

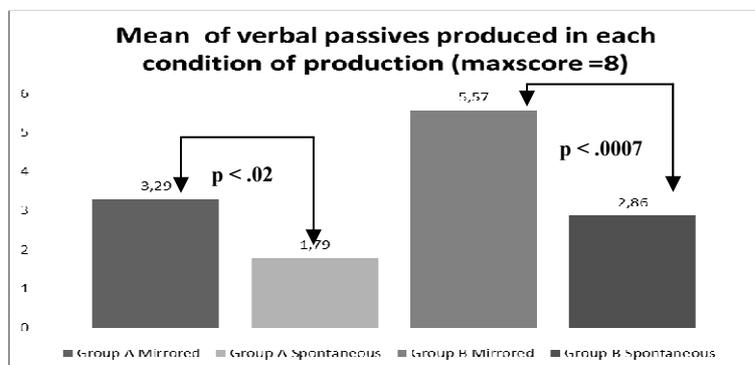
Favorable processing conditions in the production of passive sentences by Brazilian Portuguese speaking children

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Priming studies have been successful in demonstrating that, by the age 4, children can produce verbal passives (Bencini&Valian, 2008; Manetti&Belletti, 2013). However, the legitimacy of this technique for the assessment of children's grammatical knowledge has been caused into question. It has been noticed that, under priming effect, children have a tendency to reverse thematic roles up to the age of 9 (Messenger et al., 2012). Some of the sentences produced by these children had the argument arrangement of an active sentence with the morphology of passives. It has been argued that children would be accessing a sort of template rather than computing the structural relations pertaining to passives (see Snyder&Hyams, 2015). In the present study, the possibility of syntactic priming inducing sentence computation (rather than the filling in of a template) is evaluated on the basis of a model of on-line computation (Corrêa&Augusto, 2007; 2011). The on-line computation of passives is then characterized in the light of current minimalist analyses (see Lima Júnior&Augusto, 2015; Collins, 2005; Boeckx, 1998). It is argued that priming facilitates the lexical access to the relevant formal features that promote internal merge; that is, the *passive* feature that enables an internal argument to be grammatically encoded as the sentence subject. An experiment is then reported, which aimed at reconciling the use of the priming technique with a favorable condition for the actual computation of passives. The working hypothesis is that children have the computational resources for generating novel passives by the age of 4. Children can do so as soon as they recognize the need of placing themes/patients in subject position. Given, however, the computational cost illustrated in the online model, passives would tend to be avoided by children unless the processing conditions are highly favorable. This experiment consisted of an adaptation of the *Snap Game* (Branigan et al., 2005). As in that study, children had to verify whether the card they took from a pile matched the one taken by the experimenter. Both the experimenter and the child exchanged turns in describing the scenes in their cards. In order to guarantee that there would be a favorable condition for the encoding of passives, a discourse topic was created. A specific character - a dog named Bob - appeared as the patient of the actions presented in the test cards (Fig. 1). So as to create a priming effect, this character was the subject of all the sentences produced by the experimenter. Only long passives were used as primes. The discourse topic/subject maintenance was expected to attenuate the cost of comprehending the sentence produced by the experimenter and planning the sentence to be produced (see Lima Júnior&Corrêa, 2015). The participants were 28 children equally distributed in two age groups (Group A, 3-4, m=3;4; B, 5-6, m=5;9). Children's descriptions of the scene were either produced after or before the experimenter's turn - *mirrored* and *spontaneous* production, respectively. The independent variables were *Age* and *Condition of production*. The dependent variable was *number of verbal passives*. There were significant main effects of both factors. Group B produced more verbal passives than Group A. More verbal passives were also produced immediately after the prime sentence (see graph 1). Every single child in both groups produced at least one verbal passive. No instance of reversed thematic roles (the subject as the actor) was observed. Rather, alternative less costly structures having the patient as the subject were used. These results suggest, in the light of the on-line model presented, that passives produced under priming can be taken as a legitimate evidence of syntactic computation. A follow-up experiment inducing the production of passives by a question oriented to the patient (*What is happening with the patient here?*) was also conducted. Would this condition be favorable enough? The participants were the same children of exp. 1 plus a control group. They were asked to describe 8 pictures portraying two animals performing transitive actions,

presented in a sort of slide show (see Fig. 2). No character was maintained across the pictures. The number of verbal passives produced was relatively small. Alternative less costly structures predominated. It appears, therefore, that children avoid computing passives, unless the favorable conditions created by topic/subject maintenance facilitate access to the relevant lexical information.

Graph 1: Mean of verbal passives produced in the first test in each condition;



Illustrations:

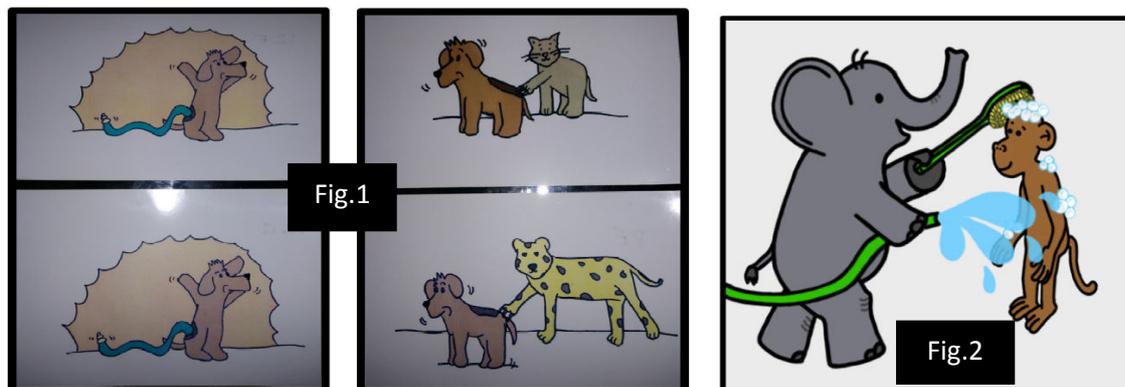


Fig. 1) pairs of cards showing the dog as the patient of the transitive actions;

Fig. 2) a picture of a series of 8 used to ask "what's happening with the patient here?"

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