Direct versus indirect strategy in French child grammar

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This paper presents some new data on the acquisition of long-distance questions in French L1. These results are consistent with the previous study, presented in Oiry & Demirdache (in press). French child grammar involves sub-scope marking strategies.

1. Previous study: Evidence from French L1 Acquisition.

This section presents a summary of the main hypothesis based on French data originally presented in Oiry (2002) and analysed in Oiry & Demirdache (in press). Oiry & Demirdache (in press) argue for the existence of two sub-scope marking strategies in French L1, namely a direct versus an indirect strategy. The former involves a partially moved wh-phrase bound by a non-lexical Q morpheme. The latter exhibits two wh-phrases, which move overtly or covertly to each CP.

1.1 Partial movement in French L1: a direct dependency analysis.

In (3) would be ungrammatical if the German wh-phrase was (what) in (1) moves from its original position, namely the object of the verb aloud (love), to the intermediate Spec CP, which bears the features [-

wh]. Hence, no lexical scope marker appears in the matrix CP. In this respect, French children’s questions differ from their English counterparts, as illustrated in (2).

(2) L1 English (Thomson 1990: 246)

What do you think which Smart really has roller skates?

wh]-Scope Marking strategies in English L1 are conformal to the German partial movement, see (3).

(3) German Adult Grammar (Mc Daniel 1989: 569)

Was, glaubt Hans mit Wissen, Jakob jetzt sprach?

what believes H. with whom J. now talk to

‘With whom does Hans believe that Jacob is now talking?’

The matrix verb below in (3) selects a [ Wh] complement. Partial movement of the embedded wh-phrase to the intermediate [- wh] Spec CP position thus violates the wh-Criterion (Roiz 1996, among others) which requires that every wh-phrase shows up in the specifier of a [- wh] CP. The sentence

* The subparts of the argument are phonologically parallel.

This proposal is further supported by the fact that partial wh-movement structures without an overt scope marker are attested cross-linguistically in languages such as, Qatran (5), Bahasa Indonesia (6) or Kihuruka (7). We analyze these partial movement structures as involving a null Q morpheme signaling where the medial -wh to be interpreted at LF.

(5) Amadu Qatran (Cole and Harmon 1994: 246)

O Jose mumun may-man Maria away-nu-na-ta ?

Jose wants where-to Maria go-NOM-3-ACC

‘Where does Jose want Maria to go?’

(6) Bahasa Indonesia (Saddy 1991: 189)

O Bilu taba mpaqua yang Tom cinta?

Bill knows who FOC Tom lives

‘Who does Bill know that Tom loves?’

(7) Kihuruka (Mariani 2004: 110)

O U- -mbinga aat a-a nu John = ring-in-e e ?

2SG-IT-think that FOC-who J. SUBJ-beat-IT-FIN ALVOWEL

‘Who do you think that John beat?’

Furthermore, following Cheng & Rooryck (2000) and Matthew (1999), French s\- in situ is licensed by a Q morpheme:

(8) s\- in situ

[\-\-Q ] | il mange q\-

‘He eat what

‘What does he eat?’

Under this proposal, the syntax of partial wh-movement in French L1 parallels the syntax of s\- in situ. In both (4) and (8), a non-lexical Q morpheme is merged in the matrix [- wh] Spec CP in the syntax.
Direct versus Indirect Strategy in French LI

Both partial wh-movement in French LI and wh-in-situ in child/adult French are wh-scope marking constructions involving a scope marker generated in a non-argument/operator position in the matrix clause (Spec CP) and directly associated (via binding) with a lower wh-phrase, itself either in situ or stranded in the specifier of [+wh]CP.

O&K do not assume that the scope marker licensing both partial wh-movement in the child grammar of French and wh-in-situ in (be it the child or adult grammar) is a semantically vacuous element subject to explicit replacement at LF, for at least three reasons. First, LF-rearing of the associate (i.e. the contentful wh-phrase) to the expulsive position is argued not to be conceptually motivated in Chomsky (1990); that is, explicatives do not attract and need not be replaced. The associate simply does not move. Moreover, as Fanoulou & Mahajan (2000) point out, merging an expulsive into Spec CP is in fact no longer even an available option in the Minimalist framework. Second, O&K do not take the scope marker base-generated in the matrix CP and licensing partial wh-movement in situ in child/adult French to be semantically vacuous, but rather to be a full-fledged Q morpheme serving three functions. It marks the matrix clause as interrogative, binds the medi-situ-in-situ wh-phrase and checks the later’s wh-Q feature (see the discussion below). Thirdly, this proposal allows us to draw a principled distinction between the grammar of overt long movement in French on the one hand, and that of wh-situ in situ and partial movement on the other, as illustrated in (4) and (5).

O&K leave open the question of whether this null Q morpheme is phonological or not. Following Cheng & Rooryck (2000) intonation plays a certain role in French wh-situ. Previous acoustic studies seem to suggest that the raising contour that Cheng & Rooryck argue for, is not only the intonational pattern of French wh-situ. This is still an open question.

The question then is how to compositionally assign matrix scope to the media in situ wh-phrases in (4), without further ( covert) movement. There are at least two well-defined semantic mechanisms available in the literature for escaping scope without movement. (i) Unaccusative Binding as in Poesio (1987) and Niehues (1998): the lower wh-phrase is analyzed as an indifferent introducing an individual variable subject to existentially closure, and the matrix Q provides the existential binder (see Fanoulou & Mahajan (2000) for an analysis of partial movement in German along these lines). (ii) A choice function analysis (Reinhart 1997): the lower wh-phrase is analyzed as an indifferent introducing a variable over choice functions, and the matrix Q provides the existential quantifier binding this variable (see Brandner (2000) for an analysis of partial movement in German along these lines). 1.2 Wh-scope marking in French LI: an indirect dependency analysis.

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O&K also provided empirical arguments for an indirect dependency strategy in French LI.

The wh-scope marking construction in the Hindi is illustrated in (9), from Dayal (2000: 160-162). Notice that two wh-phrases appear in (9): kya (‘what’) appears in the object position of the main clause, and kisse (‘who’) in the object position of the embedded verb hate.

(9) Juan kya socchta hai ki Meri kisse bantu kategi?
John what-think-PR that Mary who-INS talk do-FUT
‘Who does John think Mary will talk to?’

(10) Juan kya socchta hai?
John what-think-PR
‘What does John think?’

Dayal (2000) argues that the wh-scope marker kya (what) occurring in the matrix clause is essentially not a non-referential (explicative) scope marker. Rather, it is an ordinary wh-scope appearing in its base argument position. Dayal thus draws a parallel between the matrix clause in (9) and the independent clause in (10). In both (9) and (10), the object wh-phrase kisse occurs in the internal argument position of the verb think (think) in its own right. The matrix CP(1) is a question over propositions, and the subordinate clause (CP2), syntactically analyzed as an appositive clause addressed to the matrix, is a question over individuals.

The LF for (9) is given in (11). In the sit in wh-phrase each move to CP specifier position, yielding two local wh-dependencies. The connection between the two clauses is established indirectly by co-indexing the matrix wh-phrase and the subordinate wh-question.

(11) Covert syntax of wh-scope marking in Hindi

[c’r kya n Juan kisse socchta hai [c’r kisse ki Meri h bantu kategi]

‘What do you think-PR that Mary who-INS talk do-FUT
‘Who does John think Mary will talk to?’

We found in the Hindi data some questions involving an indirect dependency, illustrated below.

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c. LF : [c’r what, do you think t] [c’r who, t will Mary see]

In conclusion, O&K clearly identified two classes of wh-scope marking strategies: indirect vs. direct dependency. The direct dependency strategy yields both partial wh-movement and wh-in-situ: the matrix non-locus Q morpheme is merged in the matrix clause in an operator/ A position and directly associated (via binding) with the lower wh-phrase, itself either in situ or stranded in the specifier of [+wh]CP as Spell-out. The indirect dependency strategy (in the sense of Dayal 2000) involves two clauses, each containing a contentful wh-phrase, and interpreted as a wh-scope in its own right. Both wh-s can simultaneously appear at Spell-out either in situ or else fronted to the specifier position of the CP in which they occur. The wh-phrase in the matrix is not directly associated with the wh-phrase in the subordinate clause; rather, it is associated (coindexed) with the CP containing the latter.

II 2005 study: Task, Participants & Results

2.1 Production Task

The experiment was adapted from Craik & Thornton’s (1998) protocol to induce long distance questions. Two experimenters were involved and acted out different situations with props and toys to lead the child to ask questions. A lead-in to each question was presented below (in (14)).

(14) LD Subject extraction (original version and translated)

**Exempl 1** - Koko, on a caché trois objets, on va voir si tu devineras où est caché chaque objet. Koko n’a entendu pas: Parler à un enfant c’est pas facile!

On ne sait où chaque chose est cachée. Le chat est dans le lit, le pigeon est sous le chapeau et l’index est sous le pot de yaourt. On va voir si Koko peut deviner où est caché chaque objet. On commence par le lit, d’accord?

On sait que le chat est dans le lit, mais demande à Koko ce qu’il pense.

**Exempl 2** - Koko, on a caché trois objets, on va voir si tu devineras où est caché chaque objet. Koko n’a entendu pas: Parler à un enfant c’est pas facile!

On ne sait où chaque chose est cachée. Le chat est dans le lit, le pigeon est sous le chapeau et l’index est sous le pot de yaourt. On va voir si Koko peut deviner où est caché chaque objet. On commence par le lit, d’accord?

On sait que le chat est dans le lit, mais demande à Koko ce qu’il pense.

Exempl 2 - Koko, on a caché trois objets; on va voir si tu devineras où sont cachés les objets. Koko n’a entendu pas: Parler à un enfant c’est pas facile!

On ne sait où chaque chose est cachée. Le chat est dans le lit, le pigeon est sous le chapeau et l’index est sous le pot de yaourt. On va voir si Koko peut deviner où sont cachés les objets. On commence par le lit, d’accord?

On sait que le chat est dans le lit, mais demande à Koko ce qu’il pense.
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Talk to the child with a low voice, and then, Koko can’t hear.
Both of us know where each object is hidden. The cat is in the bed, the weapon is below the hat and the Indian character is hide below the jar of yoghurt. - we will see whether Koko can guess. Let’s begin with the hat, ok?
We know that the cat is in the bed, but ask koko what he thinks.

So, child answer:
If he doesn’t answer or only a matrix question: ask Koko what he thinks is hide in the bed.
Koko: hum... the cat?

2.2 Participants
Nine children were involved in this study: 6 boys and 3 girls, aged between 3.08 and 5.09.

The two experiments included 14 questions from each child. Two controls were part of this protocol. When the child produce a matrix question or a LD you-no question, we prompt again by repeating the lead-in. This technique was used for eliciting subject (5), object (5) and adjunct (2) LD sub-questions with bare sub-phrases.

The types of target questions elicited are shown in (15) below.

(15) Expected Answers
a. (control)
To voir jouer avec nous ? / Est-ce que tu as encore de jouer avec nous ? /
Do you want to play with us? / Do you feel/wish to play with us? /
Veux-tu jouer ?
Do you want to play?

b. (subject-animate)
Qui est-ce que tu penses qui est caché dans le lit ?
Who do you think is hidden in the bed?

c. (subject-inanimate)

They were originally 11 but two three years old were eliminated because they didn’t produce any LD questions, but answered them.

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Qu’est-ce que tu penses qui est caché sous le chapeau ?
What do you think is hidden below the hat?

d. (object-animate)
Qui est-ce que tu penses qui est caché sous le poit de yaourt ?
Who do you think is hidden below the jar of yoghurt?

e. (object-control)
Tu as faim ? Est-ce que tu as faim ? Are you hungry?

2.4 General Results
See table 1 below which shows the general results of the experiment.

Table 1: Typology of questions produced

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wh- scope marking</td>
<td>39 (36%)</td>
</tr>
<tr>
<td>Frontal wh LD / adult form</td>
<td>23 (21%)</td>
</tr>
<tr>
<td>Matrix questions</td>
<td>22 (20%)</td>
</tr>
<tr>
<td>Yes-no LD</td>
<td>12 (11%)</td>
</tr>
<tr>
<td>Other</td>
<td>12 (11%)</td>
</tr>
<tr>
<td>Total</td>
<td>108</td>
</tr>
</tbody>
</table>

The most striking result is that the preferred structure is the wh-scope marking strategy (36%). The adult strategy is the second most produced (21%), almost equal to the yes-no question strategy (20%).

Table 2: General results

20 produced in first elicitation, 10 more after the second elicitation.
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Production

The results show that most subjects, i.e. 7/9 (78%), produced w-k scope marking structures. In contrast, only 4 children (44%) volunteered adult LD questions. None of the children produced in situ LD questions. Each question type is illustrated below:

(16) Scope Marking
a. Tu penses où elle est cachée l’assiette ?
   "Where do you think the plate is hidden?"
   ESK you think what is hidden in the hat

(17) Yes-no LD
a. Est-ce que tu penses que l’assiette elle est cachée en d’outes
   "Do you think the plate is hidden below the stool?"
   DE = "LE st" or do you think the plate is hidden below the stool ?

(18) Matrix questions
a. Où est-ce que tu penses qu’est-ce qui est caché en l’assiette ?
   Where ESK you think that the plate is hidden below the hat
   "What is hidden below the hat?"
   b. Comment tes amis rentrent chez eux ?
   How our-friends go back at them
   "How do your friends go back home?"

(19) Sequential questions
a. Qu’est-ce que tu penses, Koko ?

What’s the cause children who produced back (a) and (b), respectively for the first and the second elicitation. Recall that a sequential question is the simplest way to express long distance dependencies, see (11) in section 3.

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Table 3: production by age range

Table 4: three-year-old production

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The primary strategy for four-year-olds is scope marking, used 40% of the time:

3.5 Five-year-olds

Table 6: five-year-olds production

<table>
<thead>
<tr>
<th>5 years</th>
<th>LD adult form</th>
<th>Wh scope marking</th>
<th>SQ</th>
<th>LD yes-no</th>
<th>Matrix</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>10</td>
<td>20</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

The primary strategy for five-year-olds is scope marking, used 56% of the time.

III Results analysis

These results confirm the existence of sub-scope marking strategies in the child grammar.

The primary strategy for four-year-olds is scope marking, used 40% of the time.

3.1 Direct versus indirect dependency

3.1.1 Direct dependency

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3.1.1.1 Licensed by a null Q morpheme

In (22), the matrix non-lexical Q morpheme is merged in the matrix clause in an operator/A’ position and directly associated with a lower wh-phrase wh/where moved from the adjacent position of caracher (bikes) to Spec CP.

(22) Q tu penses où, elle est caché l’amitié ?

you think where is FEM is hidden the plate

3.1.1.2 Licensed by a lexical Q morpheme

The data from Ory (2003) exhibit a new fact compared to the previous study. We found as in (23) the same partial sub-movement, only with a lexical scope marker, namely ESK.

(23) Est-ce que tu penses qu’ils ont caché dans le lit ?

ESK you think what is it that is hidden in the bed?

3.1.2 Indirect Dependencies

Two independent clauses are adjunction, each containing a contentful wh-phrase.

Note that the article “the plate” is right dislocated.

We still need an accurate test to determine whether wh-where (ESK) is part of wh-where (ESK) will be shaded. If wh-where (ESK) is part of these questions and not wh-where (ESK), we should translate the questions in (22) as involving an indirect dependency.
A Bound Variable comprehension task has been conducted to test whether a question in the matrix question could bind a pronoun in the subordinate clause, where ‘every’ should be coordinated with ‘it’ in order to get the distributive reading. A sequence of Tense task, based on Helmecke’s dissertation. A task presenting multiple sluicings, based on Wiesenthal, Ruper & De Villiers.

V Conclusion
Ory (2005) confirms the previous study (O&O), and fits the general ideas of two distinct strategies in the child grammar. In the course of acquisition of LD questions, children adopt first an adjunct stage, with a scope marking strategy, and secondly, a subordinate stage with partial movement, then the final stage with overt long-distance movement. There still remain some open questions that were briefly touched in the last section. These should be addressed in further studies.

References


Abikoff, L. and Ruper, T. “From universal to language-specific grammar: How do children acquire embedded Yes/No questions in English?” Ms. University of Massachusetts, Amherst.


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