

## Segmental processing and phonological awareness

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A significant amount of research on phonological awareness has been developed in the last three decades (Brady & Shankweiler, 1991, Morais & Kolinsky, 1994, Morais, 2003, Veloso, 2003). Most studies report on the ability to explicitly isolate phonological constituents in the speech string. The results are normally interpreted under a context of literacy acquisition (Morais 1991) and scholars basically investigate the relation between the development of specific degrees of awareness (awareness of *words*, *syllables* and *segments*) and the level of success in performing reading and writing tasks. The applied dimension of this research field is obvious: it is commonly assumed that the development of the child's phonological awareness is crucial for his/her success in the context of reading instruction. Consequently, most research on phonological awareness focuses on the interface with the field of educational linguistics (Treiman, 1997, Snowling & Hulme, 2007). The relation between phonological development in language acquisition and phonological awareness is a less explored interface among psycholinguists. It is our purpose to refer to this interface in the present talk, therefore contributing to the discussion on the interaction between the two processes in the child's cognitive development.

Although the research on the awareness of *words*, *syllables*, *syllabic constituents* and *segments* is substantial, studies on the impact of the internal properties of segments in the development of phonological awareness exhibited by the child are scarce. In this talk, we will focus on segmental (also named phonemic) awareness; more specifically, we will investigate the effect of internal properties of segments in the performance of tasks traditionally used to evaluate the levels of segmental awareness. As mentioned above, it is our goal to explore the relation between the child's phonological development and his/her responses to tasks used to evaluate segmental awareness. We will specifically focus on the left edge of the word. Research on language acquisition reports the preference for Labial and Coronal at the left edge of words (Fikkert & Levelt 2002, 2005; Costa et al. 2007) and the demotion of Dorsal in this context. In this talk, we will explore the potential effect of these place of articulation patterns reported for phonological acquisition in the children's performance of tasks evaluating segmental awareness.

This study is part of a larger project on the development of segmental awareness in European Portuguese (Alves, *in prep*). The project evaluates children ( $n=71$ ) from the 1<sup>st</sup> ( $n=22$ ), the 2<sup>nd</sup> ( $n=28$ ) and the 4<sup>th</sup> ( $n=21$ ) years of reading instruction. In this talk, we will strictly refer to the results from the group of the youngest children. The 22 children were submitted to series of *oddity tasks*. In these tasks, they had to take the odd word out, i.e, the one starting with a different consonant (as in the sequence *bata, mota, bota*, where the odd word is *mota*). Considering the results on phonological acquisition mentioned above, our hypothesis is that it is easier for the child to identify a Labial or a Coronal initial odd word than a Dorsal one. The results suggest that Dorsal initial odd words are more difficult to extract than the ones starting with Labial or Coronal. The general results are 38% for Labial, 37% for Coronal and 23% for Dorsal. However, the effect observed seems to be the product of the combination of place and manner of articulation. For example, a word with an initial uvular liquid is easier to extract (31%) than a velar plosive (17%). In general, [+ continuant] segments (fricatives=48%; liquids=33%) are easier to detect than [- continuant] segments (plosives=27%).

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