# *UN NP*S AND WH IN-SITU: AN ARGUMENT FOR AN INDEFINITE ANALYSIS*

*Lena Baunaz (lena.baunaz@lettres.unige.ch)*

## 1. INTRODUCTION

### 1.1. Theoretical assumptions

It is traditionally admitted in the literature that two non-commutative quantifiers (QPs) yield scope ambiguities in English (May (1977), Fox (1995) among others), as (1) shows:

(1) Every man loves a woman (∀ > ∃); (∃ > ∀)

When ∃QPs take wide scope, they are interpreted specifically, i.e., there is a certain woman such that every man loves her. (2) shows the corresponding French sentence is potentially ambiguous:

(2) Tous les hommes aiment une femme (∀ > ∃); (∃ > ∀)

May (1977) introduces a syntactic adjunction operation, capturing scope ambiguity at LF: Quantifier Raising (QR). QR is grammatically encoded and as such obeys all the principles governing movement in general. QR is a free scope taking mechanism, which applies to all QPs without exception. QPs are all treated alike and scope is understood in terms of c-command.

Reinhart (1997) claims that QR should be constrained. She bases her observation on the fact that ∀QPs are stuck in syntactic islands while ∃QPs are free. If ∀QPs and ∃QPs do not show the same scope behaviour, it means that we have to deal with at least two different types of QPs, exhibiting each a different syntax. Based on Heim 1982, she proposed that indefinites are non-quantificational and interpreted in-situ.

The quantificational realm not being uniform, Beghelli (1995) shows that QPs are best analysed if distinguished in different types: each type of QPs has different semantic properties and different scope interpretations. Based on Italian and Hungarian, Beghelli (1995), Szabolcsi (1997) and Puskás (2001) propose that QPs undergo a syntactic operation triggered for feature-checking requirements, i.e, the landing site of a QP at LF is selective. Still scopal relationships are defined in terms of c-command.

In Baunaz & Cattaneo (this volume), syntactic and semantic arguments are given to show that French ∀QPs are not uniform. Based on a micro-typology of QPs in French, they supply syntactico-semantic arguments for the status of *personne* 'nobody' as a ∀QP, contrasting N-

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words with indefinites and QPs to conclude that *personne* should be analysed as [$\forall_{\text{tous les}}$ $\neg$]. In this paper, I discuss ∃QPs and WhQPs.

### 1.2 Proposal

Along with Starke (2001), I understand the notion of existential presupposition as involving two possible readings: range-based presupposition involves a subset of a previously mentioned group (Enç's 1991 partitivity), while specificity-based presupposition refers to familiar individuals.[1] I claim that specificity is tied to the speaker, but not necessarily to the hearer. On the basis of the redefined concept of specificity, I provide a finer distinction of both ∃QPs and wh in-situ and argue they each involve similar features.

I first discuss the status of ∃QPs in Genevan French and identify three distinct classes, all endowed with different prosody, semantics, and syntax:[2] (i) fall-rise (∨) ∃QPs which involve specificity; (ii) DOWNFALL ∃QPs which trigger range and exhaustivity and (iii) neutral ∃QPs which are non-presuppositional. I show that only fall-rise ∃QPs can be extracted out of weak Islands (WI), and as such are not clause-bound, whereas downfall and neutral ∃QPs are stuck in this configuration.

Based on Starke (2001), I then discuss wh in-situ constructions in Genevan French and show that they considerably vary from those usually described in the literature (Chang 1997, Cheng and Rooryck 2000 (C&R), Boeckx 1999 and Mathieu 2002). I identify three different wh in-situ. I show that each kind has a correspondent ∃QP, sharing with it its prosody, semantic, and syntax. Scope relationships between the different quantificational elements can then easily be treated in terms of Starke (2001)'s idea of Relativized Minimality (RM).

Following Mathieu 2002's approach, originating in Obenauer 1984, I assume that quantificational DP structures may be non-canonical at Spell-out, i.e., a lexical operator and its semantic restriction may be separated, yielding Split-DP constructions -'a construction in which an operator Op is split from its noun restrictor' (Mathieu 2002:15):

(3) $OP_i$ [ $t_i$ indefinite/variable]

Based on this approach, I show that only non-presuppositional ∃QPs/wh in-situ yield Split-DP constructions, while both presuppositional existentials and wh in-situ do not.

In section 2, I present semantic, prosodic and syntactic arguments in favour of a new typology for ∃QPs. In section 3, I present wh in-situ in Genevan French. In section 4, I show that scope relationships between ∀QPs and ∃QPs, as well as between ∀QPs and wh in-situ are governed by the same constraints on movements. Strikingly the prosody, semantic and syntax of French wh in-situ allow us to assimilate them to the ∃QPs presented in section 2. Section 5 is devoted to the internal constructions of French ∃QPs and wh in-situ. Section 6 is an extension of section 5. Section 7 shows some problems with over wh-movements. Section 8 is the conclusion.

[1] See also Farkas (1994), (2002).

[2] The type of French I am presenting in this paper seems to behave in a way that disallows the traditional scope ambiguities for English (May 1985) and French (Junker 1995). That's why I call it Genevan French.

## 2. FRENCH $QPs: a new typology

The term 'existential' is used to refer to NPs like *un NP* 'a NP' (vs. 'one NP') or *quelqu'un* 'somebody'. This paper focuses on the syntax of *un NP*. As will soon become clear I formally characterise indefinites as variables bound by $Op_{\exists}$ i.e., an indefinite introduces an $Op_{\exists}$ (see Heim (1982) and Diesing (1992), among others). Discussing the status of ∃QPs, Baunaz (2004) identifies three types of *un NP*, each characterized by its own prosody, semantics, and syntax.

First, fall-rise *un* (∨) involves specificity and is not contrastive. (4a) shows the intonation, (4b) the interpretation and (4)c the scope behaviour of specific *un* NP:

(4) a. Rachel aime ∨ un homme = fall-rise (∨)

b. Rachel aime ∨ un homme, (i.e., Ross) = presuppositional → specific
Rachel loves a man

c. Toutes les femmes aiment ∨ un homme (∨ un > ∀) ; * (∀ > ∨ un)
all the women love a man

In (4), Ú *un homme* is pronounced with a slight fall-rise intonation . Because fall-rise *un NP* cannot be uttered out-of-the-blue and refer to familiar individuals (i.e., "Ross", in (4b)), I claim that it triggers specificity-based presupposition, as the following context shows:

(5) **Speaker A**: Did you watch *Friends* yesterday? Is Monica still going out with that unsecure guy ?
**Speaker B**: M'enfin! Depuis 3 saisons, tous les fans de la série *Friends* savent que Monica sort avec ∨ un homme /#UN homme / # un homme
'But fans of *Friends* have known for three seasons that Monica is dating ∨ a man /#A man / # a man'

Second, DOWNFALL *UN NP* which involves range and exhaustivity (and not contrastivity) is presented in (6): among a set of men, Monica loves a man.[3]

(6) a. Monica aime UN homme = downfall (Capitals)

b. Monica aime UN homme (from the set of men) = presuppositional → range

c.Toutes les femmes aiment UN HOMME *(UN > ∀) ;(∀> UN)

[3] Note that in French downfall intonation is typical of focalisation (i).

(i) a. C'est JEAN que j'ai vu, et pas MARIE
it is JEAN that I have seen, and not MARIE
b. J'ai vu JEAN, et pas MARIE
I have seen JEAN, and not MARIE

Yet it is important to note that *UN NP* does not involve explicite contrast, as a contrastive focus would. Rather, it involves some weak contrast with respect to the set of men in (6). Of course, *UN* can have a numeral reading, i.e., ONE and not TWO. I won't discuss it here

I propose that downfall *un NP*s are [+ exhaustive] and [- contrastive], in É. Kiss' (1998) terms and that their role is to extract an individual from a list, i.e., they trigger range-based presupposition, as the following context suggests:

(7) **Context**: a magician shuffles the cards, lays them fan-shaped and presents them to his victims. He then says:
**Conjurer**:
A.#Tout le monde prend une carte (n'importe laquelle)
b. Tout le monde prend UNE CARTE
c. # Tout le monde prend ∨ une carte
everybody picks a card (Baunaz & Cattaneo (this volume): (11))

In (7), the card game provide a range and each player is left with the choice to pick up any card. The only rule is to pick only a card. This is the quantificational non-specific use of *UN NP*.

The last identified *un NP* is characterized by its neutral (flat) intonation and its non-presuppositional interpretation. It takes narrow scope over ∀QPs, resembling downfall *UN NP*.

(8) a. Monica aime un homme = neutral (flat) intonation
b. Monica aime un homme (n'importe lequel) → variable = non-presuppositional
c. Toutes les femmes aiment un homme *(un > ∀) ;(∀> un)

The context provided by (9) suggests that (9a) is uttered out-of-the-blue, i.e., no presupposition is involved, as (9b) indicates: the identity of the enemy is not known and is not presupposed.

(9) a. Tara a un ennemi
Tara has an enemy
b. Nous allons tous essayer de savoir qui c'est
we are all trying to figure out who it was

The neutral indefinite *un homme* in (8) takes narrow scope and asserts existence of the enemy, i.e., it introduces a novel individual.

The following Existential Constructions shows that the three kinds of *un NP* discussed are existentials:[4]

(10) a. Il y a ∨ une chanteuse qui va sortir un album (i.e., Björk)
there cl. a singer who is going to released an album
b. Il y a UNE CHANTEUSE qui va sortir un album
There is a.fem singer who is going to released an album
c. Il y a un livre sur la table, mais je ne sais pas lequel.
There is a book that has been read, but i don't know which one

i.e., indefinites involve existence. That neutral *un NP* is non-presuppositional, while Ú *un NP* and *UN NP* are, is upheld by the test of Negation, where negation negate the existence of the referent denoted by the NP:

[4] Note that we face no definiteness effect in (11a), since no definite expression is used, i.e., specific is not definite (see Ihsane and Puskás (2001)).

(11) a. *Il n'y a pas ∨ une chanteuse qui va sortir un album (i.e., Björk)
here cl. a singer who is going to released an album
b. * Il n'y a UNE CHANTEUSE qui va sortir un album[5]
There is a.fem singer who is going to released an album
c. * Il n'y a pas un livre sur la table.
There is a book that has been read, but i don't know which one

Summing up so far: (i) a fall-rise intonation corresponds to a specific interpretation, i.e., it is interpreted as relating to a familiar individual; (ii); a downfall intonation indicates an exhaustive focus interpretation (crucially not contrastive), yielding a range-based presupposition (iii) a neutral intonation on an *un NP* highlights a non-presuppositional interpretation. Only specific Ú *un NP* can be extracted out of Scope Islands (4c), whereas downfall *UN NP* cannot (6c). Non-presuppositional *un NP* also show obligatory narrow scope (8c). (i) to (iii) trigger assertion of existence, as illustrated by (10). The very fact that they all interact with ∀QPs (and negation, see Baunaz & Cattaneo (this volume)) suggests that they are [+Q]. This is why, from now on, I call them ∃QPs. So they come each with different bundle of features:

(12) a. non-presuppositional: [existential]; [neutral]; [non-presuppositional]
b. specific : [existential]; [fall-rise]; [specific]
c. range: [existential]; [downfall]; [range]

In (12a), the non-presuppositional *un NP* is treated as an existential quantifier. In (8c), however, it co-varies with a ∀QP, suggesting that somehow, they are bound by a distributive operator, rather than by an $Op_{\exists}$ (see also Szabolcsi 1997, Choe 1987, Junker 1995). In (10c), however, the non-presuppositional *un NP* is existentially construed. I would like to suggest that non-presuppositional *un NP*s are indefinites that need to be bound by an Operator, either by $Op_{\exists}$ or by $Op_{D(istributive)}$. If no operator is overtly present, the indefinite is bound by a default an $Op_{\exists}$, through the process of existential closure (Heim 1982).

The typology of ∀QPs described in Baunaz (2002, 2004) and Baunaz & Cattaneo (this volume) is given in (13) .

(13) a. chacun 'each': [+universal] ; [+distributive] ; [+specific]
b. tous les NP 'all the NP':[+universal] ; [%distributive] ; [range]

where *tous* les is not intrinsically distributive.[6] If decomposing ∀QPs and ∃QPs in distinct syntactic features is on the right track, some locality constraints are expected to show up, since the same kind of features on two different QPs should block movement of one past the other.

[5] Again, see fn.3.

[6] In Baunaz & Cattaneo (this volume), facts concerning both the interpretation and the intonation of ∀QPs in French are introduced: they conclude that 'intonation does not produce the same interpretive effects on ∀QPs that it does on indefinites and wh in-situ' (2004). In this respect, they claim that they should be treated differently. ∀QPs are not uniform. Their status are also discussed and they focus on their scope taking possibilities as well as features involving distributivity and collectivity. Based on the classical assumption that ∀QPs trigger existential presupposition, Baunaz (2004) concludes that *chacun* triggers specificity, while *tous les* induces range.

Again, following traditional analyses, I assume that Scope is defined in terms of C-command, i.e, a QP scopes over another QP if it c-commands it, as formalised in (14):

(14) $\alpha\,[_D \ldots\beta\ldots] \Rightarrow \alpha$ scopes over $\beta$ (Szabolcsi 1997:109)

Turning now to the well-known ambiguity introduced in (2), we immediately note that this type of interaction has to be revised in the light of the findings of this section: both ∀QPs and ∃QPs have been shown to be composed of various features which may interact. Concerning *tous les* [+range] interactions with ∃QPs, we get the results listed in (15):

(15) a. Tous les étudiants ont lu UN livre (∀ > UN) ; *(UN > ∀)
b. Tous les étudiants ont lu ∨ un livre *(∀ > ∨ un) ; (∨ un > ∀)
all the students have read a book

In (15), only specific *un NP* take wide scope over the ∀QP. Both range and neutral ∃QPs are stuck and have to take narrow scope. (16) shows that a [+specific] ∀QP will always take wide scope over any kind of indefinites. Note that specific *un NP* cannot enter the configuration:

(16) a. Chacun des étudiants a lu UN livre (∀ > UN) ; *(UN > ∀)
b. # Chacun des étudiants a lu ∨ un livre
each of the students has read a book

What the data above suggest is that we are confronted with a pure case of RM. According to RM, movement of an element is blocked by any element of the same type. First recall the intrinsic specifications of ∀QPs in (13) : *tous les* is [+range] and is not necessarily distributive, while *chacun* is [+specific] and necessarily distributive; then that Ú *un NP* s are specific, while neutral *un NP* are non-presuppositional and downfall QPs are range. Hence following RM we expect the above effects.

Above we said that $\forall_{\text{specific}}$ QPs blocked specific Ú *un NP*, suggesting that specificity is the crucial factor:

(17) a. # Chacun des hommes aime ∨ une femme
each of the men loves a woman
b. Tous les hommes aiment ∨ une femme
all the men love a woman

Yet specific Ú *un NP* are not blocked by non-quantificational specific NPs like *cet homme* 'this man' in (18), taking scope over the verb *sembler* 'seem' in the matrix clause:

(18) Il semble que cet homme aime ∨ une femme
it seems that this man loves a woman

Based on the fact that non-quantificational specific NPs do not block specific Ú *un NP* and that only quantificational $\forall_{\text{specific}}$ QPs block them, I conclude that specific Ú *un NP* are [+Q]. Following this reasoning, because range *UN NP* are blocked by range ∀QPs, I conclude that they

are also [+Q]. Turning to non-presuppositional *un NP*, (19) shows they can never take wide scope:

(19) a. Tous les étudiants ont lu un livre (∀ > un) ; *(un > ∀)
all the students have read a book
b. Chacun des étudiants a lu un livre (∀ > un) ; *( un > ∀)
Each of the students has read a book

If scope relationships are ruled by c-command, we account for the obligatory narrow scope of ∃QPs by the fact that the indefinite remains in-situ: they are pure variables being bound by an operator which cannot be higher than ∀QPs, i.e., non-presuppositional *un NP* are not ruled out by RM in (19). I develop this idea in section 5.

The scope relationships and the three distinct interpretations of French ∃QPs suggest that ∃QPs are not uniform either. Because they all are composed of a $Op_{\exists}$, I propose that what distinguishes them is the type of restriction they have. I claim that specific Ú *un NP* combine an $Op_{\exists}$ and a specific indefinite, while range *UN NP* an $Op_{\exists}$ with a range indefinite. This follows from the idea that both specificity and range imply presupposition of existence (see Starke (2001:13)). Finally non-presuppositional indefinites are still somehow linked to an $Op_{\exists}$. But since they can vary with ∀QPs, I claim that they aquire their existential reading by existential closure (in overt as in (10), as well as in covert existential constructions, as in (9)). The feature make-up of each ∃QPs is given in (20).

(20) a. [indefinite specific-$Op_{\exists}$]
b. [indefinite range-$Op_{\exists}$]
c. [indefinite] … $Op_{\exists}$ (existential constructions)

Below, I show that only (20c) yields a Split-DP structure, while (20a-b) involve LF-movement of the whole complex DP.

## 3. WH IN-SITU

Obligatory overt movement of a wh-phrase to SpecCP is known as a property of English wh-syntax, while wh in-situ are generally related to languages like Japanese. It is well-known that French is weird in allowing properties of both Japanese and English when it comes to wh-movement. In root questions spoken French has the option of moving a wh-constituent to the front of the sentence or of leaving it in-situ. In what follows, I discuss the in-situ strategy to form questions in Genevan French (dubbed French B) in terms of prosody, semantics and syntax. I show that wh in-situ does not necessarily involve existential presupposition. Based on the results obtained in section 2, I discuss their behaviour and show that RM constrains their behaviour.

### 3.1. Fronted-wh

A relatively productive way to form a wh-question in French is to front the wh-word to the topmost XP position of the sentence:[7]

(21) a. Qu'est ce que tu as acheté?
What is it that you have bought
b. Qu'as-tu acheté ?
what have you bought

It is standardly argued that wh-phrases are moved to the highest SpecCP in root questions. In this paper we will not be concerned with the difference between *Qu'est-ce que* and *qu'* and we will assume, following Rooryck 1994 that *est-ce que* essentially realizes C° in (21a), i.e., it is a complex Q-complementizer, while C° is lexicalised by the auxiliary in (21b).

Prosodically, Cheng and Rooryck 2000 say that the wh-questions in (21) involve a non-rising intonation, to be distinguished from the rising intonation characterizing yes/no questions. The wh-phrase is focalized. Semantically these are constituent questions that seek for new information, the context is defined as a plausible range. Wh-fronting can also be uttered in non-presupposed contexts, i.e., out of the blue, as well as in presupposed D-linked contexts.

#### 3.1.1. *Syntax*

Wh-phrases in fronted-wh constructions are overtly moved to SpecCP. Overt wh-movement shows Weak Cross Over effects (WCO) (22) indicating [+Q]-movement, Strong Cross Over effects (SCO) (23) and superiority effects (24), as well as island sensitivity (25)-(26).[8]

(22) * $Qui_i$ / $quelle\ fille_i$ est-ce que $sa_i$ mère aime $t_i$ le plus?
Who is / which girl it that her mother likes the most

---

[7] I am not concerned with the optionality of inverting the finite verb with a subject clitic (vs. full DP subject), as in the contrast between (i) and (ii) indicates :

(i) a. Qui as-tu vu?
b. Qui t'as vu?
Who you have see

(ii) a. *Qui a Maya vu?
Who has M. seen
b. Qui Maya a (-t-elle) vu ?
Who M. has (-cl-she) seen

[8] A'-movement is sensitive to SCO, as the following topicalization example shows:

(i) * Au garçon$_i$, il$_i$ a donné un livre $t_i$
to the boy, he gave a book

Wh-, focus-movements and topicalization are syntactic movements sensitive to SCO. Yet they do not all react alike when faced to WCO: wh- and focus-movements are sensitive to WCO, but Topics aren't. Under the idea that wh/focus are Op (vs. topics), Cinque concludes that only [+Q]- movements are sensitive to WCO, and that topicalization does not involve [+Q]- movement:

(ii) Jean$_i$, $sa_i$ mère l' invite
J. her mother $cl_{resum}$ invites

(23) * $Qui_i$ / Quel $garçon_i$ a-t-$il_i$ invité $t_i$?
Whom/ which boy has he invited

(24) a Qui a acheté quoi?[9]
Who has bought what
'Who bought what?'
b. * Qu'est-ce que qui a acheté ?
what who has bought

3.1.1.1. Weak islands (WI): wh/neg-islands

Wh-argument extraction across a WI (wh/neg) is less degraded than extraction of wh-adjuncts, i.e, French is confronted with the classical argument/adjunct asymmetry at Spell-Out, not at LF:

(25) a. A qui est-ce que Casimir se demande s'il a donné son gâteau ?
to whom EST-CE that C. cl. wonders if he has given his cake
b. A qui est-ce que Casimir croit que Hippolythe n'a pas donné son gâteau ?
to whom EST-CE that C. thinks that H. NE has not given his cake

(26) a. * $Quand_i$ est-ce que tu te demandes quel $problème_j$ Andrea résoudra $t_j$ $t_i$?
when EST-CE that you cl. wonder which problem A. will solve
b. * Quand est-ce que tu crois qu'elle est pas partie?
When EST-CE that you think that she is not gone

Note that Fronted-Wh-argument are easily extracted if presupposed (D-linked):

(27) a. * $Qu_i$'est-ce qu'il se demande qui a acheté $t_i$?
what EST-CE that he himself wonders who has bought
b. Quel $livre_i$ Rachel se demande qui a lu $t_i$ ?
which book R. wonders who has read

If an adverb is inserted between SpecCP and the launching site of the wh, the classical argument-adjunct asymmetry shows up:

(28) $Qu_i$'est-ce que seulement Jean fait $t_i$?
What EST-CE that only J. does
'What does only Jean do?' (Mathieu (2002: 49), (24b))

(29) ?? Comment est-ce que seulement Jean lit un livre ?
how EST-CE that only Jean reads a book

[9] I won't discuss the fact that depending on the intonation/interpretation of wh-phrases, one might get different judgements (Michal Starke, p.c). More work needs to be done on that topic.

3.1.1.2. Scope Islands

As far as scope islands are concerned, it seems that wh-phrases are not blocked by ∀QPs in French, yielding unambiguous Single-Pair (SP) readings:[10]

(30) a. Qu$_i$'est-ce que tous les enfants ont fait $t_i$ ? (wh > ∀) ; *(∀ > wh)
What EST-CE that all the children have done
b. Quel livre est-ce que tous les enfants ont lu? (wh > ∀) ; *(∀ > wh)
which book EST-CE that all the children have read

The two examples in (30) does not yield PL-readings.

3.1.1.3. Strong Islands (SI)

Fronted-wh constructions also show SIs Effects, as illustrated in (31):

(31) a. * Qu$_i$'est-ce que tu crois qu'ils vont inviter ceux qui ont fait $t_i$?
what that you think that they will invite those that have done
b. * Comment$_i$ tu crois qu'ils vont rembourser ceux qui ont voyagé $t_i$?
how you think that they will reimburse those that have travelled when

eSI is traditionally said to be impossible because of (i) barrier and (ii) ECP violations (the trace is not antecedent governed): for instance, adjunct clauses are barriers for extraction. As (31) illustrates, the results are ungrammatical with both arguments and adjuncts.

**3.2. Wh-in-situ**

Instead of moving a wh-constituent to SpecCP, French can leave it in-situ. Cheng and Rooryck (2000), Mathieu (1999), (2002) and Boeckx (1999a,b) have shown that in French, there are (i) syntactic, (ii) semantic and (iii) prosodic differences between wh-frontings and wh in-situ constructions. There are two dialects of French when it comes to wh in-situ constructions. Starke (2001), Tellier (1991), Aoun et al (1981) have examples of non-root wh-in-situ which lead to assume that they describe a dialect that Chang (1997), Boeckx (1999a,b), Cheng and Rooryck (2000) and Matthieu (2002) do not speak: for instance, in their dialect(s), embedded questions with wh in-situ are never found (32), while it is perfectly fine for Tellier, Aoun et al. and the informants I tested.

(32) * Il croit qu' il a vu qui ? (Fr A)
he think that he has seen whom

The dialectal variation is acknowledged in most of the recent literature on French WH in-situ: (see Bošković 1998, 2000 and Boeckx 1999a). In this paper, I concentrate on the French dialect

[10] Mathieu (2002: 83, (78b)) judges this sentence ambiguous.

spoken in Geneva and which is shared by Starke (2001), and partially by Mathieu (2004).[11] I call French A the dialect described by these authors, and French B Genevan French.

3.2.1. *French A vs. French B*

When it comes to the prosody of wh in-situ, each linguist has his own opinion. It is classically assumed that wh in-situ involve some sort of final rising intonation (also called yes/no intonation by C&R). This intonation is to be distinguished from the non-rising intonation of wh-fronted phrases. Yet for Mathieu 2002 wh in-situ rather receive default sentence stress and involve defocalization. So if there is defocalization, then there had been some prosodic focus before: the path between focalization and defocalization can then reasonably been interpreted as a (perhaps some slight) downfall intonation which can be characterized as  . In other words, this suggests that after focussing, a natural defocalization (involving natural downfall intonation) applies. Boeckx (1999a,b) does not say much about French wh in-situ intonation. He seems to rather implicitly assume that French wh in-situ intonation is the same as in wh-fronting, i.e. he claims that 'in situ wh-phrases in French are focused, 'covert' cleft structures […]' (Boeckx (1999a : 71)) and that they receive a 'Focus Intonation'.[12,13] Prosodically focalised XPs in cleft constructions receive a downfall intonation (see Baunaz (2004) and Rialland, Doetjes, and Rebuschi (2002)) . If in-situ wh-phrases are focussed and assimilated to wh-clefts, then, this means that according to Boeckx they receive a downfall intonation too. Finally Starke (2001) describes this intonation as 'a slight accent' (vs. downfall intonation, which can be found on wh in-situ in SI configurations).

I claim that the three different kinds of intonations attributed to French in the literature co-exist: wh in situ in French B can have (i) a rising intonation (yes-no intonation), (ii) a fall rise intonation or a 'slight accent' to be distinguished from the downfall intonation (Stake (2001)), (iii) a downfall intonation. Meaning that we need a better typology of wh in-situ in French.

French B wh in-situ show three different kinds of intonations, interpretations, and syntax. As will become interesting, the paradigm discussed for ∃QPs parallels that of interrogative words, with the major difference that ∃QPs were treated in declarative sentences (and we expect the prosody of the sentence to be different). In non-presuppositional contexts, a wh in-situ receives a rising intonation, typical of yes/no questions ; presuppositional wh in-situ can have either a fall-rise intonation if they carry a specific presupposition or a downfall intonation if they carry a range-based presupposition which triggers exhaustive focus. Syntactically, specific wh can escape WIs, though not SIs, while non-presuppositional wh are stuck everywhere. Range wh are blocked in WI, while being perfectly fine in SI.

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[11] In a recent paper, Mathieu (2004) claims that he has quite similar judgements as the ones describes in this paper (and in Starke 2001) and he agrees that wh-in-situ are not necessarily presuppositional. However in his 2002 dissertation he claimed that (i) wh-in-situ do not escape weak islands (=2004); (ii) cannot be moved out of an infinitival CP-complements (not mentioned in 2004); (iii) are only found in presuppositional contexts (i.e., contexts defined by Cheng and Rooryck 2000 but he is more agnostic than they are). He adds 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.' (Mathieu ((2002):125-126). In this paper, I will only focus on his dissertation.

[12] Mathieu (2002) agrees with this idea, but claims that they are not focalized; rather covert presentational clefts.

[13] In a recent unpublished paper, Boeckx (2003) discusses this phenomenon and seems to adopt the idea that wh in-situ are focalised and involve rising intonation. As far as my judgements go, raising intonation of a focalized wh in-situ is echoic.

3.2.2. *Prosody*

The first kind of wh-in situ to be introduced is the one C&R identify as the [Yes-No] intonation: in (33a), a rising intonation is noticeable, as at the end of the yes-no question in (33b):

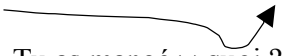
(33) a. Tu as mangé quoi?
You have eaten what

b. T'as vu Marie ?
You have seen Marie

A second type of wh in-situ receives a downfall intonation and seems –at first sight– to be associated with exhaustive focus. This wh is crucially not contrastive:

(34) Tu as mangé **QUOI** ?

The last wh in-situ identified exhibits a fall-rise intonation(∨), as illustrated by (35):



(35) Tu as mangé ∨ quoi ?

This is the intonation Starke (2001) describes as 'grammatical with a slight accent' (vs. downfall intonation). In the next section, I discuss the semantics associated with these three intonations.

3.2.3 *Semantics*

Two different streams of thoughts have treated the semantics of wh in-situ in French: either they involve presupposition (Boeckx (1999)) or they don't necessarily (Starke (2001) and Matthieu (2004)). I show that (i) a rising intonation triggers a non-presuppositional interpretation; (ii) a fall-rise intonation involves a specific interpretation (unique referent) and that (iii) a downfall intonation triggers a range interpretation. In the literature on French wh in-situ, it is often seen that wh in-situ are similar to wh-clefts in that they both show presupposition of existence (see Boeckx (1999a,b), Starke (2001)). Boeckx illustrates this by the test of Negation:[14]

(35) A : Qu'a acheté Jean ?
WH.cl has bought Jean
B : Un livre /une voiture/ **rien**… (Boeckx 1999a : 69, (2))
Un livre / a car / nothing

[14]Boeckx does not give examples of wh-clefts, but he says that '[he] would like to claim that in situ wh-phrases in French are focused, 'covert' cleft structures, so to speak, which is why they cannot be felicitously answered by 'nothing'' (Boeckx 1999:71). The idea behind is that both structures involve presupposition.

(36) A : Jean a acheté quoi ?
John has bought what
B : Un livre / une voiture / *! **Rien** (Boeckx 1999a :69, (3))
A book / a car / nothing

(37) A : C'est quoi que Jean a acheté ?
it is what that J. has bought
B : Un livre /une voiture/ *!**rien**…
A book / a car / nothing

The semantic difference between wh-clefts and wh in-situ on the one hand and wh-frontings on the other, is that the former are strongly presupposed –hence cannot be answered by *rien* 'nothing'- while the latter are not (and answering (35a) by 'nothing' is felicitous) (see also Chang (1997), C&R (2000)). Yet these answers don't reflect Genevan speaker's intuitions. When asked if (36) can be answered by *rien* 'nothing', 100% of the speakers consulted answer yes. So if it is true that wh-clefts cannot be answered by *Rien* (37), it is not for wh in-situ:

(38) A : Jean a acheté quoi ?
B' : Un livre /une voiture/ **rien**…

This test distinguishes between presuppositional and non-presuppositional contexts. It shows that in out-of the blue contexts, wh-in situ can be used and be answered by *rien* 'nothing': note that when presupposition is not involved, we have C&R's yes-no 'rising' intonation, described above. That there exists a version of non-presuppositional wh in-situ has recently been shown by Starke (2001) whose examples are the following (see fn.(9)):

(39) Tu crois qu'ils vont foutre quoi, cet après-midi?
You think that they will 'do' what this afternoon
'what so you think that they will do, this afternoon?' (Starke (2001:52, (123c)))

According to Starke, the object of verbs like *foutre* only involve non-presuppositional objects, i.e., do not carry presupposition. Then answering *rien* to the question in (39) is perfectly fine.

Our results show that wh-clefts and wh in-situ do not necessary carry the same kind of presupposition, contrary to what is standardly assumed. Put in different terms, wh-clefts are necessarily presuppositional, while wh in-situ are not. Following this logic, then, (40) involves a non-presuppositional wh in-situ. Yet both DOWNFALL and fall rise wh in-situ cannot be answered by *rien*, suggesting that they trigger some presupposition (41):

(40) A : Jean a acheté QUOI ? (Fr B)
B' : Un livre /une voiture/* **rien**…

(41) A : Jean a acheté ∨ quoi ? (Fr B)
B' : Un livre /une voiture/ ***rien**…

Boeckx is correct to argue that a wh-XP in a cleft is strongly presupposed. Wh-clefts cannot be asked out-of-the blue and a strong context where possible referents for the answer are presupposed. Yet, the reader should yet not take it as a contrastive focus, since the interpretation

that goes with identificational foci is only partly met in (42): Semantically the post-focus relative clause (the Coda, see Rialland, Doetjes, and Rebuschi (2002) ; Doetjes, Rebuschi, and Rialland (to appear)) carries presupposition and the XP in *C'est XP qui/que CODA* is exhaustively focalized. Following this account, we assume that in (42), *QUOI* is exhaustively focalised: the speaker attracts the hearer's attention in order to ask a question on a particular item:

(42) **Context** : Christmas Dinner of the Linguistics department. Eva gives each colleague a choice of menus for the evening, in order to choose one once everybody has given his opinion. She asks each of the participants:

Eva : C'est QUOI que tu vas manger ?
It is what that you are going to eat
Eric : Les tripes / *Rien
the tripes / nothing

Wh-clefts are used in presuppositional contexts, i.e., in order for Eva to ask her question, she has to presuppose that Eric is going to eat that evening (otherwise he would not be registered), i.e., there is necessarily something that Eric is going to choose from the different menus and she is asking about that 'something'. Hence, if this is true, Eric cannot answer *rien* 'nothing' to Eva's question, because a thing exists among the presupposed list of possible food items that Eric will eat such that Eva is asking what it is. The XP in *C'est XP que…* has to be identified in a range-based context: among possible presupposed referents, one will be the one asked and the answer will identify it (cf. Enç's partitivity). In wh-cleft constructions, this element does not receive a contrastive interpretation, while in non interrogative clefts it does.[15] I argue that range-based presupposition can be triggered with wh-clefts and is diagnosed thanks to the downfall intonation.; downfall wh-phrases (43) also ask about individuals, given a clear range, i.e., they trigger some kind of range-based presupposition: among these food items, you have the choice to decide which one you pick up.

(43) **Same context as in (38)**
A. Tu mangeras QUOI?
B. Les tripes / *Rien

There is a version of wh in-situ that involves the downfall intonation. Thanks to (40) and (43), we concluded that it is used in range contexts. This interpretation should recall that of the exhaustive ∃QP discussed in section 2, in that no clear contrast is involved.

In (41), the wh-phrase in situ is uttered with a fall-rise intonation. According to the test of Negation, this type of wh in-situ has to be presuppositional. Observe the following context:

(42) **Context**: Rachel knows that Joey's favourite drink is beer, and that he usually goes to t he store to buy some. When he comes back from his daily trip to the store, she asks:
**Rachel**: t'as acheté ∨ quoi?

The context described in (42) involves repetition of a daily action: what Joey buys everyday is always the same specific thing, and they both share this knowledge. Recall that it is not necessary

[15] That XPs in assertive clefts are contrastively focalised has recently been challenged by R, D & R (2002).

that the item(s) in question be known by the two speakers, only by the speaker is sufficient (see section 2). In (42) they both happen to have the same item in mind. This is then a specific version of the wh in-situ. Of course, she could also have asked him the followings:

(43) a. T'as acheté QUOI D'AUtre?
b. T'as acheté quoi d'autre?
You have bought what else

These questions need modified contexts: in (43a), the wh in-situ would receive a downfall intonation and be interpreted as range. This question can only be asked if Rachel knows that Joey wanted to buy something else, but does not know what it is. (43b) can also be uttered with a rising intonation, but it might well be the case that there is nothing that Joey bought. Rachel would ask this question without knowing that he bought anything else. In that case, it is non-presuppositional.

Wh in-situ may appear in presuppositional contexts (Chang (1997), Boeckx (1999a), C&R (2000)), but they are restricted to range (downfall) and specific (fall-rise) contexts.[16] Along with Starke (2001) I claim that wh in-situ can be uttered in non-presuppositional contexts. In that case, they are uttered with a rising intonation. Recall the ∃QP discussed in section 2: there indeed seems to be a clear parallel between wh in-situ and ∃QPs. Each QP has three versions that can be distinguished by their intonation and their interpretation: fall-rise intonation corresponds to a specific interpretation, downfall intonation to range reading and rising/neutral to the non-presuppositional reading. In the next section, I present their syntax.

### 3.2.4. *Syntax: Movement or non-movement?*

French A wh in-situ syntax fall into the following divergent data: (i) wh-in-situ do not escape WIs/SIs; (ii) wh in-situ cannot be found in embedded contexts (iii) cannot be moved out of infinitival CP-complements; (iv) are only found in presuppositional contexts. (v) judgements on QP/wh interactions suggest that wh cannot move past any Op (vs.overt movement).

A legitimate question is whether wh-movement occurs in wh in-situ constructions or not. If LF-movement takes place with these constructions, we expect syntactic parallelisms with their overt counterparts. In this section, I only underline some of the classical arguments in favour of LF-movement, namely, SCO, WCO, the superiority Effect, WIs and SIs. I conclude that movement is witnessed with the three kinds of wh in-situ under discussion.

In French B wh in-situ are possible in WIs, in embedded clauses and in non-finite CP-embedded in-situ questions.[17] They can also move past Neg/∀QPs.

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[16] On this topic, Mathieu (2002) argues that

> 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. (…) In-situ questions involve presuppositions, whereas raised questions do not. (…) wh in-situ questions, there is not only a familiar situation, but also a familiar referent to which a stranded indefinite corresponds (Mathieu (2002:131-2)).

As claimed in section 5, I arrive at the opposite result. He adds that '[wh in-situ] 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.' (id. 133). Yet Mathieu (2004) he assumes that wh in-situ are perfectly grammatical in non-presuppositional contexts and he refers to Starke (2001) for examples.

[17] Note however that if the matrix verb selects a C° [+wh] not filled by *si* 'if', a wh left in-situ will be out:

(44) a. Tu n'as pas mangé ∨ quoi à midi? (Fr B)
you neg have not eaten what at noon
b. Tu te demande si Paul a acheté ∨ quoi?
You cl. wonder if Paul has bought what
c. Jean pense que Paul a acheté ∨ quoi?
Jean thinks that Paul has bought what
d. Il a commencé à faire ∨ quoi?
He has started to do what
e. Tous les étudiants ont lu ∨ quel livre ? *(∀ > wh) ; (wh > ∀)
all the students have read which book

In this section, I show that not all wh in-situ can escape WIs: it seems that only specific wh in-situ are allowed to cross them. I illustrate this point with WIs (neg- and wh-islands). I also present SIs. Scope Islands are discussed in section 4.

Recall fronted-wh (see (23)): as fronted wh, wh in-situ also show SCO effects:

(44) a. * $Il_i$ pense que Marie a invité $qui_i$?
He thinks that M. has invited whom
b. * $Il_i$ pense que Marie a invité ∨ $qui_i$?
He thinks that M. has invited whom
c. * $Il_i$ pense que Marie a invité $QUI_i$?
He thinks that M. has invited WHOM

So French wh in-situ and standard wh-fronting pattern alike: the fronted wh-phrase overtly violates Principle C, while the wh in-situ violates it in covert syntax. Recall that the test for [+Q]-movements: if a structure is sensitive to WCO, it undergoes [+Q]-movement (vs. topicalization). The three wh in-situ show WCO effects, i.e., they undergo [+Q]-movement:

(45) a. * $Sa_i$ mère aime $qui_i$ le plus?
Her mother likes who the most
b. * $Sa_i$ mère aime ∨ quelle $chanteuse_i$ le plus?
Her mother likes which.fem.sg singer.fem.sg the most
c. * $Sa_i$ mère aime $QUI_i$ le plus?
Her mother likes who the most

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(i) a. Jean se demande qu'est ce que Marie mange (Fr B)
jean cl. wonders what is it that M. eats
b. *Jean se demande que Marie mange ∨ quoi (Fr B)
jean cl. wonders that M. eats what
c. * Jean se demande Marie mange ∨ quoi ? (Fr B)
J. cl. wonders M. eats what

Suggesting that in either embedded indirect questions wh-movement is obligatory to check the strong [+wh] feature of the selected C° or that the [+wh] feature must be overtly marked by *si*.

Thirdly, French (and English) appear to be subject to the so-called Superiority Effect: it seems that the syntax restricts the order of appearance of wh-phrases in multiple questions:

(46) a. Qui a acheté quoi?[18]
Who has bought what
'Who bought what?'
b. * Qu'est-ce que qui a acheté ?
what who has bought

According to the ECP, wh-traces must be licensed: wh-subject traces must be locally bound (see Hornstein 1995 for references). In the ungrammatical (46b), the trace of the LF-moved wh-subject fails to be locally bound, suggesting that French wh in-situ in move at LF.

A fourth piece of evidence is reported by Pesetsky (1987). Still related to the second argument, compare (45) with the next sentence:

(47) Which book$_j$ did you persuade which man to read t$_j$? (Pesetsky (1987:106, (28b)))

If LF-movement of the wh in-situ took place, the sentence in (47) would violate subjacency and should be ungrammatical. But the sentence is fully grammatical. In order to solve this problem, Pesetsky (1987) argues that wh in-situ come with two flavours: either they are D-linked and do not move, or they are non-D-linked and they move. Then, D-linked wh in-situ, as in (47), do not trigger any subjacency violation, while non-D-linked do:

(48) ?? What$_j$ did you persuade who(m) to read t$_j$? (Pesetsky (1987:104, (20b)))

Pesetsky's contribution to the analysis of wh in-situ is to highlight the distinction between the availability of LF-movement vs. non-movement. Interestingly, in Boeckx (1999b) one can find an example of so called D-linked wh in-situ constructions involving no Intervention Effect:[19]

(49) Tous les enfants ont lu quel livre/lequel de ces livres? (Fr A)
All the children have read which book/which of these books (Boeckx (1999b, (7)))

(49) contrasts with traditional data illustrating Intervention Effects for French A (50):[20]

(50) Tout le monde aime quoi? (Fr A)
All the people likes what
* 'for which thing (x), everybody likes thing (x)'
? 'for which pair <x, y>, everybody (x) likes (y)' (Mathieu 1999:447 (10a))

[18] For space reasons, I don't discuss multiple wh constructions. Note that depending on the intonation/interpretation of wh-phrases, one may get strikingly different grammaticality results. More work needs to be done on that topic.

[19] Beck (1996) claims that Quantificational Intervention effects appear at LF and are related to the scope of the intervener. This is known in the literature as Beck's Intervention Effects:

(i) * […X$_i$…[Q…[…t$_i^{LF}$…]]] (Beck (1996:1 (2)))

According to (i), (83) would be ungrammatical. See Boeckx 1999 for details.

[20] Sentences involving intervening Q are very bad for Chang (1997), Boeckx (2000) and C&R (2000). See section 4.

With the idea that D-linked wh-phrases don't move at LF, the contrast between (49) and (50) in French A is expected, since in (49), *quel livre* 'which book' / *lequel des livres* 'which of these books' is understood to be D-linked, while *quoi* 'what' is not, i.e., the non-D-linked wh is meant to raise at LF and, as such to be blocked by an intervening element. These data suggest then that in French A too, wh in-situ come with two flavours. I come back to Q-interventions below.

3.2.4.1 Weak Islands

3.2.4.1.1 Neg Islands

Starke 2001 shows that there are 'two routes' to eWI : wh in-situ in French B can occur in WIs without yielding ungrammaticality.[21] Yet if the wh in-situ receives a range reading and a downfall intonation, it cannot go out of a neg-Island, unless it is echoic:

(51) a. Tu fait QUOI ce soir ? (French B)
b. * Tu ne fait pas QUOI ce soir ?

Importantly Starke shows that wh in-situ may escape WIs only under certain contexts and intonations, hence the grammaticality of (52). (52) illustrates a neg-island again:

(52) a. Tu crois qu'elle a **pas** fait ∨ quoi? (French B)
You think that she has not done what ?
b. Tu crois qu'elle veut **pas** partir ∨ comment?
You think that she wants not to-leave how (Starke 2001:23 (52a-c))

Starke describes the prosody of these wh in-situ in eWI configurations as only 'grammatical with a slight accent' (vs. downfall intonation). That's the fall-rise intonation described in section 2.1, an intonation also characterising Ú *un NP* whose features are specific. If Ú *un NP* is inserted in a neg-island, only the specific reading is available:

(53) a. Elle a **pas** lu ∨ un livre *(Neg > ∨un) ; (∨ un > Neg)
You think that she has not read a book
b. Elle a **pas** lu un livre (Neg > un) ; *(un > Neg)
She has not read a book

In (53a), the specific Ú *un NP* takes wide scope over the negative adverb *pas.* In (87b), *pas* has to take widest scope: *un livre* is [-specific]. Recall that in (53b) *un livre* receives a neutral intonation. If the parallelism we are drawing between the syntactic behaviour of ∃QPs and that of wh in-situ is valid, we should be able to explain what happens with raising wh-phrases, i.e., they should not be able to scope over a negative adverb. Under Starke's analysis, a non-presuppositional wh should not be able to escape a WI: French B rising wh in-situ indeed don't:

[21] Recall the wh in-situ construction in French A is a root phenomenon, so eWI are simply impossible.

(54) a. * Tu crois qu'elle a **pas** fait quoi? (French B)
You think that she has not done what ?
b. * Tu crois qu'elle veut **pas** partir comment?
You think that she wants not to-leave how

So what about downfall wh in-situ? the comparison between wh-phrases and ∃QPs can still be maintained: under negation, *UN NP* is ungrammatical (unless numeral). Compare *UN LIVRE* in (55) with the wh in-situ in (56):

(55) * Elle a pas lu UN LIVRE, mais UN JOURNAL (Fr B)
She has not read A BOOK, but A NEWSPAPER

(56) a. * Tu crois qu'elle a **pas** fait QUOI? (Fr B)
You think that she has not done what ?
b. * Tu crois qu'elle veut **pas** partir COMMENT?
You think that she wants not to-leave how

So we arrive at the conclusion that downfall and rising wh in-situ pattern alike when confronted to WI: they are blocked. On the contrary, fall-rise wh in-situ behave like specific Ú *un NP*, in that they both take scope over the whole clause, i.e., they can escape WIs, suggesting that fall-rise wh in-situ are specific, which is what Starke (2001) proposes. Following this reasoning, downfall wh in-situ are not specific, rather, they involve range. As for non-presuppositional wh in-situ, they are like non-presuppositional *un NP*: they cannot be extracted out of WIs.

3.2.4.1.2 Wh-islands

If [+wh] intervenes, the famous argument/adjunct asymmetry witnessed with wh-frontings arises. It may be that wh-islands are less permissive than neg-islands, therefore needing a stronger context to let wh-phrases out (or whatever is extracted). A point supporting this idea is that argument wh-phrases can be less easily extracted than strongly "D-linked" wh-phrases (27). Compare (57a) with (57b):

(57) a. Tu te demandes si Joey a mangé ∨ quoi? (Fr B)
You cl. wonder if J. has eaten what
b. * Tu te demandes qui a cuisiné ce poulet comment ?
you cl. wonders who has cooked this chicken how

The Argument/adjunct asymmetry reappears if an A'-adverb is inserted:

(58) Tu fais souvent ∨ quoi les week-ends?
You do often what the week-ends

(59) a. * Tu manges souvent du pain ∨ quand / ∨ comment ?
You eat often bread when / how
b. ?? Tu bois souvent de la bière ∨ où ?
you drink often bier where

It seems that if a fall rise wh-adjunct is trapped in a WI, we face the traditional argument/adjunct asymmetry. This asymmetry vanishes with neg-islands.

3.2.5 Strong Islands

It has been described that French A wh in-situ cannot escape SIs (see Mathieu (2002)):

(60) * Il était contrarié [pour avoir dit quoi]? (Fr A)
he was uspet in order to have said what
'What was he upset because he said ?' (Mathieu (2002:64, (50)))

Indeed a wh in-situ with a slight accent or with a raising intonation is not possible in a SI:

(61) a. * Tu pense que Monica n'a pas nettoyé la table pour forcer Chandler à faire ∨ quoi ?
b. * Tu pense que Monica n'a pas nettoyé la table pour forcer Chandler à faire quoi ?
you think that M. NE has not cleaned the table to force C. to do what

Under the hypothesis that both fall-rise and rising wh in-situ are licensed by covert movement, (61) is accounted for in the same way overt wh-movement will be in this environment: they violate subjacency and antecedent government.

It is however not true that wh in-situ are always banned in SI: I agree with Starke (2001) who claims that wh in-situ with a downfall intonation are possible in SIs. (62)-(63) illustrates examples with both arguments and adjuncts.

(62) a. Tu crois qu'elle a dit ça pour forcer Monica à punir QUI? (Fr B)
you think that she has said this to force M. to punish whom
b. Tu crois qu'ils vont inviter ceux qui ont fait QUOI?
You think that they will invite those that have done what (Starke (2001:22, (51c)))

(63) Tu crois qu'ils vont rembourser ceux qui ont voyagé COMMENT/OÙ/QUAND?
you think that they will reimburse those that have travelled how (idem (51d))

As expected, no argument/adjunct asymmetry is noticeable. Unexpectedly however, both sets of examples involve each wh-phrases trapped in SIs and the results are grammatical.[22] This state of affairs is problematic since it is traditionally observed that extraction out of SI is impossible. The distinction between the syntax of wh overt movements on the one hand and that of downfall wh in-situ must be located in the way movement occurs.

Syntactically, we find three distinct behaviours of wh in-situ: (i) fall-rise wh in-situ are not trapped in WIs, but cannot escape SIs, suggesting that movement takes place. Specific wh in-situ can escape WIs (Starke (2001)); (ii) downfall wh in-situ are blocked in WIs, but can be extracted from SIs. (iii) rising wh in-situ are non-presuppositional and can never be extracted covertly. As

[22] The only exception is the non-referential adjunct *pourquoi* 'why':

(i) * Tu crois qu'ils vont rembourser ceux qui ont voyagé POURQUOI?
You think that they will reimburse those who have travelled why

for overt wh-movement, I assume that wh-fronted move to a specifier position in the left periphery. Fronted-wh escape WIs, but cannot escape SIs.

A consequence that these data bring up is that specific and range wh in-situ do not behave alike. Meaning that the necessary distinction between presuppositional wh-phrases is more and more justified in the three fields investigated, namely, semantics, prosody and syntax.

What we have discovered here is that wh in-situ undergo LF-movement. I have not yet discussed Intervention effects between wh in-situ and ∀QPs. According to Beck's (1996) intervention effects, we expect wh in-situ to be blocked by ∀QPs at LF. In section 4, we show that this is not borne out and that RM can account for these interactions.

## 4. Q-INTERACTIONS IN FRENCH B

French A displays Interventions Effects *à la* Beck: wh in-situ cannot scope over any type of QPs, resulting in ungrammaticality (see Chang (1997), Boeckx (1999a,b) and C&R (2000)). Yet Boeckx (2003), Zubizaretta and Vergnaud (2000) note that French displays 'Limitation Effects' in these configurations: ∀QPs and wh in-situ interactions face blocking of only one reading.[23]

French B also displays Limitation Effects, with only inverse scope readings, bannishing surface scope. Under the reasonable assumption that the [+wh] of C° needs to be checked, wh-movement is obligatory at one point of the derivation. As such we expect fall-rise wh in-situ to be compatible with a QP (103), but in the same environment, the downfall wh in-situ is out:

(64) Tous les étudiants lisent ∨ quoi ? ( ∨ wh > ∀QP) ; * (∀QP > ∨ wh)
all the students read what

(65) ?? Tous les étudiants lisent QUOI?

Turning then to $\forall_{range}$QP, we get the following results:

(66) a. * Chacun des étudiants a lu ∨ quoi ?
each of the student has read what
b.* Chacun des étudiants a lu QUOI ?
Each of the student has read what

Interestingly, we find the same results with ∀QP/∃QPs interactions. In order to deal with these data, I would like to pursue the approach initiated with ∃QPs in section 2. In the previous sections, we established different types of wh in-situ in French B. On the basis of RM and the feature-typology approach in this paper, we expect fall-rise wh in-situ to be blocked by $\forall QP_{specific}$, and be fine with range based ∀QPs. We also predict that downfall wh in-situ will be blocked by range-based QPs, and left free by $QP_{specific}$.

[23] Presenting monoclosal constructions with ∀QP subjects and wh in-situ objects, Boeckx (1999) claims that they can only be echo-questions. Yet, Boeckx (2003) corrects this view and says that 'quantifiers like *chacun de NP* 'each of NP', *beaucoup de NPs* 'many of NPs', *tous NPs* 'all of NPs' do not give rise to an echo-reading of the wh-phrase in situ, but force a single pair answer. Call this effect a 'limitation effect' (as opposed to an intervention effect)' (p.7)

### 4.1 Interactions between "QPs and $QPs/wh in-situ

Recall the interaction between ∀QP and Ú *un NP* discussed in section 2: Ú *un NP* are incompatible with specific ∀QPs:

(67) a. Tous les hommes aiment ∨ une femme
All the men love a woman
b. ?? Chacun des hommes aime ∨ une femme
each of the men loves a woman

One way of accounting for the degradation in (67b) is to claim that *chacun* needs to distribute over either an invididual, or an event. It cannot distribute over the specific Ú *un NP*. In (67a), *tous les hommes*, not being necessarily distributive is fine with a specifc ∨ un NP. If *tous les* is a ∀QP whose features have been characterized as [+range], [+Q] and [% distributive]. Under RM, we expect *tous les* to block movement of a $Q_{range}$ . This is what we get:

(68) a. Tous les étudiants lisent UN livre (Tous > UN) ; *(UN > Tous)
b. Tous les étudiants lisent ∨ un livre *(tous > ∨ un) ; (∨ un > tous)
c. Tous les étudiants lisent ∨ quoi ? ( ∨ WH > ∀QP) ; * (∀QP > ∨ WH)
d. ?? Tous les étudiants lisent QUOI?
All the students read what

(68c) shows limitation effects, while (68d) shows Intervention Effects. If movement is ruled by RM, I propose that the distinction between (68c) and (68d) can be analysed in terms of RM, collapsing the distinction between Intervention and Limitation Effects. Reasoning from the beginning in terms of features, I distinguished [+Q] elements as (i) range; (ii) specificity and (iii) non-presupposition. Then we expect that $Q_{specific}$ blocks $Q_{specific}$, that $Q_{range}$ blocks $Q_{range}$. This is exactly what we find. (68a) involves [+range] *UN NP*. The sentence is grammatical iff *UN* takes lower scope over the $\forall QP_{range}$, otherwise it is bad (and movement of the ∃QP across *tous les* triggers an intervention effect). In (68b), on the contrary, a specific Ú *un NP* is involved: the $\forall QP_{range}$ does not block LF-raising of the ∃QP, since *tous les* is not [+specific].

Turning to wh in-situ, one finds that fall-rise wh in-situ is compatible with the $\forall QP_{range}$. Again, under RM, this is expected, since Ú *quoi* is characterized by the same features as the Ú *un NP* in (68b), i.e., [+specific], [+Q]. Under this reasoning, we predict then that [+range] wh-phrases should be blocked in the same configuration: this is exactly what we find in (68d).

I have already said that wh in-situ have to move to C° to check the [+wh] feature. As a consequence, it will always take widest scope, when in SpecCP. This is exactly what we obtain. Supporting this claim is the fact that fronted wh takes wide scope over range ∀QPs:

(69) Qu'est-ce que tous les étudiants ont lu? (WH > ∀QP) ; ?*(∀QP > QPH)

Turning now to specific ∀QPs, we expect that [+specific] QPs be blocked by *chacun*:

(70) a. Chacun des étudiants a lu UN livre (∀QP > UNQP) ; *(UN > ∀QP)
b. # Chacun des étudiants a lu ∨ un livre *(∀QP > UNQP) ; (∨ un > ∀QP)

c. * Chacun des étudiants a lu ∨ quoi ?
d. * Chacun des étudiants a lu QUOI ?
each of the student has read what

(70a) is fine because *chacun* needs to distribute and does so over *UN livre*. As such, *UN* cannot scope over *chacun*, i.e., cannot move structurally higher than the ∀QP position. In (70a), *UN* does not cross *chacun*, i.e., no RM effect results. Again, in (70b), the distributive ∀QP needs to take wide scope over an individual/event. Ú *un livre* cannot fulfil this role, so the only possibility for it is to distribute is over the event of *reading*. In (70c), as expected, specific wh-phrases are blocked by $\forall QP_{specific}$, while in (70d) a wh [+range] is unexpectedly also blocked. Moving to C° to check its [+wh], the wh gets its scope position. While undergoing movement, it crosses a $\forall_{specific}QP$. Since since both range and specific wh are blocked by *chacun*, I tentatively suggest that $\forall QP_{specific}$ are absolute blockers for extraction.[24] Moreover, as with [+range] *UN*, *chacun* needs takes obligatory wide scope, i.e., needs to c-command it at LF. If so, the wh-phrase need to be structurally lower, yielding a pair-list reading. But it cannot and the derivation crashes, while range ∃QPs can , at the VP level.

Turning now to non-presuppositional wh in-situ, facts are a bit different:

(71) ?? Chacun des garçons a parlé à qui ? only (PL)
each of the boys have talked to whom

As far as (71) is fine, only the PL reading is available. This is due to the fact that the [+wh]-phrases involved in this sentence is not presuppositional. It may well be the case that distributive quantifiers need a distributive share, i.e, the wh-object: this may be a piece of evidence that in French B, non-presuppositional wh in-situ constructions involve $Op_{wh}$ moved without their restriction, which will be a 'pure' indefinite (see section 5 for details). The degradation is then explained by the fact that $Op_{wh}$ moves to C°, crossing a $\forall_{specific}$ QP, which is a strong island for extraction (see Starke 2001). Note that non-presuppositional ∃QPs only trigger a distributed reading, related to narrow scope:

(72) a. Tous les garçons ont parlé à une fille (∀QP > une) ; *(une > ∀QP)
all the boys have spoken to a girl
b. Chacun des garçons a parlé à une fille (∀QP > une) ; *(une > ∀QP)
each of the boys has spoken to a girl

Recall that I claim that non-presuppositional *un NP* is composed of an $Op_{\exists}$ and an indefinite only in existential constructions (overt or non-overt, see section 2). In (72a), there is no movement of the non-presuppositional *un NP*. The indefinite is bound by a $Op_D$ and as such, co-varies with the

[24]This supports Starke's distinction between absolute and selective blockers, where α is a selective blocker and αβ an absolute blocker. β is specific. Note that Starke does not talk about ∀QPs and ∃QPs.
(i) a. * ai … aj …ai
b. αβ ... α ... αβ (Starke (2001): 8 (16))
(ii) a. *α ... αβ ... α
b. * αβ ... αβ ... αβ (Stake (2001): 8 (17))
Potential problems to this idea arise with overt movement of wh-phrases in French, see section 7.

∀QP. I assume that the non-presuppositional wh in-situ is composed of an indefinite and an $Op_{wh}$. It is the $Op_{wh}$ that licenses the indefinite, stranded in-situ. The obligatoriness of PL readings in (71) is then accounted for by the impossibility of the $Op_{wh}$-movement to SpecCP, blocked by $\forall_{specific}$QPs: the distributive operator can then distribute over the indefinite. If this analysis is correct, we expect that (73) to be bad, i.e., the PL reading is not available since $C_{wh}°$ has to be checked, at some point:

(73) * Tous les garcons ont lu quoi?

Under the reasonable assumption that a PL reading is obtained when a distributive ∀QP scopes over a WH-QP, (73) is out because $Op_{wh}$ obligatorily moves to C° to check [+wh].

Along these lines, we can conclude that the French examples in (68b-c) do not give rise to RM effects. In other words, LF-movement of the wh in-situ is not blocked by $\forall_{tous}$QP and a specificity-based wh is grammatical. As it can be observed in (60c), the PL reading is never accepted with ∀QPs and ∨ wh in-situ. (68d) and (60d) shows that range wh are also bad with ∀QPs and their interaction can never yield a PL reading. That the PL reading is not available with presupposed wh in-situ is again in line with Starke's (2001) analysis, since '(…) the situ-wh forces a presuppositional reading which does not mix easily with the pair-list reading' ((2001):(27)). As a conclusion, wh in-situ and ∃QPs of any types seem to take the same kind of scope. The data presented seem to suggest that [+specific] QPs are real barrier for extraction (74a) (see fn.(24)), whereas [+range] are not (68) (74b): range ∀QPs only block range QPs and non-presuppositional wh in-situ, but not specific $Q_{wh/∃}$ (74c):

(74) a. * $Q_{wh/∃}$ … [$Q_{\textbf{specific}}$ … $t_{wh/∃}$], where wh/∃ are of any type
b. $Q_{wh/∃}$ … [$Q_{\textbf{range}}$ … $t_{wh/∃}$], where wh/∃ are specific
c. * $Q_{wh}$ … [$Q_{\textbf{range}}$ … $t_{wh}$], where wh are range or non-presuppositional[25]

In this section I have showed that RM can account for scope QP interactions. Building on Starke's observation that eWI are possible with specific wh in-situ, I have also provided an analysis of scope interactions in French, involving ∀QPs, ∃QPs, and wh in-situ. Based on the interpretation, prosody and syntax of wh and ∃QPs, we acknowledged that slight accented specific ∃QPs / wh in-situ are successfully covertly moved past scope islands, while downfall range ∃QPs / wh in-situ and rising non-presupposed wh-in situ / neutral non-presuppositional ∃QPs are blocked in the same environment. In the next section, I claim that the reason why the three wh in-situ exhibit distinct syntax is because they are not composed of the same material. Consequently what covertly moves is essentially not uniform.

## 5 $QPS AND WH IN-SITU

### 5.1 French wh-phrases are not necessarily interrogatives

In Standard French, as well as in French B, wh-phrases are not only used in constituent questions, but also in non-interrogative contexts, like, for instance, exclamative contexts :

[25] As said above, non-presuppositional ∃QPs never cross potential ∀QPs in the examples given, since they do not move structurally higher.

(75) a. Quoi qu'il fasse, ce gars est un nul !
what that he does. SUBJ this guy is a jerk
b. Qui que tu soies, Montre-toi !
who that you are, show you
c. Quel homme !
what a man
d. Comment t'étais habillée l'autre soir ! t'en jetais un max !
How you were dressed last night! You looked terrific!
e. Où que tu te caches, je te trouverai !
Where that you cl. hide, I will find you

One can also find wh-words in Relative Clauses, as Relative pronouns:

(76) a. l'absence de faim est un drame sur lequel nul ne s'est penché
the lack of hunger is a drama on which nobody ever bent
(Amélie Nothomb, la biographie de la faim)
b. Voici de quoi nous parlions
Here of what we talked
c. La manière comment Monica a nettoyé l'appart'…
the way how M. has cleaned the appartement…

(77) shows that they can appear as NPIs, being licensed by negation:[26]

(77) a. Je n'ai pas parlé à qui que ce soit
I NE have not talked to anybody
b. * J'ai parlé à qui que ce soit
I have talked to anybody

(75)-(77) suggests that French wh-phrases are not necessarily [+wh] (vs. Mathieu (2002)) and that they rather resemble Japanese wh-phrases more than traditionally claimed: it is generally said that Japanese wh resemble ∃QPs, in that they involve relative scope with other operators. As such they are considered as pure variables, being bound by Op higher in the structure (in a scope taking position). Chinese and Japanese are languages that have been argued to show evidence for such an approach to wh-phrases (Hagstrom (1999), (2001), for Japanese and Sinhala). Wh-words in these languages are not intrinsically [+wh] and acquire their interrogative force when bound by some overt (or non-overt) $Op_{wh}$. It follows that these elements can be bound by any Op, such as ∃, ∀ or Neg: in Japanese, an overt particle helps interpreting the wh-element as an interrogative word: *ka* marks the clause as [+wh] in (78a), while in (78b), *mo* binds *dare*, resulting in a ∀ interpretation and *ka* in (78c) assigns a ∃ interpretation:

(78) a. Dare-ga ki-masu-*ka* (Japanese)
who N some-Q
'Who's coming?'

[26] Thanks to G.Puskás for providing me with this example.

b. Dare-ga ki-te *mo*, boku-wa aw-a-nai
Who-N come Q I-T meet not
'For all x, if x comes, I would not meet (x)'
c. Dare-*ka*-kara henna tagami-ga todoi-ta
who Q from strange letter-N arrived
'A strange letter came from somebody' (Cheng (1991:83, (65)))

In Japanese, then, a wh-word like *dare* 'who' (80a) is not intrinsically interrogative: it serves as a basis for ∃QPs (79b), ∀QPs (79c) and NPIs (79d):

(79) a. dare 'who'
b. dare-ka 'someone'
c. dare-mo 'everyone'
d. dare-mo 'anyone' (Watanabe(1993:12, (20)))

*Dare* (and other 'wh-words') has then been analysed in the Heimian way, i.e., as overt realizations of indefinites needing to be bound by an Op. As such, it is an indefinite.[27] In Japanese, wh-words are generally accompanied by an overt particle (or Q-particle, in Hagstrom's terms). [28] This particle can be spelled-Out as *ka* or *no*. Wh-words can also appear in existential, universal and negative constructions, provided that an appropriate particle binds them, suggesting again that wh-words are indefinites. What is important is that the wh-word has nothing to do with the interrogative force of the sentence: it is an indefinite/variable and, as such, does not need to move. At this point, we have a choice: either (i) the variable and the particle are base generated together (and then overt Q-movement occurs, stranding the indefinite below) (80) or (ii) the two elements are not generated together: the Q-particle is merged in C°, i.e., it does not undergo movement, while the wh in-situ remains in its base-position (81).[29]

(80) C° … [indefinite + $Q_{wh}$]

(81) $Q_{wh}$ … [indefinite]
C°

In section 5.2, Hagstrom's (1999), (2001) empirical arguments are provided in favour of (i).

**5.2 The movement of question particles: Hagstrom (1999), (2001)**

If *ka* is a wh-particle which realizes the $Op_{wh}$, an interesting question is that its base-generation. Watanabe (1992) and Hagstrom (1998), (1999), (2001) give arguments in favour of a movement analysis of *ka* in Japanese interrogative sentences, and of a non-movement analysis of the wh in-situ.[30] Hagstrom's (1999) argument is based on the assumption that Islands are indicators of movement possibilities, since they can block extractions. That Japanese islands allow wh in-situ

[27] i.e., variables (see Aoun and Li (1993)) or polarity items (Den Dikken and Giannakidou (2002)).
[28] In Japanese, an overt Q-particle binds the wh-word, but in Chinese, it is non-overt (see Cheng (1991)).
[29] but may move at LF (for scope, absorption and/or selection purposes).
[30] In this paper, I will focus on Hagstrom's (1999) paper.

phrases to stay within an island is a well-studied fact which suggests that no movement occurs with these wh-phrases. The aggressively non-D-linked *ittai* 'the hell, the world' can show up with wh-phrases in non-D-linked contexts. If *ittai* is inserted inside an island and the wh-particle is outside the island, the sentence is ungrammatical (82a). If *ittai* is outside the island, as in (82b), *ka* being at the end of the clause, then the sentence is really improved. In (82), the brackets are meant to indicate island barriers (from Hagstrom (1999):4, (9)-(10)):

(82) a. * Hiro-ga [Sue-ni **ittai** $t_{ka}$ **nani**-o ageta hito-ni] aimasita **ka** ?
H-NOM S-DAT ittai what-ACC gave man-Dat met.POL Q
'What in the world did Hiro meet the man that gave t to Sue?
b. Hiro-ga **ittai** $t_{ka}$ [Sue-ni **nani**-o ageta hito-ni] aimasita **ka** ?
H-NOM ittai S-DAT what-ACC gave man-DAT met.POL Q
'What in the world did Hiro meet the man that gave t to Sue ?'

Hagstrom assumes that *ittai* marks the base position of the particle, suggesting that *ka* overtly moves in Japanese. (82a) is ungrammatical because *ka* first originates next to *ittai* and then moves toward the end of the clause, crossing the island, ruling the structure out. In (82b), however, *ittai* is not in an island, hence *ka*-movement does not cross any island boundary and the structure is fine. The same argument is advocated for Intervention Effects as illustrated in (83):

(83) ?* [John-ka Bill]-ga nani-o tka nominmasita ka ?
John-or Bill-NOM what-ACC drank Q
('What did John or bill drink?)
(Hagstrom (1999:2,(2)))

(84) a. ?* Dono hito-mo nani-o yonda no?
every person what-Acc read Q (Hoji (1985))
b. ?* Dare-mo-ga nani-o katta no?
everyone-NOM what-ACC bought Q
'Everyone bought what?' (Hoij (1985))
c. * Hotondo dono hito-mo nani-o yonda no?
almost every person what-Acc read Q (Miyagawa (1998))

In (83), a *–ka* item cannot move past another *ka* items and in (84) *–no* is blocked by *–mo*. Both (83) and (84) show that even if Japanese wh-phrases always stay in-situ, there is wh-particle movement in overt syntax, and that this movement is subject to locality constraints.[31,32] The data

[31] He actually calls it Shortest Move.

[32] The Japanese data are not that conclusive, since we cannot find instances where the *ka*-particle is in-situ, i.e., in its base position (when **ka** is in-situ, it has an existential force, not an interrogative reading). To make his point, Hagstrom (1999), (2001) gives examples from Sinhala. Sinhala makes great use of Q-particles. Interesting is the fact that in Sinhala, the Q-particle involving interrogative force appears next to the wh in-situ. Evidence that this particle moves is given by the simple fact that is can be trapped in islands and be subject to Intervention Effects. In Sinhala, **də** is the relevant Q-particle. As can be seen in (i), if **də** is trapped in an island, the sentence is ungrammatical (i)a.

(i) a. *oyaa [Chitra kaa-te **də** dunnə potə] kieuwe? (Sinhala)
You C. who-DAT Q gave book read-E
('You read the book that Chitra gave to whom')

just discussed clearly suggest that Japanese is sensitive to both wh and scope islands. Japanese shows effects when $Q_{wh}$-particles move past *Q*:[33] In (84) *no* crosses other QPs, i.e., potential Interveners (QUIBs in Beck's terms) and ungrammaticality results, i.e., suggesting that Intervention Effects might also appear at Spell-out.[34] In Beck's words, if a QUIB intervenes between a Q and its restriction, we face Intervention Effects. Of course, these are not stricto senso Beck's *Intervention Effects*, since hers appears at LF and these at Spell-Out. Rather, they involve RM *à la* Rizzi (2002).

This analysis of Japanese wh-constructions shows that it is subject to Island effects in overt syntax. Note finally that the wh-phrase is really in-situ. In itself, the wh-phrase is never involved with Island effects of any type. The Q-particle is, however.

Under the hypothesis that we face Q-movement in languages with Q-particles, we can account for island violations appealing to locality violations. People have argued that this movement strands wh-words in-situ, while $Op_{wh}$ move up (to C°) (see Miyagawa (2002) and Mathieu (2002)). The wh in-situ has then no quantificational force and is viewed as a simple indefinite. Semantically it has been argued that when moved, the $Op_{wh}$ leaves its restriction in-situ (see Pesetsky (2000), Miyagawa (2002), Mathieu (2002)).

### 5.3 *Split-DPs* : against Mathieu (2002)[35], but …

Based on the fact that wh-phrases occur only in interrogative contexts, Mathieu analyses French A wh-items as [+Q]. They involve a phonologically null Op (of which the QU-morpheme is a morpho-phonological mark) and an indefinite, yielding the abstract structure in (85):

(85) C° …….. [$Op_{wh}$ indefinite] (Fr A)

The phonological null Op is part of the complex abstract structure of the wh-phrase. It is $Op_{wh}$ that moves (at Spell-Out), stranding the indefinite in-situ, i.e., no pied-piping is involved.[36,37]

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b. oyaa [Chitra kaa-te dunnə potə] **də** kieuwe?
You C. who-DAT gave book Q read-E
'You read the book that Chitra gave to whom?' (Hagstrom (1999:7, (25)))

Sinhala **də** is subject to Intervention Effects, since the ∀-particle **t** blocks LF-movement of **də** to the left periphery:

(ii) a. ?? Kauru-t **mokak də** kiiwe
who-T what Q said E
'What did everyone say?'
b. **Mokak də** jauru-t kiiwe
What Q who-T said-E
'What did everyone say? (Hagstrom (2001):12, (32)))

See Hagstrom (1999), (2001) for further details and analyses.

[33] a fact first observed by Hoij (1985).

[34] This predicts that if the wh in-situ is in a higher position at the moment of Q-movement, then no Intervention Effects should appear: Pesetsky (2000) (among others) notes that in Japanese, scrambling is a case in point.

[35] See Mathieu (2004) for an alternative analysis, however.

[36] Chinese wh in-situ do not move, since they are pure variables (or indefinites, in his terms). As such, they are not Operators and do not need to move. Yet they need to be bound by an Op in C°. So no movement is assumed, witnessed by the fact that (a) wh phrases are not trapped in SIs and (b) do not trigger subjacency violation. According to Mathieu (2002), Chinese wh abstract structure is that in (81).

[37] Note the structure Mathieu attributes to French A is that same that Hagstrom attributes to Japanese (see (80)). In (85), wh-phrases are [+Q], and movement is triggered for checking reasons: if no pied-piping occurs, the restriction

Mathieu relates the Intervention Effects detected above to the more general RM of Rizzi (1990). He assumes that (i) $Op_{wh}$ movement is blocked when RM has been violated, (ii) that $Op_{wh}$-movement is done at the point of Spell-out, since Subjacency constrains overt movement. $Op_{wh}$ is extracted from the complex DP and moved to SpecCP to check the [+wh] feature of C°. The indefinite is left in-situ. We are left with a stranded DP or what he calls a Split-DP structure. Semantically, the [+Q] part is literally separated from its restriction (or what it scopes over). Mathieu assumes that the trace left by $Op_{wh}$-movement is a non referential trace, in Rizzi's (1990) terminology. Non-referential traces must be antecedent-governed: in WI configurations an intervening Op blocks antecedent-government of the $Op_{wh}$-trace, leading to ungrammaticality (suggesting that these interveners occupy A'-positions). Mathieu claims that Overt null Op-movement is like non-referential adjunct extraction: it is blocked by intervening A'-specifiers. It follows that wh-arguments are also blocked in WIs:

(86) * Tu ne fais pas quoi ce soir? (Fr A)
you neg do not what this evening (Mathieu (2002) :24, (28)))

Since Mathieu's analysis of wh in-situ involves the idea that wh in-situ are composed of (i) an Op and (ii) a variable (indefinite), his definition of the Intervention effect is slightly different from Beck's even if essentially the same. It is given in (87):

(87) a. A WH-phrase in situ (i.e., a variable) in single WH questions cannot remain in the scope of other scopal elements/operators
b. * [Op …[Op…[variable]]] (Mathieu (1999:445, (5)))

His generalization rightly predicts that Focus, Neg, ∀QPs and wh-phrases block movement of French A wh in-situ, since they all involve Op. As for (87b), recall that his analysis involves Split-DP constructions, which are named after the French construction discussed in Obenauer 1994, and illustrated in (88a): the Op *combien* is separated from its in-situ restriction.

(88) a. Combien$_i$ as-tu peint/*es $t_i$ de toiles ?
how-many have you read of paintings
b. Combien de toiles$_i$ as-tu peint/es $t_i$?
how-many paintings have you read-masc.pl
'How many paintings have you read?'

In (88b), the whole complex [Op-restriction] is overtly moved. According to Obenauer non-split constructions may be 'specific', while split-constructions are definitively not:[38] this is attested by the fact that French past participle may agree in number and gender with the moved DP: specificity arises with agreement (88c). This is also supported by WI facts: in French, it is easier to extract a presupposed wh-object across a neg-island than a non-presupposed wh-phrase (see Rizzi (1990), Obenauer (1994)). The same appears to be correct with *combien*-constructions:

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is left below and the sentence is potentially subject to Intervention Effects if between the $Op_{wh}$ and the restriction another Op is inserted (see also Pesetsky (1998)/(2000)). In (i), the wh-word is crucially not [+Q], the wh-Op is merged in C°, so that the sentence gets typed interrogative, i.e., [+wh]

[38] I will use the term 'presuppositional' since it is less misleading than 'specific'.

(89) a. * Combien$_i$ n'as-tu pas lu $t_i$ de livres?
How-many NE have you not read of books
b. Combien de livres$_i$ n'as-tu pas lus $t_i$?
How-many of books NE have you not read-$_{MASC.PL}$ (Mathieu 2002:23, (25))

Non-presuppositional (i.e., non-specific, in our terms) wh in-situ cannot be extracted out of neg-islands, while presuppositional can. Mathieu (2002) assumes that wh in-situ are covert Split-DPs. So the idea is that the $Op_{wh}$ is moved to the C-system, while the restriction is left in-situ, and, as in (89a), if a QP intervenes, the sentence is out (90b):

(90) a. Tu as lu combien de livres? (Fr A)
you have read how-many of books
b. * Tu n'as pas lu combien de livres?
You NE have not read how-many of books (Mathieu (2004):8, (11)-(12)))

What (90) tells us is that in (90b), the non-overt operator moves up to SpecCP, leaving its restriction in-situ (i.e, no pied-piping of phonological features), behaving like overt Split-DP constructions. (90b) will have the following abstract structure:

(91) * [$Op_{wh}$ …[$Op_{neg}$…[restriction]]]

This is the representation given in (87b), which is also found in (89a).

Recall two points raised in Mathieu (1999), (2002): (i) wh in-situ in French A are always strongly presuppositional and (ii) French A wh in-situ can never cross neg (or intervener of any Op type). Under the parallelism drawn between the syntax of overt *combien*-constructions, we expect non-presuppositional wh to be bad in eWI. In (88b), *combien de livres* is strongly presuppositional, i.e., specific in Obenauer's (1994) terms. Yet we get exactly the opposite result: overt 'specific' wh are grammatically extracted in WI configurations (89b), while covert specific wh-moved are banned (90b).[39] So wh in-situ cannot be understood as Split-DPs. Recall that fall-rise wh in-situ are perfectly fine in WIs in French B:

(92) a. Tu as écrit combien de lettres? (Fr B)
You have written how-many letters
b. * Tu as pas écrit combien de lettres?
c. Tu as pas écrit ∨ combien de lettres ?
You have not written how-many letters

An analysis *à la Mathieu* forces to strand the restriction in-situ, i.e., corresponding to the non-presupositional interpretation of the wh-phrase. Yet we have seen that a fall-rise wh in-situ is never non-presuppositional: rather it strongly involves specificity. It would be contradictory to keep Mathieu's analysis, since we would need to prove that fall-rise wh in-situ are non-presuppositional.

[39] As seen above, wh in-situ interacting with QPs are fine iff wh-phrases scope over these QPs. This is again unexpected under Mathieu's approach.

### 5.4 French B: final conclusion

I have shown that French wh in-situ are not intrinsically interrogative (see section 5.1). Moreover I argue that there are (at least) three distinct versions of wh in-situ that parallel in prosody, semantic and syntax the three ∃QP versions of section 2.1. Based this parallelism, I claim that French B's wh in-situ are indefinites, acquiring their interrogative strength by a non-overt $Op_{wh}$.

Unlike Mathieu (2002), then, I claim that the internal structure of wh-phrases in French B resembles that of Japanese, suggesting that an indefinite is generated with an Op that happens to be [+wh] in questions and [+∃] in case of existentials (see Hagstrom) (93):

(93) a. [$Op_{wh}$ + indefinite] (Fr B)
b. [$Op_{\exists}$ + indefinite] (Fr B)

Yet things are a bit more complex, since both wh in-situ and existentials involve different interpretations. Existentials are complex DPs, involving an $Op_{\exists}$, its restriction (the indefinite) and some feature (specific, range or non-presuppositional). Note that specificity has to be a non-[+Q] feature: Since specific ∃QPs are not blocked by other specific NPs like *cet homme* 'this man' in (94), but are by $\forall_{specific}$QPs, we conclude that (i) specificity is not [+Q]l and that (ii) specific ∃QPs are:

(94) a. Cet homme aime ∨ une femme
this man loves a woman
b. Cet homme aime ∨ quelle femme?
This man loves which woman

Because of the different syntactic, prosodic and semantic of French B wh in-situ, I propose the following basic structures for wh in-situ in French (see Hagstrom (1999) for a similar idea for wh in-situ constructions in Japanese):

(95) a. [ indefinite specific -$Op_{wh}$]
b. [indefinite range - $Op_{wh}$]
c. [ indefinite -$Op_{wh}$]

Based on Obenauer's (1994) observation that overt split-DP constructions yield non-specific reading in French, I propose the structure in (96) is only met with non-presuppositional wh in-situ:

(96) C°… [indefinite - $Q_{wh}$]

I claim, that only non-presuppositional wh in-situ (95c) yield Split-DP constructions. In other configurations, then we get covert movement of the whole complex-DP. This analysis is based on overt cases of Split-DP constructions (90), discussed in Obenauer 1994 and Mathieu 2002.

## 6. AN APPROACH WHERE RM RULES CONDITIONS ON MOVEMENT

∃QPs and wh in-situ in French B react in the same way when facing syntactic constraints. In section 3.3, I introduced three different types of wh in-situ: (i) a non-presuppositional wh, recognizable by its rising intonation; (ii) range-based specificity characterized by the downfall intonation and finally (iii) the specificity-based presupopsitional wh which appears with a fall-rise intonation. In this section, I discuss (i)-(iii) and show that they are sensitive to different effects, which should recall the way ∃QPs react to syntactic constraints. Recall that in section 3.1, I have illustrated that overt wh mvt is sensitive to various syntactic effects: i) WIs ; ii) SIs; iii) WCO and SCO. Wh-movement creates A'-dependencies. In this section I show that wh in-situ and ∃QPs of the various types discussed here are affected by movement paralleling those affecting overt wh-movement. In this section I build on Starke's (2001) analysis of wh-situ. Capitalizing on the RM approach of Rizzi ((2000), (2002)) to locality, I draw a parallel between the locality conditions ruling the syntax of French quantification and that of wh in-situ in French B.

### 6.1 specific and non-presuppositional wh in-situ correspond to $QPs

Both ∃QPss and wh in-situ can move out of WIs (neg, wh and scope islands) iff they are [+specific] (97)-(98). Neutral *un NP* and rising wh in-situ can never be extracted (990)-(100).

(97) a. Je n'ai pas vu ∨ une fille — (∨ une > neg) ;*(neg > ∨ une)
I NE have not seen a woman

b. Tous les garçons se demandent qui a vu ∨ une fille — (∨ une > ∀) ; *(∀ > ∨une)
all the boys cl. wonder who has seen a woman

c. Tous les garçons ont vu ∨ une fille — (∨ une > ∀) ; *(∀ > ∨ une)
All the boys have seen a woman

(98) a. Elle a pas lu ∨ quoi? — (wh> neg) ; * (pas > wh)
she has not read what

b. Tu te demandes si Jean a lu ∨ quel livre?
You cl. wonders if/whether J. has read which book

c. Tous les garçons ont lu ∨ quel livre ? — (wh > ∀) ; * (∀ > wh)
all the boys have read which book

(99) a. Je n'ai pas vu une fille — * (∨ une > neg) ; (neg > ∨ une)
I NE have not seen a woman

b. Tous les garçons se demandent qui a vu une fille — *(une > ∀) ; (∀ > une)
all the boys cl. wonder who has seen a woman

c. Tous les garçons ont vu une fille — *( une > ∀) ; (∀ > une)
All the boys have seen a woman

(100) a. * Elle a pas lu quoi?
she has not read what
b. * Tu te demandes si Jean a lu quel livre?
You cl. wonders if/whether J. has read which book
c. * Tous les garçons ont lu quel livre ?
all the boys have read which book

Trivially what blocks downfall and non-presuppositional wh in-situ/*un NP* is related to the fact that they are not specific (see Starke (2001) and fn (24)). In the next two sections, I discuss the type of movement involved with these two wh in-situ.

6.1.1 *specific wh in-situ movement is covert phrasal movement*

We have identified fall-rise wh in-situ with one of the properties characterizing presuppositional Ú *un NP*, i.e., [+specific]. What distinguishes specific wh in-situ movement from any other wh-movement is its being [+specific], a property also shared by specific ∃QPs scopal behaviors. Then because of intonational, semantic and syntactic behaviours, we are tented to assume that specific wh in-situ and specific Ú *un NP* are Siamese twins.

Above we have shown that the syntax of specific wh in-situ parallels that of overtly moved wh-phrases, facing the by now well-known argument/adjunct asymmetry. This might suggest that syntactically specific wh-in-situ are covert variants of fronted-wh, i.e., that the $Op_{wh}$ moves to SpecCP with its restriction, leaving the phonological features pronounced in the lowest copy.

If wh-movement is [+Q]-movement, we expect parallels with overt wh-movement. We argue that specific wh in-situ are sensitive to the same island constraints as overt specific wh-fronting, but is it sufficient to claim that they behave alike? In other words, are we certain that specific wh in-situ are [+Q]? After all, topics can also obliviate Islands boundaries, but they do not undergo the same movement as overt wh-phrases fronting. Recall that SCO shows ungrammaticality with both movement-types. Yet while wh- and foc-movements are sensitive to WCO, topics aren't:[40]

(101) a. * $Il_i$ a invité ∨ quel garçon$_i$?
he has invited which boy
b. * $Il_i$ a dit que Marie voudra inviter ∨ quel garçon$_i$?
he has said that M. will invite which boy
c. * Marie disait qu'$il_i$ inviterait quel garçon$_i$?
M. said that he would invite which boy

(102) a. * $Sa_i$ mère aime ∨ quelle fille$_i$ le plus?
Her mother loves which girl the most
b. * $Sa_i$ mère dit que Marie aime ∨ quelle fille$_i$ le plus?
Her mother says that Marie loves which girl the most
c. * Marie dit que $sa_i$ mère aime ∨ quelle fille$_i$ le plus?
Marie says that her mother loves which girl the most

[40] I use *quel NP* since it is receives more easily a specificity-base presupposition and because this type of wh in French is a longer constituent than *qui* 'who' or *quoi* 'quoi', i.e., it is easier to distinguish the fall-rise intonation.

(101)-(102) show that specific wh in-situ are sensitive to both SCO and WCO, i.e, specific wh in-situ undergo [+Q]-movement of the same type as overt movement does.

The comparison with overt wh-movement just given suggest that specific wh in-situ involve Op-movement. Because overt and in-situ wh-phrases syntactically behave alike, I propose that the whole complex DP pied piped and no stranding is possible (vs. Mathieu (2002)).[41]

6.1.2 *non-presuppositional wh in-situ movement is $Op_{wh}$ movement only*

As already observed, non-presuppositional wh in-situ are sensitive to different syntactic environments, as a consequence one does not expect them to move overtly. First, they are trivially not specific, second they are always trapped in WIs, behaving like non-presuppositional ∃QPs. Non-presuppositional wh in-situ, however, seem to syntactically parallel the syntax of overt non-presuppostional wh-fronted: they both undergo A'-movement, and should be analysed alike.

(103)a. * $Il_i$ a invité $qui_i$?
he has invited whom
b. * $Il_i$ a dit que Marie voudra inviter $qui_i$?
he has said that M. will invite whom
c. * Marie disait qu'$il_i$ inviterait $qui_i$?
M. said that he would invite whom

(104) a. * $Sa_i$ mère aime $qui_i$ le plus?
Her mother loves whom the most
b. * $Sa_i$ mère dit que Marie aime $qui_i$ le plus?
Her mother says that Marie loves whom the most
c. * Marie dit que $sa_i$ mère aime $qui_i$ le plus?
Marie says that her mother loves whom the most

At this point, two ways can be taken in order to handle non-presuppositional wh in-situ: the first path is to propose that that non-presupposed wh in-situ also undergo covert phrasal wh-fronting. The second path is to refer to Mathieu's idea of Split-DP. Split-DPs involve non-presuppositional wh-constructions. Based on Obenauer, Mathieu claims that structures where the $Op_{wh}$ and its restriction in *combien*-constructions are split, i.e., the wh-phrase is non-presuppositional. Above I rejected this approach for specific wh in-situ on the basis of the availability of eWI.

Yet French B shows three distinct types of wh in-situ. If we construct a sentence with a non-presuppositional wh in-situ, we have seen that this sentence will be ungrammatical when trapped under any kind of islands. Mathieu's analysis could then well fit in this environment. Following the idea that wh-phrases are constituted of an $Op_{wh}$ and an indefinite, the idea would simply be that the non-overt operator moves up to SpecCP, leaving its restriction in-situ (i.e, no pied-piping of phonological features). So the idea is that the $Op_{wh}$ is moved to the C-system,

[41] Then Ú *wh* are not in-situ at LF, i.e., they must be differentiated from wh in-situ in Japanese.

while the restriction is left in-situ, and if a QP intervenes, the sentence is bad and we meet classical Intervention Effects witnessed in (91) (see section 5).

### 6.2. Range wh in-situ

We have already started to compare wh in-situ with ∃QPs. Again, this method is fruitful with downfall elements, since both downfall wh and *UN NP* pattern alike with Scope Islands: both cannot move past wh and ∀QPs (see also section 4).

(105) a. Tous les garçons se demandent quand Jean invitera UNE fille (∀>UNE);*(UNE>∀)
all the boys wonder when J. will invite a girl
b. Tous les étudiants lisent UN livre (∀ > UN) ; *(UN > ∀)
all the students read a book

(106) a. * Tu demandes qui a fait QUOI ?
you wonder who has done what
b. * Tous les étudiants lisent QUOI?
All the students read what

Following the comparison initiated in this paper between wh in-situ and fronted-wh, downfall wh do not escape the parallelism: fronted and in-situ behave alike in being sensitive to both SCO (108) and WCO (110), suggesting that again [+Q]-movement is at stake. I use wh-clefts for fronted wh (see Baunaz (2004) for arguments), since we claimed that downfall clefts are interpreted as range-based presupposition, underlining a possible comparison with downfall wh in-situ (see (42))

(107) * C'est $QUI_i$ qu'$il_i$ a invité $t_i$?
It is whom that he has invited

(108) a. * $Il_i$ a invité $QUI_i$?
he has invited whom
b. * $Il_i$ a dit que Marie voudra inviter $QUI_i$?
he has said that M. will invite whom
c. * Marie disait qu'$il_i$ inviterait $QUI_i$?
M. said that he would invite whom

(109) a. * C'est $QUI_i$ que $sa_i$ mère aime $t_i$ le plus?
It is whom that her mother likes the most

(110) a. * $Sa_i$ mère aime $QUI_i$ le plus?
her mother likes whom the most
b. * $Sa_i$ mère dit que Marie aime $QUI_i$ le plus?
Her mother says that M. likes whom the most
c. * Marie dit que $sa_i$ mère aime $QUI_i$ le plus?
Marie says that her mother likes whom the most

Summing up, both range ∃QP and range wh are subject to strict locality conditions: they cannot scope over $\forall_{specific}$QPs and $\forall_{range}$QPs. Both are trapped in WI, suggesting that at some point, movement occurs. We know moreover that they both involve an Op and an indefinite. Because of their intrinsic nature, i.e., range, they are presuppositional. Pursuing the reasoning started above about covert Split-DPs, both range ∃QP and range wh cannot be instances of constructions involving stranding of the indefinite in-situ. Rather, they are instances of covert phrasal movement, just like specific wh/∃QPs are.

### 6.3. Potential problems

So far so good, downfall range wh in-situ seem to be the covert version of downfall range wh-cleft. Yet, such parallelism cannot be maintained in the light of SIs. We know that specific and rising wh in situ cannot escape SIs, while range wh in-situ can:

(111) a. Tu crois qu'elle a fait le gâteau pour causer QUOI / *∨ quoi/ *quoi ?
you think that she has done the cake to provoke what
b. Tu crois qu'ils vont rembourser ceux qui ont voyagé COMMENT / * ∨ comment/*comment?
you think that they will reimburse those who have travelled how

As such, specific and rising wh in-situ resemble their overt counterparts, but range wh in-situ don't: wh-clefts cannot be extracted past SIs:

(112) a. * C'est QUOI que tu crois qu'elle a fait le gâteau pour causer?
It is WHAT that you think that she has done the cake to provoke
b. * C'est $COMMENT_i$ que tu crois qu'ils vont rembourser ceux qui ont voyagé $t_i$?
it is how that you think that they will reimburse those who have travelled

This state of affair is problematic since as traditionally observed, it is impossible to extract anything out of SIs. The distinction between the syntax of both specific wh in-situ and wh overt movements on the one hand and that of downfall wh in-situ must be located in the way movement occurs. We could suggest that range wh in-situ are in fact not moved and stay in-situ even at LF. If this analysis is correct, we expect that when embedded under ∀QPs, wh-phrases have narrow scope. This is however not the case. In (113b), the wh in-situ is trapped in a SI and can take wide scope over the ∀QP *tous* 'all', but not over *chacun* 'each'(113c).

(113) a. Tu crois que Joey a dit cela pour inviter QUI ? (Fr B)
You think that J. has said that to invite WHOM
b. Tu penses que tous les garçons ont mis la table pour impressionner QUI *(PL)
you think that all the boys have set the table to impress WHOM
c. ?? Tu crois que chacun des garçons a dit ça pour inviter QUI ? *(PL)
You think that each of the boys has said that to invite WHOM

(113a) does not contain scope-taking elements and the sentence is perfectly grammatical. On the contrary both (113b) and (113c) contain a ∀QP: *tous* and *chacun* occupy the subject position of their respective embedded clause. As (113b) shows, wide scope of *QUI* suggests that it has

moved, while the degraded status of (113c) suggests that something blocks movement of the downfall wh in-situ, i.e., there is extraction. Lots of questions arise at this point: how come downfall wh-phrases extract out of SIs? Which property permits extraction out of SIs, extraction which is impossible with covert phrasal movement and overt wh-fronting / wh-cleft?

Recall that according to our typology, *chacun des* is intrinsically distributive, i.e., it distributes either over events, or individuals, while *tous les* is underspecified for distributivity. Turning to other properties displayed by ∀QPs, one finds that specificity is intrinsically bound to *chacun*, while range seems to be tied to *tous les*: according to the theory of locality pursued, i.e, an extension of Starke (2001) and Rizzi (2002), we expect syntactic blockings in Island configurations when exactly such elements are used. Lack of intervention effects suggests successful extraction. Hence the fact that *QUI* is blocked in (113c), but not in (113b) can be accounted for if we assume that movement of *QUI* past *chacun* is blocked and is not past *tous,* i.e., specificity blocks movement of the wh-phrase. Yet, downfall *QUI* is range, and as such, should be blocked by *tous les*, as (114):

(114) * Tous les étudiants lisent QUOI?
All the students read WHAT

When they interact, distributive QPs block movement of wh in-situ in monoclausal constructions, suggesting that some feature blocks extraction. This fact suggests that downfall wh in-situ are somehow moved and blocked by range ∀QPs. This yields the following abstract locality condition.

(115) * $Q_{range} \ldots Q_{range} \ldots Q_{range}$

So we face a problem. That range wh in-situ are extracted in (113) is supported by the fact that some kind of intervention –or limitation- effects show up. If it is true that WIs and SIs are different phenonmena, then, the problem we face here is not really a problem and should follow from SI-constructions by themselves, rather than by locality conditions on movement.[42]

## 7. A NOTE ON OVERT WH-MOVEMENTS AND INTERVENTION EFFECTS

French wh in-situ come in three types which behave like fronted-wh and wh-clefts in WI configurations. From that basis, I concluded that specific wh in-situ are like specific fronted-wh

[42] Incidentally, range wh in-situ are not the only phrase being insensitive to SIs: NPIs in an adjunct can be licensed in the matrix, as (i) shows:

(i) Jean n'as pas engagé Marie pour licensier qui que ce soit (Mathieu (1999 : 333, (31b))
J. NEG has not hired M. for to fire anyone
'Jean didn't hire Marie in order to fire anyone'

Interesting for us, *qui que ce soit* 'anyone' is not uttered with a flat intonation, as we will expect from a non-presuppositional indefinite. Rather, it gets a downfall intonation:

(ii) Jean n'a pas engage Marie pour licensier QUI QUE CE SOIT.

I leave the problem of SI unsensitivity open for further research.

in permitting movement out of them; raising wh in-situ cannot move past any WIs, like non-presuppositional fronted-wh; range wh in-situ are like wh-clefts and they are stuck in WIs. In section 5 I claim that specific and range wh in-situ undergo LF-raising of the whole DP, while non-presuppositional wh in-situ are stranded. Because non-presuppositional wh in-situ resemble fronted-wh, I conclude that $Op_{wh}$ is overtly moved, and support Mathieu's Split-DP analysis.

Yet the parallel between overt movements and wh in-situ vanishes when Scope islands enter the game: overt wh-movements do not create the same kind of restrictions and worse, are less strict than covert movements. First, wh/*tous les* interactions never yield PL readings.

(116) a. Qu$_i$'est-ce que tous les enfants ont fait $t_i$ ? *(PL)
What EST-CE that all the children have done
b. Quel livre est-ce que tous les enfants ont lu? *(PL)
which book EST-CE that all the children have read

(117) a. C'est QUOI que tous les étudiants ont fait? *(PL)
it is what that all the students have done
b. C'est QUEL LIVRE que tous les étudiants ont lu? *(PL)
it is which book that all the children have read

The positive point lies in the fact that both constructions yields the same results: (116) and (117) do not yield PL readings, i.e, behave alike in this respect. The negative point is that (116a) involves a non-presuppositional wh-phrase moving past a $\forall QP_{range}$, movement that should be blocked. (116b) is not problematic, since *quel livre* 'which book' is specific. (117) involves range wh-phrases which should be totally unable to move past $\forall QP_{range}$, by RM. Yet, they do.

Second, if *chacun des* intervenes, non-presuppositional wh only yield a PL reading while expecting it to be unavailable, since the wh-phrase appear quite high in the structure:

(118) Qu'est-ce que chacun des étudiants a lu ? only (PL)
what is it that each of the students has read

With *quel livre*, on the contrary, both PL and SP readings are available, as (119) shows:

(119) a. Quel livre est-ce que chacun des étudiants a lu? ??(Wh>∀) ; (PL)
b. ∨ quel livre est-ce que chacun des étudiants a lu? Only (Wh>∀)
Which book is it that each of the student has read

Again, this state of affair is unexpected, since *chacun* is specific and as such, is an absolute blocker, i.e., the SP reading should be unavailable. The same problem arises with wh-clefts:

(120) a. C'est QUOI que chacun des étudiants a lu? ??(Wh>∀) ; (PL)
it is what that each of the students has read
b. C'est QUEL LIVRE que chacun des étudiants a lu? ??(Wh>∀) ; (PL)
it is which book that each of the students has read

That overt movement and covert movement do not show the same locality effects is problematic: since Chomsky 1995, it is indeed assumed that they should.

In French B, Overt movement behaves uniformally, wh-clefts and fronted-wh behave identically in terms of scope: both movements show PL readings with *chacun*, suggesting some scopal blocking effect, while SP is the only available reading when interacting with *tous les*. Covert movement is subject to stricter locality conditions, which, I claim, is related to RM. So, how come? I leave this question open for further research.

Despite similar behaviour in WIs and SIs, Wh in-situ and overt-wh-movements are different with respect ot Scope Islands, suggesting that they are not identical twins. I conclude, along with Boeckx (1999a,b), Mathieu (2002), (2004), C&R (2000) and Starke (2001), that wh in-situ constructions are not optional.

Wh in-situ do not differ because of the nature of the $Op_{wh}$, but rather of the nature of the indefinite. Then if non-presuppositional indefinites are variables, we expect the restriction to be left in situ, while the $Op_{wh}$ is moved to the C system. In presuppositional contexts, things parallel those happening with ∃QPs: specific Ú *un NP* can cross interveners (and are only blocked by $Q_{specific}$) and range *UN NP* can not cross interveners (this is witnessed by the fact that they only take narrow scope). I propose that when it comes to wh-phrases, non-presuppositional wh-phrases in-situ are Split –DPs, while presuppositional wh in-situ are not. In other words in non-presuppositional wh-phrases the $Op_{wh}$ strands its restriction and move alone to the C-system, while presuppositional wh-phrases undergo covert phrasal movement and pied-piping results. If wh-phrases of the type in questions involve operators we expect, at some point, some interaction with other quantificational operators (ambiguities, blocking effects…). Suggesting that that $Q_{specific}$ is an absolute blocker, and supporting Starke's 2001 claim. (121) upholds this idea:

(121) a. # Chacun des hommes aime ∨ une femme
each of the men loves a woman
b.?? Combien est-ce qu' ∨ une femme a lu de livres
how many EST-CE QUE a woman has read of books

(121a) illustrates the case in which a specific indefinite is blocked by a $Q_{spec}$, while in (121b) Ú *une femme* intervenes between the launching site and its landing site, resulting in a degradation.

## 8. CONCLUSION

Following recent works initiated by Beghelli *et al.* and Puskás (2001), I give a finer typology of ∀QPs (Baunaz & Cattaneo (this volume)) as well as of ∃QPs, assuming that QPs come with a bundle of distinct features - phonological, semantic and syntactic- expressing their own individual properties. On the one hand, *chacun* 'each' clearly always appears with [+∀] and [+ distributive] features, whereas *tous les* exhibits [+∀] and may have a [+distributive] feature. On the other hand, the existential *un NP* 'a NP' can be distributed over or not. Still distributive universals like *tous les* NP 'all the NP', *chaque* ('each') and *chacun* ('every/each') scope over a quantified existential if they c-command it at Spell-Out, i.e., distributing over other [+Q] elements.

Based on the idea that ∀QPs are 'specific', I develop the notion of specificity, based on Starke (2001). Again, a distinction can be drawn among ∀QPs: *chacun* is clearly intrinsically specific, while *tous les* NP is clearly not. Turning to ∃QPs, I establish a split between presuppositional *un NP* (range and specific) and non-presuppositional ∃QP *un NP*, based on their semantics and prosody: corresponding to each type of ∃QPs is a particular intonation. Non-

presuppositional ∃QPs are uttered with a neutral (or flat) intonation, focalised 'range' ∃QPs are downfall and specific ∃QPs are uttered with a slight fall-rise Intonation.

When focusing on the interaction between ∀QPs and ∃QPs in general, we find that these 3 types of ∃QPs do not behave alike: on the one hand, non-presuppositional and range ∃QPs can never take scope over a ∀QP; on the other hand, specific Ú *un NP* have to, suggesting that they c-command ∀QP at LF. Based on these results, we discussed the behavior of wh in-situ in French. We showed that when it comes to French wh in-situ, two dialects must be distinguished: French A belongs to the dialect studied by Chang (1997), Boeckx (1999a,b), (2003) and to a certain extend Mathieu (2002); French B is the dialect studied by Starke (2001) and attested in the French speaking area of Switzerland.

French B shows at least 3 different instances of wh in-situ: (i) fall-rise wh in-situ; (ii) downfall wh in-situ and (iii) rising wh in-situ. Based on the distinction drawn in section 3.3, we have shown that these wh in-situ correspond to the various identified *un NP*, in that (i) is specificity-based, (ii) is range-based presuppositional, while (iii) is non-presuppositional. The parallelism between *un NP* and wh in-situ is confirmed by the fact that we find three distinct syntactic behaviours of wh in-situ: (i) fall-rise wh in-situ are not trapped in weak and scope islands, (ii) downfall wh in-situ are blocked in any kind of weak islands, but not in strong islands, (iii) rising wh in-situ are non-presuppositional and can never be extracted covertly. Based on Starke (2001), we claim that RM can account for their behaviour.

We have also discussed –thought not in full details- two different structures where wh-phrases overtly move: wh-clefts and wh-fronting. Wh-clefts are strongly presupposed, while ranged-based. Wh-fronted can be either non-presuppositional (i.e., out-of-the-blue) or presupposed (range and specific). Wh in-situ and wh ex-situ react alike in front of WI and SI, while they show divergeant behaviours with Scope Islands.

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