Acquisition of variable input in Brazilian Portuguese: Gradience in the production of number agreement by preschoolers

The gradience in multilingualism has been widely discussed [1]. Rio de Janeiro (RJ) is an interesting scenario for such discussion. Its urban center concentrates people with higher socioeconomic status (SES) and its suburbs concentrate low SES speakers [2]. This segregation has linguistic consequences such as the production of number agreement in Brazilian Portuguese (BP). The morphophonological expression of number agreement in BP varies according to the SES and the educational level of the speaker as shown by sociolinguistic studies [3, 4]. In BP, plural morphophonological marker is obligatory in the determiner (D), but not in subsequent elements: (1) standard variant: /-s/ regular nouns (N) and inflectional suffix in the verb (V); (2) non-standard variant: /Ø/ in N and V (cf. Table 1). Thus, Brazilian children are exposed to variable input. In order to verify whether children present any preference towards one or the other variant, an elicited production task was conducted with 36 children from both private (n= 20, mean age 5;7) and public school (n=16, mean age 5,9) in the same suburban neighborhood. The type of school was an independent variable since public schools concentrate low SES students and private schools concentrate students from middle to high SES families [5]. Children were told that the robot Bob presented on the screen of a laptop sometimes speaks in an unusual way. They listened to Bob saying the stimuli while the researcher pretended she was not listening. Afterwards, children were asked to tell what Bob had said to them. All the sentences had plural D in the subject DP. Redundancy in the expression of number agreement was manipulated both in the subject DP: redundant noun (/-s/), non- redundant noun (/Ø/); and in the TP (as verbs moves to T in BP): redundant verb (inflectional suffix), non-redundant verb (non-marked/ 3rd person). Each child listened to 4 sentences in each condition (cf. table 1). The number of responses matching the stimuli was the dependent variable of a 2 X 2 X 2 ANOVA. Alternative non-matching responses were analyzed qualitatively. A significant interaction between Type of school and Redundancy in the DP was obtained (F = 12,014; p < .001; (Redundant DP: private school (mean: 5,45; SD: 2,0); public school (mean: 3,81; SD: 2,1); Non-redundant DP: private school (mean: 1,7; SD:1,8); public school (mean: 3,81; SD: 2,0)): children from the private school revealed preference for the standard variant whereas children from the public school did not show any preference (cf. graph 1). That is, before schooling years, children from suburbs in RJ have access to both variants in sentence production and show preferences according to the SES of their environment. Thus, these data shed light on how the sociolinguistic patterns of spoken BP in RJ affect the course of acquisition. Daily-basis interaction among people from different SESs shapes adult’s speech and consequently the input to the children. According to the Sociolinguistics literature, BP presents different continua: a continuum from rural to urban [6], another continuum inside the urban speech [7] and another continuum inside the suburban speech. It seems, though, that a plural redundancy scale seems to be shared among different varieties of spoken BP. These varieties would differ in featural combination and distribution that should be identified and acquired by children exposed to closely related linguistic varieties [8,9] (cf. figure 1).
1. As coisas tão muito caras
   [The(pl) things are very expensive(pl)]
2. As coisa tá cara
   [The(pl) thing is expensive]

Examples from Scherre & Naro (2006: 108)

Table 1. Examples of test sentences per condition (Red = Redundant)

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Stimuli (D + N (regular) + V (regular) + object)</th>
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<tbody>
<tr>
<td>1 (Red DP + Red TP)</td>
<td>Os (pl) cachorros (pl) chamaram (pl) o leão</td>
</tr>
<tr>
<td>2 (Red DP + Non-Red TP)</td>
<td>Os (pl) cachorros (pl) chamou (Ø) o leão</td>
</tr>
<tr>
<td>3 (Non-Red DP + Red TP)</td>
<td>Os (pl) cachorro (Ø) chamaram (pl) o leão</td>
</tr>
<tr>
<td>4 (Non-Red DP + Non-Red TP)</td>
<td>Os (pl) cachorro (Ø) chamou (Ø) o leão</td>
</tr>
</tbody>
</table>

Figure 1. Representation of the shared continuum of plural redundancy marking in spoken BP varieties

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