# 5

# Assessment of participants' syntactic processing abilities

The oral sentence comprehension abilities of 6th grade students from public schools in Rio de Janeiro were examined by means of a battery of tests, called MABILIN I (Módulos de Avaliação de Habilidades Linguísticas I).

## 5.1

## MABILIN I and the comprehension of highly costly structures

MABILIN I is a battery of tests developed at LAPAL (Laboratório de Processamento e Aquisição da Linguagem) in PUC-Rio (Corrêa, 2000). It has been used as an assessment tool to identifying possible SLI children.

The participants' comprehension abilities were investigated by means of a picture-identification task, which was divided into three blocks of sentences. Each block, in turn, included eight sentences of each structure. The first one was formed by active and reversible/irreversible passive sentences; in the second block there were subject and object right-branching relative clauses, subject and object WH+N questions, and subject and object WH questions; and the third block included center-embedded subject and object relative clauses, with both transitive and intransitive verbs.

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**Block I**

**i) Active sentence:** *O leão chamou o elefante.*
[The lion called the elephant.]

**ii) Reversible passive sentence**: *A formiga foi beijada pela borboleta.*
[The ant was kissed by the butterfly.]

**iii) Irreversible passive sentence:** *A porta foi pintada pelo cachorro.*
[The door was painted by the dog.]


**Block II**

**iv) Subject right-branching relative clause:** *Mostra o sapo que pintou o coelho.*
[Show me the frog that painted the rabbit.]

**v) Object right-branching relative clause:** *Mostra o cachorro que o porco chamou*
[Show me the dog that the pig called.]

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vi) **Subject WH+N question:** *Que vaca limpou a zebra?*
[Which cow cleaned the zebra?]

vii) **Object WH+N question:** *Que gato o porco chamou?*
[Which cat did the pig call?]

viii) **Subject WH question:** *Quem lavou a formiga?*
[Who washed the ant?]

ix) **Object WH question:** *Quem o porco chamou?*
[Who did the pig call?]

**Block III**

x) **Center-embedded subject relative clause with transitive verb:**
*A tartaruga que pegou o macaco comeu a folha.*
[The turtle that caught the monkey ate the leaf.]

xi) **Center-embedded object relative clause with transitive verb:**
*O porco que a tartaruga beijou segurou o balde.*
[The pig that the turtle kissed held the bucket.]

xii) **Center-embedded subject relative clause with intransitive verb:**
*O sapo que lavou o porco dormiu.*
[The frog that washed the pig slept.]

xiii) **Center-embedded object relative clause with intransitive verb:**
*A tartaruga que o macaco chamou nadou.*
[The turtle that the monkey called swam.]

Figure 8: Examples of sentences presented in MABILIN I (Corrêa, 2000).

For each sentence, three pictures were shown and participants should choose the one that corresponded to the sentence they had heard. Among the three pictures there were the target-picture, the most probable error and the least probable error.
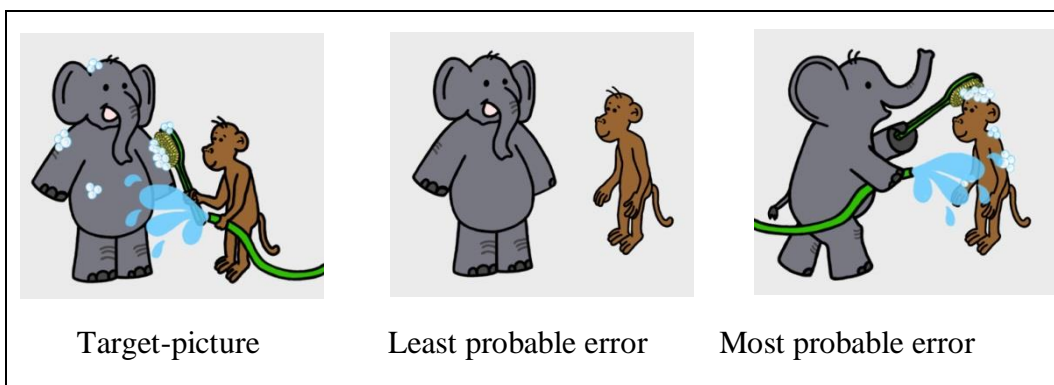


Target-picture      Least probable error      Most probable error

Figure 9: Examples of pictures for the passive sentence "The elephant was washed by the monkey" (Corrêa, 2000).

The test indicates whether or not the participant exhibits difficulties related to the investigated structures. Three degrees of difficulty have been defined as a function of the number of incorrect responses in each condition: moderate; expressive; or severe.

The most demanding sentences were object WH+N (OWH+N) questions; and object relative clauses (ORCs), which were then taken as the critical structures to be evaluated in the reading fluency test.

### 5.1.1
### Method

### - Participants

As mentioned above, 78 students (mean age: 12; 37 girls) from three public schools in Rio de Janeiro participated in this experiment.

### - Material

A software presented the visual material at the screen of a laptop, including all test sentences in a randomized order.

### - Apparatus

The software MABILIN I and a DELL Inspiron 15 laptop were used.

### - Procedure

The task was carried out in an isolated room at the subjects' own schools. The participants were instructed to point to the picture that matched what the experimenter would say. A pre-test consisting of 10 stimuli was presented. Only children who understood the task should continue. All participants could cope with this pre-test. After the pre-test, the participants were invited to continue and the procedure took about 25 minutes. After each block they were asked whether

they were enjoying the task and if they would like to continue. All participants reached the end of the task.

## 5.2.

## Distribution of participants as a function of performance in MABILIN I

The software MABILIN itself analyzes the performance of each participant in relation to the standardized measures. For each condition, the number of correct responses below 2 standard deviations in relation to the mean correct responses of the age group was taken to be an indication of impaired comprehension. The degree of impairment was determined in relation to the number of conditions in which impairment was detected. All participants whose performance was classified as moderately, expressively or severely impaired constituted the group of language impaired participants to take part in the next evaluations. There were 25 language impaired participants that were age matched to a control group of 53 subjects who had not shown difficulties concerning the structures investigated.