

NARROW AND WIDE FOCUS INTERPRETATION IN THE ACQUISITION OF *ONLY*-SENTENCES

The utterance in (1), with neutral intonation, is ambiguous, in the sense that in different contexts, adults allow both reading (2a) and (2b). (Main stress falls on the indirect object.)

- (1) 'He only threw a chair to Piglet.'
(2) a. The only creature that he threw a chair to was Piglet. Focus= indirect object
b. The only thing he did was throwing a chair to Piglet. Focus= VP

Out of context, adults have a preference for (2a). But this is not the case with children. Facing such potential ambiguities, the language learning child has to adopt (2b) as the only possible reading, otherwise they will face a learnability problem: Since (2b) entails (2a), it would be impossible for the child to discover that (2b) is a possible reading of (1) on the basis of positive evidence, in case they adopted (2a) as the interpretation of (1). (the semantic subset principle; Crain, Ni & Conway 1994: 455)

As is well-known (e.g. Selkirk 1984), the same interpretative ambiguity is lacking in utterances with marked stress, such as (3), where stress has been shifted to the direct object.

- (3) 'He only threw a CHAIR to Piglet.'
(4) a. The only thing that he threw to Piglet was a chair. Focus= direct object
b. #The only thing he did was throwing a chair to Piglet. Focus= VP

Reinhart (1995, to appear) argued that the reason for the unavailability of the wide focus interpretation in (3) is due to the fact that this interpretation IS available in the neutrally stressed (1) (see 2b). Thus, stress shift, the optional prosodic operation that places main stress on the direct object in (3), was applied unnecessarily. Assuming that such optional operations only apply if necessary, the unavailability of (4b) follows. Note that comparison of full derivations (i.e. (1) and (2)) is required at the interface to determine the unavailability of (4b).

An alternative, widely-held explanation states that marked stress and neutral stress possess different focussing abilities. Marked stress, as in (3), only allows narrow focus readings, while neutral stress in (1) may project focus to higher constituents (E.Kiss 1998; Zubizarreta 1998). In this view, there is no comparison of derivations at the interface. Wide focus in the case of marked stress is simply disallowed by the grammar.

Theoretical issues aside, the two views make different predictions for language acquisition. If the wide focus reading is intrinsically disallowed in the case of marked stress, there is no reason why children should ever assume it. The learnability argument is irrelevant as the utterance with marked stress is never ambiguous in the adult grammar. The only reason why children might assign wide readings to marked stress cases is if they fail to distinguish marked stress from neutral stress. In contrast, if in (3), the wide reading is allowed by the grammar, and is only ruled out at the interface due to the existence of (1) (with the reading in 2b), as in Reinhart's proposal, then children should entertain the wide reading in (3), in order to avoid the potential learnability problem, just as they do in the case of (1).

For adults, the situation is different. The referential theory of parsing maintains that out of context, the perceiver attempts to construct a mental representation of a situation that is consistent with each of the alternative interpretations of the sentence. In other words, adults conform to the principle of parsimony, which states that the reading that carries the fewest unsatisfied but consistent presuppositions will be adopted (Crain & Steedman 1985). This is why, out of context, adults adopt the minimally committal reading (2a) in the case of (1). Crain & Hamburger (1992) argue that the principle of parsimony is ultimately motivated by the need to minimize cognitive effort in response to limitations in working memory capacity. Unnecessary extensions to the mental model may have to be changed later. The principle of parsimony ensures that the risk of having to do such changes is minimized.

Given that children initially assume the maximally committal reading, they will not be able to recover the minimally committal reading preferred by adults, until they can deal with such a cognitive effort, i.e. until their working memory is large enough to handle the required changes. Reinhart (1995, to appear) argued that the global comparison of expressions required in the course of the determination of the focus of an utterance with marked stress equally causes a computational overload. Assuming that the two place similar demands on the working memory,

the following prediction is made. Children will recover from the incorrectly assumed wide focus interpretation in the case of (1) at the same time as they can correctly determine the focus of the utterance to be the direct object in the case of (3). No such coincidence is expected under the view that regards marked stress as intrinsically incapable of focus projection. Under this view, there is little reason why children should entertain the wide interpretation in the marked stress case, and none whatsoever, as to why they should recover from it at the same time.

A truth-value judgement task modeled after Gennari et al (2002) was carried out on 28 Dutch L1 children (age: 4 yrs 1m-6 yrs 10m; mean: 5 yrs 5m). The results support Reinhart's proposal.

Both children and adults correctly rejected the utterance in (5b) in the context of an acted out story such as the one that has the end result depicted in (5a). In the story, Tigger shows to his friends how strong he is, by throwing different pieces of furniture to his friends, such as chairs and a table, but after some consideration he decides not to throw the wardrobe to Piglet.

- (5) a. Winnie chair, table
Piglet chair
Tigger wardrobe
b. Hij heeft alleen een stoel naar KNORRETJE gegooid.
he has only a chair to Piglet thrown
'He only threw a chair to PIGLET.'

As predicted by Crain, Ni & Conway (1994), some children (Group 1) reject (5b) for a different reason as adults do. When asked to state the reason for their negative judgement, their answer reveals that contrary to adults and the other children (Group 2), who interpret the focus of the utterance in (5b) to be the indirect object, these children associate *only* with the VP. (i.e. a typical answer: 'Because, he also threw a chair to Winnie and he also threw a table to Winnie.')

The two groups behave differently with respect to the test condition involving marked stress, (6). In the same situation as above (i.e. 5a), (6) is correctly accepted by adults and Group 2, while Group 1 incorrectly rejects it. (Their explanation, again, reveals VP-focus interpretation.)

- (6) Hij heeft alleen een STOEL naar Knorretje gegooid.
he has only a chair to Piglet thrown
'He only threw a CHAIR to Piglet.'

I propose that these results support Reinhart's proposal that marked stress is problematic for children due to the extra computational load. A comparison of the results of Groups 1 and 2 reveal that children recover from the non-adult-like wide reading and show adult-like interpretation in the marked stress condition when they do so in the neutral stress condition. The results also provide evidence that the ambiguity of wide and narrow readings is potentially available in the case of marked stress as well. This is what prompts children to initially adopt the wide reading, otherwise they would run into a learnability problem. Finally, the initial wide reading in the marked stress condition, cannot be the result of imitation or wrong parameter setting as the adult language never allows this option. However, the interplay of innate principles governing language acquisition and parsing in the case of ambiguity can explain the data.

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