

Wh-In-Situ in the Acquisition of French - A Question of Theory of Mind?

Anne Mette Nyvad

Aarhus University, School of Communication and Culture

The phenomenon in question

In French, both *wh*-questions with overt movement and *wh*-in situ are possible as interrogative structures. However, according to Chang (1997), there is a pragmatic difference in use, such that the referent of the *wh*-phrase in situ must be presupposed in order for the structure to be licensed, a requirement not imposed on overt *wh*-movement. This is illustrated in the following question-answer pairs, where the question in (1a), contra (1b), appears to presuppose that something has been eaten:

- | | |
|---|----------------|
| (1a) A: Tu as mangé quoi ? | B: *Rien |
| <i>You have eaten what</i> | <i>Nothing</i> |
| (1b) A: Qu'est-ce que tu as mangé? | B: Rien |
| <i>What have you eaten</i> | <i>Nothing</i> |

It has been observed that French-speaking language-acquiring children produce more *wh*-in situ questions than their adult counterparts, even in incongruous contexts, cf. (1a):

English v. French (Gotowski & Becker 2016: 32)

Language	Corpus	Adult Input	Child Output
English	Brown (1973)	16%	0.4%
French	Palasis (2010)	13.2%	81.5%

The contrast between English and French in the *wh*-in situ proportions in Child-Directed Speech and child language production demonstrates that the input is not related to whether children produce *wh*-in situ in any transparent way.

Establishing Common Ground

Based on Mathieu's (2004) split DP analysis, viewing *wh*-phrases in situ as backgrounded referents, Gotowski & Becker (2016) argue that the overproduction of *wh*-in situ questions in French language acquisition relates to the notion of Common Ground, defined as follows:

"Information that was previously given (or inferred) from the previous discourse or from the extralinguistic context, and which is shared (or assumed by the speaker to be shared) by speaker and hearer" (Pires & Taylor 2007: 205)

While fronted *wh*-phrases, cf. (1b), are inherently foregrounded as Focus elements, *wh*-phrases in situ are backgrounded (or presupposed) material. French children seem to be overattributing of the discourse referents to the Common Ground, resulting in the overproduction of *wh*-in situ. *The question is why?*

A question of Theory of Mind

I will argue that the tendency found in language acquisition detailed here may in fact be more generally related to the development of Theory of Mind (i.e. more specifically, the ability to meta-represent other minds). A strong indicator of a potential causal relation is a dramatic drop in *wh*-in situ production around the age of 4 (approaching the rate of the adult input) which crucially coincides with the development of meta-representational understanding in social cognition:

Wh-in-situ production (Gotowski & Becker 2016: 28)

Corpus	Age	Wh-in-situ
Geneva (2003)	1;8-2;9	80%
Palasis (2010)	2;9-3;10	81.5%
Z&H (2001)	4;0-5;9	18%

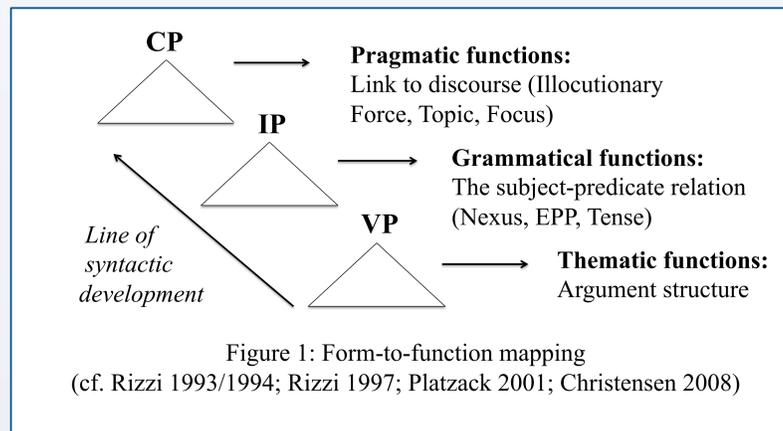
Development of Theory of Mind (Astington & Dack 2008)

Age range	Major development
Birth – 18 months	Social perception
18 months – 3 years	Mental-state awareness
4-5 years	Meta-representation
6 years onwards	Recursion and interpretation

Hence, there appears to be an inverse correlation between *wh*-in situ production and meta-representational skills. Due to an underdeveloped Theory of Mind, language-acquiring French children tend to believe that discourse referents that are salient to them are part of the Common Ground.

The interface between syntax and pragmatics

Gotowski & Becker (2016: 30) claim that the problem may reside in the interface relation between syntax and discourse, as "difficulties using syntactic mechanisms to correctly distinguish the discourse status of different referents", an explanation that would be compatible with Rizzi's (1993/1994) Truncation Hypothesis.



At the same time, they adopt the concept of joint attention in their account of the overproduction of *wh*-in-situ, arguing along with De Cat (2009: 236) that children "bank on what is visible to them and their addressee to reduce the amount of information [that is] encoded linguistically". However, an explanation of the phenomenon with reference to joint attention hinges upon acquired knowledge of what is grammatically encoded (i.e. the discourse function) in the *wh*-in-situ structure. Otherwise, what would be the point of relying on joint attention?

In a similar vein, the Theory of Mind-account proposed here assumes the following developmental sequence in the acquisition of French *wh*-in-situ:

Syntax > Discourse function (Common Ground) > Theory of Mind

Path for future research

In sum, the underproduction of *wh*-ex-situ in the acquisition of French can be explained without stipulating Economy, but simply by relating the phenomenon to an independently observed conceptual transition in the development of social cognition (i.e. Theory of Mind).

Whereas children's reliance on joint attention is difficult to measure, the role of Theory of Mind can be operationalized by means of e.g. false-belief tasks. The suggested inverse correlation between meta-representational skills and *wh*-in-situ production in the acquisition of French has not yet been examined experimentally, but if it is established in future research, autism will become of particular interest: Autistic children – unlike their typically-developing peers – show deficiencies in joint attention behavior and tend to systematically fail false-belief tasks well beyond the age of 4. They may thus represent an ideal testing ground for investigating the relationship between social cognition and the acquisition of *wh*-questions in French.

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Email: amn@cc.au.dk

Webpage: <http://pure.au.dk/portal/da/amn@cc.au.dk>