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How Information Structure drives parsing preferences in adults and children

Vincenzo Moscati^{1*}

¹ University of Siena, Italy

In Italian, as in many other languages, Information Structure (IS) is syntactically encoded. Constituents that serve as Topics or Foci can be displaced from their canonical sentential position and fronted, so to exploit a layer of dedicated functional projections (Rizzi 1997, 2001). As a consequence, strings with two fronted nominal constituents are possible, as in (1):

(1) [la tigre] [la zebra] ha battuto SOV or OSV
[the tiger] [the zebra] has defeated

Although the string in (1) is potentially ambiguous, discourse-pragmatic and intonation provide crucial clues to disambiguate it and to detect the fronted object. In fact, the object can be fronted without a clitic pronoun only when it receives a focal intonation (a L+H* prosodic contour) and introduce a contrast or a new piece of information. Thus, prosodic and discourse-pragmatic cues are crucial to assign the right parse to the string in (1), which is (2) or (3) depending on whether the Focused-object is the first (2) or the second (3) constituent:

(2) [FocP LA TIGRE [TopP la zebra [IP ta ha battuto tb]]] OSV Foc>Top
(3) [TopP la tigre [FocP LA ZEBRA [IP ta ha battuto tb]]] SOV Top>Foc

Background.

Previous results (see Moscati et al. 2015) investigating children and adults interpretation of sentences with Corrective-focus movement have shown that both children and adults prefer interpretation (3) over (2). This pattern of results, however, is amenable to at least two interpretations: preference for (3) could be either explained by invoking a parsing-bias (e.g. “subject-first”) favouring the SOV interpretation, or an information-structure (IS) bias that favours given information first (“topic-first”). In order to further explore this parsing preference, a new experiment has been designed, aimed at disentangling the impact of IS from the one played by the thematic role of the fronted constituents. This was done by inverting the IS assigned to the two sentence-initial nouns: we tested constructions in which the subject was focal, while the object topical. If a preference for SOV still persists, in cases where the IS is Focus > Topic, this will add support in favour of a “subject-first” and against a “topic-first” explanation.

The experiment.

Corrective-focus fronting was investigated in a scenario where the relevant discourse-pragmatic and phonological conditions were satisfied (Bianchi et al. 2015). The same methodology in Moscati et al 2015 was used, with the difference that this time the subject was focalized, while the object was a left-dislocated topic with a resumptive clitic. All test sentences were of the form DP DP cl V, potentially ambiguous between a OSclV or a SOclV interpretation. In our experiment we tested whether both sentences (5) and (6) were accepted at the same rate in a scenario that verifies them (or rejected in a scenario that falsified them) and that constitutes a correction of a previous statement (4). Method and Materials. There were two experimental conditions: the OSclV (5) and SOclV (6). Capital letters indicate the Corrective Focus L+H* intonation. In total, participants heard 4 sentences per condition, 6 SVO control sentences and 8 fillers. Test items were counterbalanced so that in half of the cases the correct answer was an acceptance and in the other half it was a rejection. The same held for fillers and controls, so that each participant had to judge 10 true and 10 false trials. Participants. 12 adults (age >18) and 16 children (mean = 5;7) recruited at the Kindergarten Mameli in Florence. Results. While both and adults had no general problem in understanding the experimental task and correctly judged SVO sentences (fig.1), they showed two opposite patterns in the experimental conditions (fig.2). Adults had less troubles in correctly accept (or reject) OSclV sentences, those were IS was Topic>Focus. Children instead showed the opposite pattern and they found easier SOclV, the subject-first sentences in which IS was Focus>Topic. Results were analysed in R using the glmer function through a Generalized Mixed Effect Model. We set Group and Condition as predictors and Item and Subject as random effects. The model confirmed a main effect of Condition (p<.005) and Group (p<.001) and a significant interaction between Condition and Group (p<.001).

Discussion.

Children’s behaviour in our experiment replicated the findings in Moscati et al (2015): they had no troubles with subject-initial sentences in the SOclV condition. This result supports the conclusion that in children is operative a “subject-first” bias (Schlesewsky et al 2000), regardless of the information structure assigned to the initial constituent. Adults, on the contrary, show a greater sensitivity to IS: the preference for subject-first sentences in (3) found in Moscati et al (2015) disappeared once the subject is made focal. In this case, adults prefer the OSclV constructions, that respects instead the Topic>Focus IS. This pattern of results suggest that while adults’ parsing preference are mostly dictated by IS and they prefer old information before new information (Top> Foc), children’s parsing preferences are mostly influences by a subject-first type of preference.

Image 1

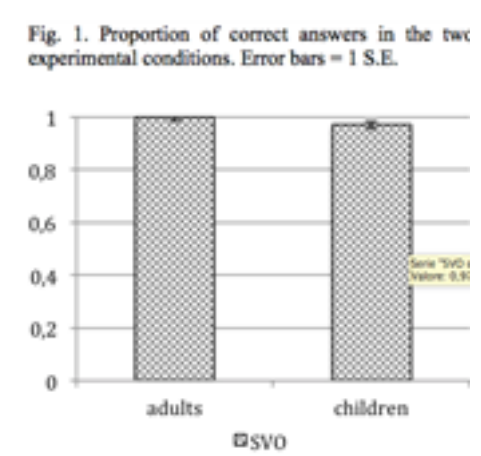
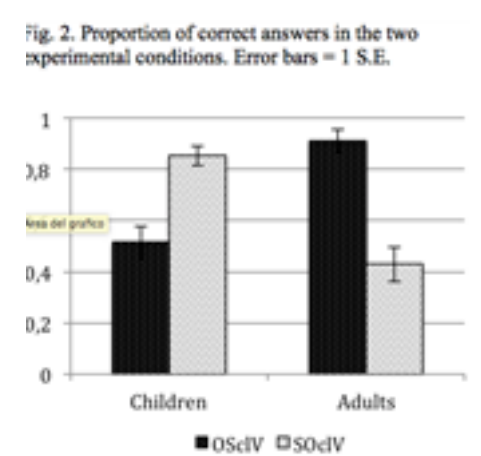


Image 2



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Received: 15 May 2017; **Published Online:** 30 May 2017. * **Correspondence:** Prof. Vincenzo Moscati, University of Siena, Siena, Italy, moscati.v@gmail.com