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## Prosody and Communicative Function in the Speech of Aphasic Individuals

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### Introduction

We describe, for the first time, the non-lexical stereotypy of adult aphasic subjects in the Portuguese language, and analyze it in its prosodic aspects. This study aims at investigating whether the aphasic who uses verbal stereotypy in his spontaneous speech makes proper use of prosodic resources to transmit information with communicative purposes. Halliday's models of intonation (1970) and other works such as Rizzo's Model (1981) were used as groundwork for our research.

### Method

Eight aphasic subjects, aged between 20 and 50 years old, presenting non-lexical stereotypies in their oral expression, were assigned linguistic tasks such as repetition and naming. In the repetition task, the content to be repeated consisted of six illocutionary speech acts of statement, question and command, while in the naming task the stimuli were eleven words with different numbers of syllables and different accents. The collected data was recorded, transcribed phonetically and analyzed. Fundamental frequency, duration, rhythm and intensity were measured acoustically through PRAAT software.

This study was approved by the University Ethics Committee. (ETIC 519/07)

### Results and Discussion

The results in the repetition task revealed great variability in the duration of the statement, leading us to the conclusion that the knowledge of the physical size of the statement is not preserved. Fundamental frequency (F0) is always a descending curve in the statements that do not depend on modality, characterizing a peculiar type of intonation pattern. The tessitura also varies both between individuals and statement types. Concerning rhythm, we also observed a syllabic type instead of an accentual or syllabic rhythm. The intensity, presented as an ascendant-descendant curve, is considered as a standard for normal speech. In the naming task the intonational pattern was of an ascendant curve in the first syllables and a descendant curve in the last ones. The duration of the statement was higher than the target word and there was no correspondence between the target word and the aphasic emission considering the number of syllables and accent. Our analysis demonstrated that the aphasic did not reproduce or use the prosodic patterns of intonation, duration and accent, leading us to conclude that their speech is a product of automatic process without cognitive control. The data suggests that there is a strong individual component in the development of verbal stereotypy, both in segmental and prosodic level, which leads us to hypothesize the existence of a stereotyped prosody product, limited in its repertoire, without either cognitive skills or communicative

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intention control.

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