Notes on wh in situ in French∗

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1. Introduction

French has six strategies of wh interrogation, (1). This paper is concerned with the in-situ option in (1a), against the background of overt movement, (1b,c), and clefting, (1d). The cleft strategy, in its turn, is compared to (1e) and some properties of (1e) to (1f).

(1)  a. In situ: tu as quitté qui? you have left who
    .  b. Wh movement and no I→C: qui tu as quitté? who you left
    c. Wh movement and I→C: qui as-tu quitté? who have you left
    d. Wh- cleft: c'est qui que tu as quitté? it is who that you have left
    e. Movement of cleft pivot: qui c'est que tu as quitté? who it is that you have left
    f. Wh movement + [est-ce-que]: qui est-ce que tu as quitté? who is-it that you have left

1. Weak islands

Mathieu's 1999 observes that the argument-adjunct asymmetry in extraction out of weak islands does not extend to wh in situ. These are unselectively constrained by Relativized Minimality (RM) of Rizzi 1990.

Unlike overtly moved wh arguments, both argument and adjunct in situ wh are sensitive to intervention by c-commanding quantificational elements. Although some of these weak island effects - in the sense of Cinque 1990 and Rizzi 1990 - are subtle and controversial, the consensus among researchers is that wh in situ is ungrammatical in the scope of negation and within wh-islands (see also Starke (2001).)

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(3a) is sharply ungrammatical when compared with (2a), whereas no degradation is perceived in (3b) when contrasted with (2b).\(^1\)\(^2\)

(2)  
   a. Tu crois qu'elle a fait quoi?  
      you think that she has done what?  
   b. Que crois-tu qu'elle a fait?  
      what think-you that she has done?

(3)  
   a. *Tu crois qu'elle (n')a pas fait quoi?  
      You think that she has neg done what  
   b. Que crois-tu qu'elle n'a pas fait?  
      what think-you that she neg has neg done

Whereas wh movement of an argument out of a wh-island is marginal, (4a), in situ wh in (4b) is markedly degraded inside such an island.

(4)  
   a. *(?)Qui te demandes-tu comment aider?  
      whom you wonder how to help  
   b. *Tu te demandes comment aider qui?

Mathieu observes that these differences between moved and in situ wh recall the familiar asymmetry between (overt)argument and adjunct extraction. Moved adjuncts cannot be separated from their variables by negation or a wh-island. The chain connecting e.g., *how*, to its variable violates RM in (5a,b).

(5)  
   a. *Comment, n'as tu pas fait cela t?  
      'how didn't you do that?'
   b. *Comment, t'es-tu demandé quand j'ai fait cela t?  
      'how did you wonder when I did that?'

The 'adjunct-like' behavior of both argument and adjunct wh in situ suggests first, that wh in situ is chain-linked to C and second, that this chain is non-argumental and hence subject to RM. Mathieu's idea is that wh in situ phrases contain a null operator which moves to SpecCP and that "the trace left after movement of the French question operator is non-referential. Since the variable is non-referential, it needs a local antecedent." (p.4).\(^3\)

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\(^1\) More precisely, (3a) is sharply ungrammatical under the standard downfall intonation felicitous in (2a). With a change of accent on the situ-wh, (3a) is acceptable. The different accents correlate with presuppositional readings, i.e., a list-like range or an existential/specific one; see Baunaz 2008, Starke 2001.


\(^3\) Rizzi 2000 expresses the argument-adjunct difference in terms not of referentiality but of grammatical category: Argument chains are DP chains (subject to (nonlocal) binding) while adjunct chains are non-DP chains, subject to RM. Since Mathieu's null operators are presumably DPs, some modification is required. Suppose that only the wh
Two consequences merit mention. First, Chomsky's (2001) AGREE mechanism alone is incapable of capturing the parallelism between wh in situ and moved adjuncts. One must assume that MOVE must also apply. This is so for the same reason that the Minimal Link Condition (MLC) of Chomsky (1995) does not subsume Relativized Minimality. Both AGREE and the MLC are search-oriented, in the sense that the wh feature on C attracts or probes for a wh feature associated with some constituent in its search domain. Negative or other non-wh quantificational features in the search domain of a probe for wh are not expected to intervene in SEARCH's way because they are not potential candidates for AGREE. A condition on chain locality of the sort proposed by Rizzi 1990, 2001 seems to be independently required.

The second consequence concerns Poletto & Pollocks' (2004, 2008 and related work) remnant movement analysis of wh in situ. A key component of this approach is that wh-movement of 'what' (which is an argument) applies overtly in the derivation of both (3a) and (3b). The ungrammaticality of (3a) comes into light in subsequent steps in the derivation. The parallel between wh in situ and overt adjunct extraction which Mathieu and Starke attribute to RM lacks a theoretical expression in the remnant movement approach and comes out as an accident.

2. Strong islands

The sensitivity of French wh in situ to Islands is selective: Strong islands can embed wh in situ (Obenauer 1994 and Starke 2001). The following contrasts (from Obenauer 1994: 295-296) are illustrative:

(6)   a. *Qu'est-il tombé sur la solution en faisant t?  
      what has he fallen on the solution by doing
   b. Il est tombé sur la solution en faisant quoi?

(7)  a. *Combien de personnes, connaissez-vous des gens qui pourraient héberger t?  
       how many persons do you know people who could host
   b. Vous connaissez des gens qui pourraient héberger combien de personnes?  
       you know people who could host how many people

The grammaticality of (6b) and (7b) is consistent with a different claim, namely, that strong islands actually block null operator or feature movement but that a covert derivational operation allows the wh to be smuggled (in Collins' 2005 sense) to the matrix CP without ever crossing the island.

Following Nishigauchi 1990, Obenauer suggests that strong islands can be covertly pied piped so

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feature is moved, stranding not only the restriction on the quantifier but also its categorial feature. Since categorial features need only be piped for PF well-formedness, it stands to reason that they are not moved covertly. A particular implementation of feature movement is developed in Bošković 2000 which Mathieu rejects, but the more general feature-movement approach of Chomsky 1995, Pesetsky 2000 is tenable, I believe.
that the island is actually never crossed by the wh in situ. Richards 2000 develops this idea and argues that the wh inside the island undergoes covert internal movement (in the sense of Riemsdijk 1984) to the edge of the island, triggering pied piping of the entire island. The wh operator or feature ends up c-commanding its variable much like a quantifier in SpecDP c-commands a bound pronoun (e.g., every linguist's father thinks she is a genius). (It remains to be determined why internal movement and pied piping cannot be overt.) Covert pied piping is of no avail in wh islands, however, presumably because the wh operator would end up occupying two scope positions, in violation of Criterial Freezing (Rizzi 2006): One on the edge of the island and one in the matrix position of the pied-piped island.

Obenauer (pp. 296-297) records the following pattern: While wh in situ are fine inside single strong islands, they are sharply degraded when the island is embedded inside another island. Compare (6b) and (7b) with (8).

(8) a. *Il a falli désespérer [avant de tomber sur la solution [en faisant quoi]]? he almost gave up before falling on the solution by doing what

b. *Vous connaissez [des gens qui ont [une maison où héberger combien de personnes]]? you know people that have a house where to host how many people

These facts militate in favor of the pied piping analysis: A null operator or wh feature can licitly move to the edge of β in (8) but it cannot cross the island and move to the edge of α. Pied piping, if it is licit at all in (8), can only target α and wh would be too deeply embedded within it to c-command out.

3. Indirect questions

French wh in situ is perfectly acceptable in matrix clauses, (9a), but barred in indirect questions, (9b), (compare (9c)).

(9) a. Jean a vu qui
   Jean has seen who

b. *Tu te demandes Jean a vu qui
   you wonder John has seen who

c. Tu te demandes qui Jean a vu
   you wonder who John has seen

The idea I would like to pursue is that the wh feature/operator on the in-situ wh in (9b) is inaccessible to PROBE by a selected (as opposed to root) interrogative C. Assume that C's probing wh or Q feature is activated through selection, as a consequence of the satisfaction of the selectional
requirements of the predicate, ‘wonder’ in (9). C becomes an active probe after merge of V. If merge of the predicate activates the SEARCH capacity of C, it also has the consequence of rendering the complement of C inaccessible to SEARCH. This is due to the Phase Impenetrability Condition (PIC) of Chomsky 2001, 2004, according to which the complement of a phase head undergoes TRANSFER and becomes inaccessible to further computation.

In order to explain why (9c) is nevertheless acceptable, that is, why the PIC does not rule out overt wh movement in indirect questions, we must assume that the feature attracting phrasal movement to CP is independent of selection. One possibility is to take this feature to be an uninterpretable phi feature on Fin⁰, perhaps a covert variant of the sort of wh agreement morphology characteristic of languages such as Chamorro, Chung 1982. Alternatively, the wh category in (9c) is attracted by a focus feature on C (or on Foc⁰. See Bošković (2002).) Both options make the necessary cut between wh phrasal movement, which is possible in indirect questions, and wh feature movement, which is not.

Once wh has reached CP in (9c) (having been attracted there by a head independently of selection,) it is accessible to further computation, in particular, to PROBE (AGREE) by the wh or Q feature activated through selection. I assume that from the perspective of the PIC, the complement of the lowest head of CP (Fin, in Rizzi’s 1997 architecture,) undergoes TRANSFER. CP should be thought of as an extended projection, Grimshaw 2000, containing a single head and a hierarchical matrix of features. Each remerge of C activates one feature, Shlonsky 2006. All heads and specifiers within CP are computed as part of the CP phase edge and thus fail to undergo TRANSFER along with C's complement TP.

4. Subjects

Rizzi’s (2006) Subject Criterion has the effect of barring transit through SpecSubj - the EPP position - en route to C (Criterial Freezing). Rizzi & Shlonsky 2007 argue that the Subject Criterion is satisfied by a phonetically unrealized phi-endowed Fin head in (10a). (10b) violates Criterial Freezing in the embedded sentence. Long subject extraction can be rescued, for some speakers, by merging the phi-bearing Fin head, realized as qui in (10c).

(10) a. *Qui a parlé à Marie?*

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4 See Soare (in progress) for discussion of the features that enter into the computation of wh questions.
5 Two questions arise and both related to the proper characterization and delimitation of the PIC: How is long wh movement implemented and how is wh in situ licensed in indirect questions in languages which do not manifest the root-selected asymmetry (e.g., Chinese, Malay). Long (cyclic) movement is an independent problem and a general one for theories espousing the PIC. As for Chinese, Malay etc., it is conceivable that they implement wh dependencies by some form of binding (see e.g., Cole & Hermon 1998, Tsai 1994, Cheng & Rooryck 2000,) a mechanism which does not appear to be constrained by the PIC.
who spoke to Mary
b. *Qui a-t-il dit que devait parler à Marie?
   Who did he say that should speak to Mary
c. %Qui a-t-il dit qui devait parler à Marie
   Who did he say Fin+phi should speak to Mary

Can wh subjects appear in situ? A sentence like (10a) cannot be used to answer this question, because it provides no indication as to whether *qui* is indeed in situ and not moved to CP. Trapping *qui* under the complementizer in embedded clauses, however, ensures that it is not in the embedded CP but in the embedded SpecSubj. The sentences in (11), from Obenauer 1994, reveal a subject-object asymmetry: Subject *qui* in situ is systematically degraded as compared with object *qui* in situ. This asymmetry illustrates the workings of Critical Freezing: The embedded wh in situ in subject position is criterially-frozen and cannot be attracted by a higher C.6

(11) a. Il a dit que Marie devait parler à qui?
   He has said that M. should speak to who?
b. ??Il a dit que qui devait parler à Marie
   He said that who should speak to who

A subject-object asymmetry is also perceptible in strong islands. The following contrast is recorded by Obenauer, p. 297:

(12) a. Il a construit une machine qui sert à (faire) quoi?
   He has built a machine that serves (to do) what
b. *?Il a construit une machine que qui va utiliser?
   He has built a machine that who is going to use

Wh in situ inside strong islands involve a step of internal movement, followed by pied-piping of the entire island (see §2). The subject wh in (12b) is criterially-frozen in SpecSubj. Hence, internal movement cannot be launched and pied-piping either fails to take place or fails to raise the wh feature to a position from which it can scope over its variable.

5. Wh in situ are not hidden clefts

Boeckx 2000 states that “…in situ wh phrases in French are focused, ‘covert’ cleft structures…”, a view shared by Zubizarreta 2003. Belletti 2006 suggests that “…wh in situ is not literally an in situ process but it involves a shorter movement than regular wh movement: While the wh-word reaches the left peripheral relevant position in the CP area in the latter, in the former it stops in the low VP

6 I venture the hypothesis that the marginal as opposed to robustly ungrammatical status of (11b), is due to a presuppositional effect, of the kind discussed by Starke 2001 and Baunaz 2008 (see note 1). Once this is controlled for, a sharper degradation is perceived (but see Obenauer, 298, note 23 for a different suggestion.)
peripheral focus position.” In related work, Belletti 2008 argues that (some) clefts are structured around the vP peripheral focus position. This section takes issue with the claim that wh in situ are cleft-like and points to some problems with the idea that they undergo even short overt phrasal movement.

Wh in situ are clearly focalized (as are all wh elements, in situ or moved). But the presuppositions they are associated with are different from those that characterize wh clefts. Wh clefts are associated with an existential presupposition while wh in situ are not necessarily associated with such a presupposition. This is shown by the infelicity of the answer 'nothing' to the cleft interrogative in (13) and its felicity to an in situ wh question in (14).

\[(13)\]  
\[\text{A: } \text{C'est quoi que tu fais dans la vie?} \]
\[\text{it's what that you do in the life} \]
\[\text{'What is it that you do in life?'} \]
\[\text{B: } \#\text{Rien.} \]
\[\text{'Nothing'} \]

\[(14)\]  
\[\text{A: } \text{Tu fais quoi dans la vie?} \]
\[\text{you do what in the life} \]
\[\text{'What do you do in life?'} \]
\[\text{B: } \text{Rien.} \]
\[\text{'Nothing'} \]

Starke 2001 argues that the verb \textit{foutre}, roughly 'fuck (up)', can be used in place of \textit{faire} 'do', under the presupposition that the addressee didn't do what they were supposed to. Thus, (15a) is felicitous in a context that presupposes that you are not doing anything or not doing what you are supposed to be doing. Note that the cleft in (15b) is impossible in this context, because its presupposition (that you are doing something) clashes with the presupposition introduced by \textit{foutre}.

\[(15)\]  
\[\text{a. } \text{Tu fous quoi?} \]
\[\text{you fuck what} \]
\[\text{'what are you fucking doing?'} \]
\[\text{b. } *\text{C'est quoi que tu fous?} \]
\[\text{it's what that you fuck} \]
\[\text{'What is it that you're fucking doing?'} \]

Wh clefts are associated with an exhaustive/uniqueness presupposition while wh in situ, like moved wh, are not necessarily associated with such a presupposition. This is demonstrated in the contrast

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7 Boeckx 2000 and Cheng & Rooryck 2000 claim that B's answer to A in (14) is as inappropriate as it is in (13). I follow Starke 2001, who challenges this view. (1f) patterns with (14), as Starke notes, arguing that the \textit{wh est-ce que} construction is not a cleft. (1e) unsurprisingly patterns with the cleft in (13).
between the question-answer pairs in (16) and (17).

(16)  A:  C'est à qui que tu as parlé à la soirée de Bertrand?
    it's to who that you have talked at the party of Bertrand
    'It's who that you talked to at B.' party?'
    B:  #(J'ai parlé) à Marie, entre autres / par exemple
    (I have talked) to Marie, among others / for example
    'I talked to Mary, among others / for example.'

(17)  A:  Tu as parlé à qui à la soirée de Bertrand?
    you have talked to who at the party of Bertrand
    'Who did you talk to at B.' party?'
    B:  (J'ai parlé) à Marie, entre autres / par exemple
    (I have talked) to Marie, among others / for example
    'I talked to Mary, among others / for example.'

Clearly, then, clefting involves presuppositions that do not obligatorily accompany wh in situ.

I conclude this paper by posing a problem for the view that wh in situ is undergoes (even short) A'
phrasal movement.

Kayne 1972 notes that the particle donc is incompatible with wh in situ; consider the contrast in
(18).

(18)  a.  Qui donc (est-ce que) tu as vu hier?
    who donc (est-ce que) you have seen yesterday
    'who then did you see yesterday?'

b.  ??Tu as vu qui donc hier?
    you have seen who then yesterday

Donc here is an 'interrogative reinforcer', Grevisse 1993, and contributes an 'aggressively non-D-
linked' presupposition (similar to diable 'devil'; cf. Obenauer 1994 and Pollock 2008.) If we state
the descriptive generalization underlying the distribution of interrogative donc as in (19), the
deviance of (18b) follows trivially.

(19)  Interrogative donc is only possible with an overtly moved wh.

The wh cleft (20) patterns with the moved wh in (18a) and not with the wh in situ format in (18b).

(20)  C'est qui donc que tu as vu hier?
    it's who then that you have seen yesterday

What is the landing-site of the clefted wh in (20)? (21) (which corresponds to the wh interrogation
strategy in (1e)) suggests that the clefted wh in (20) undergoes some sort of partial movement: It is
neither in situ nor in CP but somewhere in-between.
Belletti's vP-peripheral focus position is - as she explicitly argues - a likely candidate for housing wh in (20).

There is evidence that this position is not the final landing site (or criterial position) of the cleft pivot. The robust intervention effect illustrated in (22) and discussed in Rizzi 2006 and Starke 2001 diagnoses further attraction of the cleft pivot (or of some feature within it) to a position above negation, presumably to CP.

(21) Qui c'est que tu as vu?
   who it is that you saw
   'Who is it that you saw?'

(22) *Ce n'est pas qui que tu as vu?
   'It isn't who that you saw.'

In other words, wh clefting is akin to partial wh-movement: The wh phrase in clefts undergoes overt phrasal movement (allowing donc) but to a position which is lower than its final landing site (or of a feature embedded within it.) The vP-peripheral focus position appears to be reserved for non-interrogative foci. If FocusP and WhP are distinct (though perhaps adjacent) positions in the CP periphery, then our conclusion is that the vP periphery includes a FocP but not a WhP.

6. Conclusion

I have tried to trace the lines of a coherent description of wh in situ in French. Despite some factual discrepancies in the literature, a number of generalizations seem to be valid:

a. Wh in situ is possible in both root and embedded contexts.
b. It is constrained by both weak and strong islands
c. It is illicit in indirect questions.
d. It lacks both the syntax and semantics/pragmatics of clefts.

Weak island sensitivity diagnoses non-argumental chains and can be successfully handled with a minor modification of Mathieu's (1999) approach. Strong island sensitivity reveals itself in multiple island embedding, as Obenauer (1994) shows. Richards' (2000) treatment of similar patterns in Japanese can be transposed to French. The ungrammaticality of wh in situ in indirect questions can be construed in terms of the PIC: A selected C head is unable to probe into TP and the wh in situ is out of bounds. Finally the differences between wh in situ and wh clefts argues that the semantics and syntax of the former cannot be reduced to those of the latter.

There are a number of issues that this paper has not discussed. One is the ungrammaticality of wh in situ in clausal subjects, discussed by Obenauer 1994:295. Another matter not touched upon is the ameliorating impact of D-linking on wh in situ in weak islands, see Starke 2001, though not on wh
in situ in indirect questions. Cinque's 1990 detailed study of A’ dependencies in Romance demonstrates that a seemingly uniform phenomenon is actually a family of complex patterns. Further research will probably reveal the same for D-linking and hopefully clarify further its role in the syntax of wh in situ in French.

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