ABSTRACT

This study describes the misarticulations of two Jordanian children within a generative framework. Accordingly, each child's phonological system is accounted for with context-free inventory constraints. The child's phonological system possesses differential knowledge which is not identical to the ambient system. Also, articulatory errors are observed in each child's system. Furthermore, it is found that the voiceless contrasts are present in the speech of this child.

INTRODUCTION

This paper examines the speech of two Jordanian children and illustrates the contribution of generative phonology to phonological description. The term "functional misarticulation" is typically used to describe the speech of speakers whose chronic articulatory errors cannot be attributed to any obvious organic disorders such as hearing impairment or cleft palate [7, 1]. The basic assumption of most of the work done on speech misarticulations is that the child's knowledge is identical to that of the ambient speech community [2, 9]. Within this framework, misarticulators are viewed as having a well-identified, discrepant, and characteristic speech system. The phonological rules have been shown to be that the underlying structure into misarticulators' surface structures makes it difficult to arrive at any but gross commonalities across functional and minimal misarticulation systems [7]. Any discrepancy between the articulatory and the ambient system is described as a 'process' [D]. Such information is clear misrepresentation of the apparent differences across the misarticulation systems [6]. Recent development in the literature has shown an increasing interest in employing the generative framework to further characterize misarticulations in children [8, 10, 11]. Within this framework, misarticulations are classified into groups depending on the severity of the problem and the markedness violations [8]. The misarticulation inventory constraints are placed on children's productions and phonological rules are posited to correct misarticulators' underlying representations into their phonetic production. The purpose of this paper is to further support the claims of generative phonology to account for misarticulations.

METHOD

Two female Jordanian children, aged 7 1/2 (Child 1) and 7 (Child 2) years, served as subjects for the present study. Purely spontaneous speech samples were collected from the two children by eliciting certain alternations making use of picture naming, friends and family naming, and questioning the children. The children were enrolled in regular schools in the second grade. They were referred to the researcher for remediation.

PHONOLOGICAL ANALYSIS

Child 1, age 7 1/2, produces 14 consonants of the 23 ambient language phonemes. Among the non-ambient consonants, the productions are [t, s, b, d, m, n, h, l, j], which are never produced in any position, as can be ascertained from the following forms:

<table>
<thead>
<tr>
<th>Child</th>
<th>[t]</th>
<th>[s]</th>
<th>[b]</th>
<th>[d]</th>
<th>[m]</th>
<th>[n]</th>
<th>[h]</th>
<th>[l]</th>
<th>[j]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiant</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

These three suggest that the child's non-ambient consonants are represented underlyingly with constraints in all positions. Thus, an optional rule that deletes consonants word-finally is proposed. However, the following context-free inventory constraint is postulated to limit the non-ambient non-coronal fricatives to low ones:

<table>
<thead>
<tr>
<th>[t]</th>
<th>[s]</th>
<th>[b]</th>
<th>[d]</th>
<th>[m]</th>
<th>[n]</th>
<th>[h]</th>
<th>[l]</th>
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</tr>
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<tbody>
<tr>
<td>Ambiant</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

As for continuants, the child does not show any knowledge of [x, y] in any position. As illustrated by the following forms:

<table>
<thead>
<tr>
<th>[x]</th>
<th>[y]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>-</td>
</tr>
</tbody>
</table>

Therefore, we postulate the following context-free inventory constraint that limits the non-ambient non-coronal fricatives to low positions:

<table>
<thead>
<tr>
<th>[t]</th>
<th>[s]</th>
<th>[b]</th>
<th>[d]</th>
<th>[m]</th>
<th>[n]</th>
<th>[h]</th>
<th>[l]</th>
<th>[j]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiant</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

With regard to vowels, this child never produces [i, r]. Notice, for example, the following forms:

<table>
<thead>
<tr>
<th>[i]</th>
<th>[r]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>-</td>
</tr>
</tbody>
</table>
produce the voiced alveolar stop/ḍ/ for the voiceless stops /s/ and /ʃ/. Child 2 devoices stops word-initially, but medial /ʃ/ and final stops are preserved. In all cases of devoicing, voiced segments are not devoiced. Child 2's devoicing does not seem to characterize the population of functionally misarticulators (8). That is, phonological systems that evidence undue devoicing violations are classified as "deviant" whereas other systems are said to be "delayed" [3]. The delay/deviance is based on the severity of misarticulation.

These violations may question the assumptions of the typological-based implicational universals proposed by Dimmend and Eckman [4]. For example, implicational universal (8) states that the presence of voice contrast word-finally implies the presence of contrast word-medially and word-initially. Child 2 represents a counter example to this prediction. In particular, Child 2 evidences stop voice-contrast word-medially and word-finally, but not initially. Child 2 also violates the predictions of implicational universal (9) which predicts that the voice contrast word-finally be realized as voiceless contrast /f/ word-finally, but she changes f/ to its voiceless counterpart /f/ word-medially. To offer a possible account for each child's knowledge, non-ambient underspecifications and implicational constraints might be placed in relation to each child's normal specific types of non-ambient underspecifications and implicational constraints. For example, it might be that the restrictions on child 2 are more lenient than those on child 1. If we assume that the restrictions on child 2 are more lenient than those on child 1, then both children may be classified as deviant.

REFERENCES

Se 41.1.3

Mitte 3

Child

Ambient

[ŋ ʃ b] [ŋ ʃ b]

vowel / ʃ /

vowel / v /

Se 41.1.4

Mitte 4

Child

Ambient

[ŋ ʃ b] [ŋ ʃ b]

vowel / ʃ /

vowel / v /

REFERENCES