece of clothing, to y.'

b. A qui tu as donné TOUS LES VÊTEMENTS t?

to whom you have given all the clothes

    (i) ✓ 'Which x, x a person, you gave every y, y a piece of clothing, to x.'

    (ii) ✓ 'For which pair <x, y>, you gave every x, x a piece of clothing, to y.'

    'To whom did you give all the clothes?'

Op is an adjunct. The stranded indefinite is a scopeless element, therefore (84a) and (85a) can receive only an interpretation according to which the stranded indefinite is subordinated to the universal quantifier.

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.

2.5.3 The Constraint on Skolem Dependence (CSD)

In natural languages the following elements may be identified: first-order terms, second-order terms, third-order terms (adjuncts), and, of a higher order still, operators
(such as WH, Neg or focus). First-order terms correspond to first-order entities like discrete objects and individuals. Second-order terms correspond to second-order entities (states of affairs, events, processes, activities, relations, universal quantifiers and some adjuncts; in other words, predicates). 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 or of a lower order (a UQ over a lexical predicate). Some examples are given in table 2.1.34, 35

<table>
<thead>
<tr>
<th>1</th>
<th>Type of term</th>
<th>2</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>↑</td>
<td>Operators</td>
<td>↓</td>
<td>WH, focus, Neg</td>
</tr>
<tr>
<td>↑</td>
<td>Third-order term</td>
<td>Predicates over sets of sets of individuals</td>
<td>↓</td>
</tr>
<tr>
<td>↑</td>
<td>Second-order term</td>
<td>Predicates over a set of individuals</td>
<td>↓</td>
</tr>
<tr>
<td>↑</td>
<td>First-order term</td>
<td>Lexical predicates</td>
<td>↓</td>
</tr>
</tbody>
</table>

*Table 2.1*

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, let us come back to those structures which exhibited weak-island effects. I argue that the stranded indefinite in French WH1-in-situ questions introduces only a Skolem function, and does not introduce an existential quantifier (otherwise the island effects cannot be explained). WH phrases in situ denote functions with contextually supplied domains and ranges. When a questioner is using a French WH1-in-situ question like (1a), she asks the hearer to identify and then supply a function with the property that for a person as input, the function will return what that person is doing. The hearer has to supply the necessary information: not only an appropriate domain, but also linking the intended object to something that is already given. The domain may be provided by a suitable quantifier. If there is no quantifier present in the question, then the domain is provided by the context or alternatively via inferences.

The Skolem function introduced by the stranded indefinite is bound by the null WH operator while the argument of the Skolem function can be unselectively bound by an intervening quantifier provided that the quantifier element is of a lower or of the same order as the stranded indefinite. The stranded indefinite is a scopeless element, and thus behaves very much like an adjunct in that its scope is fixed locally.

The WH phrase, or, more precisely, the remnant, can depend on an intervening frequency adverb because scopeless indefinites and frequency adverbs are of the same order. In the following examples I use $\downarrow$ for ‘depends on’ and $\downarrow$ for the element on which the stranded indefinite depends. $i$ is the functional index showing that the functional variable is bound by the question operator, while $j$ is the argumental index showing that the argument variable is bound by the intervening scopal element. It may be assumed that movement of the operator leaves a complex trace behind or alternatively that Op simply binds the functional variable $f$. 
(72a) \[ \text{CP Op} \quad [\text{IP} \quad \text{Tou} \quad \text{fais} \quad [\text{VP} \quad \text{Toujours} \quad [\text{VP} \quad [\text{SK} \quad f_i (x_j) \quad \text{quoi}] \quad \ldots]]]] \]

‘What do you always do (at weekends)?’

✓ ‘Which is the Skolem function \( f \) such that you do \( f(x, \text{things}) \) always at weekends?’

\( f: \) a Skolem function from people into the things they do.

(73a) \[ \text{CP Op} \quad [\text{IP} \quad \text{Tou} \quad \text{fais} \quad [\text{VP} \quad \text{Souvent} \quad [\text{VP} \quad [\text{SK} \quad f_i (x_j) \quad \text{quoi}] \quad \ldots]]]] \]

‘What do you often do (at weekends)?’

✓ ‘Which is the Skolem function \( f \) such that you do \( f(x, \text{things}) \) often at weekends?’

\( f: \) a Skolem function from people into the things they do.

In (78a) and (79a), the stranded indefinite can depend on the UQ. This is because the stranded indefinite is of the same order as the UQ:

(78a) \[ \text{CP Op} \quad [\text{IP} \quad \text{Tous les enfants} \quad ont \quad \text{fait} \quad [\text{SK} \quad f_i (x_j) \quad \text{quoi}]]] \]

‘What did all the children do?’

(i) * ‘Which \( x, x \) a thing, every \( y, y \) a child, did \( x \).’

(ii) ✓ ‘Which is the Skolem function \( f \), such that every \( y, y \) a child, did \( f(x, \text{things}) \)?’

\( f: \) a Skolem function from children into the things they did.
(79a) \[\text{[CP Op;} \begin{array}{l} \text{Tu as donné} \text{ TOUS LES VÊTEMENTS} \end{array} \text{à [SK } f_i (x_i) \text{ qui}]SAFE]\]

'To whom did you give all the clothes?'

(i) * 'Which \(x\), \(x\) a person, you gave every \(y\), \(y\) a piece of clothing, to \(x\).'

(ii) \(\checkmark\) 'Which is the Skolem function \(f\), such that you gave every \(y\), \(y\) a piece of clothing, to \(f(x, \text{persons})\)?'

\(f\): a Skolem function from pieces of clothing into the people they were given to.

On the other hand, the stranded indefinite cannot depend on negation, focus, iterative adverbs or quantifiers such as \(\text{exactement cinq étudiants}\) ('exactly five students') or \(\text{plus de cinq étudiants}\) ('more than five students'). This is because, in those cases, the intervening element is of a higher order than the stranded indefinite. (2a), (23a) to (23), (24), (76) and (77) are repeated here with relevant (partial) derivations:

(2a) *\[\text{[CP Op;} \begin{array}{l} \text{Tu ne fais} \text{ PAS}\text{ [SK } f_i (x_i) \text{ quoi] ce soir]}SAFE\end{array}\]

'What are you not doing tonight?'

* 'Which is the Skolem function \(f\), such that you don’t do \(f(x, \text{things})\) tonight?'

\(f\): a Skolem function from people into the things they do.

To spell out the oddness of (2a): the WH phrase in situ introduces a Skolem function. This means that there is a presupposed domain and range. To negate that is a contradiction: it is like saying that there is an \(x\), but also that there isn’t an \(x\).
Again the question in (23a) leads to a contradiction. A domain and a range are presupposed, and the questioner is negating the domain and the range, so the question does not make any sense.

\[
(23a) \quad *[\text{Op}_1 \ \text{AUCUN ÉTUDIANT} \ a \ \text{lu} \ [\text{SK} \ f_i(x_3) \ \text{quoi}] ]?
\]

‘What did no student read?’

* ‘Which is the Skolem function \( f \) such that no student has read \( f(x, \text{things}) \)?’

\( f: \) a Skolem function from students to the things they have read.

Again the question in (23a) leads to a contradiction. A domain and a range are presupposed, and the questioner is negating the domain and the range, so the question does not make any sense.

\[
(24a) \quad *[\text{Op}_1 \ \text{SEULEMENT JEAN} \ \text{fait} \ [\text{SK} \ f_i(x_3) \ \text{quoi}] ]?
\]

‘What does only JEAN do?’

* ‘Which is the Skolem function \( f \) such that only JEAN does \( f(x, \text{things}) \)?’

\( f: \) a Skolem function from people into the things they do.

Again the question in (23a) leads to a contradiction. A domain and a range are presupposed, and the questioner is negating the domain and the range, so the question does not make any sense.

\[
(25a) \quad *[\text{Op}_1 \ \text{MÊME JEAN} \ \text{fait} \ [\text{SK} \ f_i(x_3) \ \text{quoi}] ]?
\]

‘What does even JEAN do?’

* ‘Which is the Skolem function \( f \) such that even JEAN does \( f(x, \text{things}) \)?’

\( f: \) a Skolem function from people into the things they do.
(26a) *[cp Opi [IP Il a BEAUCOUPL lu [SK fi (xj) quoi]]]

'What has he often read?'

* 'Which is the Skolem function f, such that he often read f (x, things)?'

f: a Skolem function from people into the things they read.

(27a) *[cp Opi [IP Il a PEUL lu [SK fi (xj) quoi]]]

'What has he seldom read?'

* 'Which is the Skolem function f, such that he seldom read f (x, things)?'

f: a Skolem function from people into the things they read.

(28a) *[cp Opi [IP Il a TROP lu [SK fi (xj) quoi]]]

'What has he read too much?'

* 'Which is the Skolem function f, such that he read f (x, things) too much?'

f: a Skolem function from people into the things they read.

(76a) *[cp Opi [IP EXACTEMENT CINQ ÉTUDIANTS; ont fait [SK fi (xj) quoi]]]

'What did exactly five students do?'

* 'Which is the Skolem function f, such that exactly five students did f (x, things)?'

f: a Skolem function from students into the things they did.
In summary, I have shown that the stranded indefinite in a French single-WH-in-situ construction can depend on some intervening scopal elements, but not on others. This follows from the NSC and the CSD, the set of conditions on scope to which the antecedent-government condition can be reduced. The present analysis is therefore an attempt to reduce weak-island and intervention effects to scope.


2.5.4 Szabolcsi and Zwarts (1992-1993), Honcoop (1998)

French WH in situ is not discussed by either Szabolcsi and Zwarts (1992-1993) or Honcoop (1998), so only receives a principled account in terms of scope in the present study. Their respective accounts do, nonetheless, account well for the freezing property of adjuncts (Szabolcsi and Zwarts) and for the locality effects produced by the movement of bare operators (Honcoop). In the present section, I discuss why my analysis in terms of scope is superior to these alternatives.

Szabolcsi and Zwarts (1992-1993) argue that weak-island effects arise because, in contrast to the trace left by arguments, the trace left by adjuncts does not range over discrete individuals. Rather, the trace left by an adjunct ranges over a partially ordered
domain. Certain Boolean operations, such as complement and meet (negation corresponds to taking Boolean complement; universal quantification corresponds to taking Boolean meet), cannot be performed on impoverished domains such as the ones corresponding to adjuncts. When an expression E scopes over some operator O, the operations that define O need to be performed in E’s denotation domain. For instance, in calculating the denotation of (103), I take the complement of the set of those whom you saw:

(103) Who didn’t you see?

This is possible because who ranges over individuals, and individuals form sets, on which complementation can be performed.

Szabolcsi and Zwarts argue that, by contrast, the denotation domains of weak-island-sensitive items (manners, methods, etc.) do not lend themselves to complementation and/or intersection. Thus, they cannot scope over negation or universal quantifiers, for example:

(104) a. *How didn’t you see the car?
   b. How did everyone arrive? *WH>∀

According to Szabolcsi and Zwarts, they can, however, scope over existentials (whose definition is in terms of union) or intensional verbs (whose semantic contribution is not Boolean in nature):
a. How did a boy behave?
b. How did you want me to behave?

In sum, they propose that weak-island violations are semantically incoherent, in much the same way as *six airs is, where a numeral is applied to a mass term.

One problem for Szabolcsi and Zwarts's analysis is that in-situ questions with existentials or intensional verbs are not very good. The existential un enfant and the verb chercher 'seek/to look for' blocks the licensing of French WH1 in situ:

(106) ?* Un enfant a fait quoi? (French)

a child has done what

'What did a child do?'

(107) ?* Tu cherches quoi? (French)

you seek what

'What are you looking for?'

On their account, existential and modals are not expected to block the licensing of French WH1 in situ, the reason being that the definition of existential is in terms of union and the semantic contribution of intensional verbs is not Boolean in nature. On my analysis, the near-ungrammaticality of (106) and (107) is accounted for as follows: the existential and the modal are of a higher order than the stranded indefinite, so the stranded indefinite cannot depend on them.

I now turn to Honcoop (1998). Honcoop reduces the explanation of weak-island effects to that of cross-sentential anaphora. He notes that the expressions that create
weak-island effects and those that block cross-sentential anaphora are the same. In the examples in (108), the intervener ‘freezes’ the dynamic potential of the indefinite:

(108)  \textit{Inaccessibility}

a. John has a car. It is too expensive.

b. *John doesn’t have a car. It is too expensive.

c. *No student has a car. It is too expensive.

d. *Exactly five students have a car. It is quite expensive.

e. *Most students have a car. It is quite expensive.

f. *Every student has a car. It is quite expensive.

(Honcoop 1998:17)

An indefinite contained inside the scope of any of the operators (negation, quantifiers, etc.) can no longer introduce a ‘discourse’ referent that can be picked up by a pronoun in subsequent sentences. Following standard terminology, Honcoop refers to this phenomenon as \textit{inaccessibility}. His claim is summarised in (109):

(109)  \textit{Claim: Weak-island Inducers are Inaccessibility Inducers}

The class of expressions that induce WIs [i.e. weak islands] coincides with the class of expressions that create inaccessible domains for dynamic anaphora.

Honcoop then proposes the following generalisation:
Honcoop (1998) follows the framework of Dynamic Semantics (cf. Groenendijk and Stokhof 1991, Chierchia 1992, 1995, Dekker 1993) according to which indefinites introduce an existential quantifier. This differs from Discourse Representation Theory (cf. Kamp 1981) according to which indefinites never introduce an existential quantifier. Dynamic Semantics accounts for the well-known quantificational variability of indefinites as follows: when an indefinite behaves like a (restricted) bound variable rather than a (restricted) existential quantifier, the operation that applies is Existential Disclosure. So, for example, whereas the indefinite introduces an existential quantifier in (111a), ED applies to the indefinite in (111b). In the latter case, usually binds the variable introduced by the indefinite expression:

\[(111)\]

a. *A man* came in.

b. Usually, *a new car* is expensive.

In the case of cross-sentential anaphora, the indefinite introduces an existential quantifier. The quantifier can thus bind discourse markers in subsequent discourse:

\[(112)\]  

\(\downarrow \exists \)
If the indefinite is inside an inaccessible domain created by some operator, the indefinite is 'closed off' or 'deactivated', i.e. it undergoes Existential Disclosure (ED). The indefinite is therefore unable to bind discourse markers in subsequent discourse.

Honcoop argues that in a split construction the stranded indefinite is related to the bare operator dynamically. It is thus associated in the same way as the adverb of quantification *usually* in (111b) above is related to the indefinite it binds. In both cases, ED is required. If a quantifier intervenes between the bare operator and the indefinite, then the indefinite is deactivated. Therefore, it can longer be dynamically bound by the bare operator.

Honcoop's analysis is very appealing. However, there are a few problems with his account. First of all, it is not clear how his analysis can account for the weak-island sensitivity of *how*. This is because there seems to be no reason to assimilate it to split constructions under the ED approach (this argument is made by Szabolsci and Zwarts). In order for Honcoop's analysis to work for *how*, one would need to postulate a split structure for derivations involving *how*. However, presumably an adjunct like *how* does not contain an indefinite expression which could undergo ED. So, it is difficult to imagine how adjuncts involve splitting.

Another problem for Honcoop's approach is that, whereas focus is typically a weak-island inducer, it does not seem to block cross-sentential anaphora:

(113) Only JOHN received a letter. It was from his mum.

Similarly, iterative adverbs do not appear to create inaccessible domains:
(114) \( \exists x \) John twice saw a film\(_i\). \( \exists x \) was the best film he'd ever seen.

Finally, as shown by Honcoop, adverbs of quantification create inaccessibility domains (the judgment concerns the possibility of a token-interpretation of the indefinite antecedent):

(115) *Last year, when it rained, John often bought an Italian newspaper\(_i\). \( \exists x \) reminded him of his summer love.

(Honcoop 1998:17)

However, it was shown that adverbs of quantification do not create opaque domains in the case of French single-WH questions in situ or split *combien-de* constructions.

In sum, although there are overlaps between inaccessibility in cross-sentential anaphora and blocking in split constructions, the interveners in split constructions and the interveners in cross-sentential anaphora are not totally equivalent.

In the next section, I capitalise on the Skolem function analysis presented in the previous section and generalize the present theory to other constructions.

2.5.5 Stranded nominals as predicative indefinites (Generalized Semantic Incorporation)

In this section, my goal is to further define what it means for an indefinite to be scopeless. First, I make the following generalisation: the split constructions with which I deal in the present thesis can be assimilated to those introduced by van Geenhoven

In split-topic constructions, the indefinite raises to a topic position, while the quantifier with which it is associated remains in situ. If a UQ intervenes between the raised nominal and the adjectival numeral, the indefinite must depend on the UQ; it cannot achieve scope over that scopal element:

(116) a. Jedes Kind hat fünf Katzen gesehen. (German)
    every child has five cats seen
    ‘As for cats, every child saw five such animals.’
    ‘There are five cats such that every child saw them.’

b. Katzen; hat jedes Kind fünf t, gesehen.
    cats has every child five seen
    ‘As for cats, every child saw five such animals.’
    * ‘There are five cats such that every child saw them.’

(van Geenhoven 1998:125)

In West Greenlandic (WG), when the noun is incorporated into the verb, the scope of the noun is also fixed:36

(117) Juuna Kaali-mit atatsi allagart-si-nngi-l-a-q (WG)
    Juuna-ABS Kaali-ABL one-INST.SG letter-get-NEG-IND-[TR]-3SG
'It is not the case that Juuna got one letter from Kaali.'

* 'There is one letter from Kaali that Juuna did not get.'

Finally, bare plurals cannot receive wide scope (this was first noticed by Carlson 1977).37

\[(118) \quad \text{Everyone read books on giraffes.} \quad (\forall \exists \cdot \exists \forall)\]

'Everyone was reading different books on giraffes.'

* 'There were books on giraffes that everyone was reading.'

The fixed narrow scope of indefinites is thus a widespread phenomenon. As has been already pointed out in the light of the examples from Williams (1994) and Geurts (2000), it appears that some indefinites have the ability to introduce either an existential quantifier or a Skolem function, but that some can introduce only a Skolem function. The above examples provide yet further evidence that the choice-function mechanism proposed by Reinhart (1997, 1998) is too powerful. On her account, nothing stops existential closure from applying to a choice function yielding an individual reading. Since the indefinites above are nominal they should introduce a Skolem function existentially closed off. However, the individual readings are absent.38

A predicative indefinite is not an argument, but a predicate of type \(<e, e>: it denotes a property. It is akin to the noun found in sentences like John is a dentist. The stranded indefinite introduces a Skolem function. When such a function is introduced an indefinite has zero scope. It behaves like the trace of an adjunct in that its scope is fixed locally. A predicative indefinite nevertheless differs from an adjunct in that it is not a predicate of a predicate. Rather, a predicative indefinite is a predicate of a subject
or alternatively of an object as in *John made Mary their spokesperson.* The present analysis thus argues against predicative Ns being of type $<e, e>$; $<e, e>$, i.e. an adverb (de Hoop 1992, Bittner 1994).³⁹

The idea is thus that stranded indefinites are like incorporated nouns: they denote a property and they are part of a complex predicate. To give a concrete example, this means that a sentence like *Combien as-tu lu de livres?* is asking something like ‘How many books did you book-read?’ or a sentence like ‘Tu fais quoi?’ asks something like ‘What thing are you thing-doing?’°⁴ The scope freezing property of predicative indefinites, which is amply justified on independent grounds, thus provides the basis for an explanation of the well-known intervention effects shown in split constructions. In particular, I have made the relevant facts to follow from the Scopal ECP. The facts are thus accommodated in a principled way. The details of my analysis thus differ from van Geenhoven (1998) who argues that the existential interpretation of incorporated nouns does not come from existential closure, but is provided lexically by the verb. On her view, the existential quantifier is lexicalised: non-incorporating verbs do not introduce an existential quantifier while incorporating verbs do. On my view, stranded indefinites do not introduce an existential Q, but only a so-called Skolem function which is bound by an existential quantifier. The function must be salient and its domain must be part of the context (either anaphorically or inferentially).⁴¹

In the next section, the discourse properties of WH phrases in situ in French single-WH constructions are addressed. In the section after next, I will account for the presuppositional effects alluded to earlier in the discussion (section 2.3.2).
2.6 Discourse properties of French WH in situ

The main argument of the present chapter has been that in French single-WH questions in situ a phonologically null WH operator moves to the specifier of CP while the indefinite remains in situ. In the present section, it is argued that in French single-WH in situ questions and in split-WH constructions in general (e.g. *combien ... de livres*, etc.), the indefinite with which the operator is associated remains in situ because it is defocalised. In other words, it is a topic. In the non-split alternative, the indefinite with which the WH operator is associated is focalised along with the WH operator. In each case, movement of the WH operator occurs (Q is always strong in French). The only difference between a split-WH construction and a non-split (overt-movement) WH construction is thus the stranding and the associated defocalisation of the indefinite.

Split and non-split-WH constructions mean the same, i.e. they receive the same truth-conditions (or at least overlapping truth-conditions; in-situ questions may lack readings that non-in-situ questions have). However, split and non-split-WH constructions differ as to how the information is packaged: while in-situ questions involve presupposition, fronted-WH questions do not. Our proposal can thus be seen as an argument against the minimalist view of movement, according to which movement is always triggered by strong features (Last Resort). On our view, movement of a WH operator in French is a Last-Resort operation. However, whether the indefinite with which the WH operator is associated remains in situ or whether it is moved along with its operator is not determined by morphology, but by discourse considerations.

At this point, let me provide some definitions, since the notion of topic and focus mean different things for different people:
(119) \[ \text{FOCUS} = \text{def} \text{ the focus is the non-presupposed part of the sentence.} \]

a. \textit{informational or weak focus}

Informational focus is simple weak focus, so called because it fills a gap in the addressee's knowledge without the exhaustive, contrastive or counter-assertive connotations of strong focus.

b. \textit{strong focus}

Strong focus is focus that does not merely fill a gap in the addressee's knowledge, but additionally evokes and excludes alternatives. The term covers exhaustive listing, contrastive focus and counter-assertive focus.

(120) \[ \text{TOPIC} = \text{def} \text{ the topic is the part of the sentence which is presupposed.} \]

(121) \[ \text{TAIL} = \text{def} \text{ a tail is the part of the sentence that is neither topic nor focus.} \]

Let me concentrate on focus first, and turn to topic later.

\textbf{2.6.1 Focus}

Germanic and Romance, the most embedded word in the sentence receives default (weak) focus. This is made to follow from the Nuclear Stress Rule (NSR).  

\[ (122) \quad \text{Nuclear Stress Rule (Romance)} \]

Given two sisters \( C_i \) and \( C_j \), the one lower in the asymmetric c-command ordering is more prominent.

(\textit{Zubizarreta 1998:150})

Take French as an example. To a question like (123a), an answer such as (123b) is appropriate (capital letters are used to indicate main stress and brackets + F for focus to indicate the focus constituent; the weakly focused constituent is capitalised):

\[ (123) \]

a. ‘What did you do?’ \hfill \text{(English)}

b. Nous avons rendu son livre [\textit{à MARIE}]_{\text{F}}. \hfill \text{(French)}

we have returned his book to Mary

‘We returned his book to Mary.’

The symmetry between syntactic ordering and phrasal prominence may be broken because of an independent requirement that a focused constituent must contain the most prominent element in the sentence. If \( \textit{son livre} \) receives focus, the PP \( \textit{à Marie} \) is defocalized and thus becomes ‘metrically invisible’. Then, \( \textit{son livre} \) is more prominent (the defocalized element is in italics):

\[ (124) \]

a. ‘What did you return to Marie?’ \hfill \text{(English)}

This is made to follow from the Focus Prominence Rule (FPR):

\[(125) \quad \text{Focus Prominence Rule}\]

Given two sister nodes $C_i$ (marked [+F]) and $C_j$ (marked [-F]), $C_i$ is more prominent than $C_j$.

(Zubizarreta 1998:150)

In languages like Spanish, all phonologically specified material is metrically visible. Spanish has recourse to a different mechanism to resolve cases of conflict between the FPR and the NSR:

\[(126) \quad \text{a. Volvimos su libro } [\text{a MARIÀ}] \quad (\text{Spanish})\]

\[\text{returned his book to Maria}\]

‘We returned his book to Mary.’

\[(127) \quad \text{Volvimos a María, } [\text{su LIBRO}] \quad (\text{Spanish})\]

The PP a María undergoes so-called P-movement which is prosodically motivated.

As Zubizarreta shows, the case of French is in fact more complicated, since it is also possible in French for a defocalised element to undergo P-movement.\(^{46}\)

\[(128) \quad \text{Nous avons rendu à Marie, } [\text{son LIVRE}] \quad (\text{French})\]
Importantly, Germanic and Romance focus is licensed prosodically in statements, but syntactically in questions. A fronted WH phrase is licensed in virtue of occupying the specifier position of a functional category bearing the feature [+WH] (i.e., via the feature-checking mechanism) (Zubizarreta 1998:92). According to Zubizarreta, whereas in statements, the nuclear stress is contained within the focused constituent, in questions it is contained within the presupposed part of the sentence. I assume that even in the case of split-WH constructions, including French single-WH-in-situ constructions, focus is licensed syntactically. So, it is not the case that the WH phrase in situ is licensed prosodically. The FCP is revised accordingly:

(129)  

Focus Prominence Rule

Given two sister nodes $C_i$ (marked [+F]) and $C_j$ (marked [-F]), $C_i$ is more prominent than $C_j$, unless $C_i$ is a WH phrase and is syntactically licensed by the WH head of $C_j$.

2.6.2 Topic

With the background about focus in place, let us now concentrate on issues that relate to topic. As is well known, although the canonical French sentence consists of a subject DP followed by an object DP, the word order is often very different in colloquial usage. Subject DPs can be left or right dislocated:

(130)  

a. Jean, il est parti.  

Jean, he is left  

‘John left.’  

(French)  

(130)  

a. Jean, il est parti.  

Jean, he is left  

‘John left.’  

(left dislocation)
b. Il est parti, Jean.

he is left Jean

‘John left.’ (right dislocation)

Similarly, objects can be left or right dislocated:

(131) a. Jean, je le connais bien. (French)

Jean I him know well

‘I know Jean well.’ (left dislocation)

b. Je le connais bien, Jean.

I him know well Jean

‘I know Jean well.’ (right dislocation)

For subjects, left dislocation is apparently more frequent than right dislocation. For
direct and indirect objects, right dislocation objects are more frequent (cf. Ball 2000).
The referent of a dislocated DP has already figured in the conversation, in the
situational context or simply as part of the common ground (whatever is presupposed
between the participants). Left and right dislocation thus correspond to topicalisation
in French.

I argue that split questions in French (and in other languages) are instances of
topicalisation of the indefinite with which the WH operator is associated. While a bare
operator (not necessarily overt) raises to Spec-CP, the indefinite is stranded and
together with the rest of the VP becomes part of the topic. In the movement
alternative, both the WH operator and the indefinite with which it is associated are part
of the focus structure. The VP is in this case neither topic nor focus, but tail.

Boeckx's (1999) analysis is thus essentially correct in claiming that French WH
questions in situ are covert clefts, but wrong in assuming that they involve strong
focus. There are (at least) two kinds of cleft sentences: non-presentational and
presentational clefts. Non-presentational clefts are associated with strong focus:

(132) C'est le LIVRE que j'ai acheté. \quad \text{(French)}
It is the book that I have bought

'It's the BOOK that I bought.' (not the magazine).

(132) can also be used as presentational. In this case, it is associated, not with strong,
but with weak focus:

(133) C'est le livre que j'ai acheté. \quad \text{(French)}
It is the book that I have bought

'It's the book that I bought.'/Here's the book that I bought.'

This construction is not to be confused with a focus cleft. Although this construction is
identical in form with the cleft sentence, it is nevertheless very different, in that it does
not express contrastive focus (cf. Sasse 1987:538-539). The presentational cleft
resembles a topic structure in which the NP has been left dislocated.

Presentational clefts are widely used in spoken varieties of French:
I argue that French WH questions in situ are akin to presentational clefts. They involve presupposition of the DP in situ, but of the whole VP as well. In presentational clefts, the entire VP is also presuppositional, but crucially the DP does not involve strong focus.

Since focus in Romance questions is licensed syntactically, the nuclear stress finds itself contained in the presupposed part of the sentence. The WH phrase in situ receives the default stress.

In what follows I give the focus/topic mapping for some examples:

(135) a. Qui est-ce que tu vois?

who that you see

‘Who are you seeing?’
### OPERATOR  RESTRICTION  SCOPE

<table>
<thead>
<tr>
<th>Qui + indefinite</th>
<th>x, x a person</th>
<th>tu vois</th>
</tr>
</thead>
</table>

FOCUS  TAIL

New information  Neither new nor old information

b. Tu vois qui?

you see who

‘Who are you seeing?’

### OPERATOR  SCOPE  RESTRICTION

<table>
<thead>
<tr>
<th>Op</th>
<th>tu vois</th>
<th>qui + indefinite?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>x, x a person</td>
</tr>
</tbody>
</table>

FOCUS  TOPIC1  TOPIC2

New information  Old information  Old information

(136) a. **Combien de livres** as-tu lus?

how many of books have you read

‘How many books have you read?’
OPERATOR | RESTRICTION | SCOPE
---|---|---
Combien + de livres | x, x a number of books | as-tu lus

FOCUS | TAIL
New information | Neither new nor old information

b. Combien as-tu lu de livres?
- how many have you read of books
- 'How many books have you read?'

OPERATOR | RESTRICTION | SCOPE
---|---|---
Combien | x, x a number of books | as-tu lu de livres?

FOCUS | TOPIC1 | TOPIC2
New information | Old information | Old information

(137) a. Wen glaubt Uta dass Karl gesehen hat?
- whom believes Uta that Karl seen has
- 'Who does Uta believe that Karl saw?'
<table>
<thead>
<tr>
<th>OPERATOR</th>
<th>RESTRICTION</th>
<th>SCOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wen</td>
<td>x, x a person</td>
<td>glaubt Uta dass Karl gesehen hat?</td>
</tr>
<tr>
<td>FOCUS</td>
<td>TAIL</td>
<td>New information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neither new nor old information</td>
</tr>
</tbody>
</table>

b. Wasj glaubt Uta j wen; Karl j gesehen hat?

'Who does Uta believe that Karl saw?'

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<tr>
<th>OPERATOR</th>
<th>RESTRICTION</th>
<th>SCOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was</td>
<td>wen</td>
<td>Karl gesehen hat?</td>
</tr>
<tr>
<td></td>
<td>x, x a person</td>
<td></td>
</tr>
<tr>
<td>FOCUS</td>
<td>TOPIC1</td>
<td>TOPIC2</td>
</tr>
<tr>
<td>New information</td>
<td>Old information</td>
<td>Old information</td>
</tr>
</tbody>
</table>

(138) a. Jaki numer wykręciłeś?

'Which number did you dial?'

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<thead>
<tr>
<th>OPERATOR</th>
<th>RESTRICTION</th>
<th>SCOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jaki numer</td>
<td>x, x a number</td>
<td>wykręciłeś</td>
</tr>
<tr>
<td>FOCUS</td>
<td>TAIL</td>
<td></td>
</tr>
<tr>
<td>New information</td>
<td></td>
<td>Neither new nor old information</td>
</tr>
</tbody>
</table>
In summary, split questions are a means of asking information about an entity already introduced in the discourse or an entity that is inferable.

### 2.6.3 Questions and presuppositions

Before I close the discussion on French WH in situ, let me come back to the problem of presupposition. The distinction which has been made between fronted and in-situ questions goes against the traditional assumption that WH questions of the movement type involve presupposition of both the scope and the indefinite with which the WH operator is associated. For example, in Hintikka’s (1976), (1983) approach, the presupposition of a question is involved in spelling out its desiratum. Alternative questions like (139) are said to presuppose the truth of (exactly) one of the alternatives:

(139) Is John a sales assistant or a manager?
As for constituent questions, they are assumed to have existential presuppositions, i.e. there is at least one instance satisfying the predicate:

(140) **Who** did you invite for dinner?

Groenendijk and Stokhof (1994) and earlier work from these authors show that it is in fact very difficult to find real cases of existential presupposition with (fronted) WH questions. Consider the following two questions:

(141) a. **Who**'s that?

   b. **Who**'s coming to the party tomorrow?

Groenendijk and Stokhof argue that questions like (141a) have an existential presupposition, but that it seems due to the demonstrative rather than the WH phrase. As for examples like (141b), they argue that, although there may an expectation on the part of the questioner that there is someone coming to the party, it does not seem to be a presupposition. The reason being that ‘nobody’ is a perfectly straightforward answer, and not a rejection of the question as such. I follow Geurts (1999) in arguing that it is the whole question that acts as a presupposition inducer. In other words, when a speaker asks a question, the speaker expects an answer (unless perhaps the question is rhetorical, but this is a different case, since rhetorical questions are not information seeking in the first place). Crucially, in-situ questions of the type found in French differ from fronted-WH questions in that they involve presuppositions of all the material in the VP.
The claim being made here is that movement is not always driven by feature checking. In-situ questions involve presuppositions, whereas raised questions do not. Whether the indefinite with which the WH operator is associated moves depends on whether a context has already been introduced. In the case of fronted-WH questions, no context has been introduced. There is no familiar situation or individual that the participants have in their immediate environments or in mind. This type of question does not presuppose any of the elements that appear in the answer. On the other hand, with in-situ questions, there is not only a familiar situation, but also a familiar referent to which the stranded indefinite corresponds. As already pointed out, Chang (1997) is essentially correct when she claims that the variable that French WH phrases in situ contain does not range over a restricted set. French WH phrases in situ in single-WH questions are discourse linked, but not in the sense of Pesetsky (1987). In-situ WH questions in French are not associated with a presupposed answer set.

Consider some examples for possible interpretations:

(142) a. Tu fais quoi, ce soir? (French)
you do what this evening
‘As for things, which things are you doing tonight?’

b. Tu viens comment à la fête?
you come how to the party
‘As for methods of transport, with which method of transport are you getting to the party?’
Note that all the examples above may be uttered out of the blue with no situational context. In this case, an event, its protagonists and the entity to which the WH operator is referring are inferred. In sum, whereas movement of the WH operator may follow from economy conditions and from feature checking, fronting of the indefinite does not. Where the indefinite is positioned does not depend on syntax, but on discourse properties. If it remains in situ, the indefinite is associated with presuppositions. If the indefinite fronts along with its operator, the indefinite is not associated with presuppositions. This militates against the view that the restriction of an operator is necessarily a topic/presupposed element (cf. Partee 1995).

Fronted single-WH interrogatives also differ from multiple-WH questions in terms of presupposition. Compare (141b) with (143):

(143)  \textbf{Who's bringing what} to the party tomorrow?

Hornstein (1995) argues that this kind of example is unlike (141b) in that there is a discourse specification of who is coming. While (141b) is perfectly felicitous in the absence of any knowledge of the potential invitees, (143) is not. In (143) the highest WH phrase is D-linked. On the other hand, the WH phrase in situ is focused. The question denotes a partial function: some invitees may be stingy and not bring anything to the party. In order to know the answer to a pair-list question the denotation of the relation expressed by the predicate in the question needs to be known, i.e. the set of
ordered pairs needs to be familiar. The first member of each pair is picked from the set denoted by the noun restrictor in the higher WH phrase. Knowledge of the denotation of the relation is contingent on knowledge of the membership of this set. On the other hand, to know the answer of a single-constituent question is to know the extension of the predicate. Knowledge of this extension is independent of knowledge of the set that the WH ranges over (cf. Comorovski 1996).

To sum up the present section: it was argued that French WH-in-situ questions are split questions involving defocalization of the indefinite with which the WH operator is associated.

2.5 Summary and concluding remarks

It was shown that the distribution of French WH in situ in single-WH questions is very restricted. In contrast, the distribution of Chinese WH in situ in the same environments is not restricted at all. I have applied several tests to French WH in situ and have shown that such expressions are quantificational while their Chinese counterparts are pure variables. I have postulated movement of a phonologically null operator in the case of French WH-in-situ questions and accounted for the intervention effects exhibited by them in terms of scope. More specifically, I have argued that French single-WH-in-situ questions are split questions involving stranding of the indefinite with which the WH operator is associated. When the indefinite appears in that position, it is defocalised.

To the extent that the conclusions reached in this chapter are sound, they provide evidence for the claim that WH movement in French is not optional, contrary to what has been claimed in the literature, but obligatory. The WH feature in C is always strong. What
is optional is the fronting of the indefinite with which the WH operator is associated. Whereas movement of the WH operator is syntactically driven, movement of the indefinite with which the operator is associated is not. The choice between raising the indefinite or leaving it in situ is determined by discourse properties, not by syntax. When the indefinite remains in situ, the question involves presuppositions (the indefinite is defocalised, i.e. it is a topic structure, akin to a presentational cleft). When the indefinite raises, it does so, not because of feature checking, but because the indefinite is not associated with presuppositions (it is focused along with the WH operator). If correct, our analysis suggests that the minimalist stance according to which all movement is feature driven cannot stand.

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1 Echo questions are responses from an utterance that takes the form of a question seeking confirmation of some part, in effect repeating that utterance. They do not involve quantification (cf. Hendrick and Rochemont 1988, May 1985:61-62). Moreover, echo questions involve heavy stress of the WH phrase in situ and/or rising intonation. This is not the case with the questions that concern us.

2 There is dialectal variation concerning the judgements in (3a). According to Aoun et al. (1981) and Tellier (1991) French WH in situ is possible in tensed embedded clauses. The dialectal variation is acknowledged in most of the recent literature on French WH in situ: Bošković (1998, 2000) and Boeckx (1999).

3 'Why' in Chinese does, however, exhibit intervention effects. Compare (i) with (ii) (both examples are from Aoun and Li (1993a:218)):

(i)  
\[
[C_P_1 \text{Ta xiang-zhidao } [C_P_2 \text{shei maile shenme}]]? \\
\text{he wonder who bought what} \\
'What does he wonder who bought?' \\
'Who does he wonder bought what?' \\
'He wonders who bought what?'
\]

(ii)  
\[
[C_P_1 \text{Ta xiang-zhidao } [C_P_2 \text{shei weishenme likaile}]]? \\
\text{he wonder who why left} \\
'Who does he wonder left why?' \\
* 'Why does he wonder who left?' \\
* 'He wonders who left why.'
\]

4 I am aware that Chinese does not have an overt complementizer. I nevertheless assume that there is a covert Comp.

5 I will underline the elements which could reasonably be expected to give intervention effects, whether they do or not.
By 'specific' or 'referential' I mean 'referring to a unique individual who fits the description'. The individual may not necessarily be known to the speaker, but is known by the speaker to exist.

A similar idea was proposed independently by Plunkett (1997) and Denham (2000).

There is dialect variation. Not all speakers reject (18a).

The root constraint is also supposed to account for the fact that French WH phrases in situ are possible only in direct and not in indirect questions. Chinese is not restricted this way:

(i) *Je me demande que tu as vu qui. (French)
    I myself ask that you have seen who
    'I wonder who you have seen.'

Since merger applies only at the root, examples like (i) are correctly ruled out.

My account may appear as a step back, since it is not clear how it can account for examples like (i). Let me just point out that the generalization according to which French WH phrases in situ cannot appear in embedded questions does not seem entirely correct. The examples in (ii) are well-formed in colloquial French:

(ii) a. Je ne sais pas c'est où. (French)
    I NE know not it is where
    'I don't know where it is.'

b. Je me demande c'est quoi.
    I myself wonder it is what
    'I wonder what it is.'

It thus appears that WH phrases in situ are possible in embedded interrogatives; a fact which suggests that an analysis along the lines of Bošković is uncalled for.

See chapter 1 for the definition of the MLC.

Following de Swart (1992), Obenauer (1994) and others, I distinguish iterative adverbs {beaucoup, twice, etc.) from frequency adverbs (souvent 'often', toujours 'always', parfois 'sometimes', etc.).

My judgement on this type of sentence differs from Boeckx’s (1999:77). According to him, sentences like (29a) are ungrammatical.

Simpson (1995, 2000) has a similar proposal.

The same presuppositional effects can be found with combien de questions:

(i) a. Question: Combien de livres as-tu lus?
    how many of books have you read-AOR
    'How many books have you read?'

b. Answer: Je n'en ai lu aucun.
    I Neg some have read none
    'I haven't read any.'

(ii) a. Question: Combien as-tu lu de livres?
    how many have you read of books
    'How many books have you read?'

b. Answer: # Je n’en ai lu aucun.
    'I haven’t read any.'
This suggests that Obenauer's (1994) analysis of French WH in situ in terms of D-linking in the sense of Pesetsky (1987) is not on the right track.

The same presupposition effects have been noticed with Portuguese WH in situ questions. *Nada* is a good answer for *O que comprou o Pedro* ‘What did Peter buy?’, but not for *O Pedro comprou o quê?* (Ambar et al., 1998).

I actually disagree with this view, since with a tag, the intonation is not raising.

The English variant is acceptable given an appropriate setting. This is not the case in French.

‘Why’ in Chinese behaves differently; it cannot be bound by operators other than WH (cf. Tsai (1994)).

This terminology is problematic if a minimalist approach is adopted, since indices, the syntactic markers of referentiality in the grammar, are no longer tolerated under the Inclusiveness Condition (cf. Chomsky 1995). However, the original proposal can easily be translated into one in which the distinction between referential and non-referential theta roles is accessible at the LF-interface from the syntax-semantics mapping.

Rizzi assumes McDaniels’s (1989) analysis whereby the WH scope marker is base-generated in matrix Spec-CP and coindexed with the contentive WH phrase in the intermediate Spec-CP. I consider partial WH movement in more detail in chapter 3.

This is a problem for Rizzi (1990) and not for Cinque (1991) who argues that it is the quantificational nature of the element in A'-position rather than its derivation ‘via WH-Movement’ that is responsible for its ‘WH-Movement’ properties.

Although the existential reading is entailed by the pair-list reading, and should thus be available on logical grounds, it is nevertheless absent.

Although both readings are available in the (a) version, there is a preferred reading, that of wide scope for the WH phrase over the UQ. This means that the in-situ position correlates with one reading, while the raised alternative correlates with another. This idea is reminiscent of Obenauer’s (1994) contention that French WH in situ receives a different interpretation from the one where the WH phrase is dislocated. The proposal made herein is very different from his though, since he takes French WH phrases in situ to be D-linked in the sense of Pesetsky (1987).

Contrary to the case of *tous*, the adverb *souvent* does not give rise to a pair-list reading. I assume that this is because *souvent* does not generate a domain in the sense of Chierchia (1991).

In the GB framework, the ECP originally applied at S-structure, but it was later extended to LF (cf. Kayne 1981, 1984).

A benefit of the Scopal ECP is that it can derive the Head Movement Constraint (HMC). The HMC says that the head of a phrase cannot move higher that the next higher head. A head is assigned scope by the Head Scope Rule: the scope of a head is the phrase it projects. Consequently, a head can move no higher than to a position that is sister to its projection.

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

Skolem functions, which are used to capture narrow scope of existentials, are more complex than simple choice functions like those used by Reinhart (1997, 1998). The choice of value for Skolem functions varies with the choice of value for some bound variable.
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). Note that the ambiguity we have in mind here is the exact reverse of what is meant by Reinhart (1995, 1997) or Fodor and Sag (1982) when they claim that indefinites are ambiguous. According to them specific/referential indefinites are not quantificational, whereas on our account, they are. On their accounts, non-specific/non-referential indefinites are quantificational, whereas, on our view, they are not.

Examples (96), (97) and (99) are inspired by Szabolcsi and Zwarts (1992-1993) and work by É. Kiss (1992).

Dayal (to appear) mentions similar cases. For example, she notes that the followings questions cannot receive pair-list answers:

(i) Which student read the book that which professor wrote?
(ii) Which student got a headache after she read which book?
(iii) Which linguist will be offended if we invite which philosopher? (a variation on Reinhart’s well-known example).

Dayal claims that (iii) is an awkward, if not unacceptable response to (iv):

(iv) #/* Professor Smith will be offended if we invite Professor Brown, and Professor King will be offended if we invite Professor Matthew.

She reaches conclusions that are very similar to Bars (2000), i.e. that a mechanism in addition to existential closure over choice-functions à la Reinhart is necessary. They both have a movement mechanism in mind, but a non-movement analysis making use of Skolem function would be perfectly adequate.

See also Aoun and Li (1993b), chapter 6 on QP/adjunct WH interaction and Williams (1994) pp. 64 and 66.

The CSD is independently motivated. Those elements that create opacity effects for the licensing of stranded indefinites in scope-marking chains are exactly those which cannot participate in WH/QP interactions and yield a pair-list reading at the same time:

(i) a. Who, did every student read t? ✓Pair-list reading
b. Who, did each student read t? ✓Pair-list reading
c. Who, does no one love t? *Pair-list reading
d. Who, do many people love t? *Pair-list reading
e. Who, do even John and Mary love t? *Pair-list reading

Without the focus marker, it is possible for a pair-list reading to obtain in (i). This kind of examples leads Chiurchia (1991) to argue against quantifying-in into questions and to propose an alternative analysis for WH/quantifier interaction based on functional dependence rather than on relative scope (see also Engdahl 1986).

I assume that variation between languages with regard to intervention effects will be due to different lexical properties of the operators. Variation does not stem from possible permutations in the hierarchy presented here. In other words, this ordering relation between operators is universal.

The same scope effects (or lack thereof) have been found in Hindi (cf. Dayal (1999)).
Note that, whereas Carlson (1977) proposes that existential bare plurals denote kinds, van Geenhoven (1998) argues that they denote properties. An early view of the idea that generics denote properties can be found in Burton-Roberts (1976), see also Burton-Roberts (1989). For yet another view, as well as a very comprehensive overview of generics, see Cohen (1999).

Additional empirical evidence that the nominal status of a WH phrase in situ is not sufficient for unselective binding comes from the particular use and behaviour of what in languages like Japanese, Chinese, Russian, Modern Greek, Bulgarian, Hebrew, Serbo-Croatian, two of which WH in situ languages. In all those languages, the WH phrase what may be used with an interpretation meaning why (this type of WH question is appropriate in a context in which the speaker is emotionally affected). This type of WH phrase shares some properties with true adjuncts WH phrases in that it cannot occur in islands, suggesting that in this case the WH phrase denotes a function over higher-order entities (Ochi and Hsin 1999).

Adjuncts may thus be of a higher order than scopeless indefinites and might perhaps be moved up in table 2.1. The theory predicts that an adjunct can depend on a scopeless indefinite, but not vice-versa.

Functional/typological studies of noun incorporation have long suggested that the formal differences between incorporated nouns and non-incorporated nouns are symptomatic of underlying semantic and functional differences. (cf. Velásquez-Castillo (1995) and references cited therein). For example, Velásquez-Castillo (1995:556-557) argues that the discourse use of Guarani noun incorporation has the following properties (amongst others): (a) ‘portraying bodily activities as characteristic behaviour, and therefore as a reflection of an attitudinal characteristic’; (b) ‘contruing an action and its object as a unitary predicate to designate a routinised or institutionalized activity’. It thus seems to me that a statement involving noun incorporation is a thetic statement in the sense of Sasse (1987). It is not about an entity, but about an event. French WH in situ interrogatives can thus be seen as ‘thetic questions’. These ideas fit with Mithun’s (1984) thesis according to which the primary function of noun incorporation is the manipulation of discourse structure and the expression of a conventionalized activity or the background of a given referent. This explains why noun incorporation can never encode contrastively focused information because the noun becomes part of the verb in the course of incorporation. Note that the discourse view of noun incorporation might be too strong. There seems to be at least two large types of noun-incorporation languages. One group in which N-V compounds express conventionalized activities (e.g. Mokilese) or is used to background a particular referent, making it less salient in discourse (as in a handful of language families like Nahuatl and Tanoan); and a second group where there does not seem to be a substantial semantic difference between the analytic and synthetic variants (e.g. Mohawk, cf. Baker (1988), (1995)). In the latter case a possible trigger for noun incorporation is that either the noun or the verb is morphologically defective and cannot appear as an independent word (cf. Gronemeyer (1996)).

Further evidence for the idea that stranded indefinites might be (semantically) incorporated nouns comes from the fact that when an indefinite is a stranded there is lack of agreement on the past participle (as is well-known). When nouns incorporate, this anti-agreement phenomenon also occurs:

(i) a. [CP Combien de livres, as-tu lus t,]? (French)
how many of books have you read,?

b. [CP Combien, as-tu lu/*s [t, de livres]]?
how many have you read/*, of books

‘How many books have you read?’

(ii) Arnajaraq eqalut-tur-p-u-q. (West Greenlandic)
Arnajaraq-ABS salmon-eat-REV[-3SG]-3SG
(van Geenhoven 1998:15)

In (ii), the verbal inflection lacks object agreement otherwise shown when incorporation does not take place. Anti-agreement of this kind has also been reported for Mohawk. Baker (1996:316) reports that when noun incorporates, absence of object agreement is normal, and its presence is rare or impossible:
Another well-known fact about noun incorporation seems to be relevant to split-DP syntax. In those languages where noun incorporation is possible, in a ditransitive construction, the theme/direct object may incorporate, but the goal/indirect object may not (cf. Baker 1996:293, amongst others). This is exactly the kind of restrictions that is found in split *combien de* constructions:

(iv) a. \[\text{Combien de livres, as-tu donné t, à Marie et à Jean?}\] (French)
how many of books have-you given to Marie and to Jean
b. \[\text{Combien, as-tu donné [t, de livres] à Marie et à Jean?}\]
how many have-you given of books to Marie and to Jean
‘How many books have you given to Jean and Marie?’
c. \[\text{A combien de personnes, as-tu donné trois livres t,?}\]
to how many of persons have-you given three books
‘To how many people have you given three books?’
d. *\[\text{A combien, as-tu donné trois livres [t, de personnes]?}\]
to how many have-you given three books of persons

Secondly, noun incorporation is impossible with agents, and so is DP-splitting:

(v) a. \[\text{Personne de célèbre n’ a éternué.}\] (French)
no one of famous NE has sneezed
b. *\[\text{Personne n’ a éternué de célèbre.}\]
no one NE has sneezed of famous
‘No one famous sneezed.’

Finally, whereas unergative verbs never allow noun incorporation, unaccusative verbs do. Again, this is exactly what we find in DP-splitting (the DP subject is a theme):

(vi) a. \[\text{Personne de célèbre, n’ est sorti t,}\] (French)
no one of famous NE is gone out
b. *\[\text{Personne, n’ est sorti [t, de célèbre].}\]
no one NE is gone out of famous
‘No one famous has gone out.’

I do not think these facts have been noticed before.

42 Therefore, by ‘topic’ I do not mean ‘comment’ (i.e. what the statement or the question is about), but only a presupposed entity. More precisely, a presupposed entity in the answer. It may well be that a
speaker while uttering a split interrogative has certain expectations in mind, but these expectations may not be warranted. When I speak of presuppositions I mean presuppositions in the answer only.

43 For the notion of tail (in a slightly different sense) see Vallduvi (1992) and Lambrecht (1994).

44 I concentrate here on Romance and ignore the differences between Germanic and Romance with regard to the NSR.


46 The fact that French allows both metrical invisibility and P-movement is seen a reflex of the fact that French is in a transitional stage of language change with respect to certain aspects of its prosodic properties. The metrical invisibility option belongs to one grammar, while the P-movement alternative belongs to another (on dual grammars, see Kroch 1989).

47 Zubizarreta (1998) does not discuss French WH in situ. She does, however, mention WH in situ in multiple-WH environments and argues that the WH phrase in these contexts is licenced prosodically rather than in terms of feature checking.

48 Other theories (e.g. Higginbotham and May 1981) concentrate on the uniqueness presupposition which is supposed to distinguish between singular and plural WH phrases. I choose to ignore this point, since it is less directly relevant to the present discussion.

49 There may be an expectation on the part of the speaker who utters the question, but crucially there is not presupposition involved in the answer.

50 Interestingly, van Genniphoen (1998) notes that the split DP in a split-topic construction in German are not in a partitive relation. (i) cannot be interpreted as 'he wants to have no kids out of a particular set of kids that has been established by the previous context':

(i) Kinder, möchte er [keine t.] haben (aber Haustiere schon). (German)
kids would-like he none to-have (but pets yes)
‘As for kids, he wouldn't like to have some (but pets, he would).’
CHAPTER 3

PARTIAL WH MOVEMENT

3.1 Introduction

The main claim of the present chapter is that partial-WH-movement constructions are further cases of non-canonical quantification. The intervention effects observed in French WH₁-in-situ and *combien-de* constructions are also found in partially-moved-WH questions, which suggests that partial WH movement involves splitting of the kind described in the previous chapter: an operator is split from the indefinite with which it is associated.

Like the analysis of French WH in situ in the previous chapter, the analysis of partial WH movement presented here is partly syntactic and partly semantic. The blocking effects will be accounted for in terms of scope, as in chapter 2, and not in terms of Relativized Minimality or the MLC. The focus is on German and Hungarian, although data from other languages will be introduced when relevant.

In languages where partial WH movement is possible, there is a choice between raising a standard WH phrase to matrix Spec-CP or leaving the contentive WH phrase in an intermediate A'-position with an expletive WH word appearing in matrix Spec-CP.¹ (1a, b) illustrate these alternatives for German (here and in what follows I will present examples of partial WH movement together with their full-WH-movement counterpart):
(1) \textit{Full WH movement}

a. \[\text{[CP}_1 \text{Wen}_i \text{ glaubt } \text{Uta[CP}_2 \text{ t}_i, \text{ dass Karl t}_i \text{ gesehen hat]}]? \text{ (German)}\]

whom believes Uta that Karl seen has

‘Who does Uta believe that Karl saw?’

\textit{Partial WH movement}

b. \[\text{[CP}_1 \text{Was glaubt } \text{Uta [CP}_2 \text{ wen}_i, \text{ Karl t}_i \text{ gesehen hat]}]? \text{ (German)}\]

WH believes Uta whom Karl seen hat

‘Who does Uta believe that Karl saw?’

In partial-WH-movement constructions, the contentive WH phrase must raise to a subjacent Spec-CP, not the specifier of just any lower CP. In other words, the relation between the non-contentive WH element and the contentive WH phrase is always local. The examples in (2) are from German; those in (3) from Hungarian:

(2) a. \[\text{[CP}_1 \text{Was glaubst du [CP}_2 \text{ mit wen}_i, \text{ Hans meint } \text{ (German)}\]

WH believe you with whom Hans thinks

\[\text{[CP}_3 \text{ t}_i \text{, dass Jakob t}_i \text{ gesprochen hat]}]? \]

that Jakob spoken has
b. *\[cpi \textbf{Was} \text{ glaubst} \ du \ [\text{cp}_2 \ ti', \ dass \ Hans \ meint} \]
\[\text{WH believe you that Hans thinks} \]
\[\text{[cp}_3 \textbf{mit} \text{ wem}, \text{ Jakob} \ ti, \text{ spoken hat}} \]
\[\text{with whom Jakob gesprochen hat}]]]?

‘With whom do you believe that Hans thinks that Jakob spoke?’

(Simpson 1995:106)

(3) a. \[\text{[cp}_1 \textbf{Mit} \text{ hitt Mari} \ [\text{cp}_2 \text{ hogy kinek} \text{ (Hungarian)}} \]
\[\text{WH believed-3SG.indef.DO Mary-NOM that who-DAT} \]
akartál \ [\text{cp}_3 \text{ hogy telefonáljunk}]]]?

wanted-2SG.indef.DO that phone-SUBJ.IPL

b. *\[\text{[cp}_1 \textbf{Mit} \text{ hitt Mari} \ [\text{cp}_2 \text{ hogy} \text{ kinek telefonáljunk}]]]?
\[\text{WH believed-3SG.indef.DO Mary that} \]
akartál \ [\text{cp}_3 \text{ hogy kinek telefonáljunk}]]]?

wanted-2SG.def.DO that who-DAT phone-SUBJ.IPL

‘Whom did Mary think that you wanted us to phone?’

(Horvath 1997:523-524)

(2b) and (3b) become grammatical if another non-contentive WH element is inserted in the intermediate position (an observation that goes back to van Riemsdijk 1982 for German):
Further evidence for the claim that the relation between the non-contentive WH element and the contentive WH phrase is local comes from examples involving negation. In German, full movement across negation is possible (cf. (5a) and (6a)). However, if a negative expression intervenes between the expletive WH element and the contentive WH phrase, the sentence is ungrammatical (cf. (5b) and (6b)):
b. *[CP1 Was glaubst du NICHT [CP2 mit wen, Hans t, gesprochen hat]]?  
WH believe you not with whom Hans spoken has  
‘Who don’t you believe that Hans has spoken to?’  
(Beck 1996:3)

(6) a. [CP1 Wen, glaubt NIEMAND [CP2 t,] dass  
when believes nobody that  
Karl t, gesehen hat]?  
Karl seen has  
(German)

b. *[CP1 Was glaubt NIEMAND [CP2 wen,  
WH believes nobody whom  
Karl t, gesehen hat]?  
Karl seen has  
‘Who does nobody believe that Karl saw?’  
(Beck 1996:5)

Besides negation, factive predicates also create blocking effects in German (cf. Fanselow 2000):

(7) a. [CP1 Wen, bedauerte Fritz [CP2 t, dass sie t, liebt]]?  
who regretted Fritz that she loves  
(German)
b. *\([_{CP1} \text{Was bedauerte Fritz}_{CP2} \text{ sie t_i liebt}]\) ?
   WH regretted Fritz who she loves
   ‘Who did Fritz regret that she loves?’

The intervention of certain types of volitional verbs also leads to ungrammaticality (cf. Fanselow and Mahajan 1996, Reis 1996):

(8) a. \([_{CP1} \text{Weni mochtest du}_{CP2} \text{ dass sie t_i liebt}]\) ?
   who want you that she loves
   (German)

b. *\([_{CP1} \text{Was mochtest du}_{CP2} \text{ sie t_i liebt}]\) ?
   WH want you who she loves
   ‘Who do you want her to love?’

(9) a. \([_{CP1} \text{Weni hoffst du}_{CP2} \text{ dass sie t_i liebt}]\) ?
   who hope you that she loves
   (German)

b. *\([_{CP1} \text{Was hoffst du}_{CP2} \text{ sie t_i liebt}]\) ?
   WH hope you who she loves
   ‘Who do you hope that she loves?’

In addition, partial WH movement in German exhibits WH-island effects:
Finally, both partial and full WH movement in German exhibit strong island effects.

(11) a. *Wie ist er glücklich weil er gestern (German)
how is he happy because he yesterday
Fußball gespielt hat.
football played has

b. *Was ist er glücklich wie weil er gestern
WH is he happy how because he yesterday
Fußball gespielt hat.
football played has

* ‘How is he happy because he played football yesterday?’
In Hungarian, the situation with regard to weak islands is slightly more complex. A negative expression does not create blocking effects when verbs that presuppose a pre-existing set of propositions are involved (e.g. admit, reveal, deny, notice, permit), cf. Fanselow (2000):^2

\[
\text{(12)} \quad [\text{CP}_1 \text{Mit NEM ismert be} \quad \text{János} \quad [\text{CP}_2 \text{ hogy} \quad (\text{Hungarian})]}
\]

\[
\text{WH not admitted-indef Janos that}
\]

\[
\text{hányszor hamisította az aláírásodat]}? \quad \text{how forged the signature}
\]

‘How didn’t János admit that the signature was forged?’

However, with verbs like think, if negation intervenes between the non-contentive WH element and the contentive WH phrase, blocking effects do ensue:

\[
\text{(13)} \quad *[\text{CP}_1 \text{ Mit NEM gondolsz} \quad [\text{CP}_2 \text{ hogy kivel} \quad (\text{Hungarian})]}
\]

\[
\text{WH not you think that with whom}
\]

\[
\text{beszélt Mari]?} \quad \text{spoke Mari}
\]

‘With whom didn’t you think that Mari spoke?’

In Hungarian, partial-WH-movement constructions do not exhibit WH-island effects:
Finally, whereas full WH movement exhibits strong-island effects, partial WH movement does not.³

In sum, German and Hungarian partial-WH-movement constructions behave quite differently. Whereas German partial-WH-movement constructions exhibit inner, WH and
adjunct islands, Hungarian partial-WH-movement constructions do not show WH or adjunct islands, and exhibit inner islands with certain verbs only.

The goal of the present chapter is two-fold: (a) to explain how the non-contentive WH element and the substantive WH phrase are related in a partial-WH-movement question; (b) to account for the intervention effects. (a) and (b) might be interrelated and the answer to question (b) might provide a clue for question (a). The differences between German and Hungarian with regard to the intervention effects will also be addressed.

Many researchers argue for a uniform analysis of partial WH movement cross-linguistically. However, I will take the opposite view. Fanselow and Mahajan (1996) and Simpson (2000) both argue that the non-contentive WH element in German originates in an underlying Case position, just like in Hungarian. The difference between Hungarian and German is that, while Case and agreement are overt in the former, they are abstract in the latter. On their view, the differences between Hungarian and German with regard to the intervention effects are superficial, if not trivial. In contrast, the present chapter argues that the mechanism underlying partial-WH-movement constructions in Hungarian and German is different. This is essentially Horvath's line of thought on the matter. However, the technical details of my analysis of partial WH movement will differ from hers in a number of respects.

In a nutshell, what I propose is that a process of absorption applies to partial-WH-movement constructions, as a result of which these constructions are interpreted a single WH questions. The higher WH element, an operator, is separated from the indefinite with which it is associated. The WH phrase in the intermediate Spec position contains a stranded indefinite expression which is a defocalised element that is licensed in situ.
The organization of this chapter is as follows. After the basic facts about partial WH movement and its surface parametric variations have been reviewed in section 3.2, 3.3 gives an overview of so-called direct approaches to partial WH movement, while section 3.4 discusses the indirect approaches, namely Horvath (1997) and Brody (1997). In section 3.5, I develop my own theory of partial WH movement and account for the blocking effects, not in terms of Relativized Minimality, but in terms of scope. Section 3.6 briefly discusses the discourse properties of partially-WH-moved interrogatives. Section 3.7 is the conclusion.

3.2 Parametric variations


In some of these languages, there is no overt non-contentive WH element. (16b) is an example from Bahasa Indonesian (BI):

(16) a. [CP₁ Siapa, yang Bill tahu [CP₂ t₁, 'Tom cintai t₂]]? (BI)
   who FOC Bill knows Tom loves
b. $[\text{CP}_1 \emptyset \text{ Bill tahu } [\text{CP}_2 \text{ siapa, yang Tom cintai } t_i]]$?

   WH Bill knows who FOC Tom loves

   'Who does Bill know that Tom loves?'

   (Saddy 1991:189)

It is also possible for the contentive WH phrase in BI to remain in situ (for reasons that
need not concern us here, the focus particle yang does not appear in this case):

\[(17) \ [\text{CP}_1 \emptyset \text{ Bill tahu } [\text{CP}_2 \text{ Tom cintai siapa}]]? \quad \text{(BI)}\]

   WH Bill knows Tom loves who

   'Who does Bill know that Tom loves?'

   (Saddy 1991:188)

Iraqi Arabic (IA) is another language where the contentive WH phrase can remain in situ
(contrary to BI, IA must have an overt WH element in matrix Spec-CP, $sh$ is the reduced
form of sheno 'what'):

\[(18) \ a. \ \text{Sheno, tsawwarat Mona} [\text{CP Ali ishtara } t_i]. \quad \text{(IA)}\]

   what thought Mona Ali bought

\[\text{b. Sh-tsawwarat Mona} [\text{CP Ali ishtara sheno}].\]

   WH-thought Mona Ali bought what

   'What did Mona think that Ali bought?'
Recall that in German and Hungarian, the contentive WH phrase must raise to the subjacent Spec-CP. In languages like Hindi, both the non-contentive WH element and the WH phrase must remain in situ:

(19) a. \[[_{CP1} kaun] tum socte ho [_{CP2} ti' ki ti, bhaashaN degaa]??\] (Hindi)

   who you think-A-2-MAS be that speech give-FUT-3-MAS

b. Tum \[[_{CP1} kyaa \_NAJIIN socte ho [_{CP2} ki kaun bhaashaN degaa]??\]

   you WH Neg think-A-2-MAS be that who speech give-FUT-3-MAS

‘Who do you think will give the speech?’

As in German, the expletive WH element is also the word for ‘what’ in Hindi and IA. However, the fact that the non-contentive WH element is the word for ‘what’ in those languages appears arbitrary. For example, Russian (20b) and Polish (21b) use ‘how’ (kak and jak = ‘how’) instead of ‘what’ (examples from Stepanov 2000):‘

(20) a. \[[_{CP1} Kogo\_ vy dumaete [_{CP2} ti', ljubit Ivan ti]]??\] (Russian)

   whom you think loves Ivan

b. \[[_{CP1} Kak vy dumaete [_{CP2} kogo\_ ljubit Ivan ti]]??\]

   WH you think whom loves Ivan

‘Who do you think that Ivan loves?’
German is not the only partial-WH-movement language where negation creates blocking effects. Consider Hindi (Fanselow and Mahajan 1996, Sinha 2000):\(^5\)\(^6\)

\[(21)\]
\[\text{a. } [\text{CP}_1 \text{Kog}i \text{ myslisz } [\text{CP}_2 \text{ t}_i', \text{ Janek lubi } \text{ t}_i]]? \]
\[\text{whom think-you Janek loves}\]
\[\text{b. } [\text{CP}_1 \text{Jak myslisz } [\text{CP}_2 \text{Kog}i \text{ Janek lubi } \text{ t}_i]]? \]
\[\text{WH think-you whom Janek loves}\]

‘Who do you think that Janek loves?’

\[(22)\]
\[\text{a. } [\text{CP}_1 \text{Kaun}i \text{ tum NAIHIN socte ho } [\text{CP}_2 \text{ t}_i' \text{ ki } \text{ t}_i]]? \]
\[\text{who you Neg think-\text{A-2-MAS be that bhaashaN degaa}]? \]
\[\text{speech give-FUT-3MS}\]
\[\text{b. } *\text{Tum } [\text{CP}_1 \text{ kyaa NAIHIN socte ho } [\text{CP}_2 \text{ ki you WH Neg think-\text{A-2-MAS be that kaun}i } \text{ t}_i \text{ bhaashaN degaa}]? \]
\[\text{who speech give-FUT-3-MAS}\]

‘Who don’t you think will give the speech?’

(Sinha 2000)
I will abstract away from the differences between German and Hungarian, on the one hand, and IA/BI and Hindi, on the other. I will assume that the fact that the contentive and the WH expletive can remain in situ is due to the fact that in IA, BI and Hindi a weak rather than a strong feature is present on C. I further assume that, when licensed in situ, the contentive (and the ‘scope marker’ in the case of Hindi) is bound by C. Despite the parametric variation just introduced, the main question remains the same: what is the relation between the WH expletive and the contentive WH phrase in those languages that allow partial WH movement.

Finally, there is clear evidence that partial WH movement creates one question rather than two sequential ones. This implies that the relationship between the two clauses, and consequently between the WH scope marker and the contentive WH phrase, is syntactic. First, there is no intonation break between the two clauses. Second, in German the second clause has
verb-final word order, indicating that it is a subordinate clause (cf. McDaniel 1989). Third, it is possible for a quantifier in the main clause to bind a pronoun in the embedded one. This would be excluded if partial-WH-movement questions consisted of two sequential questions, since variable binding is not available across sentences (cf. 25):

(24) **Was** glaubt jeder Student, wo er ihn treffen kann? (German)

WH believes every student where he him meet can

‘Where does every student believe that he can meet him?’

(25) *Every student came in. He, was late.

In the next section, the direct approaches to partial WH movement are discussed.

3.3 Direct approaches

In the literature on partial WH movement, a distinction between direct and indirect approaches is often made. On the former view, there is a direct link between the non-contentive WH element and the contentive WH phrase. On the latter, there is only an indirect connection between the two elements, which is mediated by the CP containing the substantive WH phrase. What the two approaches have in common, however, is that LF movement is assumed: of the contentive WH phase in the direct approach and of the whole embedded clause in the indirect alternative. On both accounts, the highest WH
phrase is an expletive, i.e. a deficient/non-contentive element, lacking crucial features that the lowest WH phrase on the other hand possesses.

Recent accounts of partial WH movement (e.g. Dayal 1994, Brody 1997) have cast doubt on the idea that the highest WH element in a partial-WH-movement construction is an expletive. In my view, the distinction between the two views on the status of the higher WH element is less important than the distinction between direct and indirect analyses and my overview of the literature reflects this bias. The rest of this section discusses various direct approaches. The indirect approaches will be discussed in section 3.4.

3.3.1 A'-movement of the contentive WH phrase at LF (McDaniel 1989)

According to van Riemsdijk (1982) and the work on partial WH movement inspired by him, e.g. McDaniel (1989), the non-contentive WH element serves as a scope marker for the contentive WH phrase. The substantive WH phrase leaves its base position but does not move all the way to its scope position, which is marked by the non-contentive WH element. Thus, the WH element in matrix Spec-CP in a partial-WH-movement configuration is an expletive element of the kind found in existential constructions. The difference between there and German was is that there is an A-expletive, while was is an A'-expletive:

(26) **There** is a man in the garden.
In her seminal work, McDaniel suggests an S-structure-chain-based analysis for partial-WH-movement constructions. The WH scope marker is base-generated in Spec-CP and forms an A’-chain with the substantive WH phrase in the intermediate Spec-CP position. The substantive WH word is the associate of the WH expletive. The latter is thus directly related to the contentive WH phrase. The associate of an A-expletive raises and adjoins to the A-expletive. Likewise, the associate of an A'-expletive, the contentive WH phrase, cyclically moves up and adjoins to the A'-expletive.\(^7\) In this case, absorption takes place: the contentive and the expletive WH phrases merge into a single unary operator.\(^8\)

McDaniel’s account is not without problems, of which I identify four. First, partial-WH-movement constructions do not share all the properties of standard DP-related expletive constructions. One finds only one expletive per chain in existential constructions, whereas in partial-WH-movement constructions there is no limit (from the point of view of competence) to the number of A'-expletives that a partial-WH-movement construction can contain. Compare (4a), repeated here for convenience, with (28):

\[(4)\]  
\[\text{a. } \left[\text{CP}_1 \text{Was } \text{glaubst du } \left[\text{CP}_2 \text{ was Hans meint } \right]\right.\]  
\[\text{WH believe you WH Hans thinks}\]  

\[(27)\]  
\[\text{Was glaubt Uta wen, Karl t, gesehen hat? } \text{(German)}\]  
\[\text{WH believes Uta whom Karl seen hat}\]  
\[\text{‘Who does Uta believe that Karl saw?’}\]
There seems that there appears to be a man in the garden.

It seems that WH expletives are more akin to CP-expletives than to DP-expletives. The latter cannot be repeated but the former can, as long as each enters into a relation with the clause that immediately follows (each bracket is an CP coindexed with its A-expletive):

(29) \[\text{It seems } [\text{i that it appears } [\text{t that it surprised nobody } [\text{s that Bill had lost}]]].\]

Suppose that each WH expletive is taken to enter into a relation with the CP that follows it (each bracket is a CP coindexed with its A'-expletive):

(30) \[\text{Was } [\text{t was } [\text{t welches Buch } t]].\]

Then, the generalisation is that a ‘there’-expletive cannot be repeated because its associate cannot contain a ‘there’-expletive. By contrast, a CP-related expletive can be repeated precisely because its associate can contain the same expletive.

The second problem is that it is not clear under McDaniel’s analysis why the examples in (31) are ungrammatical:
(31)  a. *Was glaubst du was? (German)

   WH believes you what

   'What do you believe?'

   b. *Mit akarsz kivel beszelni? (Hungarian)

   WH want who-with talk-INF

   'With whom do you want him to talk?'

If the WH expletive is like there, i.e. a DP-expletive, then it is expected to be possible to relate the contentive WH phrase to the WH expletive even in non-embedded environments. If was is a CP-expletive, then these data are immediately explained.

The third problem for McDaniel's analysis is this: if the intermediate Spec-CP position that the contentive WH phrase moves to is not the ultimate position for that WH phrase in terms of scope, then why does the WH phrase move to that position in the first place? In minimalist terms (Chomsky 1995), movement must be motivated, it is never free.10

In order to solve this kind of problem, Brody (1995) suggests that the contentive WH phrase in partial-WH-movement constructions moves to an intermediate position to check a focus feature. The idea is that partially-moving WH phrases are licensed directly in the position they are in, in accordance with the principle of Transparency (the contentive category in the chain must be in the highest position licensed by morphology). On Brody's view, the non-contentive WH phrase is either base-generated in, or moved to, Spec-CP from a lower position (no decision is made between the two alternatives), while the contentive WH phrase moves for reasons independent of WH movement.
A variant of Brody's approach to the 'motivation-for-movement' problem can be found in Fanselow and Mahajan (1996). They propose that in a partial-WH-movement construction the contentive WH phrase raises to the intermediate position to check a D/EPP feature. Their argument is based on the well-known fact that in German either the C head or its Spec must always be filled by some overt element. They argue that the contentive WH phrase raises to the intermediate Spec-CP position to fulfil this requirement. The strong feature on the C head thus attracts the contentive WH because it is an element with a D/EPP feature and not because it is an element with a WH feature. Fanselow and Mahajan argue that the fact that it is a WH phrase that moves to the intermediate Spec-CP position is independent of WH checking; other lexical items with a relevant D feature could in principle have moved to that position.

One problem for the view that the contentive WH phrase raises to check a focus or a D/EPP feature is that one would now also expect WH phrases to raise to the intermediate Spec-CP position in multiple-WH questions, if only optionally. However, as Simpson points out, the example in (32a) is ill-formed (the second WH phrase must remain in situ as shown in (32b)).

(32) a. *[\text{Wer} \text{ hat gesagt [\text{mit wem, Hans t,}]}]? \text{(German)}

\begin{tabular}{llll}
\text{wer} & \text{hat gesagt} & \text{mit wem, Hans} & \text{t,} \\
\text{who} & \text{has said} & \text{with whom} & \text{Hans} \\
\text{gesprochen hat]}? & \text{spoken has} \\
\end{tabular}
b. \[\text{[CP}_1 \text{Wer hat gesagt [CP}_2 \text{ dass Hans mit wem who has said that Hans with whom gesprochen hat]? spoken has}

‘Who said that Hans spoke with whom?’

A related problem, also raised by Simpson, is that, although the matrix Spec-CP position in German is a position in which general D features may be checked, it is in fact not possible to topicalise non-WH elements in embedded C positions:

(33) *Johann glaubt, [CP Martin wir gesehen haben]. (German)

Johann believes Martin we seen have

‘Johann believes that it is Martin that we saw.’

(Simpson 2000:177)

The fourth main problem with McDaniel’s analysis is the claim about WH-expletive replacement. Most variants of this approach argue that the substantive WH phrase raises from its intermediate Spec-CP position to replace the WH expletive element at LF. However, as argued by Brody (1995), assuming LF movement from an \( \Lambda' \)-position is problematic (see also Chomsky 1986:52). LF movement from an \( \Lambda' \)-position is not possible, for instance, in English multiple-WH questions. Consider the example in (34):

(34) Who wonders where we bought what?
This is ambiguous between a question asking for the name of the individual(s) who wonder(s) where we bought what (answer: John does) and a question soliciting a pair-list (answer: John wonders where we bought the wine and Carol wonders where we bought the bread). On the first reading, the scope of what coincides with that of where; on the second, with that of who. Thus, an analysis capturing these readings in terms of covert movement would associate them with the LF representations in (35a) and (35b), respectively. But, crucially, the LF representation in (35c), according to which the scope of where coincides with that of who is simply not available in English:

(35)  
   a. \textit{What}_j \textit{who}_i t_i \textit{wonders where}_k \textit{we bought t_j t_k}?  
   b. \textit{Who}_i t_i \textit{wonders what}_j \textit{where}_k \textit{we bought t_j t_k}?  
   c. \textit{*Where}_k \textit{who}_i t_i \textit{wonders what}_j t_k \textit{we bought t_j t_k}?  

One could argue that the ban on LF movement from A'-positions is parameterised: it holds in English, but not in languages in which partial WH movement is possible. However, as Brody (1995:108-109) argues, 'such a parameter seems theoretically undesirable since it is incompatible with the restriction of parameters to (some subpart of) the lexicon. LF movement is not a property of any lexical item, hence we do not expect its characteristics to vary from language to language.' In conclusion, it is likely that the ban on LF movement from an A'-position holds for every language and for every possible construction.

The proposal that the contentive WH phrase moves covertly from the intermediate Spec-CP position is also problematic from a minimalist perspective. Given uniformity of
syntactic operations, overt and covert WH movement should behave identically with regard to weak islands. However, as was discussed previously, covert movement is more restricted than overt movement in partial-WH-movement constructions: negation, for example, appears to block covert, but not overt movement, of the contentive WH phrase. In the Minimalist Program (Chomsky 1995), covert movement translates into feature movement, while overt movement is feature movement + phonological pied-piping. Since covert movement moves a ‘subset’ of the category targeted by overt movement, one would then expect both types of movement to exhibit weak island effects. A similar point can be made about the absence of Adjunct-Island effects in Hungarian partial-WH-movement questions.

The fourth problem (i.e. LF movement from an Λ'-position) applies to all the other direct approaches introduced in this section. Therefore, I will not repeat the argument each time.

3.3.2 Rizzi (1994)

Rizzi (1994) assumes, following McDaniel (1989), that the non-contentive WH element is base-generated in matrix Spec-CP. He proposes that the link between the non-contentive WH element and the contentive WH phrase in a partial-WH-movement construction cannot be established via binding because the expletive operator does not carry an argumental θ-role at any level of representation. This explains why in this construction the well-known argument/adjunct asymmetry is wiped out. Partial-WH-movement constructions with argument WH phrases are as ungrammatical as those with adjunct WH phrases:
Rizzi argues that scope-marking chains are always non-referential and therefore always have the effects of (overt) adjunct extraction.

As he shows, there is an interesting parallel with clefted constituents, which can be negated or questioned, but not negated and questioned at the same time. Rizzi’s idea is that this is because clefted constituents are focused elements: although they look like
arguments superficially, they do not carry a referential $\theta$-role. Hence, they behave like adjuncts rather than arguments. Evidence for this claim comes from examples such as (37d) in which island effects are exhibited:

(37)  
  a. It is JOHN $[\text{CP} \text{that we should help}]$.  
  b. It is not JOHN $[\text{CP} \text{that we should help}]$.  
  c. $[\text{CP}_1 \text{WHO}_i \text{is it} \ T_i \ [\text{CP}_2 \text{that we should help}]]$?  
  d. $*[\text{CP}_1 \text{WHO}_i \text{is it NOT} \ T_i \ [\text{CP}_2 \text{that we should help}]]$?

(Rizzi 1994)

The paradigm holds across languages. All examples are from Rizzi (1994:371).12

(38)  
  a. Ce n’ est pas JEAN $[\text{CP} \text{que nous devrions aider}]$. (French)  
      it Neg is not Jean that we should help  
      ‘It is not JOHN that we should help.’
  b. $*[\text{CP}_1 \text{QUI}_i \text{n’ est-ce PAS} \ T_i \ [\text{CP}_2 \text{que nous devrions aider}]]$?
      who Neg is it not that we should help  
      * ‘WHO is it NOT that we should help?’

(39)  
  a. Non è GIANNI $[\text{CP} \text{che dovremmo aiutare}]$. (Italian)  
      not is Gianni that we should help  
      ‘It is not GIANNI that we should help.’
b. *[CP₁ CHIi NON è ti [CP₂ che dovremmo aiutare]]?
   who not is that we should help
   * ‘WHO is it NOT that we should help?’

(40) a. T is VALÈRE nie [CP dan-k doa gesien een]. (West Flemish)
   it is Valère not that-I there seen have
   ‘It is not VALÈRE that I have seen.’

b. *[CP₁ WIENi is-t NIE ti [CP₂ dan-k doa gesien een]]?
   who is-it not that-I there seen have
   * ‘WHO is it NOT that I have seen?’

As Rizzi points out, the ban against negative clefting with questions appears to be structural. There is indeed nothing wrong with the interpretation of the starred variants of the above (b) sentences: ‘Which individual x, is such that it isn’t x that we should help?’.

As in the case of partial WH movement, the argument/adjunct asymmetry is wiped out with focused WH phrases. Extraction of who is as bad as adjunct extraction in the same context:

(41) a. It is IN THIS WAY [CP that they should behave].

b. *[CP₁ HOWi is it NOT ti [CP₂ that we should behave]]?

The solution to the problem (i.e. absence of argument/adjunct asymmetry) involves the presence of focus. According to Chomsky (1977), a cleft involves a focused element: the
DP. The DP in a cleft is base-generated in focus position and the cleft sentence is predicated of it. Internally to the sentence, WH movement of an empty operator to Spec-CP occurs and a local relation is established in which the operator is construed with the focused element. The focused element can undergo WH movement:

(42) a. It is JOHN [Op; that [we should help t₁]].
   b. [CP₁ WHO; is it t₁ [CP₂ Op; that [we should help t₁]??]

The chain (who, t₁) is not directly associated with a referential θ- role. Therefore, according to Rizzi, binding is impossible, so antecedent-government must apply. Under Relativized Minimality, antecedent-government is blocked if negation or other similar elements intervene. Crucially, no argument/adjunct asymmetry arises in the cases above because the focused element never is an ‘argument’ in the theta-theoretic sense. Although it is nominal, the DP in a cleft sentence is not argumental.¹³

Returning to partial WH movement, if the relation between the non-contentive WH element and the contentive WH phrase is like the relation between who and its trace in (42b), then it cannot be licensed via binding. This would explain the intervention effects.

Let me now highlight the problems that Rizzi’s theory faces. The first is that Relativized Minimality as envisaged by Rizzi (1990) cannot explain all the blocking effects observed in partial-WH-movement constructions. As already mentioned in chapter 2, not all A’-specifiers block the licensing of the non-contentive WH element:
(43) a. \[[\textit{Was}_i \text{ glaubst du } \textit{OFT} [\textit{mit wezi} \text{ Hans } t_i] (\text{German})

Who do you often believe that Hans has spoken to?

b. \[[\textit{Was}_i \text{ glaubst du } \textit{IMMER} [\textit{mit wezi} \text{ Hans } t_i] (\text{German})

Who do you always believe that Hans has spoken to?

On the reasonable assumption that these adverbs occupy an A'-position, (43a) and (43b) should be ill-formed.

In addition, although quantifiers like 'almost everyone' are not A'-specifiers (on Rizzi's account they are IP adjuncts), they nevertheless lead to complete ungrammaticality.\(^{14}\)

(44) a. \[[\textit{Wen}_i \text{ glaubt } \textit{FAST_JEDER} [\textit{CP}_2 t_i'] dass Karl t_i (\text{German})

whom believes almost everyone that Karl

gesehen hat]]?

seen has

b. \textit{b. *[\textit{Was} glaubt \textit{FAST_JEDER} [\textit{CP}_2 wezi} \text{ Karl } t_i]

WH believes almost everyone whom Karl
‘Who does almost everyone believe that Karl saw?’
(Beck 1996:30)

Examples like (45) are cases of scope islands:

(45) a. [CP1 Wen glaubt JEDER [CP2 ti’ dass Karl ti, (German) who believes everyone that Karl

gesehen hat)]?

seen has

(i) ✓ For which pair &lt;x, y&gt;, x a person, y a person, x believes that Karl saw y.

(ii) * Which x, x a person, did every y, y a person, y believes that Karl saw x.

b. [CP1 Was glaubt JEDER [CP2 wen; Karl ti, WH believes everyone whom Karl

gesehen hat)]?

seen has

(i) ✓ For which pair &lt;x, y&gt;, x a person, y a person, x believes that Karl saw y.

(ii) * Which x, x a person, did every y, y a person, y believes that Karl saw x.
(45b) is well-formed on the pair-list interpretation, but not on the individual reading. Although the pair-list reading (according to which, for example, John believes Karl saw Mary, Paul believes Karl saw Kathy, and Anna believes Karl saw Robert) is available in both (45a) and (45b), the individual interpretation (according to which everyone saw the same person) is available only in (45a). This adds support to the claim made in chapter 2 that weak islands are a scope phenomenon.

On Rizzi’s account, (45b) should allow the two interpretations mentioned earlier, since according to him universal quantifiers do not occupy A'-specifiers, but IP-adjoined positions. So even if Relativized Minimality was postulated to apply at LF rather than at S-structure, there would be no way to derive the blocking effect from Relativized Minimality, since universal quantifiers do not occupy an A'-specifier position either at S-structure or at LF.

In summary, the notion of A'-specifier as relevant for Relativized Minimality is problematic for a full account of the blocking effects in partial-WH-movement constructions. Moreover, universal quantifiers create unexpected opacity effects, while not all A'-specifiers are interveners.
3.3.3 FF-movement (Pesetsky 2000, Beck 1996)

Pesetsky (2000) proposes that the contentive WH phrase is related to the WH expletive by covert movement of formal features (FF-movement). The blocking effects in partial-WH-movement constructions are attributed to a condition dubbed the 'Intervention Effect':

(46) \textit{The Intervention Effect Condition} (universal characterisation)

A semantic restriction on a quantifier (including WH) may not be separated from that quantifier by a scope-bearing element.

Pesetsky distinguishes between FF movement and covert phrasal movement, and argues, contra Chomsky (1995), that both are possible. Unlike FF-movement, covert phrasal movement, like its overt counterpart, does not exhibit intervention effects.

Pesetsky’s Intervention Effect Condition is very similar to Beck’s (1996) Minimal Quantified Structure Constraint. Beck suggests that the constraints on partial WH movement in German follow from an island condition on traces that are left behind by covert movement of a semantic restriction to its quantifier. In Beck’s formulation a trace created by LF movement cannot be related to its antecedent across ‘Quantifier-Induced Barriers’ (QUIBS):

(47) a. \textit{Quantifier-Induced Barrier} (QUIB)

The first node that dominates a quantifier, its restriction, and its nuclear scope is a Quantifier-Induced Barrier.
b. **Minimal Quantified Structure Constraint (MQSC)**

If an LF trace $\beta$ is dominated by a QUIB $\alpha$, then the binder of $\beta$ must also be dominated by $\alpha$.

(Beck 1996:39)

As far as I am aware, the conditions in (46) and (47) do not follow from anything and only amount to a restatement of the facts.

In chapter 2 it was argued that the weak island effects exhibited by French single-WH-in-situ questions arose because the stranded indefinite is a scopeless element, and thus behaves like a moved adjunct: its scope is fixed. Adjuncts and scopeless elements in general have well-known properties that give rise to the observed blocking effects. Therefore, it is expected that the intervention effects under consideration should also yield a principled explanation.

Pesetsky’s and Beck’s respective accounts share with McDaniel’s analysis the following problems: (a) movement of the contentive WH phrase is not motivated; (b) there is evidence that $A'$-LF movement from an $A'$-position is impossible; (c) following minimalist assumptions, it is not possible to postulate a condition that holds only of processes in the LF-component, since the derivation from the numeration to LF is assumed to satisfy Uniformity (cf. Chomsky 1995).

### 3.3.4 Checking at a distance (Simpson 1995, 2000)

Simpson’s (1995, 2000) analysis shares with the accounts presented above the idea that the contentive WH phrase has not moved all the way to its scope position, and that
therefore the highest WH element is a WH expletive. In his work on partial WH movement, a distinction is made between WH features and WH operators (or Q features). Contentive WH phrases possess both a WH feature and a WH operator (= Q feature), whereas non-contentive WH elements contain a WH feature only. It is in this sense that they are defective. Moreover, both matrix and embedded $C$ contain a WH feature, but only matrix $C$ contains a Q feature. This has the consequence that the contentive WH phrase must be placed in a domain local to that of matrix $C$ in order for the Q feature of matrix $C$ to be checked.

Simpson assumes that checking of the Q feature is achieved at a distance and that the Checking Uniformity Hypothesis, according to which all feature checking is achieved in a Spec-Head configuration, must be rejected. This is why the contentive WH phrase cannot remain in situ; it needs to be 'close enough' to matrix $C$:

\[(48) \quad *[\text{CP}_1 \text{ Was glaubt Uta } [\text{CP}_2 \text{ Karl wen}_i, (\text{German})
\begin{align*}
\text{WH believes Uta Karl whom} \\
gesehen \text{ hat}]?
\text{seen has}
\end{align*}
\]

‘Who does Uta believe that Karl saw?’

However, recall that in languages like Iraqi Arabic, it is possible for the contentive WH phrase to remain in situ in the embedded clause of a partial-WH-movement question (on the condition that the non-contentive WH element $sh$ is added), cf. Ouhalla (1996). (18b) is repeated here for convenience:
(18) b. Sh-tsawwarat Mona [cp Ali ishtara sheno].

WH-thought Mona Ali bought what

'What did Mona think that Ali bought?'

On Simpson's analysis, (18b) shows that the relation between the non-contentive WH element and the contentive WH phrase is less local in Iraqi Arabic than in German. He accounts for the contrast by assuming that the +WH/+Q C^0 in German has different lexical properties from the +WH/+Q C^0 in Iraqi Arabic. In particular, he proposes that WH expletives may vary as regards the locality constraint they impose on the relation with their associate.

Finally, his analysis accounts for the ungrammaticality of the examples in (31).

(31) a. *Was glaubst du was? (German)

WH believes you what

'What do you believe?'

He assumes that the WH expletive originates in a Case position and that both the substantive and contentive WH phrases compete for the same Case position. Therefore, one NP is left without Case.

Simpson argues that partial-WH-movement constructions in different languages should receive a similar account. The empirical argument for this view is primarily based on the observation that examples like (31a) are as ungrammatical in German as they are in Hungarian (cf. 31b):
Simpson argues that the similarities between partial-WH-movement questions in these languages are overwhelming and analyses German partial-WH-movement questions on a par with their Hungarian counterparts. Let us now turn to a critical evaluation of this proposal.

The first problem with Simpson’s analysis is that it is not clear how it differs from those accounts which assume movement of the intermediate WH phrase or of its FF features. Checking at a distance and F movement are variants of the covert-WH-movement analysis, which has been argued to be untenable (see Brody 1995, 1997).

The second problem is the proposed solution to the Iraqi Arabic puzzle. In that language it is possible for the contentive to remain in situ. Simpson’s solution reduces locality to a lexical, and therefore idiosyncratic, property. This is surprising, since idiosyncracy is not a property that is normally associated with locality. On the contrary, it is precisely the apparent universal character of locality constraints that underlies the view of locality as ‘wired in’, that is a property of the computational system.

The third problem is the solution to the ungrammaticality of (31a). There is no direct evidence that German WH expletives originate in a Case position. I consider an alternative account of the ungrammaticality of (31a) in section 3.5.
Fourth, as will be discussed in the next section in great detail, German behaves differently from Hungarian, in that expletives are not generally allowed with non-interrogatives.

Finally, as shown in section 3.2, there are several substantial differences between properties of partial WH movement in German and Hungarian. This severely undermines the empirical case for a unified analysis of partial WH movement across languages.

3.4 Indirect approaches

3.4.1 Raising of the CP associate (Horvath 1997)

Horvath (1997) views the WH expletive as a *sentential* expletive rather than a DP expletive. This idea originates in Dayal (1994). Horvath’s proposal is however quite different from the one made by Dayal. On Dayal’s view, a partial-WH-movement question asks not one, but two questions, and the details of her analysis are semantic rather than syntactic.

According to Horvath, the non-contentive WH phrase is thus more the A’-equivalent of *it* in (49) than *there* in (26) above:

(49) **It** is clear that John left.

(26) **There** is a man in the garden.
On this account, there is a syntactic relation between the non-contentive WH element and the contentive WH phrase, but not a direct one. The substantive WH phrase moves to the intermediate Spec-CP position to check a [+WH] feature. Overt raising of the contentive WH phrase to the intermediate Spec-CP position results in the WH phrase percolating its WH features to the CP node. Since the dominating CP acquires the feature [+WH], it can move to the matrix Spec-CP position, replacing the WH expletive, and then, like any other WH constituent, type the clause as interrogative.

The WH phrase itself is no longer an operator. In this way, the selectional requirements of the matrix verb are met (intermediate C is not marked [+WH]):

(50) a. \[[CP_1 \text{Was} \text{ glaubt } \text{Uta } [CP_2 \text{ wen} \text{ Karl } t_i]} \text{ (German)}
\text{WH believes Uta whom Karl}
\text{gesehen hat ]}\text{?}
\text{seen has}

LF b. \[[CP_1 [CP_2 \text{wen} \text{ Karl } t_i \text{ gesehen hat}]_j \text{ glaubt Uta } t_j ]\text{?}
\text{WH Karl seen has believes Uta}

‘Who does Uta believe that Karl saw?’

Stepanov (2000) follows this analysis for both Russian and Polish. (51a) and (51b) are his LFs for (20b) and (21b) respectively, the latter examples are repeated here for convenience:
Horvath (1997) (see also Fanselow and Mahajan 1996) claims that the necessity of pied-piping the whole embedded clause is corroborated by data from Basque. In addition to ordinary full WH movement, Basque employs an overt-clausal-pied-piping strategy of
WH-question formation. In the latter, the WH phrase moves to the Spec-CP position within this clause first, before the entire clause moves to matrix Spec-CP, from where the WH phrase can take scope (cf. Ortiz de Urbina 1990):^^15

(52) [CP [Nor etorriko d-ela], esan du Mirenek uste (Basque)]

who come AUX-that said has Miren think
du-ela Peruk t.]

AUX-that Peruk

‘Who did Mary say that Peter thinks will come?’

(Simpson 1995:199)

Under the proposed hypothesis, the difference between Basque and German is that Basque allows overt clausal pied-piping, but not the presence of a non-contentive WH element, whereas German has a non-contentive WH element and clausal pied-piping is covert. In short, overt clausal pied-piping and non-contentive WH phrases are mutually exclusive.

The operator-feature-percolation mechanism is argued to be independently motivated. According to Ortiz de Urbina (1990), (53a) is grammatical because the negative feature is percolated up the node immediately dominating the negative quantifier. The NPI can thus be licensed (c-commanded) by the negative quantifier. (53b) is ill-formed because the negative quantifier does not c-command the NPI. Operator-feature percolation would only involve the node immediately dominating the negative quantifier, i.e. PP, so the c-command requirement on NPI licensing fails to be met:^^16
Further evidence for the claim that it is the embedded CP, rather than the contentive WH phrase, that is the associate of the WH expletive comes from Hungarian. According to Horvath (1997), the non-contentive WH phrase is an A-expletive rather than an A’-expletive, since it is case marked and shows agreement. She proposes that the non-contentive WH element originates in a non-0-marked A-position, presumably Spec-AgrsP and Spec-AgroP, for nominative and accusative case, respectively. The embedded CP is in a θ position.

The evidence Horvath provides for the claim that WH expletives originate in a non-θ position is as follows. Starting from the assumption that variable binding is not possible into an adjunct, she claims that since variable binding is possible in partial-WH-movement questions, the embedded clause cannot be an adjunct. However, the assumption that variable binding is not possible across an adjunct does not appear to be correct:

(54) Every student left after he finished his exam.

The grammaticality of (54) suggests that variable binding can penetrate islands. This invalidates the argument for the argumenthood of what appear to be complement clauses in Hungarian.

Secondly, Horvath claims that WH extraction from tensed CPs in Hungarian is possible. However, it turns out that whereas there are no island effects when no expletive is present. When the expletive is present, the CP is an island:
(55) Whom did you think I met?

(56) Who with thought you that met-I

(57) a. With whom do you want that I meet?

b. With whom would you like me to meet?

(58) a. Whom would you like me to meet?

b. With whom would you like me to meet?
Horvath’s proposal that the scope marker originates in an A-position is supported by the observation that in Hungarian, non-contentive WH phrases bear non-inherent Case (e.g. Accusative), and trigger appropriate independent object agreement:

(59)  
\[
\text{[CP1 } \text{Mit}_i \text{ mondtál } t_i \text{ AGR [CP2 hogy } \text{kinek}_j \text{ vett }} \text{ (Hungarian)}
\]

\[
\text{WH-ACC said-2SG-indef.DO that who-DAT bought}
\]

János \text{ színházjegyet } t_j]?\]

John-NOM \text{ theatre-ticket-ACC}

Literally: ‘What did you say for whom John bought a theatre ticket?’

(Horvath 1997:527)

Horvath argues that the WH expletive could not have inherited its Case by transmission from the lower WH phrase, with which it allegedly forms a chain, since the Cases they manifest are distinct and incompatible.17

Moreover, she claims that the object-agreement effect on the verb observed in the examples in (60) cannot be attributed to some transmission of agreement from the lower clause containing the contentive WH phrase, since the inflection is different:

(60)  
\[
\text{a. Tudják AGR [CP hogy } \text{melyik fiú}_i \text{ szereted } t_j] \text{ (Hungarian)}
\]

\[
\text{know-3PL-def.DO that which boy-ACC like 2SG-def.DO}
\]

‘They know (def.) which boy you like (def.)’
b. \([\text{CP}_1 \text{Mit}_i \text{ tudnak } t_i \text{ /}^* \text{ tudják, } \text{AGR} \text{ WH}_{-\text{ACC}} \text{ know-3PL-indef}_D O \text{ /}^* \text{ know-3PL-def}_D O \text{ [CP}_2 \text{ hogy melyik } \text{ fiút}_j \text{ szereted } t_j]]?)\]

that which boy-ACC like-2SG-def.DO

Literally: ‘**What** do they know (indef.) which boy you like (def.)?’

(Horvath 1997:527)

In Hungarian, the case received by the scope-marking WH phrase always corresponds to the case received by the non-WH expletive associated with the embedded clause in the corresponding non-interrogative construction. So, from this point of view, WH scope markers are just like any other sentential expletives in Hungarian:

(61) a. \([\text{CP}_1 \text{ Mitol}_i \text{ felsz } t; \text{AGR } [\text{CP}_2 \text{ hogy } \text{kit}_j \text{ latott } \text{Mari } t_j]]?)\text{ (Hungarian)}\]

WH-from are-afraid-you that who saw Mari

‘Who are you afraid that Mari saw?’

b. Felsz \text{ attol } [\text{CP hogy } \text{Mari latta } \text{Petert}].

are-afraid-you that-from that Mari saw Petert

‘You are afraid that Mari saw Petert.’

(Brody 1997: 24)

(62) a. \([\text{CP}_1 \text{Mi}_i \text{ nyilvanvalo } t; \text{AGR } [\text{CP}_2 \text{ hogy } \text{kit}_j] \text{ (Hungarian)}\]

WH-NOM is obvious that who
atott Mari tij]?
saw Mari

‘Who is it obvious that Mari saw?’

b. Nyilvanvalo az [cp hogy Mari latta Petert].
is-obvious that-NOM that Mari saw Petert

‘It is obvious that Mari saw Petert.’

(Brody 1997: 24)

(63) a. [cp1 Miért; ment el Janos t; AGR [cp2 mert kivel;] (Hungarian)

what for went away Janos because with whom talked Mari tij]?

b. Janos azert ment el [cp mert Mari beszelt Peterrel].

Janos that-for went away because Mari talked Peterl-with

‘John left because Mari talked to Petert.’

(Brody 1997: 24)

Horvath (1997) applies her analysis to Hungarian, but argues that different languages have
different WH-scope-marking strategies (see also Beck and Berman 1996). According to
Horvath, WH scope marking does not arise from some unitary parametric source, such as
the availability of a WH expletive morpheme. Rather, it seems to be parasitic on
independent syntactic properties exhibited by the individual languages.
Horvath's analysis attributes the partial-WH-movement strategy in Hungarian to: (a) the mechanism of highly restricted operator-feature transfer to CP, which underlies clausal pied-piping (overtly in languages like Basque); and (b) to the independent existence of expletives associated with CPs in that language, in conjunction with expletive replacement, an LF process instrumental in the satisfaction of Full Interpretation.

On her view, the main differences between Hungarian and German are: (a) the lack of non-interrogative expletives in German versus the presence of such items in Hungarian; (b) the lack of WH-feature percolation in German versus the availability of such percolation in Hungarian. Although (b) is difficult to check, (a) is more straightforward. In German, non-interrogative expletives are possible with verbs like believe, know, regret and expect:

(64) a. Ich glaube es [CP dass Peter krank ist].
   I believe it that Peter ill is
   'I believe that Peter is ill.'

b. Ich weiss es [CP dass Peter krank ist].
   I know it that Peter ill is
   'I know that Peter is ill.'

c. Ich bedauere es [CP dass Peter krank ist]?
   I regret it that Peter ill is
   'I regret that Peter is ill.'
d. Ich erwarte es [CP dass Peter krank ist].

I expect it that Peter ill is

'I expect that Peter is ill.'

On the other hand, non-interrogative expletives are impossible with verbs like think or say:

(65) a. *Ich denke es [CP dass Peter krank ist].

I think it that Peter ill is

'I think that Peter is ill.'

b. *Ich sage es [CP dass Peter krank ist].

I say it that Peter ill is

'I say that Peter is ill.'

Therefore, expletives are possible only with a handful of verbs.

On the other hand, in Hungarian, non-interrogative expletives are generally available, except when the expletive receives accusative Case. If the expletive receives a Case other than accusative, it cannot be omitted. The expletive is obligatorily in the focus position, it takes stress. This is the neutral way to say 'Peter believes that...', 'John thinks that...'. The non-neutral way is to focus the subject, thus the expletive does not receive stress, and is therefore not focused:18
In Hindi non-interrogative expletives are available with think. The language thus behaves like Hungarian in that non-interrogative expletives are required across the board, not just with certain verbs (they are nevertheless optional):

(66) a. Peter azt hiszi, [CP hogy Mari] (Hungarian)  
Peter it-ACC believes that Mari egy boszorkany].  
'a witch  
'Peter believes that Mari is a witch.'

b. Peter megbanta azt [CP hogy jott el].  
Peter PRT-regretted it-ACC that came PRT  
'Peter regretted that he came.'

c. Peter gondolta azt [CP hogy Mari egy boszorkany].  
Peter thought it-ACC that Mari a witch  
'Peter thought that Mari was a witch.'

(67) a. Raam-ne yeh socaa [CP ki Mohan-ne gaaRii Thiik kii] (Hindi)  
Raam it think that Mohan car fixed  
'Raam thinks that Mohan fixed the car.'

b. Jaun yeh jaantaa hai [CP ki Merii kis-se baat karegii  
John it know-PR that Mary who-INS talk do-P  
'John knows who Mary will talk to.'
Second, whereas in German the relation between the non-contentive WH element and the contentive WH phrase exhibits intervention effects, this is not the case in Hungarian, unless verbs like think are used. Compare the set of examples (5b), (10b), and (11b) with the set (12), (13) and (15b), all repeated here for convenience:

(5) b. *[\textsubscript{CP\textsubscript{1}} \textit{Was} glaubst du \textit{Nicht} \textsubscript{CP\textsubscript{2}} mit \textit{wem}\textsubscript{i}] (German)

WH believe you not with whom

Hans \textsubscript{t\textsubscript{i}} gesprochen hat]]? Hans spoken has

‘Who don’t you believe that Hans has spoken to?’ (inner island)

(Beck 1996:3)

(10) b. *[\textsubscript{CP\textsubscript{1}} \textit{Was}\textsubscript{i} fragt sie sich \textsubscript{CP\textsubscript{2}} warum\textsubscript{j}] (German)

whom wonders she herself why

Hans \textsubscript{t\textsubscript{j}} glaubt \textsubscript{CP\textsubscript{3}} \textit{wem}\textsubscript{i Jakob \textsubscript{t\textsubscript{i}} gelobt hat}]? Hans believes when Jakob praised has

‘Whom does she wonder why Hans thinks Jakob praised?’ (WH island)

(11) b. *\textit{Was} ist er glücklich \textit{wie} weil \textit{er gestern}

WH is he happy how because he yesterday
Fußball gespielt.

football played

* 'How is he happy because he played football yesterday?'  
(adjunct island)

(12)  
[CP1 Mit NEM ismert be János [CP2 hogy (Hungarian)
  WH not admitted-\textit{indef} Janos that
  hányszor hamisította az aláírásodat}?]

how forged the signature

'How didn't János admit that the signature was forged?'  
(inner island)

(13)  
*[[CP1 Mit NEM gondolsz [CP2 hogy kivel (Hungarian)
  WH not you think that with whom
  beszélt Mari]?]

spoke Mari

'With whom didn't you think that Mari spoke?'  
(inner island)

(15)  
\textit{Miért voltál szomorú mert hogy} (Hungarian)

why were-\textit{2SG} sad because how

viszonyultak hozzád?

related-\textit{3PL} to-you

* 'How you were sad because they had related to you?'  
(inner island)
According to Horvath, since, in Hungarian, the relation between the expletive and the embedded clause is not an A'-relation negation does not create intervention effects. She argues that partial WH movement is licensed differently in German. The WH expletive in that language is linked, not to the CP, but to the intermediate WH phrase. In this case, the WH expletive and its associate are licensed via A'-movement, hence the island effects.

Another advantage of Horvath’s analysis is that it accounts well for the ungrammaticality of (31b) repeated here. Under her approach, (31b) is ill-formed because both the contentive and the non-contentive elements compete for the same case position:

(31) b. *Mit akarsz kivel beszélni? (Hungarian)

   WH want who-with talk_INF

   ‘With whom do you want him to talk?’

I shall use Horvath’s basic insight that Hungarian and German have at their disposal different partial-WH-movement strategies. However, the difference between hers and the account that I shall propose is that, whereas she assumes that in German the WH expletive is a DP expletive (it is linked to the WH phrase), I will assume that the WH expletive in German is, like its Hungarian counterpart, a CP expletive.

Although Horvath’s analysis accounts well for the data, there is one major problem which needs to be highlighted. As she acknowledges herself, the WH expletive cannot be a ‘pure’ expletive in the sense of Chomsky (1995), such as there in English. A WH expletive in a partial-WH-movement construction has some non-categorial features, including Case and WH. As Horvath admits, this fact raises the issue of what drives the expletive-
replacement process she assumes. It cannot be Case, since the WH expletive has Case already. It cannot be WH, since morphologically the WH expletive has a WH feature, and so can check the WH feature on C. The only way to circumvent the problem is to make a distinction between EPP and WH features, and claim that although the WH expletive looks like it has a WH feature (morphologically), it nevertheless lacks one. So, suppose the WH expletive checks the EPP feature of matrix C, but not the WH feature; then, the embedded clause could raise and replace the WH expletive in order to check this WH feature. Although this might technically work, it would amount to a stipulation and not a very nice one.

An alternative view takes WH expletives in fact to be contentives (cf. Brody 1997). This is the view that I shall adopt in section 3.5. The next section introduces the non-deficiency school. The contents of that section will pave the way for my analysis of partial WH movement.

3.4.2 Brody (1997)

Brody (1997) abandons the idea that the contentive WH phrase in a partial-WH-movement construction moves to the intermediate Spec-CP position to check a strong focus feature in intermediate C (cf. Brody 1995). Rather, the substantive WH phrase is now assumed to move to the intermediate position to check the +WH feature on C. It is thus already licensed in the intermediate Spec-CP position. The non-contentive WH element checks both the EPP and the WH features of matrix C. Non-contentive WH elements are not taken to be defective. Hence, there is no need for either the WH phrase or the whole CP to move at LF. As in Brody (1995), the idea is that intermediate WH
phrases are licensed directly in the position they are in, in accordance with the principle of Transparency (the contentive category in the chain must be in the highest position licensed by morphology). As for the non-contentive WH phrase, it is either base-generated or moved to Spec-CP from a lower position (no decision needs to be made between the two alternatives).

The intermediate WH feature checked by the contentive WH phrase\(^9\) is later disregarded since, according to Brody, both WH features merge through CHAIN construction at LF (a \textit{CHAIN} is an interpretive rather than a syntactic chain). This is equivalent to absorption. In sum, the non-contentive WH element is related to the contentive WH phrase indirectly, but no LF pied-piping of the whole clause is necessary.

Brody's proposal also differs from Horvath's in that he takes the A-position copy of the WH scope marker to be linked to the embedded WH head, and not to the whole embedded clause. Brody argues that this claim is supported by the fact that in partial-WH-movement constructions, the WH chain in the embedded clause must be overt. Thus, there would be an analogy with the English clausal expletive \textit{it}, which must similarly be associated with an overt complementizer or WH phrase in the associated clause (these are Brody's judgements, not mine):

(68) a. It is obvious *(that) Mary left.
b. It is possible *(for) Mary to go.
c. It is unclear *(if/whether) Mary should go.
d. It is unclear *(who) Mary saw.
The problem with the analogy is that the chain is not overt in some of the languages that allow partial WH movement, e.g. Iraqi Arabic. Second, it is in fact possible in English to drop the complementizer that follows raising verbs and raising adjectives:

(69) a. It seems John has left.
    b. It is likely John will have left by then.

It is also possible for that to be deleted after a noun complement:

(70) The fact I can’t spell is disturbing.

In sum, the argument put forward by Brody in support of his view does not stand up to scrutiny.

Note that in German, the complementizer dass is not possible in embedded clauses in partial-WH-movement questions; therefore it must be the case that the WH expletive is linked, not to the WH head of the embedded clause, but to the whole CP. As has been already pointed out, the fact that dass is not possible in embedded clauses in partial-WH-movement questions indicates that the intermediate C is marked WH.

3.4.3 Interim conclusion

Let us take stock. There are two main approaches to partial WH movement: one approach has it that the higher WH element is an interrogative expletive, while the other claims that it is in fact a substantive element. The latter approach has the advantage that no LF A’-movement from an A’-position is necessary. This is a welcome result, since this type of
movement is not available in natural languages. It would seem then that an approach according to which the higher WH element is a contentive element is on the right track. More importantly perhaps, it should be clear at this point that the indirect approach has clear advantages over the direct one. The scope marker is not associated with a DP, but with a CP. In the next section, I spell out the details of my own analysis.

### 3.5 A solution in terms of scope

#### 3.5.1 The relation between the two WH elements

Following Brody (1997), I assume that the contentive WH phrase moves to an intermediate Spec-CP to check a WH feature. This explains why the non-contentive WH phrase cannot remain in situ in German or in Hungarian, a strong WH feature in intermediate C needs to be checked. This WH feature is later disregarded.

Further, I take the higher WH element to be a contentive WH phrase. I assume that it is base-generated in matrix Spec-CP in German. In contrast, in Hungarian, it moves from an underlying Case position. In both cases, the WH phrase checks the WH feature of matrix C. In Hungarian, there is evidence that the higher WH element originates in an underlying Case position, since in that language so-called WH expletives receive Case. In contrast, in German there is no such evidence. I therefore assume that in this case WH expletives are base-generated in matrix Spec-CP. (61)-(65) are repeated here for convenience.20
(61) a. \[\text{[CP1 Mitol, felsz t, [CP2 hogy kit, latott Mari t]]?} \quad \text{(Hungarian)}\]

\[\text{WH-from are-afraid-you that who saw Mari} \]

‘Who are you afraid that Mari saw?’

b. Felsz \text{ attol [CP hogy Mari latta Petert].} \\

\[\text{are-afraid-you that-from that Mari saw Petert} \]

‘You are afraid that Mari saw Petert.’

(Brody 1997: 24)

(62) a. \[\text{[CP1 Mi, nyilvanvalo t, [CP2 hogy kit, latott Mari t]]?} \quad \text{(Hungarian)}\]

\[\text{WH-NOM is obvious that who} \]

\[\text{atott Mari t]?} \]

\[\text{saw Mari} \]

‘Who is it obvious that Mari saw?’

b. Nyilvanvalo \text{ az [CP hogy Mari latta Petert].} \\

\[\text{is-obvious that-NOM that Mari saw Petert} \]

‘It is obvious that Mari saw Petert.’

(Brody 1997: 24)

(63) a. \[\text{[CP1 Miert, ment el Janos t, [CP2 mert kivel, latott]}} \quad \text{(Hungarian)}\]

\[\text{what for went away Janos because with whom} \]
talked Mari

‘With whom did Janos leave because Mari talked?’

b. Janos azert mentel [CP mert Mari beszelt Peterrel].

Janos that-for went away because Mari talked Petert-with

‘John left because Mari talked to Petert.’

(Brody 1997: 24)

(64) a. Ich glaube es [CP dass Peter krank ist].

I believe it that Peter ill is

‘I believe that Peter is ill.’

b. Ich weiss es [CP dass Peter krank ist].

I know it that Peter ill is

‘I know that Peter is ill.’

c. Ich bedauere es [CP dass Peter krank ist]?

I regret it that Peter ill is

‘I regret that Peter is ill.’

d. Ich erwarte es [CP dass Peter krank ist].

I expect it that Peter ill is

‘I expect that Peter is ill.’
(65) a. *Ich denke es [CP dass Peter krank ist].
I think it that Peter ill is
'I think that Peter is ill.'
b. *Ich meine es [CP dass Peter krank ist].
I say it that Peter ill is
'I say that Peter is ill.'

In sum, the way the 'scope marker' (this is now a neutral term) relates to the embedded clause in German is different from the way the scope marker relates to the embedded CP in Hungarian. Whereas in German the scope marker links with the embedded CP from an A'-position (cf. (71a)), in Hungarian the scope marker links with the embedded clause from an A-position (cf. (71b)).

\[ \downarrow \]

(71) a. \([\text{Spec-CP} \ WH \ldots [\text{embedded CP}]\]

\[ \downarrow \]

b. \([\text{Spec-CP} \ WH_i \ldots t_i \ldots [\text{embedded CP}]\]

This idea is a variant of Horvath's proposal. The difference between her proposal and the one presented here is that: (a) on her view scope markers are expletives, whereas on my account they are not; (b) she argues that in German the scope marker is a DP expletive, whereas I assume that the scope marker in German is linked to the embedded clause (as in
the case of Hungarian). This way I can account for why (31a), repeated here for
convenience, is ungrammatical in German:

(31) a. *Was glaubst du was? (German)

WH believes you what

'What do you believe?'

Horvath cannot explain the ungrammaticality of (31a), since on her view the scope marker
is a DP expletive.

In addition, the fact that in both Hungarian and German the higher WH element is
linked to a CP explains why an intermediate C position cannot be "skipped"; (2) and (3)
are repeated here for convenience:

(2) a. [CP1 Was glaubst du [CP2 mit wem_i Hans meint] (German)

WH believe you with whom Hans thinks

[CP3 ti, dass Jakob ti gesprochen hat]]?

that Jakob spoken has

b. *[CP1 Was glaubst du [CP2 ti, dass Hans meint

WH believe you that Hans thinks

[CP3 mit wem_i Jakob ti spoken hat

with whom Jakob gesprochen hat]]?

'With whom do you believe that Hans thinks that Jakob spoke?'

(Simpson 1995:106)
Following Brody, it can be assumed that in Hungarian the higher WH element is linked to the WH complementizer of the embedded clause. This complementizer is always present in such environments. In German, a complementizer is not allowed in embedded clauses (the intermediate C then must be WH).

I further assume that in Hungarian, the embedded CP forms a single syntactic unit with the scope marker. Contrary to Horvath (1997) I assume that the embedded CP is an adjunct. On her view, it is the embedded CP, not the expletive, that receives a θ-role. On my account, it is the DP (of which the WH element is the head) that receives the θ-role. The CP is an adjunct and does not receive a θ-role. Recall that it is not possible to WH extract from finite CPs in Hungarian when an expletive is present. See examples (56) and (58a) above.
Evidence for the claim that the embedded CP forms a single syntactic unit with the WH scope marker comes from the fact that an expletive like attol can move along with a CP to a topic position:\(^2\)

(72) Attol, hogy Peter eljon, senki nem felt. (Hungarian)
that-from that Peter here-come nobody not afraid-of

'The possibility that Peter might come didn't worry anybody.'

Horvath considers the possibility that the expletive and the embedded CP might form part of one and the same DP. In a footnote, she entertains the possibility that her idea of CP raising at LF might be replaced by a DP analysis (whereby the higher WH element is merged with the embedded CP within one DP) of the kind proposed here (without the idea that the \(\emptyset\)-role is assigned to the DP). I think the DP analysis is an idea worth pursuing, since it would have the advantage of getting rid of an otherwise non-minimalist kind of raising (i.e. raising of a whole clause at LF). Under minimalist assumptions covert movement equals feature movement. Movement of a whole clause at LF does not equal movement of a feature.

Horvath does not fully endorse the alternative that views the higher WH element and the embedded clause as forming a DP, because she claims that the WH scope marker never seems to surface together with (i.e. adjacent to) its alleged complement CP. But (72) is a good example where the WH 'expletive' and the CP surface together and are adjacent.
I shall therefore assume that the higher WH element and the CP with the lower WH phrase are generated as a single DP argument of the matrix verb (cf. Kiss 1987), where *mit* is the head of the DP while the CP is an adjunct.

In German, since there is no evidence for the idea that the WH scope marker forms a single syntactic unit with the embedded CP, I assume that there is no DP argument in that language and that therefore the higher WH element and the embedded CP do not form a single unit.

Lexically, the German scope marker may well be the same element as the Hungarian scope marker (in essence a standard WH phrase). However, syntactically these elements are licensed differently, hence the various contrasts between the two languages previously highlighted.

(73)  

(Hungarian strategy)

(74)  

(German strategy)

Antecedent-government is not relevant in the case of Hungarian, because in this instance the relation is an A-relation.
Since non-contentive WH elements are invariably CP expletives, the ungrammaticality of the examples in (31) is explained: here the expletive enters into a relation with a DP:

(31) a. *Was glaubst du was? (German)
   WH believes you what
   ‘What do you believe?’

b. *Mit akarsz kivel beszélni? (Hungarian)
   WH want who-with talk-INF
   ‘With whom do you want him to talk?’

3.5.2 Absorption

At this point, the configuration envisaged for partial-WH-movement constructions still leaves us with two WH questions rather than one. I assume that the two WH elements undergo absorption. Following Brody (1997), I assume that the intermediate WH feature is deleted, with the added proviso that the semantic restriction of the higher WH phrase is also deleted. Once the two WH elements have merged into one, the following configuration is obtained:

(75) Was (+WH) ... Wen (+WH) ...

The quantification yielded in partial-WH-movement questions is thus non-canonical in that, as in the case of French WH1 in situ, a WH operator is separated from its semantic restriction.
3.5.3 Accounting for the intervention effects

I argue that the blocking effects follow from the fact that the scope of the stranded WH phrase is fixed. In chapter 2, a theory of weak islands in terms of scope was put in place. In the present section, it is demonstrated that the same theory can be extended to partial-WH-movement questions.

Recall that while arguments are subject to (76a), adjuncts are subject to (76b):

(76) \textit{Scopal ECP}

a. If the movement of a phrase and the scope assigned to it do not coincide, then the phrase must be connected to its trace via (the equivalent of) antecedent-government.

b. If the movement of a phrase and its scope coincide, then its trace can be licensed by (the analogue of) lexical government.

Recall also from chapter 2 that the antecedent-government condition was reduced to a set of conditions on scope - the Nested Scope Constraint and the Constraint on Skolem Dependence (CSD):

(77) a. \textit{Nested Scope Constraint} (NSC)

\[ XP, \ldots [ \ldots YP :i \ldots ] :k \text{XP depends on } k \] (where \( :i \) is the scope of \( XP \) and \( :k \) the scope of \( YP \)).

b. \textit{Constraint on Skolem Dependence} (CSD)

A lower-order term cannot depend on a higher-order term.
The NSC makes sure that the scope of adjuncts is nested under the scope of other scopal elements in the sentence. As for the CSD, this ensures that lower-order elements cannot depend on higher-order elements, and that only higher-order elements can depend on lower-order elements (table 2.1, repeated here):

<table>
<thead>
<tr>
<th>Type of term</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operators</td>
<td>WH, focus, Neg</td>
</tr>
<tr>
<td>Third-order term</td>
<td>Predicates over sets of sets of individuals</td>
</tr>
<tr>
<td>Second-order term</td>
<td>Predicates over a set of individuals</td>
</tr>
<tr>
<td>First-order term</td>
<td>Lexical predicates</td>
</tr>
</tbody>
</table>

With the background in place, it is now possible to account for the blocking effects observed in partial-WH-movement constructions.

Universal quantifiers are not interveners because the stranded indefinite can depend on them (the indefinite introduces a Skolem function). The pair-list reading is possible because universal quantifiers are of the same order as adjuncts/scopeless elements. (45b) is repeated here for convenience:

\[
\text{[CP}_{1}\text{ Was}_{i} \text{ glaubt JEDER}_{i} [t_{i} \text{ SK } f_{i}(x_{j})] [\text{CP}_{2}\text{ wen}_{i} \text{ Karl } t_{i} \text{ gesehen hat}]]
\]

‘Who does everyone believe that Karl saw?’

‘Which is the Skolem function \( f \), such that everyone believes that Karl saw \( f(x, \text{persons}) \)?’

\( f \): a Skolem function from people into the things they saw.
(43a) and (43b) are grammatical because the adverbs of quantification *oft* and *immer* are suitable elements on which the stranded indefinite in the non-contentive WH element can depend:

\[
\begin{align*}
\text{a.} & \quad \text{Was glaubst du [t, SK } f_t(x_j)] [\text{mit } wem, \text{ Hans t} \ldots]? \\
& \quad \text{'Who do you often believe that Hans has spoken to?'} \\
& \quad \text{'Which is the Skolem function } f \text{ such that you often believe that Hans has spoken to } f (x, \text{persons)?'} \\
& \quad f: \text{ a Skolem function from people into the people they spoke to.}
\end{align*}
\]

\[
\begin{align*}
\text{b.} & \quad \text{Was glaubst du [t, SK } f_t(x_j)] [\text{mit } wem, \text{ Hans t} \ldots]? \\
& \quad \text{'Who do you always believe that Hans has spoken to?'} \\
& \quad \text{'Which is the function } f \text{ such that you always believe that Hans has spoken to } f (x, \text{persons)?'} \\
& \quad f: \text{ a Skolem function from people into the people they spoke to.}
\end{align*}
\]

The stranded indefinite cannot depend on *fast jeder* because *fast jeder* is of a higher order than the indefinite in the non-contentive WH element. This is why (44b), repeated here, is ungrammatical:
(44) b. *[[CP1 Was, glaubt FAST JEDER] [t; SK f; (x_i)] [CP2 wen; Karl t; ...]]?

‘Who does almost everyone believe that Karl saw?’

‘Which is the function f, such that almost everyone believe that Karl saw f (x, persons)’

f: a Skolem function from people into the things they saw.

Negation creates blocking effects because the stranded indefinite cannot depend on the negation, a higher-order term. (5b) and (6b) are repeated here:

(5) b. *[[CP1 Was, glaubst du NICHT] [t; SK f; (x_i)] [CP2 mit wen; Hans t; ...]]?

‘Who don’t you believe that Hans has spoken to?’

‘Which is the function f, such that you don’t believe that Hans has spoken to f (x, persons)’

f: a Skolem function from people into the the people they spoke to.

(6) b. *[[CP1 Was, glaubt NIEMAND] [t; SK f; (x_i)] [CP2 wen; Karl t; ...]]?

‘Who does nobody believe that Karl saw?’

‘Which is the function f, such that nobody believes that Karl saw f (x, persons)’

f: a Skolem function from people into the people they saw.
In Hungarian, there are no island effects because the relation between the scope marker and its associate has in its origin in an A-relation. The quantification yielded in this case is canonical in that there is no WH operator separated from its semantic restriction. The indefinite in the intermediate WH phrase is not just a predicative indefinite, but can be interpreted with either wide or narrow scope: either it introduces an existential quantifier or a Skolem function. This means that no intervention effects are expected.

This concludes our analysis of the blocking effects in partial-WH-movement constructions. In the next section, the discourse properties of partially-WH-moved questions are briefly discussed.

3.6 Discourse properties of partially WH-moved questions

Like French WH questions in situ, partial-WH-movement constructions have special discourse properties. When full WH movement occurs, the indefinite with which the WH operator is associated is part of the focus structure. When partial WH movement takes place, the indefinite with which the WH operator is associated is a defocalised element; it is no longer part of the focus structure, but is instead a topic. Partial-WH-movement constructions ask questions whereby a situation and its protagonists are familiar to the participants. The discourse representation for full WH movement versus partial WH movement introduced in chapter 2 is repeated here as (78a) and (78b), respectively:
(78) a. **Wen** glaubt **Uta** dass **Karl** gesehen hat?

\begin{align*}
\text{whom believes} & \quad \text{Uta that} & \quad \text{Karl seen has} \\
\text{‘Who does Uta believe that Karl saw?’}
\end{align*}

<table>
<thead>
<tr>
<th>OPERATOR</th>
<th>RESTRICTION</th>
<th>SCOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wen</strong></td>
<td>x, x a person</td>
<td>glaubt Uta dass Karl gesehen hat?</td>
</tr>
<tr>
<td>FOCUS</td>
<td></td>
<td>TAIL</td>
</tr>
<tr>
<td>New information</td>
<td></td>
<td>Neither new nor old information</td>
</tr>
</tbody>
</table>

b. **Was** glaubt **Uta** wom **Karl** gesehen hat?

\begin{align*}
\text{WH believes} & \quad \text{Uta whom} & \quad \text{Karl seen has} \\
\text{‘Who does Uta believe that Karl saw?’}
\end{align*}

<table>
<thead>
<tr>
<th>OPERATOR</th>
<th>RESTRICTION</th>
<th>SCOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Was</strong></td>
<td>wen</td>
<td>Karl gesehen hat?</td>
</tr>
<tr>
<td>x, x a person</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOCUS</td>
<td>TOPIC1</td>
<td>TOPIC2</td>
</tr>
<tr>
<td>New information</td>
<td>Old information</td>
<td>Old information</td>
</tr>
</tbody>
</table>
3.7 Summary and concluding remarks

The goal of the present chapter was to account for the weak island effects found in partial-WH-movement constructions and to provide a theory of the relation between the non-contentive WH element and the substantive WH phrase. The way I accounted for the weak island effects did not rely on movement, but on function dependence. Central to the approach presented here was the idea that a partial-WH-movement construction is a split construction in which the scope of the indefinite contained in the contentive phrase is fixed. It was argued that while movement of the contentive and movement or base-generation of the non-contentive WH elements is driven by feature checking, and is thus done in the syntax, the fact that negation and such like elements create weak island effects was best explained in terms of scope. Finally, it was concluded that whether the contentive WH phrase remains in situ or moves along with the WH operator depends entirely on discourse choices. Full movement of the substantive WH phrase is thus not triggered by any strong feature, but is pragmatically driven. The data introduced in the present chapter thus constitute further support for the idea that not all movement phenomena are morphologically driven.

It was argued that the way the scope marker is related to the WH phrase in the embedded clause in German is different from the way the scope marker is related to the WH phrase in Hungarian. While in German the relation is an A’-dependency, in Hungarian the relation between the higher WH element and the WH phrase in the embedded CP is via an A-dependency. Many of the contrasts between German and Hungarian with regard to island effects fall out from this difference in syntactic representation. I tentatively argued
that full versus partial movement stems from different discourse properties. The hypothesis needs to be tested properly and much further research is thus needed.

---

1 I use the terms expletive, non-contentive and scope marker interchangeably.

2 Note that (12) involves an adjunct WH phrase. Horvath (1997) does not introduce data with argument WH phrases on the grounds that the judgments are not clear. However, Kriszta Szendroi (p.c.) informs me that the equivalent of (12) with an argumental WH phrase is also well-formed:

(i) [\text{CP1} Mit nem ismert be János \text{CP2} hogy (Hungarian)]

\text{WH not admitted-\textit{indef}} János \text{that} ki hamisitotta az alairasodat?

\text{who forged the signature} ‘Who didn’t John admit to forged your signature?’

3 \text{Miért is, according to Horvath}, a scope marker. It consists of \textit{mi + ért} = ‘what-for’.

4 In Russian and Polish, partial WH movement is in fact rather limited. It is only possible with predicates like ‘think’ . It is not possible with verbs like ‘say’ (cf. Stepanov 2000).

5 \textit{Kyaa} literally means ‘what’.

6 The fact that the subject appears to the left of WH will become clearer later in the discussion.

7 A variant of McDaniel’s (1989) analysis can be found in Anyadi and Tamrazian (1993). According to their theory, the WH scope marker forms an LF chain rather than an S-structure chain.

8 McDaniel, Chiu and Maxwell (1995) later abandon the absorption mechanism.

9 Furthermore, the DP associate of the ‘there’ expletive can only be associated with one expletive for reasons of Case and agreement (cf. Chomsky 1995).

10 At least with regard to morphological features like WH; recall that in chapter 2 I adopted a modified position with respect to the positioning of the remnant indefinite in French WH-in-situ questions.

11 The same goes for Hungarian, as Simpson shows.

12 The paradigm also holds in Hungarian (p.c. Kriszta Szendroi).

13 See also Higginbotham (1987) who argues that the DP in a cleft is a predicate.

14 Quantifiers like ‘almost everyone’ have very different properties from universals like ‘everyone’, whereas ‘everyone’ is monotone-decreasing in its restriction and monotone increasing in its scope, ‘almost everyone’ is neither monotone decreasing nor monotone increasing.

15 The same phenomenon occurs in Ancash Quechua (cf. Hermon 1984).
Moritz and Valois (1994) also make use of operator feature percolation. Their theory will be introduced in chapter 4.

Horvath stipulates that, although Nominative may be compatible with Accusative, Nominative is not compatible with Dative, the idea being, I think, that structural cases are compatible with each other and inherent cases are compatible with each other, but structural cases are not compatible with inherent cases, and vice versa.

I thank Kriszta Szendroi for these data.

I use the term contentive and non-contentive loosely now since, if Brody is correct, both the WH expletive and the ‘real’ WH phrase are contentive.

There is variation in the presence of expletives according to the dialect spoken.

I thank Kriszta Szendroi for these data.
4.1 Introduction

The present chapter extends the analysis of intervention effects developed in the two previous chapters to the domain of negation, focusing on French negative constructions involving N-words. It will be argued that French N-words are negative indefinites rather than pure indefinites (cf. Déprez 1997). The latter view is particularly associated with semantic accounts of N-words, originating in the work of Ladusaw (1992, 1994). I will show that the semantic account cannot characterise the properties of French N-words, which appear to be inherently negative. On the basis of the island and intervention effects displayed by French N-words, I argue that they are a composite form containing a negative operator and an indefinite, which end up separated from each other in the course of the derivation.

French is often 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, together 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 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) \textit{Logical representation of general negative statements}

a. $\forall x \ [P(x) \rightarrow \neg Q(x)]$ \hspace{1cm} \text{Universal negation}

b. $\neg \exists x \ [P(x) \land Q(x)]$ \hspace{1cm} \text{Existential negation}

Following Ladusaw, let us call (1a) the strong licensing and (1b) the weak licensing of an N-word. In a language like English, which has both a Negative Polarity Item (NPI) series \textit{(anyone, anything)} and a negative quantifier specimen \textit{(no one, nothing)}, the distinction between (1a) and (1b) is lexically instantiated. English negative quantifiers are interpreted universally whereas NPIs are interpreted existentially.\textsuperscript{2} To illustrate, (2a) corresponds to (1a) while (2b) corresponds to (1b):

(2) a. I saw no one.

$\forall x \ [\text{person}(x) \rightarrow \neg \text{I saw}(x)]$. \hspace{1cm} \text{(strong licensing)}

\textquote{For all x, x a person, it is not the case that I saw x.}

b. I didn’t see anyone.

$\neg \exists x \ [\text{person}(x) \land \text{I saw}(x)]$. \hspace{1cm} \text{(weak licensing)}

\textquote{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 via either 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) \( \text{Je n'} \text{ ai vu personne.} \) (French)

I Neg have seen N-word

(i) 'For all \( x \), \( x \) a person, it is not the case that I saw \( x \).'

(ii) 'There is no \( x \), \( x \) a person, such that 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) \( \text{Ha telefonato nessuno?} \) (Italian)

has called N-word

'Has anyone called?'

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 and Quer 1995, 1997 for Greek, Déprez 1997 for French, Peres 1997 for Portuguese).

The negative element in question is an abstract negative operator in logical form that is triggered by syntactic rules (Quantifier Raising for the strong licensing and Quantifier Construal, i.e. binding, for the weak licensing), not by any morpheme. The
analysis is thus very different from the Neg Criterion analysis (cf. Haegeman and 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 takes place when the variable contained in the indefinite is interpreted in the restriction of the negative operator (cf. (5a)). In the case of the weak licensing, the variable is interpreted in the scope of the negative operator (cf. (5b)). Thus, 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. Neg [restriction ... x ... ] [scope Main Predication]  
b. Neg [scope ... ∃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 and 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 in languages like Italian and Spanish:

(6)  
a. Maria *(non) ha visto nessuno. (Italian)
    Maria Neg has seen N-word
    'Maria didn’t see anybody.'
b. \textbf{Nessuno} (*non) ha visto Maria.

\begin{tabular}{ll}
N-word & Neg has seen Maria \\
\end{tabular}

‘No one has seen Maria.’

The aim of the present chapter is to argue that the semantic analysis outlined above cannot be applied to French. Although it appears suitable for Italian and other Romance languages like Spanish and Catalan, the semantic account will not work for French, because French 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; 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 in fact has 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 reached in the present chapter is that French N-words are not pure variables, but inherently negative 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. Since the indefinite is separated from its operator, French negative constructions with French N-words are thus another instance of non-canonical quantification.

The chapter is organised as follows. Section 4.2 provides some background on negative quantifiers, NPIs, and negative concord languages in general. Section 4.3 reviews two recent accounts of French N-words, both of which claim that French N-words are pure variables. Section 4.4 introduces existing and new evidence against the claim that French N-words are pure variables. Section 4.5 provides an analysis of the locality problem posed by French N-words. Section 4.6 briefly accounts for the discourse properties of French negative constructions. Finally, I gather the main conclusions in section 4.7.

4.2 Different ways of expressing sentential negation

The aim of the present section is to introduce some basic facts about sentential negation and how it is expressed cross-linguistically. Section 4.2.1 shows how languages like German, Dutch and English make use of negative quantifiers to mark sentential negation. Section 4.2.2 introduces those languages that allow NPIs, while section 4.2.3 reviews some of the languages that display negative concord.

4.2.1 Negative quantifiers

To express sentential negation, languages like Dutch and German use only one negative expression per sentence. When an N-word is used, no additional Neg head is
present. This suggests that in Dutch and German, N-words are inherently negative. They can contribute to negative meaning in isolation:

(7) Remke heeft niemand gezien.  (Dutch)
    Remke has N-word seen
    ‘Remke didn’t see anyone.’

(8) Carina hat niemanden gesehen.  (German)
    Carina has N-word seen
    ‘Carina didn’t see anyone.’

In fact, when another negative expression is present, double-negation ensues:

(9) Remke heeft niet niemand gezien.  (Dutch)
    Remke has not N-word seen
    (i) ✓‘It is not the case that Remke didn’t see anyone.’
    (ii) * ‘Remke didn’t see anyone.’

(10) Carina hat nicht niemanden gesehen.  (German)
    Carina has not N-word seen
    (i) ✓‘It is not the case that Carina didn’t see anyone.’
    (ii) * ‘Carina didn’t see anyone.’

Standard English also has negative quantifiers. Like their German and Dutch counterparts, English negative quantifiers can be used in isolation and two negative
expressions cannot coexist in the same sentence without giving rise to double-negation:

(11)  
   a. John saw no one.  
   b. John didn’t see no one.

   (i) ✓ 'It is not the case that John didn’t see anyone.'
   (ii) * 'John didn’t see anyone.'

Standard English differs from both German and Dutch in having, in addition to the negative quantifier series, words like anyone, which form the NPI paradigm.

4.2.2 Negative Polarity Items

Sentential negation in English can be expressed using NPIs. NPIs are not negative quantifiers, but pure variables. This means that in (12), there is only one negative expression in the sentence, n't:

(12)  
   a. I haven't seen anyone.  
   b. I haven't seen anything.

Since the negative word is the sole expressor of negation, it is obligatory in negative statements with NPIs:

(13)  
   a. *I have seen anyone.  
   b. *I have done anything.
NPIs differ from regular indefinites in that they cannot be licensed via discourse existential closure. They are dependent existentials that need an operator like negation to license them. They always take scope under negation for instance, not scope over it:

(14) a. I didn’t see any doctor. (English)
    b. I didn’t see some doctor.

(14a) is interpreted as (15a) and not as (15b). (14b) is interpreted as (15b), not as (15a):

(15) a. ¬∃x [doctor (x) ∧ I saw (x)].
    b. ∃x [doctor (x) ∧ ¬I saw (x)].

Whereas negative quantifiers cannot appear in non-negative contexts, as a pure variable, an NPI can be interpreted existentially by depending on operators other than negation:

(16) a. Has anyone/*no one called? (yes-no operator)
    b. If you see anyone/*no one, let me know. (conditional operator)
    c. Everyone who knows anything/*nothing about this (universal quantifier) knows it’s dangerous.

Note that the starred components in the examples in (16) are only ungrammatical under an NPI reading. They are grammatical under the reading according to which the N-word is inherently negative.
4.2.3 Negative-concord languages

As was already mentioned in the introduction, the term 'negative concord' (NC) 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.

There has been a tendency in the literature to assimilate N-words in NC languages (NC N-words, henceforth) with either negative quantifiers or NPIs. However, it could well be that NC N-words form a class in their own right. The difficulty with classifying N-words is that negative concord is not a unitary phenomenon. There are at least three types of negative concord languages: Slavic languages, Romance languages and languages like West Flemish.

In languages belonging to the Slavic group (e.g. Russian, Serbo/Croatian and Polish), sentential negation can be marked by two negative expressions, a Neg head and an N-word. Let us concentrate on Russian. In this language, the neutral word order for N-words is preverbal, but they may also occur post-verbally (usually with emphasis). The Neg head is obligatory:

(17) a. Ja *nikogo, *(ne) videl t.
    I N-word Neg saw

    b. Ja *(ne) videl nikogo.
    I Neg saw N-word

    'I haven’t seen anyone.'

    (Brown 1999:29, 30 respectively)
The Neg head is inherently negative, since it can express negation on its own (the object can receive either accusative or genitive case for reasons which need not concern us here):

(18) Sasha ne čitaet gazetu/ gazety. (Russian)
    Sasha Neg reads newspaper_{ACC} newspaper_{GEN}
    ‘Sasha doesn’t read the newspaper.’
    (Brown 1999:76)

Russian N-words are like NPIs in that they cannot contribute to negation on their own: they need the support of another negative expression, i.e. the Neg head ne. On the other hand, they are unlike NPIs in that they cannot be interpreted in non-negative environments:

(19) a. *Nikto zvonil? (Russian)
    N-word called
    ‘Has anyone called?’ (yes-no operator)
    (Brown 1999:21)

b. *Ja somnevayus’ čto Maria vidit nikogo.
    I doubt that Maria sees N-word
    ‘I doubt that Maria can see anyone.’ (adversative operator)
    (Progovac 1994:4)
Since Russian N-words cannot appear in non-negative environments, it is tempting to conclude that they are negative quantifiers. This claim is corroborated by the fact that in Russian both subject and object N-words can be used in elliptical contexts, a fact which strongly suggests that they have a certain inherent negative specification:

(20)  
**Speaker A:** Kto znaet adres?

who knows address

‘Who knows the address?’

**Speaker B:** Nikto.

N-word

‘No one.’/* ‘Anyone.’

(21)  
**Speaker A:** Kogo ty videl?

who you saw

‘Who did you see?’

**Speaker B:** Nikogo.

N-word

‘No one.’/* ‘ Anyone.’

Yet, since Russian N-words cannot appear without the support of negation, the argument that they are negative quantifiers is weakened. There is potential evidence for the claim that Russian N-words are NPIs rather than negative quantifiers. Apparently they cannot co-occur with other N-words in the same sentence and yield double-negation (cf. Giannakidou 2000):
The argument is that because there is no double negation available, only one negative expression is present, and not one.

The second type of NC is found in Romance languages. In Italian and Spanish, the Neg head is obligatory with postverbal N-words:

(23) Maria *(non) ha visto nessuno.  (Italian)

Maria Neg has seen N-word

‘Maria didn’t see anybody.’

(24) *(No) conozco a nadie.  (Spanish)

Neg know to N-word

‘I don’t know anyone.’

It must be the case that the Neg head is inherently negative since it can express negation on its own:
Contrary to object N-words, Italian and Spanish subject N-words, are never accompanied by a Neg head:

(27)  
Nessuno *non ha visto Maria.  
N-word Neg has seen Maria  
‘No one has seen Maria.’

(28)  
Nadie *no ha visto a Maria.  
N-word Neg has seen to Maria  
‘No one has seen Maria.’

In view of examples like (27) and (28), Rizzi (1982), van der Wouden and Zwarts (1993) and Dowty (1994) have claimed that Italian N-words are lexically ambiguous: negative quantifiers when in subject position and NPIs when in object position.

Evidence for the claim that Romance postverbal N-words are pure variables rather than negative quantifiers comes from their ability to appear in non-negative environments:
Note, however, that not all non-negative-polarity environments are suitable for Italian and Spanish N-words. For example, Italian or Spanish N-words cannot appear in the antecedent of a conditional:

(31) *Se vedi nessuno, fammelo sapere. (Italian)

if see N-word make-me-it know

‘If you see anyone, let me know.’

(32) *Si viste nadie, dimelo. (Spanish)

if see-subj N-word, tell-me-it

‘If you see anyone, let me know.’

In fact, Italian and Spanish N-words are admitted in only a few non-negative environments. In the Romance family of languages, only Catalan N-words can appear in many non-negative environments (cf. Giannakidou 1997). Portuguese N-words are like Italian and Spanish N-words in resisting most non-negative environments. More Italian data is provided in section 4.4.1.
Further evidence for the claim that Romance N-words are NPIs comes from their alleged inability to co-occur with other N-words in the same sentence and yield double-negation:

(33) **Nessuno** ha detto **niente**. (Italian)
N-word has said N-word
‘No one has said anything.’
(i) ‘It is not the case that there is an \( x \) and an \( y \), such that \( x \) is a person, and \( y \) is a thing, and \( x \) said \( y \).’
(ii) ‘It is not the case that it is not the case that there is an \( x \) and an \( y \), such that \( x \) is a person, and \( y \) is a thing, and \( x \) said \( y \).’

(34) **Maria non** ha visto **nessuno**. (Italian)
María Neg has seen N-word
‘Maria didn’t see anybody.’
(i) ‘It is not the case that there is an \( x \), \( x \) a person such that Maria saw \( x \).’
(ii) ‘It is not the case that it is not the case that there is an \( x \), \( x \) a person such that Maria saw \( x \).’

(35) **Nadie** ha dicho **niente**. (Spanish)
N-word has said N-word
‘No one has said anything.’
(i) ‘It is not the case that there is an \( x \) and an \( y \), such that \( x \) is a person, and \( y \) a thing, and \( x \) said \( y \).’
(ii) ≠ 'It is not the case that it is not the case that there is an x and an y, such that x is a person and y a thing, and x said y.'

However, if one assumes Romance postverbal N-words are NPIs, one faces the task of explaining why Italian and Spanish object N-words can be used in elliptical contexts:

(36) **Maria** no ha visto a **nadie**.  
María Neg has seen to N-word  
'Maria didn't see anyone.'

(i) 'It is not the case that there is an x, x a person such that Maria saw x.'

(ii) ≠ 'It is not the case that it is not the case that there is an x, x a person, such that Maria saw x.'

(37) **Speaker A:** Chi ha telefonato?  
Who has telephoned  
'Who phoned?'

**Speaker B:** **Nessuno.**  
N-word  
'No one.'/* 'Anyone.'

(38) **Speaker A:** Chi hai visto?  
Who have-you seen  
'Who did you see?'
The above examples indicate that both "nessuno" and "nadie" have a certain inherent negative specification.

The third type of NC language that I consider is West Flemish. In that language, there is a clear relation between the negative head and the N-word in that N-words must be adjacent at surface structure to the Neg head with which they are associated. This has been taken to suggest that N-words must enter into a syntactic relation with
the Neg head. According to this theory, N-words contain a \([+\text{NEG}]\) feature which needs to be checked against another \([+\text{NEG}]\) feature, that of the Neg head:

(41) a. \(\ldots\text{da Valère }[\text{Neg} \text{nooti} \text{ Neg } t_k \text{ nor } \text{us } [\text{vp } t_i \text{ tj }] \text{ en } \text{goatj}]\). (WF) 
   that Valère never to house Neg goes

b. \(*\ldots\text{da Valère }[\text{Neg} \text{ Neg } t_k \text{ nor } \text{us } [\text{vp } \text{nooti } t_j ] \text{ en } \text{goatj}]\).
   that Valère to house never Neg goes

'...that Valère never goes home.'

(Haegeman 1995:128)

According to Haegeman (1995, 1997), the ungrammaticality of (41b) follows from the fact that no Spec-head relation between the negative constituent and the Neg head is instantiated.

In (41b) the Neg Criterion is violated. N-words come with a syntactic negative feature which needs to be checked:

(42) \textit{The Neg Criterion}

a. A NEG operator must be in a Spec-Head configuration with an \(X^0\) \([+\text{NEG}]\);

b. An \(X^0\) \([+\text{NEG}]\) must be in a Spec-Head configuration with a NEG operator.


Importantly, Haegeman adds to her empirical base examples with N-words as complements of prepositions. This is to avoid interference of Case-driven leftward
movement. Presumably, objects of prepositions receive Case from the preposition and therefore do not need to move leftward in order to get case. The claim is thus that they move leftward to be in a Spec-head relation with a Neg head.

An absorption mechanism is postulated that yields the negative concord reading. This mechanism allows any number of N-words and the negative head to merge into one semantic negation:

(43) **Negative absorption rule**

\[
[\forall x\neg] [\forall y\neg] [\forall z\neg] \rightarrow [\forall x, y, z]\neg
\]

In West Flemish, the Neg head *ne* is not obligatory; (44) is equivalent to (41a):

(44) ...da Valère [NegP nooit], Neg] nor us [vp t; t] goatj. (WF)

that Valère never to house goes

'...that Valère never goes home.'

The Neg head *ne* cannot express negation on its own:

(45) *...da Valère dienen boek en-eet. (WF)

that Valère that book Neg-has

'... that Valère doesn’t have that book.'

(Zanuttini 1991:170)
4.2.4 Summary and the problem posed by French

The previous section shows that N-words do not form a homogeneous class and that negative concord is not a unitary phenomenon. Some negative concord languages are ‘stricter’ negative concord languages than others (e.g. Russian versus Italian).

The focus of the present chapter is negation in French. With regard to negative concord, French is often grouped with other Romance languages. However, the status of French N-words is not easy to pinpoint. The first problem stems from the fact that the Neg head *ne* may or may not be present. The subject/object asymmetry that was mentioned with regard to Italian is absent in French. Both subject and object N-words can appear with *ne*:

(46) a. *Je n’ai vu personne.* (French)
   
   *I haven’t seen anyone.*

b. *Personne n’a vu Marie.*

   *No one has seen Marie.*

Without additional evidence, the data in (46) can be taken to suggest that French N-words are like those of Russian. However, unlike what happens in Russian, the Neg head in French can be absent all together:
(47) a. J' ai vu personne. (French)
I have seen N-word
'I haven’t seen anyone.'

b. Personne a vu Marie.
N-word has seen Marie
'No one has seen Marie.'

This, in turn, may be taken as evidence for the claim that French N-words are inherently negative.

But there is yet another logical possibility: when absent, the Neg head has been phonologically deleted. In this case we are back to square one, French N-words could be argued to be NPIs or negative quantifiers depending on other evidence (note that it does not matter for the Neg Criterion whether the head is overt or covert).

The second problem is that ne cannot express negation on its own:

(48) Je n' ai *(pas) bien dormi la nuit dernière. (French)
I Neg have not well slept the night last
'I didn’t sleep well last night.'

(48) casts doubt on the idea that when ne is present it contributes negativity to the sentence.

In short, depending on how the data which were introduced in this section are interpreted, several logical possibilities offer themselves. Before I develop my own account of French N-words, I first explore recent work that views French N-words as pure variables.


4.3 French N-words as pure variables

The aim of the present section is to introduce two recent accounts of French N-words that share the view that French N-words are NPIs, therefore pure variables. I first discuss the semantic account put forward by Déprez (1997), and then consider Rowlett’s (1998) proposal, which is essentially syntactic.

4.3.1 Déprez (1997)

Like other analyses based on Ladusaw (1992), Déprez (1997) claims that French N-words are indefinites with no inherent negative force. On this account, French lacks the negative quantifier paradigm. French is classified alongside Italian and is said to have the NPI specimen only.

On this view, French N-words are indefinites/pure variables. Like other indefinites, French N-words can, according to Déprez, receive a strong or a weak reading. On the strong reading, the N-word undergoes QR; on the weak reading, the N-word remains in the VP. The strong reading corresponds to the strong licensing discussed earlier in this chapter in relation to Ladusaw (1992, 1994), while the weak reading corresponds the case where the variable introduced by the indefinite is interpreted in the scope of negation (alternatively, the variable can be interpreted in the scope of other relevant operators, e.g. factives or conditionals, so the account under discussion thus predicts that French N-words can be licensed in environments other than negation). When the variable contained in the indefinite is interpreted in the restriction of negation, the so-called strong licensing is obtained.

Under this account, one and the same sentence can be associated with either the strong or the weak reading, a problem for the Neg Criterion analysis, according to
Déprez. Under the Neg Criterion, an N-word obligatorily enters into a Spec-Head relation with a [+NEG] head; there is no option for the variable contained in the indefinite to be interpreted in situ (i.e. in the scope of negation or in the scope of other - relevant - operators).

According to Déprez, French N-words are akin to numeral indefinites (e.g. ‘three books’), except that they denote a zero sum. The N-word personne, for example, is equivalent to zéro personne, a null numeral. As already mentioned, on the weak reading personne remains in situ. On the strong reading personne is still viewed as a null numeral. The difference in the case of the strong interpretation is that personne undergoes QR.

The fact that French words cannot be licensed across clauses is then made to follow from the fact that QR is clause-bound:

(49) *Tu ne te demandes quand voir personne. (French)
you Neg yourself ask when to see N-word

‘You do not wonder when to see anyone.’

(Déprez 1997:57)

The island effect is therefore not due to the possibility that the N-word is inherently negative. Let me stress again the fact that under this view, negative expressions in French are pure variables with no quantificational force of their own.

Several assumptions in this proposal need looking into, three of which are: (a) the claim that the negative quantifier paradigm is absent in NC languages; (b) the alleged possibility for NC N-words to appear in non-negative contexts; (c) the putative absence of inherent negative specification in N-words.
To summarise: according to Déprez, French N-words are not inherently negative, but pure variables. Not only can French N-words be licensed in negative contexts, they can also be licensed in questions, factives, conditionals, etc. Her proposal makes strong predictions. However, it will become clear at a later stage in this chapter that French N-words cannot in fact appear in environments other than negation, casting serious doubt on Déprez’s analysis.

4.3.2 Rowlett (1998)

Rowlett (1998) argues that French is not an NC language like Italian and Spanish and therefore that French N-words are not inherently negative, but pure variables. Assuming Pollock’s (1989) negative phrase, Rowlett takes as his point of departure Jespersen’s (1924) well-known observation that natural languages are subject to the Negative Cycle:

\[ (50) \quad \textit{The Negative Cycle} \]

\[ \begin{align*}
   \text{a. } & \text{Neg}^o & \text{Je ne marche vite.} \\
   \text{b. } & \text{Neg}^o \text{ (+XP)} & \text{Je ne marche (pas) vite.} \\
   \text{c. } & \text{Neg}^o + \text{XP} & \text{Je ne marche pas vite.} \\
   \text{d. } & (\text{Neg}^o) + \text{XP} & \text{Je (ne) marche pas vite.} \\
   \text{e. } & \text{XP} & \text{Je marche pas vite.} \\
   \text{f. } & [\text{Neg}^o \text{XP}] & \\
\end{align*} \]
Diachronically, negation tends to be associated either with a negative element like the English *not* or a smaller element such as the French *ne* or West Flemish *en*. In French, *ne* first exclusively represented negation, then came the reinforcer *pas*. The latter was optional at first, but then became obligatory. The next step saw the element *ne* itself become optional.

Rowlett reformulates Jespersen’s observation in concrete structural terms:

\[(51) \text{ Generalization} \]

A language is a negative concord language iff the regular marker of pure sentential negation is not associated with Spec-NegP.

On Rowlett’s (1998) view, standard English has [+NEG] on Spec-NegP whereas a language like Italian bears it on the Neg head (Rowlett 1998:87):

\[(52) \text{ Negative concord languages} \]

\[ \text{NegP} \]
\[ \text{Spec Op} \]
\[ \text{Neg} \]
\[ \text{ [+NEG] } \]
\[ \text{non} \]
\[ \text{XP} \]
\[ \text{nessuno} \]
\[ \text{ [+NEG] } \]
In (52) *non* bears the feature [+NEG] because of the lexical properties of *non*. Spec-Neg\(P\) is filled by an empty operator in accordance with the Neg Criterion.\(^6\) The operator is an expletive operator in the sense of Haegeman (1995). The operator A'-binds the negative XP which is inherently negative. In (53) the contentive operator *not* A'-binds the XP, itself not inherently negative.

Rowlett's theory relies on Spec-Head agreement, whereby the two Neg features are interpreted as one feature, not absorption. No double negation arises semantically (logically), since one of the [+NEG] elements is a syntactic head and the other is a maximal projection. Modern French *ne* is generally seen as neither sufficient nor necessary to mark sentential negation. It cannot mark negation on its own, contrary to what is the case of *no(n)* in Italian or Spanish. The Neg head *ne* can appear in a sentence without contributing a negative feature to the clause: so-called redundant or
paratactic negation. A verb, an expression (a comparison of inequality) or a word (a conjunction) of negative import triggers a superfluous negation (van der Wouden 1997):'

(54) a. J’ai peur qu’il ne vienne. (French)
I have fear that he Neg come
‘I’m afraid he may come.’
(van der Wouden 1997:197)

b. Il est autre que je ne croyais.
he is other than I Neg believed
‘He is different than I thought.’
(van der Wouden 1997:198)

c. Avant qu’il ne fasse froid.
before that it Neg make cold
‘Before it gets cold.’
(van der Wouden 1997:199)

From these facts, Rowlett concludes that in French it is Spec-NegP rather than Neg that bears the feature [+NEG]. The generalisation in (51) then predicts that French is a non-NC language and that negative XPs such as personne and rien are not inherently negative, but pure variables. This proposal thus groups French with English rather than with Italian or Spanish. On this view, the difference between English and French is that, while in English the contentive operator is always overt, in French the contentive operator may be overt (as in (55a)) or covert (as in (55b)).
(55) a. \[ \text{Je} \ [\text{IP} \ (\text{ne})] \ I \ 	ext{vois}_{j} \ [\text{NegP} \ \text{pas} \ \text{Neg} \ t_{i} \ [\text{VP} \ t_{j}]]. \]

I Neg see not

'I do not see.'

b. \[ \text{Je} \ [\text{IP} \ (\text{ne})] \ I \ 	ext{vois}_{j} \ [\text{NegP} \ \text{Op}_{k} \ \text{Neg} \ t_{i} \ [\text{VP} \ t_{k} \ [\text{VP} \ t_{j} \ \text{personne}_{k}]]. \]

I Neg see N-word

'I do not see anyone.'

(56)
French N-words are interpreted negatively in virtue of being unselectively bound by the contentive null Op. The latter is base-generated adjoined to the constituent over which it takes scope: VP. The null Op moves to Spec-NegP, thereby ensuring that the N-word has wide scope, so that sentential negation obtains. If Op did not move to Spec-NegP, the N-word would only take local scope.

In being base-generated in a lower position, the null Op behaves like *pas*. *Pas* is base-generated in a VP-adjoined position that reflects the nature of the relationship between the negation and the predicate. Spec-NegP is therefore not the base-position of *pas*, as in Pollock (1989), but is, instead, its derived position. This allows a unitary analysis of *pas*, there being a formal relationship between (narrow) constituent negation and (wide) sentential negation: the latter is derived from the former, a consequence of scope-widening by raising *pas* to Spec-NegP. In the following examples *pas* has local scope:
(58) a. Beau ou [pas beau], je l’ épouseraï. (French)
    handsome or not handsome I him will-marry
    ‘I’ll marry him whether he’s handsome or not.’

b. J’ ai lu plein de romans mais [pas de poèmes].
    I have read full of novels but not of poems
    ‘I have read loads of novels but no poems.’

(Rowlett 1998b:188)

Since Rowlett argues that French N-words are not inherently negative, he must find an
alternative explanation as to why pas cannot co-occur with other N-words. Moritz and
Valois (1994) argue that (59a) and (59b) are ill-formed because Spec-NegP is already
filled by pas (according to Moritz and Valois (1994), pas is base-generated in Spec-
NegP at D-structure):

(59) a. *Je (ne) vois pas personne. (French)
    I Neg see not N-word
    ‘I do not see anyone.’

b. *Je (ne) vois pas rien.
    I Neg see not N-word
    ‘I do not see anything.’

Rowlett explains the ungrammaticality of both (59a) and (59b) by other means,
claiming that it is impossible in those cases for pas to be spelled-out overtly. The null
contentive negative operator is obligatory. It is not clear, however, why this should be
so.
The idea that the null negative operator is VP-adjoined accounts for the fact that superordinate negation cannot license French N-words:

(60) *J’ ai rencontré Jean hier soir et (French)
    I have met Jean yesterday evening and
    il n’a mentionné qu’il avait vu personne.
    he Neg has mentioned that he had seen N-word
    ‘I met Jean last night and he didn’t mention that he had seen anyone.’

According to Rowlett (1998:132), French N-words are like English NPIs in that they cannot be licensed by superordinate negation. In this regard, Rowlett follows Progovac (1994). However, in section 4.4.3 it will be shown that superordinate negation does license English NPIs.

To summarise: on Rowlett’s view, French N-words are not inherently negative, but pure variables. His theory therefore predicts that N-word in French can appear in environments other than negation. As we shall see, this does not appear to be possible, suggesting that Rowlett’s account, like Déprez’s, is not satisfactory.

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

The theories advanced by Déprez and Rowlett, although they are very different, share the following idea. Both argue that French N-words are indefinites/pure variables with no quantificational force of their own. From this point of view, their proposal is quite different from the one proposed by Haegeman and Zanuttini in their work on negation. According to the latter view, N-words in Romance are inherently negative.
In the present section, I give evidence against the idea that French N-words are indefinites/pure variables, and show that French N-words are in fact inherently negative. First of all, I put to the test the claim that French N-words can be licensed by operators other than negation.

4.4.1 Non-negative polarity environments

If French N-words were pure variables/NPIs, one would expect that they could 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):

(61) 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 (* indicates ‘ungrammatical under the NPI reading’):

(62) a. Ha telefonato nessuno?  
    has telephoned N-word  
    ‘Has anyone phoned?’  
    (yes-no question)

b. *Quando hai chiamato nessuno?  
    when has called N-word  
    ‘When did you call anyone?’  
    (WH question)

c. *Se vedi nessuno, fammelo sapere.  
    if see no one make-me-it know  
    ‘If you see anyone, let me know.’  
    (conditional)

d. Dubito che nessuno venga  
    doubt-I that N-word arrives-SUBJ  
    ‘I doubt anyone will come.’  
    (adversative)

e. Sono sorpreso che conosca nessuno.  
    am surprised that he know-SUBJ N-word  
    ‘I am surprised that he knows anyone.’  
    (factive)

f. Tutti quelli che sanno niente a proposito di  
    everyone who knows N-word about
questo sanno che è pericoloso.
this knows that is dangerous

'Everyone who knows anything about this knows it's dangerous' (UQ)

**g. Solo Gianni ha visto niente.**
only Gianni has seen N-word

'Only Gianni has seen anything.' (only)

**h. Gianni è più ricco di nessuno.**
Gianni is more rich of N-word

'Gianni is richer than anyone.' (comparative)

**i. È l'idea più stupida che abbia avuto nessuno.**
is the idea more stupid that has had N-word

'It's the dumbest idea anyone has had.' (superlative)

Nevertheless, 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. (63a) 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:

(63) a. **Personne a téléphoné?** (French)

N-word has telephoned

'Has anyone called?' (yes-no question)
b. *Quand as-tu téléphoné à personne?
   'When did you call anyone?'  (WH question)

c. *Si tu vois personne, fais-le-moi savoir.
   'If you see anyone, let me know.'  (conditional)

d. *Je doute que personne vienne.
   'I doubt anyone will come.'  (adversative)

e. *Je suis surpris qu’il connaisse personne.
   'I am surprised that he knows anyone.'  (factive)

f. *Tout le monde qui connaît rien à propos de ça sait que c’est dangereux.
   'Everyone who knows anything about this knows it’s dangerous.'  (UQ)

g. *Seulement JEAN a rien vu.
   'Only JEAN saw anything.'  (only)

h. *Jean est plus riche que personne.
   'John is richer than anyone.'  (comparative)
Table 4.1 gives an overview of the data discussed in this subsection:

<table>
<thead>
<tr>
<th>Context</th>
<th>English NPIs</th>
<th>Italian N-words</th>
<th>French N-words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes-no questions</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>WH questions</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>Conditionals</td>
<td>✓</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Adversative predicates</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>Factive predicates</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>Universal quantifiers</td>
<td>✓</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Only</td>
<td>✓</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Comparatives</td>
<td>✓</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>Superlatives</td>
<td>✓</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Table 4.1

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.

4.4.2 Movement environments: strong and weak islands

Sentences with NPIs do not exhibit strong island effects. (64a) involves a subject island, (64b) an adjunct island and (64c) a co-ordinate structure:

(64) a. John didn’t make the father of any of his friends do the accounts.

b. John didn’t hire Mary in order to fire anyone.
c. I didn’t see John or any of his friends come in.

Note that on the basis of examples like (65), (66) and (67), Progovac (1994) concludes that NPIs cannot appear in strong islands. (65) involves a co-ordinate structure, (66) an adjunct island and (67) a complex NP constraint:

(65) ?*I am not asking you to prepare this and bring anything.

(Progovac 1994:58)

(66) *I did not make a pie after I received anyone.

(Progovac 1994:58)

(67) ?*We weren’t aware of the fact that anyone left.

(Progovac 1994:58)

But it is not clear that these examples are completely ungrammatical. Note also, that Progovac has no explanation as to why NPIs can appear in relative clauses, given that these are WH islands:

(68) I never met a man who anybody tried to kill.

(Progovac 1994:59)

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

(70) a. John made the father of none of his friends do the accounts.

b. John hired Mary in order to fire no one.

c. I saw John or none of his friends come in.

d. I never met a man who no one tried to kill.
I take the evidence that French N-words exhibit strong island effects to suggest that French N-words are: (a) inherently negative; and (b) involve movement. Let us now turn to weak islands.

Recall that Déprez (1997) notes that French N-words exhibit weak island effects; (49) is repeated here for convenience:

(49) *Tu ne te demandes quand voir personne. (French)

you Neg yourself ask when to see N-word

‘You do not wonder when to see anyone.’

(Déprez 1997:57)

According to Déprez (1997), (49) 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 (it is not clause-bound like the scope of universals). 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):

(71) 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)
However, 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):

(72) 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 (49) must be ungrammatical for reasons other than QR.

Further evidence for the idea that (49) is ungrammatical, not because QR has applied, but because Neg movement is involved comes from the three examples in (73). While (73a) might be compatible with the claim that QR cannot associate personne with matrix scope, (73b-c) show that the true source of ungrammaticality in (73a) must be the intervening focus operator. This is so because (73b-c) are monoclusal, so that QR should be fine. The only factor that distinguishes (73b) from (73c) is the presence of the intervening focus in the former.

(73) a. *Je ne demande que SEUL ¡MENT JEAN voit personne.
    I Neg ask that only Jean see subj N-word
    ‘I don’t require that only JEAN see anyone.’
    b. *Je n’ ai SEUL ¡MENT VU personne.
    I Neg have only seen N-word
     ‘I haven’t only SEEN anyone.’
It is unclear how Déprez's proposal would capture the relevant contrast.\textsuperscript{10}

Finally, I observe that so-called iterative adverbs, typical weak-island inducers, also block the licensing of French N-words (74b involves a monoclausal domain, so, like 73b, it is problematic for Déprez's analysis):

\begin{flushleft}
(74) a. *Je ne veux qu'il voit BEAU COUP personne.
\end{flushleft}

\begin{flushleft}
I Neg want that he see-SUBJ a lot N-word
\end{flushleft}

'I don't want him to see anyone a lot.'

b. ?* Je n' ai BEAU COUP vu personne.

\begin{flushleft}
I Neg have a lot seen N-word
\end{flushleft}

'I have not seen anyone a lot (i.e. on many occasions).'

Note that the examples above are completely ungrammatical. This is somewhat unexpected. \textit{Personne} looks like an argument, so if it were \textit{personne} that moved across the intervener, one would not expect any weak island effects. I shall return to this problem in section 4.5, where the island effects exhibited by French N-words are accounted for.
4.4.3 Superordinate negation

If French N-words were NPIs one would expect that they can be licensed by superordinate, i.e. non-clausemate, negation, just like the English NPI anyone:

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

However, superordinate negation cannot license French N-words:

(60) *J’ai rencontré Jean hier soir et il n’a mentionné qu’il avait vu personne.
     I have met Jean yesterday evening and he has mentioned that he had seen N-word
     ‘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:

(76) a. ?Je ne veux qu’il voie personne. (French)
     I Neg want that he sees SUBJ N-word
     ‘I don’t want him to see anyone.’ (subjunctive clause)

b. Je ne veux voir personne.
     I Neg want to see N-word
     ‘I don’t want to see anyone.’ (infinitival clause)
c. Je ne l’ai fait rencontrer personne.

I Neg it have made meet N-word

‘I didn’t make him meet anyone.’ (causative)

Next, I turn to the evidence showing that French N-words have a certain inherent negative specification.

4.4.4 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. English NPIs cannot appear sentence initially (cf. 77), nor can they appear without a negative licensor (cf. 78):

(77) a. Personne est venu.

N-word is come

‘Nobody came.’/* ‘Anybody came.’

b. Rien est arrivé.

N-word is happened

‘Nothing has happened.’/* ‘Anything has happened.’

(78) a. Je vois rien.

I see N-word

‘I do not see anything.’
b. Je vois **personne**.

I see N-word

‘I do not see anyone.’

So, from this point of view, French N-words behave like English, Dutch and German NQs which contribute to negative meaning in isolation ((7) and (8) repeated as (79b) and (79c), respectively):

(79)   a. John saw **no one**.

   (English)

   b. Remke heeft **niemand** gezien.

   (Dutch)

   Remke has N-word seen

   ‘Remke didn’t see anyone.’

c. Carina hat **niemanden** gesehen.

   (German)

   Carina has N-word seen

   ‘Carina didn’t see anyone.’

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

(80)  **Speaker A**: Qui as-tu vu?

   who has-you seen

   ‘Who did you see?’

  **Speaker B**: **Personne**.

   N-word

   ‘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. This was originally shown by Zanuttini (1991):

(82)

a. Jean (n’) a *presque* rien fait.
   Jean Neg has almost N-word done
   ‘Jean did almost nothing/*anything.’

b. Jean (n’) a *pratiquement* rien fait.
   Jean Neg has practically N-word done
   ‘Jean has done practically nothing/*anything.’

c. Jean (n’) a *absolument* rien fait.
   Jean Neg has absolutely N-word done
   ‘Jean has done absolutely nothing/*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). This confirms the view that French N-words are negative:11
Indeed, as regards double negation, French N-words behave very much like NQs in standard English:

(84) **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:

(85) **Marie** (n’) a vu **personne**.

Maria Neg has seen N-word

‘Marie didn’t see anybody.’
(i) \( \checkmark \) 'There is no x, x a person such that Marie saw \( x \).

(ii) \( \neq \) 'It is not the case that there is no x, x a person, such that Marie saw x.'

This is confirmed by the fact that the Neg head \( ne \) is neither necessary nor sufficient to mark sentential negation (see also example (52), introduced earlier):

(86) a. Je fume pas.
    I smoke not

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 are not lexically ambiguous. The strong and weak licensing distinction is lexically instantiated in French.

Indeed, French NPIs differ from their N-word counterparts in that they need a negative marker to be licensed:

(87) 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.'

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

(88) a. Jean n’ a pas dit que [la femme de
Jean Neg has not 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 pas engagé Marie [pour licencier qui que ce soit].
Jean Neg has not hired Marie for to fire anyone

'Jean doesn’t want to stay in town in order to help anyone.'

c. Je n’ ai pas vu Jean [ou qui que ce soit entrer].
I Neg have not seen Jean or anyone come in

'I didn’t see Jean or anyone come in.'

(89) J’ ai rencontré Jean hier soir et il
I have met Jean yesterday evening and he
n’ a pas mentionné qu’ il avait vu qui que ce soit.
Neg has not mentioned that he had seen anyone

'I met Jean last night and he didn’t mention that he had seen anyone.'
Furthermore, French NPIs behave like English NPIs in that they can occur in non-negative-polarity environments.

(90) 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.’

4.4.5 Interim conclusion

To summarise, I have shown that French N-words are inherently negative. Table 4.2 groups the findings of section 4.4:

<table>
<thead>
<tr>
<th>Distribution</th>
<th>NPIs</th>
<th>French N-words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can appear in non-negative contexts</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Can appear in strong islands</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Can appear in weak islands</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Can be licensed by superordinate negation</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Can appear sentence initially</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Can be used as fragment answers</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Can yield double negation interpretation</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Table 4.2*

In the next section, I provide a morphological breakdown of French N-words and account for the island effects exhibited by them.
4.5 An alternative analysis

4.5.1 A phonologically null negative operator

I argue that French N-words are complex XPs consisting of an indefinite expression and a phonologically null negative operator (i.e. \( \neg \exists \)), while NPIs consist of an indefinite expression only. Let us call French N-words ‘negative indefinites’ and NPIs ‘simple indefinites’:

(91) a. Personne [\text{Op}_{\text{NEG}} \text{ indefinite}]
    b. Rien [\text{Op}_{\text{NEG}} \text{ indefinite}]

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

According to the theory I develop, the operator is part of the N-word: French N-words are thus negative expressions that can license themselves. The crucial difference between Rowlett’s (1998) null Neg operator and the one proposed here is that I assume that the operator is part of the N-word, whereas he does not. But as was seen earlier, there is ample evidence for the view that French N-words are inherently negative. In this respect, the current proposal is more in line with Zanuttini and Haegeman (1991) and Haegeman (1995, 1997). The difference between their proposal and the one outlined here is that whereas they consider \( ne \) to be negative, I do not.\(^{12}\) I 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...
The null Neg operator is a subextracted element which creates a split-DP configuration. The resulting structure exhibits so-called non-canonical quantification. The null operator movement is driven by economy conditions. It is a necessary syntactic operation, without which the sentence would fail to be interpreted as a negative statement.

While the Neg operator raises, the indefinite is stranded:

\[(93) \quad \text{[NegP Op}_\text{NEGI} \quad \text{[VP ... [t; indefinite]]].}\]

Note that in the case of single Neg constructions, we do not have negative concord. As has been already shown, the Neg head *ne* is neither necessary nor sufficient to mark sentential negation. The sole function of *ne* is to indicate the scope of negation. It is a scope marker with no semantic content (when *ne* appears in a matrix clause while the N-word is in an embedded clause, the N-word has matrix scope). French is therefore not a strict NC language. By a strict NC language I mean one in which the Neg head is inherently negative (such as in Italian, Spanish, the Slavic languages and Greek). In French, NC is instantiated only in the case of multiple N-word constructions (from now on I shall gloss *personne* as 'no one', and *rien* as 'nothing'):

\[(94) \quad \text{Personne (n') a rien dit.}\]

no one Neg has nothing said

'No one said anything.'

I assume here a process of absorption à la Williams:
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 for the fact that they have a certain intrinsic negative specification.

Although I grant negative status to French N-words, the contention that I 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. I decompose French N-words into a negative expression + an indefinite expression, whereas English, Dutch, and German N-words may well form one semantic unit.

We are now in a position to 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 (49), (73a, b), and (74a, b) are completely ungrammatical.

Note that (53) is as ungrammatical as the examples in (96), both of which involve adjunct N-words:
(96) a. *Tu ne te demandes QUAND plus fumer.
   you Neg myself 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 from weak islands of arguments is much better than
extraction of adjuncts. In (49), (73a, b) and (74a, b), personne looks very much like an
argument, but it nevertheless involves an adjunct operator. If personne raised as a
whole complex XP, then one 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 (49), (73a, b), and (74a, b) are completely ungrammatical.

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

(97) 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.’

As in the case of French single-WH-in-situ questions and partial WH movement, not all A’-
specifiers (on the reasonable assumption that souvent and toujours occupy A’-specifier
positions) block the licensing of the null operator. Here again, the intervention effects should be viewed in terms of scope. The fact that an alternative analysis in terms of scope is necessary is strengthened by the facts in (98):

(98)  Je n'ai donné à TOUT LE MONDE aucun cadeau.

I Neg have given to all the people no gift

'I didn't give everyone any gift'

(i) * 'There is no x, x a gift, and for all y, y a person, I gave x to y.'  *¬∃>∀

(ii) V 'For all y, y a person, there is no x, x a gift, and I gave x to y.'  ∀>¬∃

(98) is not ungrammatical; it has a reading according to which the universal quantifier takes wide scope over the negative indefinite. However, it lacks the interpretation according to which the negative indefinite takes wide scope over the universal. These are cases of scope islands of the kind discussed in chapter 2 and chapter 3. In English, both readings (wide and narrow scope of the indefinite) are available:

(99)  I didn't give everyone any gift.

(i) √ 'There is no x, x a gift, and for all y, y a person, I gave x to y.'  ¬∃>∀

(ii) √ 'For all y, y a person, there is no x, x a gift, and I gave x to y.'  ∀>¬∃

In the next section, I provide an account of weak island/intervention effects in terms of scope.
4.5.2 A solution in terms of scope

Because the Neg operator raises without any other material that otherwise pairs with it, the quantificational relation between the null negative operator and the stranded indefinite is non-canonical. In other words, French negative constructions with words like *personne* and *rien* are split constructions. This analysis of French N-words predicts that the intervention effect illustrated in (73a, b) is just the tip of the iceberg, since not only focus but several other scopal elements will act as interveners.

As in the previous chapters, I distinguish between the scope of the null operator and the scope of the stranded indefinite and assume that the stranded indefinite does not introduce an existential quantifier, but a Skolem function only. The argumental variable is bound by a (suitable) quantificational antecedent (when available), while the functional variable is bound by the negative operator, which translates as \( \neg \exists \):

\[
\text{(100)} \quad \text{Op}_{\text{NEGI}} \cdots Q_j f_i(x_j)
\]

If the intervener is of the same or of a lower order than the stranded indefinite, then the indefinite can depend on that intervener, and the sentence is not completely ungrammatical. If the intervener is of a higher order than the stranded indefinite, the sentence is completely ungrammatical.

Turning back to the examples with intervention effects that were introduced earlier, the idea is that the stranded indefinite in (97) can depend on an intervening frequency adverb because, although the indefinite is a scopeless element (it behaves very much like an adjunct, since it introduces a Skolem function only), the indefinite is
of the same order as the frequency adverbs (\(\downarrow\) = depends on; \(\downarrow\) = the element on which
the stranded indefinite depends):

\[
\begin{array}{c}
\downarrow \\
(97) \quad \text{a. } [\text{IP Je ne j vois } [\text{NegP Op t k [VP SOUVENT] [VP [SK } f_i (x_j) \text{ personne]]]]].
\end{array}
\]

'I often don’t see anyone.’

\(\checkmark\) 'It is not the case that there is a Skolem function \(f\), and that I often see \(f(x, \text{persons})\).'

\(f\): a Skolem function from people into the people they see.

\[
\begin{array}{c}
\downarrow \\
(97) \quad \text{b. } [\text{IP Je ne j vois [NegP Op t k [VP TOUJOURS] [VP [SK } f_i (x_j) \text{ personne]]]]].
\end{array}
\]

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

\(\checkmark\) 'It is not the case that there is a Skolem function \(f\), and that I always see \(f(x, \text{persons})\).'

\(f\): a Skolem function from people into the people they see.

In contrast, the stranded indefinite cannot depend on \(WH\), \(seulement JEAN\) or
\(beaucoup\). This is because, in this case, the intervening element is of a higher order
than the remnant. (49), (73a, b) and (74a, b) are repeated here with relevant (partial)
derivations:

\[
\begin{array}{c}
\downarrow \\
(49) \quad \text{* [NegP Op t [CP QUAND] voir [SK } f_i (x_j) \text{ personne]]].
\end{array}
\]

'(You do not wonder) when to see anyone.’

\(\ast\) 'It is not the case that there is a Skolem function \(f\), and that you wonder when to see
\(f(x, \text{persons})\).'
f: a Skolem function from people into the people they see.

↓

(73) a. \[\neg \text{Op}_1 [\text{vp} \text{ que seuloment JEAN voit } [\text{SK } f_i (x_j) \text{ personne}]]\].

'(I don’t require) that only JEAN see anyone.'

* 'It is not the case that there is a Skolem function f, and that you require that only JEAN see f (x, persons).'

f: a Skolem function from people into the people they see.'

↓

b. \[\neg \text{Op}_1 [\text{vp seulement vu} [\text{SK } f_i (x_j) \text{ personne}]]\].

'(I haven’t) only SEEN anyone.

* 'It is not the case that there is a Skolem function f, and that you only SAW f (x, persons).'

f: a Skolem function from people into the people they see.

↓

(74) a. \[\neg \text{Op}_1 [\text{cp qu’il voit } [\text{vp beaucoup} [\text{vp } [\text{SK } f_i (x_j) \text{ personne}]]]]\].

'(I don’t want) him to see anyone a lot.'

* 'It is not the case that there is a Skolem function f, and that he often sees f (x, persons).'

f: a Skolem function from people into the people they see.
b. \( \neg \exists_p \ Op_1 \ [\text{VP \ BEAUCOUP}] \ [\text{VP \ vu} \ [\text{SK \ } f_1(x_j) \ \text{personne}]]) \].

'(I have not) seen anyone a lot (i.e. on many occasions).'</b>

\( * \text{ 'It is not the case that there is a Skolem function } f, \text{ and that I have often seen } f(x, \ \text{persons}).' \)

\( f: \text{ a Skolem function from people into the people they see.} \)

In (98), the stranded indefinite can depend on the intervener, i.e. a universal quantifier, because the universal and the scopeless indefinite are of the same order. This explains why the sentence is not completely ungrammatical, it is simply non-ambiguous:

\( \downarrow \)

(98) \( \ldots \ [\neg \exists_p \ Op_1 \ [\text{VP \ donné \ à \ TOUT LE MONDE}] \ [\text{SK \ } f_1(x_j) \ \text{aucun cadeau}]]) \]

'I didn’t give everyone any gift.'

\( \checkmark \text{ 'For all } y, \ y \text{ a person, it is not the case that there is a Skolem function } f, \text{ and that I gave }\)

\( an \ f(x, \ \text{gifts}, \ \text{to} \ y).' \)

\( f: \text{ a Skolem function from people into gifts.} \)

Since the stranded indefinite does not introduce an existential quantifier, but only a Skolem function, it is impossible for that expression to take wide scope over the universal.

Since the scopal elements responsible for the blocking effects in French Neg constructions and partial-WH-movement constructions are the same elements responsible for the intervention effects in French single-WH interrogatives, a unified
analysis of these sentences is called for. It is known independently that negative and interrogative sentences share many crucial properties (Klima 1964, Lasnik 1974, Haegeman 1995), so the present chapter can be seen as further motivation for the close relationship between questions and negative sentences.

In summary, it was shown that the null stranded indefinite can depend on some intervening scopal elements, but not others. This was made to follow from the NSC and the CSD, the set of conditions on scope to which the antecedent-government condition can be reduced.

4.6 Discourse properties of French Neg constructions with N-words

It was argued in previous chapters that indefinites separated from their operator have specific properties, i.e. they are topics, elements already introduced in the discourse or more generally part of the common ground. In the case of French WH in situ in single-WH environments and in the case of partial WH movement, there was a choice between leaving the indefinite in situ or raising it along with the WH operator. Whether or not the whole material is pied-pied depends on different discourse properties. While the in-situ strategy was a case of topic, the raising alternative was an instance of focus.

The present chapter has shown that French negative constructions are further cases of split constructions, whereby a Neg operator is separated from its noun restrictor. It thus tempting to suggest that the stranded negative indefinite introduces a familiar referent, i.e. that French N-words are topicalized elements. Is there evidence for this claim?
The answer is yes. French N-words can only be used in scenarios where a situation with its participants is given. In (101), Speaker A sets the scene: a situation and its protagonists is given. Speaker B answers in the negative with an N-word. An answer with an NPI is strange in this context:

(101) **Speaker A:** Tu as vu quelqu’un que tu connaissais
you have seen someone that you knew
à la fête?
at the party
‘Did you see anyone you knew at the party?’

**Speaker B:**

a. Non, je **n’** ai vu **personne**.
no, I Neg have seen no one
‘No, I saw no one.’

b. *# Non, je **n’** ai pas vu qui que ce soit.*
no I Neg have not seen anyone
‘No, I haven’t seen anyone.’

The hypothesis is that French N-words denote functions with contextually supplied domains and ranges. The domain may be provided by a suitable quantifier. If there is no quantifier present in the question, then the domain is provided by the context or alternatively via inferences.
Since in French, there is no choice between moving just the operator or the whole complex, the question that arises is how a non-presuppositional reading can be obtained? I conjecture that, in this case, the constructions with NPIs are used:

(102) **Speaker A:**  Tu as vu quelqu’un à la fête?

you have seen someone at the party

‘Did you see anyone at the party?’

**Speaker B:**  Non, je n’ai pas vu qui que ce soit.

No I Neg have not seen anyone

‘No, I haven’t seen anyone.’

4.7 Summary and concluding remarks

The present chapter 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 repeat the nine types of evidence provided: (a) unlike NPIs, French N-words cannot appear in non-negative contexts; (b) French N-words exhibit strong island effects, whereas NPIs do not; (c) French N-words show weak island effects, whereas NPIs do not; (d) NPIs can be licensed by superordinate negation, while French N-words cannot; (e) French N-words can appear sentence initially, whereas NPIs cannot; (f) French N-words can be used as fragment answers, whereas NPIs cannot; (g) French N-words can be modified by adverbs which can typically modify quantificational elements, while this is impossible with NPIs; (h) negative statements with multiple N-words can yield a double negation interpretation in addition
to the NC reading; (i) French has, in fact, its own set of NPIs, so French N-words need not be lexically ambiguous as argued by Ladusaw (1992, 1994).

I advocated the view that French N-words consist of a phonologically null negative operator and an indefinite expression. It was 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 for the fact that they manifest inherent negative specification. It was 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 negative operator, not by their intrinsic quantificational force.

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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.

2 In the present chapter, NPI means weak NPI (e.g. anything, anyone) and not strong NPI (e.g. a red cent, a bit). A distinction has been made 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 that of weak NPIs, suggesting that they may involve movement, contrary to weak NPIs. Strong NPIs also appear to be banned from non-negative contexts. It cannot be argued that French N-words are strong, rather than weak NPIs, since contrary to strong NPIs they can express negation on their own as we shall see.

3 The idea that negation might form 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.

4 Non-discourse-level existential closure applies when indefinites are in the scope of a quantificational element, whereas discourse-level existential closure applies when no such quantificational expression is present.

5 Pas means ‘step’, it was a pure NPI which led to the literal meaning I don’t walk a step as one would say in English I don’t move an inch.

6 Rowlett assumes a weak Spec-Head relationship based on compatibility rather than on feature identity. The presence of the expletive negative operator satisfies the Neg Criterion although there is no feature [+NEG] associated with the Spec.

7 There are a few exceptions. In very formal registers and written form, when so-called pseudo-modal verbs take an infinitival complement, it appears that ne is able to indicate sentential negation on its own:
Nous ne pouvons vous aider davantage.

"We are unable to help you further."

8 NPIs can be licensed by a UQ provided that they are in the restriction of that quantifier (as in 61f), 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.

9 Some researchers would be happy to say that the kind of examples in (63) do not invalidate the claim that French N-words are NPIs. The idea is that French N-words could be very choosy. The word 'choosy' for instance is used in Herburger (2001:297) – but, note, not with regards to French. I do not understand what 'choosy' means theoretically, or even pre-theoretically for that matter. If N-words cannot appear in any environments other than negative contexts, then surely this indicates that they contain a negative feature, which is incompatible with non-negative environments. Thus, in essence, saying that N-words are 'choosy' is equal to saying that N-words are inherently negative. Note also that N-words in Italian are not 'choosy'. Therefore, what would it mean to say that French N-words are 'choosy' while Italian N-words are not?

10 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 the locality of N-words follow from this fact, since (UQ) QR is clause-bound).

11 It must be noted that one reading is more natural than the other. However, the basic point remains: in languages like Italian, Spanish, Modern Greek, etc. it is impossible to obtain the double-negation reading whereas in French it is possible, which suggests that in French, N-words have an inherent negative feature.

12 A recent article by de Swart and Sag (2000) has come to my attention. In that work, they argue that French ne is not a negative element and that NPI analyses of French N-words cannot work because French N-words can receive a double-negation interpretation.

13 The Neg feature may thus be universally strong. In West Flemish, N-words move overtly (cf. Haegeman and 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 also universally strong.

14 Bouvier (2001), in an article which recently came to my attention, notes some audible effects of this silent operator. *In a widespread colloquial use, a phonological rule optionally reduplicates the initial liquid consonant that constitutes, after the schwa-drop, the third person singular accusative clitic, when it stays between two vowels in overt syntax* (p.6):

(i) Jel-l’aime.
   Ih-him love
   'I love him.'

This phonological rule isn’t available in negative sentences:

(ii) *Jel-l’aime pas.
   Ih-him love not.
   'I don’t love him.'

Bouvier takes this to indicate that there might be a clitic negative Boolean operator blocking the reduplication rule:

(iii) *Jel-~l’aime pas.
    Ih-~him love not.
CHAPTER 5

FOCUS PARTICLES AND FROZEN SCOPE

5.1 Introduction

A particle like only can combine with a VP (cf. 1a) - the so-called adverbial use - or with a DP (cf. 1b) – the so-called attributive use. In the latter case, covert movement must place the particle and, according to Bayer (1996), the category it attaches to, in an appropriate scope position (cf. 1b'). This can give rise to scope ambiguity, as in (2) (capital letters are used to indicate main stress and [] brackets + F for focus to indicate the focus constituent):¹

(1)  a. John only [VP studies [DP SYNTAX]f]. (adverbial use)
    b. John [VP studies [only [DP SYNTAX]f]]. (attributive use)
    b'. John [only [DP SYNTAX], [VP studies t]].

(2)  John was [VP1 advised to [VP2 study [only [DP SYNTAX]f]]].
    a. John was advised to study syntax only. (narrow focus)
    b. John was only advised to study syntax. (wide focus)

On the narrow-focus reading, (2) means something like John was advised to study no subject other than syntax. On the wide-scope interpretation, (2) means something like John was advised one thing: to study syntax, but he was not advised to study anything
This particular reading leaves open the possibility for other subjects to be studied by John, should he wish to.

When *only* combines with a VP, the scope of *only* is fixed. Whereas the wide-scope interpretation for *only* is available in (2), it is impossible in (3):

(3) John was [VP1 advised to *only* [VP2 study [DP SYNTAX]f]].

Similarly, the wide-scope reading for *only* is impossible in (4).

(4) Mary has [VP1 requested that John *only* [VP2 study [DP SYNTAX]f]].

Bayer (1996) proposes that focus particles move at LF with the XPs they are attached to. On his account, the complex category moves to the specifier of a particle phrase. This functional projection is located above IP. The particle is thus in a Spec-Head relation with a PRT at LF and the complex category [*only* + DP] is thus in a position where it can take scope over an IP. On the wide-scope reading, LF movement targets a particle phrase in the matrix clause. On the narrow-scope reading, the complex category [*only* + DP] raises to the specifier of the particle phrase which is right above the embedded IP. An adverbial particle position is an operator position, so once the complex [*focus particle + DP*] is in that operator position, it can raise no further; hence, the lack of wide scope for the focus particle in (3) and (4).

The present chapter introduces existing (cf. Bayer 1996) and novel data showing that constructions involving focus particles exhibit both strong and weak island effects, suggesting that movement is indeed involved, *contra* what is claimed in Büring and Hartmann (2001) for German and Kayne (1998) for English. It is argued that focus-
particle constructions of the attributive kind are further instances of split-DP syntax (i.e. non-canonical quantification), involving the raising of a null focus operator: the focus associate itself always remains in situ. This is where the present analysis differs from Bayer’s (1996).

This chapter is organised as follows. Section 5.2 reviews Büring and Hartmann’s (2001) recent analysis of focus particles in German. Section 5.3 introduces Kayne’s (1998) theory of English focus particles. Section 5.4 provides the existing and novel data showing that structures involving focus particles must involve movement. Section 5.5 provides an account of the locality effects. Finally, the findings are summarised in section 5.6.

5.2 Büring and Hartmann (2001)

On the basis of German data, Büring and Hartmann (2001) argue that attributive focus particles do not exist. According to them, all German focus particles are adverbial, the attributive use of focus particles is just an illusion due to the fact that German is an OV language. The authors have two main arguments for their theory: an argument from adjacency and an argument from reconstruction. Section 5.2.1 deals with the argument from adjacency, while section 5.2.2 deals with the argument from reconstruction.

5.2.1 The argument from adjacency

As is well known, focus particles can attach to many different constituents. For example, only can attach to a DP, a PP, an AP, a VP, a CP or an adverb phrase:
Particles (PRTs for short) immediately dominated by a node within the clausal projection line are defined as adverbial PRTs, and PRTs which are attached to DP are defined as attributive. This terminology will be adhered to in the subsequent discussion.

Büring and Hartmann argue that attributive focus particles in German do not in fact exist: their position in the sentence is due to the OV nature of that language. These authors thus follow Jacobs (1983) who assumes that the German focus particles nur 'only', auch 'also' and sogar 'even' are exclusively adverbial.

In Jacobs (1983), the motivation behind such a move is to make sure that the interpretation of a sentence follows directly from its surface structure (as in Montague grammar). In such a theory, no LF is assumed. Instead, a rule-by-rule translation of syntactic configurations into model-theoretic semantic objects is provided. Since the translation into the logical language must read S-structure directly, the particle must take scope in its 'overt' syntactic domain. This means that the particle must attach to V, V', V'' or V''', the last element to S.

First, Büring and Hartmann show that focus particles attach only to maximal projections. So, according to them, focus particles are maximal projections themselves. Both auch and nur can appear in Spec-CP in German, a fact which indicates that the
particles are maximal projections (if they were heads they could not appear in Spec-
CP; as is well known, heads cannot appear in that position in German, only XPs):

(6) a. Auch [war ich sehr MÜDE]. (German)
also was I very tired
‘Also, I was very tired.’
b. Nur [WEISS das keiner].
only knows that nobody
‘It’s just that nobody knows about it.’

Next, Büring and Hartmann show that while German ‘adverbial’ focus particles
require strict adjacency with the elements with which they associate, ‘attributive’
particles do not (the terms ‘adverbial’ and ‘attributive’ are now used pre-theoretically
– at least in this section, since there is, according to Büring and Hartmann, no such
thing as an attributive focus particle). As in Jacobs (1983), this is taken to suggest that
attributive particles do not in fact attach to the category they associate with. Consider
first the case of adverbial PRTs (Subj. = subject; IO = indirect object; DO = direct
object; V = verb):

Subj. IO

(7) a. Gestern hat Rufus [sogar [dem MÄDCHEN]] (German)
yesterday has Rufus even the DAT GIRL
Adjoining the focus particle at a distance, as in (7c) and (8c), where the subject intervenes between the particle and its associate, results in unacceptability. The particle must be strictly adjacent to the element with which it is associated. This is, according to
Büring and Hartmann, in marked contrast to English, where an adverbial PRT can be associated with any non-adjacent focus:

(9) a. Yesterday, Rufus [even [gave [FLOWERS] f ]] to the girl.
   b. Yesterday, Rufus [even [gave [flowers [TO THE GIRL] f ]]]

(10) a. Yesterday, Rufus [only [gave [FLOWERS] f to the girl]].
    b. Yesterday, Rufus [only [gave [flowers [TO THE GIRL] f ]]]

As (7b) and (8b) show, in German, adjunction of PRT to the left of the subject is in general permitted, provided that the subject is focused. Note, however, that even in English the equivalent of (7c) and (8c) are ungrammatical:

(11) a. *Yesterday, [even [Rufus [gave [FLOWERS] f ]]] to the girl.
    b. *Yesterday, [only [Rufus [gave [flowers [TO THE GIRL] f ]]]]

Next, Büring and Hartmann show that in German, adjacency is not required with attributive focus particles:

(12) ...weil Kim sogar [die Freunde von (German) [MARGRETS] f Freunden] besuchte.

MARGRET'S friends visited
‘…because Kim visited even the friends of Margret’s friends.’
(13) ...weil Kim nur [die Freunde von [MARGRETS] F Freunden] besuchte.

Margret's friends visited

'...because Kim visited only the friends of Margret's friends.'

In fact, the only position for PRTs in German is preceding the object DP as a whole. Any DP-internal position, e.g. attached to PP or an embedded DP, is unavailable:

(14) *...weil Kim [die Freunde [sogar [von [MARGRETS] F Freunden]] besuchte.

Margret's friends visited

'Kim visited even the friends of Margret's friends.'


Margret's friends visited

'Kim visited even the friends of Margret's friends.'


Margret's friends visited

'Kim visited only the friends of Margret's friends.'
Margret's friends visited. ‘Kim visited only the friends of Margret’s friends.’

(17) ...weil Kim [die Freunde von [nur]
...because Kim the friends of only
Margret’s friends visited
‘Kim visited only the friends of Margret’s friends.’

The structure of the DP object is given in (18):

(18) [DP1 the [NP1 friends] of [DP2 [DP3 MARGRETSf]f’s [NP2 friends]]].

The focus on DP3 is narrow (it cannot project from the specifier of DP2). Yet, the particle in (12) and (13) is adjoined to DP1, hence not adjacent to the focus constituent. This is taken to suggest that a German focus particle is never attached to DP, but to the XP immediately dominating DP (e.g. VP). German focus particles thus adjoin only to nodes immediately dominated by a node within the projection line (or, following Grimshaw 1991, by a node which is part of the extended verbal projection, EVP, henceforth). Any instance of PRT + DP in German is thus analysed as an instance of PRT + [XP DP ...]. In other words, given that German is verb final, an analysis is available according to which focus particles are in fact never attached to DP, but to the XP immediately dominating DP. Since the object precedes the verb in German, it is quite possible that the PRT is in fact attached not to DP, but to VP:
(19) Focus particle Object sequence:

\[ [\text{VP} \{ \text{DP} \{ \text{PRT} \{ \ldots \} \} \} \text{V}] \rightarrow [\text{VP} \{ \text{PRT} \{ \text{VP} \{ \text{DP} \text{V} \} \} \} \]  

As for subjects, it is quite possible that, rather than being attached to DP, the PRT is in fact attached to IP:

(20) Focus particle Subject sequence:

\[ [\text{IP} \{ \text{DP} \{ \text{PRT} \{ \ldots \} \} \} \{ \ldots \} \rightarrow [\text{IP} \{ \text{PRT} \{ \text{IP} \{ \text{DP} \{ \ldots \} \} \} \]  

As for verbs, it is quite possible to analyse the PRT as being attached to VP rather than to the verb directly:

(21) Focus particle Verb sequence:

\[ [\text{VP} \{ \text{DP} \{ \text{VP} \{ \text{PRT} \{ \text{V} \} \} \} \} \rightarrow [\text{VP} \{ \text{PRT} \{ \text{VP} \{ \text{VP} \{ \text{V} \} \} \} \]  

Returning now to the problematic cases of (7c) and (8c), Büring and Hartmann argue that the correct generalization seems to be that adjunction of PRT ‘at a distance’ is prohibited if there is a closer adjunction site within the EVP. The PRT in (7c) and (8c) could in principle have adjoined to IP and from that adjoined position associate with the focused DP ‘dem MÄDCHEN’, since IP is an EVP. However, this is not possible, because there is a lower node to which the PRT can attach: VP.

Following Jacobs (1983) and König (1991), Büring and Hartmann thus propose the following two definitions:

(22) PRT must precede and c-command the focus.
The Later and Better Principle (LATE)

PRT cannot attach to a node $\alpha$ in the extended projection (EP) if it could adjoin to some $\beta$ in the same EP where it would be later (= further to the right) and still meet (22).

The c-command condition in focus-particle constructions is uncontroversial. It is a requirement not only in German, but in English too:

(24) a. *[John even had an idea] and [he told it his [BOSS]$_f$].

b. *[John even went home] [although he hadn’t met his [ADVISER]$_f$].

(Bayer 1996:16)

With the LATE principle, Büring and Hartmann avoid the problems associated with Jacobs’s (1983) original analysis, which permitted too many associations with focus. Bayer (1996) gives the following examples of unwanted focus associations permitted by Jacobs’s analysis:

(25) a. **Sogar HANS gab seiner Tochter ein neues Fahrrad.

    even Hans gave his daughter a new bicycle

b. *Sogar Hans GAB seiner Tochter ein neues Fahrrad.

c. *Sogar Hans gab SEINER Tochter ein neues Fahrrad.

d. *Sogar Hans gab seiner TOCHTER ein neues Fahrrad.

e. *Sogar Hans gab seiner Tochter ein NEUES Fahrrad.
The same patterns can be repeated for *nur* ‘only’:

(26) a. Nur HANS gab seiner Tochter ein neues Fahrrad.
    only Hans gave his daughter a new bicycle
b. *Nur Hans GAB seiner Tochter ein neues Fahrrad.
c. *Nur Hans gab SEINER Tochter ein neues Fahrrad.
d. *Nur Hans gab seiner TOCHTER ein neues Fahrrad.
e. *Nur Hans gab seiner Tochter ein NEUES Fahrrad.
f. *Nur Hans gab seiner Tochter ein neues FAHRRAD.
   ‘Nur Hans gave his daughter a new bicycle.’

Büring and Hartmann’s analysis correctly rules out the ungrammatical examples in (25) and (26), since in all these examples there is a lower EVP available for the focus particle. Therefore, according to LATE, the particle should attach to that node rather than the higher node. Since Jacobs’s theory lacks a principle like LATE, the particle can associate with any focus-bearing phrase it c-commands.

To recapitulate, (7c) and (8c) violate LATE in (23) because there is an attachment position for the PRT which is later (i.e. VP) than the next attachment position higher up (i.e. IP). In (12) and (13), on the other hand, any position which is later either follows the focus or is dominated by an EVP (such as those within DP1); therefore (23) is not violated. However, even though there are positions closer to the focus in
(12) and (13) – e.g. adjoined to DP3 or DP2 or PP – these positions are not dominated by an EVP. This explains why the focus particle cannot associate directly with its associate.

A surprising consequence of Büring and Hartmann’s theory is that all sentence-initial occurrences of ‘PRT-DP’ in German topicalised constructions must be analysed as V3 sentences with the particle attached to the root node rather than the DP in Spec-CP:

\[
(27) \quad [\text{CP Nur} [\text{DP die HARTEN}]_f \text{ kommen in den Garten}].
\]

only the hard come into the garden

‘Only the TOUGH ones make it into the garden.’

As commented by Büring and Hartmann themselves: ‘this flies in the face of practically every analysis of verb-second languages like German, for which it is usually held that any kind of adjunction to CP must be strictly ruled out in order to guarantee the strict verb-second characteristic.’ Like Jacobs, Büring and Hartmann are willing to accept this consequence.

5.2.2 The argument from reconstruction

The second argument for the idea that the focus particle and the DP do not form a constituent, and thus for the idea that the focus particle is base-generated in adverbial position only, comes from reconstruction:
In (28), the topicalised DP *a mistake* can either take wide scope over the universal quantifier, in which case everyone made the same mistake or the DP reconstructs and is interpreted in the scope of the universal, in which case everyone made a different mistake.

Büring and Hartmann argue that, although the associate DPs of focus particles reconstruct, focus particles themselves do not. Consider example (29) in which reconstruction of the DP *a picture of his wife* is necessary in order to obtain the correct interpretation (different men/different wives):

(28) [Einen Fehler], hat vermutlich jeder t_i gemacht.

*a-ACC mistake has presumably everyone-NOM made*

‘Presumably, a mistake, everyone made.’  (ambiguous)

(i) ‘There is an $x$, $x$ a mistake, such that everyone made $x$.’

(ii) ‘For all $y$, $y$ a person, there is an $x$, $x$ a mistake, such that $y$ made $x$.’

(Büring and Hartmann 2001)
(29) is supposed to show that the topicalised *ein Bild von seiner Frau* constituent can undergo reconstruction while the clause-initial PRT must stay behind. Büiring and Hartmann say that a construal by which the PRT reconstructs under the subject position is not available in (29), but that, however, the DP itself can be reconstructed, so that the pronoun can be bound by the subject quantifier, yielding LF (29b). They conclude that such disjoint scope would be completely unexpected given a PRT + DP theory (let alone its obligatoriness).

These facts are taken by Büiring and Hartmann to indicate that the focus particle is attached to CP rather than to the DP in Spec-CP. The XP *a picture of his wife* can reconstruct, but the focus particle cannot reconstruct with it. On this account, the particle remains adjoined to CP, hence the obligatory wide scope for the focus particle.

5.2.3 Problems

Büiring and Hartmann’s analysis suffers from the same problems that Jacobs’s account faces. First, the fact that the base-generation approach is incompatible with the V2 constraint is problematic rather than insightful. As acknowledged by Büiring and Hartmann themselves, allowing PRTs to adjoin to CP is an exception to the rule which otherwise seems to hold across the board in verb-second languages like German: no adjunction to CP.

Second, the argument from adjacency is inconclusive, since even in English attributive-focus particles cannot attach directly to the elements with which they associate DP internally:
(30)  a. *Kim visited [the friends even of MARGRET]'s friends.
    b. *Kim visited [the friends of even MARGRET]'s friends.
    c. Kim visited even [the friends of MARGRET]'s friends.
    d. *Kim visited [the friends only of MARGRET]'s friends.
    e. *Kim visited [the friends of only MARGRET]'s friends.
    f. Kim visited only [the friends of MARGRET]'s friends.

English focus particles can, however, attach to DPs as a whole. In English, it is clear that focus particles can attach to DPs rather than necessarily a VP (cf. (30c), (30f)).

Third, the argument from reconstruction is inconclusive. It is not clear that the reading according to which 'every man only possesses a picture of his wife and nothing else' is missing in the English translation of (29). This becomes more evident with appropriate contextualisation:

(31) Only a picture of his wife does every man keep in his wallet.

(i) √ 'Every man only keeps a picture of his wife in his wallet (and nothing else).'

(ii) √ 'The only person every man keeps a picture of in his wallet is his wife.'

If one looks at the unmoved alternative of (31), it becomes obvious that, in order to obtain the reading according to which a picture of his wife is the only picture that every man keeps in his wallet, one needs to put heavy stress on wife (indicated by underlining), otherwise it is very difficult to obtain that reading:
(32)  a. Every man keeps only a picture of his wife in his wallet.
   ✓ 'Every man only keeps a picture of his wife in his wallet (and nothing
   else).'

   b. Every man keeps only a picture of his **WIFE** in his wallet.
   ✓ 'The only person every man keeps a picture of in his wallet is his wife.'

Now, if heavy stress is put on wife, it becomes impossible to obtain the other reading. Why this state of affairs? The difference between the moved and unmoved case is that the location of default sentence stress and focal stress coincide in the unmoved case, but not in the moved case. In the moved case, there is no need to put heavy stress on wife, since wife is no longer part of the default sentence stress. The interpretational bias demonstrated in the German example may have something to do with this. As a result, it is easy to misjudge the example.

   Since Frau in (29) must receive heavy stress in the unmoved case, the unmoved case and its moved variant are completely parallel. Neither sits very easily with the 'nothing else' reading. If correct, this scenario greatly undermines Büring and Hartmann's contention that focus particles do not reconstruct.

   To summarise, Büring and Hartmann argue that in German focus particles attach to elements of the verbal extended projection only. Attributive focus particles do not exist. It was argued, however, that neither the argument from adjacency nor the argument from reconstruction was conclusive.
5.3 Kayne (1998)

Kanye (1998) provides an approach to English focus particles similar to that of Büring and Hartmann (2001). However, much more machinery is needed than in German, since English is not an OV language. Kanye dispenses with covert movement and replaces it with a combination of overt movement of phonetically realised phrases. He argues that the movement operations are not covert, but overt (pre-Spell-Out) operations. His argument is based on the observation that the scope of adverbial PRTs is fixed. Recall that the wide scope interpretation for *only* was much more difficult in (3) than in (2):

(3) John was \[ {vp_1 \text{ advised to } \text{only } [vp_2 \text{ study } [dp \text{ SYNTAX}]_F]} \].

(2) John was \[ {vp_1 \text{ advised to } [vp_2 \text{ study } \text{only } [dp \text{ SYNTAX}]_F]} \].

Suppose that *only* is a quantifier which undergoes Quantifier Raising (QR). The question one must address is then why in (3) *only* cannot QR higher up in the tree. On the assumption that *only* is a quantifier, nothing in GB or more recent theories of syntax prohibits QR of the focus particle in (2). However, if it is assumed that *only* is part of a focus phrase and thus targets a specific position, then the freezing properties of focus particles in adverbial position becomes clearer, since once the particle is in an operator position it can no longer raise. This is the hypothesis Kanye pursues. According to him, the focus particle *only* is the head of a focus phrase.

On Kanye's account, *only* is an adverbial particle, and thus is always associated with an EVP in the sense of Büring and Hartmann. The ambiguity in (2) arises
depending on where the focus particle is base-generated (i.e. in the matrix or in the embedded clause). There is no initial PART-XP constituent, the association between the particle and the XP is derived by movement. The wide scope reading is achieved as follows:

\[(33)\] John was advised to study only syntax.

a. John was only \([VP \text{ advised to study } syntax]\).

\((only\text{ is merged in the matrix clause})\)

b. John was \([syntax], only \([VP \text{ advised to study } t_i]\].

\((only\text{ attracts the focus constituent to its Spec, because } only\text{ has a focus feature})\)

c. John was only\([sy\text{ntax}], t_j [VP \text{ advised to study } t_i].\)

\((only\text{ raises because it has a w - word order - feature which is attracted by a higher abstract head } W), \text{ then the order ‘only syntax’ is established correctly.}\)

d. John was \([VP \text{ advised to study } t_i], only [syntax], t_j t_k.\)

\((VP \text{ moves to Spec-W})\)

In sum, scope is expressed hierarchically. Under such an account, there are no covert phrasal or featural movements permitted by UG.

A first objection to Kayne’s account is in fact not specific to his treatment of focus particles, but applies across the board to his treatment of word order, with its extensive reliance on remnant movement. Very often, as was the case here, this calls for the introduction of functional heads whose sole motivation appears to be that without them the correct surface order fails to be derived.
Secondly, the proposal that attributive focus particles are adverbials faces the problem that in English focus particles can intervene between the verb and its object while adverbs cannot (cf. Rooth 1985):

(34)  
\begin{itemize}
  \item a. John likes even [HIMSELF]_{f}.
  \item b. John likes only [HIMSELF]_{f}.
  \item c. *John likes often himself.
  \item d. ?*John likes very much himself.
\end{itemize}

If attributive focus particles were indeed adverbial, then it is predicted that they should appear in positions where adverbs normally appear.

In summary, Büring and Hartmann (2001) and Kayne (1998) argue that focus particles are base-generated where they take scope. This claim is more straightforward for German than for English, since German, unlike English, is an OV language. As a result, a German focus particle preceding an object DP can be analyzed as adjoined to VP. Extending this idea to a VO language such as English is not straightforward, as was seen earlier.

The next section provides evidence for the idea that focus particles and the XP with which they are associated do form a constituent (contra Kayne) and for the hypothesis that focus-particle constructions involve movement (contra Büring and Hartmann, but like Kayne).
5.4 Evidence for movement: intervention effects

Evidence for the idea that focus particles involve movement comes from two main sources. Focus particles cannot remain in strong or weak islands and, at the same time, take wide scope over the matrix predicate. Theories that posit no movement of focus particles cannot explain these facts.

5.4.1 Strong island effects

The examples in (35) show that a focus particle and the DP with which it is associated cannot remain in a strong island and at the same time take wide scope, i.e. scope over the matrix predicate. (35a) is from Bayer (1996) and (35b) and (36) are additional data. The difference between (35a) on the one hand and (35b) and (36) on the other is that, while (35a) has no reading, (35b) and (36) lack the wide-scope reading; they are however grammatical on the narrow-scope reading:

(35)  a. *John waited for the bus \([\text{inland behind only } \text{PETER}_f]\).

    b. John opened the window \([\text{inland in order to see only } \text{PETER}_f]\).

(36)  a. *Hans stand in der Schlange

    Hans stood in the queue

    \([\text{inland hinter nur } \text{PETER}_f]\).

    behind only Peter.

    b. Hans öffnete das Fenster \([\text{inland um }\]

    Hans opened the window so that
nur [PETER]₋ zu sehen.
only Peter to see

In the above it is impossible for the focused particle to take wide scope over the matrix verb.

5.4.2 Weak island effects

The examples in (37) show that a focus particle and the DP with which it is associated cannot remain in a weak island if it wants to take scope over the predicate. In other words, the focus particle cannot take wide scope over weak-island inducers. The reading according to which the focus particle takes scope in the matrix clause is not available:

(37) a. John asked [island WHERE to study only [SYNTAX]₀]. (unambiguous)
b. John knows [island WHEN to study only [SYNTAX]₀]. (unambiguous)

(38) a. Hans fragte [island WANN nur [SYNTAX]₀] (unambiguous)
Hans asked when only syntax
zu studieren].
to study (unambiguous)

‘Hans asked when to study only SYNTAX.’
b. Hans weiss [island \text{WO} \text{nur} [\text{SYNTAX}] \text{F}] \quad (\text{unambiguous})

Hans knows where only syntax zu studieren].
to study \quad (\text{unambiguous})

‘Hans knows where to study only SYNTAX.’

The examples in (39) involve so-called inner islands:

(39) a. John was advised [island \text{NOT} to study only [\text{SYNTAX}] \text{F}]. \quad (\text{unambiguous})

b. John advised [island \text{NO ONE} to study only [\text{SYNTAX}] \text{F}]. \quad (\text{unambiguous})

(40) a. Hans wurde geraten [island \text{NICHT nur} [\text{SYNTAX}] \text{F}] \quad (\text{German})

Hans was advised not only syntax zu studieren].
to study

‘Hans was not advised to study only SYNTAX.’

b. Hans hat [island \text{NIEMANDEN} geraten nur [\text{SYNTAX}] \text{F}]

Hans has no one advised only syntax zu studieren.
to study

‘Hans advised no one to study only SYNTAX.’

Finally, (41) shows that tense creates an opaque domain for the licensing of focus particles:
(41) John was advised [C that Peter should study only [SYNTAX]f].

In summary, all the examples considered in section 5.4 suggest that focus particles involve movement. Since Büring and Hartmann (2001) assume that focus particles remain in their base position, and do not undergo movement, they cannot account for the intervention effects noticed above. Although Kayne’s analysis does involve movement of only, it is only within the higher clause, so he cannot explain the island effects either. Kayne’s derivation for (33) is repeated here for convenience:

(33) John was advised to study only syntax.

a. John was only [vp advised to study syntax].

(only is merged in the matrix clause)

b. John was [syntax]; only [vp advised to study t_i].

(only attracts the focus constituent to its Spec, because only has a focus feature)

c. John was only; [syntax]t_j [vp advised to study t_i].

(only raises because it has a w - word order - feature which is attracted by a higher abstract head W), then the order ‘only syntax’ is established correctly.

d. John was [vp advised to study t_i]; only; [syntax];t_j t_k.

(VP moves to Spec-W)
To account for the blocking effects the focus particle would need to originate below in the embedded clause, crossing the intervener on its way to the matrix clause.

5.5 An alternative analysis

In order to account for the island effects in focus-particle constructions, I argue that in attributive uses of focus particles, movement of a phonologically null focus operator occurs. The attributive focus particle is the morphological/phonological realisation of that operator. The operator takes scope somewhere in the VEP. While the focus operator raises for scope, the focused associate remains in situ. Thus, the situation with focus-particle constructions may, at first sight, look quite different from the other constructions considered so far in the present thesis. Recall that it was argued in previous chapters that the stranded indefinite in a split construction is generally a defocalised element. And here it appears that the stranded indefinite is not defocalised. On the contrary, the stranded indefinite is a focus element.

Note, however, that, when in previous chapters, it was argued that a stranded NP is a defocalised element, what was meant by that was that the stranded NP (i.e. the noun restrictor) is not part of the informational focus (represented typically by WH). Crucially in the case of contrastive focus, it is the contrastiveness that is the new information (John requested that Mary study syntax and nothing else). However, the associated NP ‘syntax’ in (33), is nevertheless part of the topic structure, since it is presupposed that there are various possible topics of study, of which ‘syntax’ is one.

Returning to the proposed analysis, (39) is the derivation for (1), (40) is the derivation for (2a) and (41) the derivation for (2b):
(39) John [Op₁ [VP studies [t; only [SYNTAX]ᵣ]]].

(40) John was [VP₁ advised to [Op₁ [VP₂ study [t; only [DP SYNTAX]ᵣ]]]].

(41) John was [Op₁ [VP₁ advised to [VP₂ study [t; only [DP SYNTAX]ᵣ]]]].

(40) corresponds to narrow scope while (41) corresponds to wide scope of the focus particle.

Suppose now that the focus null operator I have postulated in attributively-used-focus particle structures is an adjunct. As an adjunct, the null operator leaves a non-referential trace behind. This trace needs to be antecedent-governed. On the assumption that the weak-island inducers (e.g. WH, negation, etc.) are all A'-specifiers, the intervention effects receive a principled explanation in terms of Relativized Minimality or a locality principle in this spirit. Similarly, the examples with strong island effects considered earlier will all (on the relevant scope reading) involve movement of a null operator out of the island.

However, as in the previous chapters, it turns out that universal quantifiers modified by almost are also interveners. Yet, they are not A'-specifiers (on Rizzi’s view they are IP-adjuncts) - the range of data that follows is new (as far as I know).³

(42) a. *John [Op₁ advised ALMOST EVERY STUDENT to study [t; only [SYNTAX]ᵣ]].

b. *John [Op₁ advised ALMOST EACH STUDENT to study [t; only [SYNTAX]ᵣ]].
(43)  *Hans fragte FAST JEDER STUDENT (German)

Hans asked almost every student

nur [SYNTAX] zu studieren.

only syntax to study

* 'Hans asked almost every student to study only SYNTAX.'

In (42a, b) and (43) are completely ungrammatical.

Another problem for the Relativized Minimality solution is that not all A'-specifiers lead to intervention effects:

(44) John was [Op1 advised to ALWAYS study [t1 only [SYNTAX]]].

(45) Hans wurde geraten IMMER nur (German)

Hans was advised always only

[SYNTAX] zu studieren.

syntax to study

'Hans was advised to always study only SYNTAX.'

The course of argumentation should by now be familiar to the reader. On the reasonable assumption that adverbs like always occupy A’-positions, on Rizzi’s view, one would expect (44) and (45) to be ungrammatical. Further evidence for the idea that the intervention effects exhibited in focus particle constructions should be viewed in terms of scope comes from examples like (46) and (47):
(46) Mary [Op, advised EVERY STUDENT to study [ti, only [ONE SUBJECT]f]]

(i) *There is one subject such that Mary only advised every student to study that subject (e.g. maths).

(ii) ✔ ‘There is a set of pairs <student (x), subject (y)> such that Mary only advised a student (x) to study a subject (y).’

(47) Hans fragte JEDER STUDENT nur [ein FACH]f (German)

Hans asked every student only a subject zu studieren.

(i) *There is one subject such that Mary only advised every student to study that subject (e.g. maths).

(ii) ✔ ‘There is a set of pairs <student (x), subject (y)> such that Mary only advised a student (x) to study a subject (y).’

Although it is relatively easy to obtain the reading according to which the indefinite takes narrow scope over the universal quantifier, it is impossible for the indefinite to take wide scope over the universal.

In view of the data in (42)/(43) and (44)/(45), I shall, as in previous chapters, therefore account for the intervention effects in terms of scope. I assume that the DP with which the focus operator is associated is the semantic restriction of that focus operator.

The hypothesis put forward is that the stranded indefinite introduces a Skolem function, but not an existential quantifier. This means that the stranded NP is a dependent element. If an intervener of the wrong sort is placed between the null focus operator and its noun
restrictor, then ungrammaticality will follow. The stranded indefinite can depend on frequency adverbs, because frequency adverbs are of the same order as the stranded indefinite. Recall that the $i$ index is the functional index – here bound by the focus Op - and the $j$ index is the argumental index (the equivalent German examples will receive the same analysis):

![Diagram]

(44) John was $[O_p [v_p \ldots \text{ALWAYS}_j [v_p \ldots [SK f_i (x_j) only [SYNTAX]_j]]]]$.

✓ 'There is a Skolem function $f$, such that John was only advised to always study $f(x, \text{syntax})$.'

$f$: a Skolem function from people to what they were advised to study.

The Skolem function introduced by the stranded indefinite cannot depend on almost every student/almost each student, negation or WH because those elements are of a higher order than the stranded indefinite:

![Diagram]

(42) a. John $[O_p [v_p \ldots \text{ALMOST EVERY STUDENT}_j [v_p \ldots [SK f_i (x_j) only [SYNTAX]_j]]]]$.

* 'There is a Skolem function $f$, such that John only advised almost every student to study $f(x, \text{syntax})$.'

$f$: a Skolem function from students into what they were advised to study.
b. John \([\text{Op}_i [\text{vp}_1 \ldots, \text{ALMOST EACH STUDENT}, \ldots [\text{SK } f_i(x_j) \text{ only [SYNTAX]}_f]]]\).

* 'There is a Skolem function \(f\), such that John only advised almost each student to study \(f(x, \text{syntax})\).'

\(f\): a Skolem function from students into what they were advised to study.

(37) a. John \([\text{Opi} [\text{vp}_1 \ldots [\text{WHERE} \text{ to } [\text{vp}_2 \ldots [\text{SK } f_i(x_j) \text{ only [SYNTAX]}_f]]]]]\).

* 'There is a Skolem function \(f\), such that John asked where to study \(f(x, \text{syntax})\).'

\(f\): a Skolem function from people into what they were asked to study.

b. John \([\text{Opi} [\text{vp}_1 \ldots [\text{WHEN} \text{ to } [\text{vp}_2 \text{ to study} [\text{SK } f_i(x_j) \text{ only [SYNTAX]}_f]]]]]\).

* 'There is a Skolem function \(f\), such that John knows when to study \(f(x, \text{syntax})\).

\(f\): a Skolem function from people into what they were asked to study.

(39) a. John \([\text{Op}_i [\text{vp}_1 \ldots [\text{NOT} \text{ to } [\text{vp}_2 \text{ study} [\text{SK } f_i(x_j) \text{ only [SYNTAX]}_f]]]]]\).

* 'There is a Skolem function \(f\), such that John was only advised not to study \(f(x, \text{syntax})\).'

\(f\): a Skolem function from people into what they were not advised to study.
b. John [Op, [vp₁ … [NO ONE to [vp₂ study [SK f₁ (x) only [SYNTAXₜ]]]]].

* 'There is a Skolem function f, such that John advised no one to study syntax.'

f: a Skolem function from people into what they were not advised to study.

In sum, the present theory differs from Bayer's (1996) in that movement of the focus particle only, and not of the whole PRT + DP complex, is assumed. Focus-particle constructions with attributive particles can be viewed as split constructions, since the operator is separated from its restriction. If the whole complex moved, then the intervention effects would not be expected.

As already pointed out in the introduction and in previous chapters, the theory put forward considerably reduces the role of LF. In all the cases considered movement of the null operator is overt. From this standpoint, the present analysis is in line with Kayne, who does away with covert movement. However, unlike him, the present analysis does not assume movement of whole phrases, but movement of null operators.

5.6 Summary and concluding remarks

The present chapter argued against a base-generation approach to attributively used focus particles. It was argued that structures with attributively used focus particles involve movement of a null focus operator. While the operator moves and takes scope somewhere in the VEP, the restriction of only, i.e. the associate of focus, remains in situ. Existing (cf. Bayer 1996) and novel data were introduced showing that
attributively used focus particle structures exhibit strong and weak island effects, thus suggesting that movement is involved in these constructions. In view of the data involving certain quantifiers and adverbs, I concluded that a solution in terms of scope was superior to an account in terms of Relativized Minimality.

1 This observation is known as Taglicht's (1984) observation, see also von Stechow (1991).

2 This is a non-interpretivist view of the relation between syntax and semantics, so it is not to be confused with the position with regard to LF that was advocated in the previous chapters. Although no LF is assumed in the present work, it is nevertheless assumed that syntax is autonomous.

3 Almost every student or almost everyone are not to be confused with every student or everyone. The former pair yield intervention effects in other split constructions (see chapter 2 for example). The two groups have very different properties (cf. Beck 1996).
CONCLUSION

The present thesis has argued that French simplex WH questions in situ, partial WH movement constructions in German, negative dependencies involving N-words and focus particle constructions are all split constructions. That is, the quantified schema they yield is non-canonical in the sense that the operator is separated from its semantic restriction; the latter having remained in situ. The four constructions with I have dealt all exhibit both strong and weak island effects, a characteristic feature of split constructions cross-linguistically. The island effects were accounted for, not in terms of pure syntax, but in terms of scope. The Scopal ECP (cf. Williams 1994) provided us with a means to account for these island effects in a principled way. The main idea was that stranded indefinites in split constructions are predicative indefinites. They do not introduce an existential quantifier, but only a Skolem function. These indefinites have special properties, one of which being that they are scopeless. They take scope only locally, very much like adjuncts whose trace is basically their scope.

I remained agnostic as to whether the relation between the operator and the noun in situ was via movement or whether the operator was base-generated in its operator position. If the bare operator moves, then the idea is that the trace left behind is a complex trace, involving a functional variable and an argumental variable. The operator binds the functional variable while the argumental variable can be bound by a (suitable) antecedent
(provided either anaphorically or via context or even via inference. If the bare operator is base-generated in its operator position, then the operator simply binds the functional variable.)
References


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