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IV Workshop Formal Linguistics at USP:
SEMANTICS AND PHONOLOGY
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ORDER AND FILLING IN PORTUGUESE: SYNTAX,
INTONATION AND RHYTHM

1. Introduction

This communication addresses the question the options chosen by European Portuguese (EP) and Brazilian Portuguese (BP) to satisfy the Jackendoff’s principle *Focus to Stress Alignment* (FSA). It is part of my master research *The role of the rhythm in lexical and syntactical choices in European Portuguese and Brazilian Portuguese* and also of thematic project *Rhythmic patterns, setting of parameters and linguistic change*, both supported by Fapesp.

2. The FSA principle and the options chosen by languages to satisfy this principle

According to Jackendoff’s principle *Focus to Stress Alignment* (FSA):

*If P is chosen as the focus of a sentence S, the highest stress in S will be on the syllable of P that is assigned highest stress by the regular stress rule* (Jackendoff, 1972:237).

Nespor and Guasti (2001) assert that languages may have two options to satisfy this principle: 1) a different order of the constituents in the sentence is chosen in such a way that the focused element be on the right in the intonational phrase; 2) the main prominence is moved to the constituent marked [+F] in the syntactic tree.

According to the same authors, languages such as English would choose number 2) to satisfy FSA principle:

*What did Jacob give to Thomas?*
*Jacob gave a book to Thomas.*

Languages such as Italian would choose number 1):

*Cosa ha dato Giacomo a Tommaso?*
(Giacomo gave to Tommaso a book.)

Nespor and Guasti (2001) affirm that different mechanisms used in English and in Italian for focus-prominence alignment are consequence of different settings of a specific syntactical parameter (± pro). Then, pro-drop languages would choose number 1) to satisfy FSA principle, whereas no pro-drop languages would choose number 2) to satisfy the same principle.

3. The options chosen by EP and BP to satisfy FSA principle

When we analyze European Portuguese (EP) and Brazilian Portuguese (BP), we can observe that EP chooses number 1) to satisfy FSA principle and BP chooses number 2):

In EP¹:

*Quem partiu a janela? (Who broke the window?)*

Partiu a janela o Paulo. (Broke – the window – Paul – Paul broke the window.)

*O Paulo partiu a janela. (Paul broke the window.)*

In BP²:

*Cosa ha dato Giacomo a Tommaso?*

Giacomo ha dato a Tommaso un libro. (Giacomo gave to Tommaso a book.)

*Giacomo ha dato un libro a Tommaso.*

¹ These data were extracted from Nespor and Guasti (2001).
² The highlighted words are the focused and prominent words in the sentence.
³ Idem note number 1.
⁴ These EP data were extracted from Costa (1996).
In BP: *Quem partiu a janela? (Who broke the window?)*

O Paulo partiu a janela. (*Paul broke the window.)*

*Partiu a janela o Paulo. (Broke – the window – Paul – broke the window.)*

Since both EP and BP are null subject languages, my hypothesis is that the different options chosen by languages to satisfy Jackendoff’s principle are related not only to the possibility that languages present of having a null subject, as Nespor and Guasti (2001) affirm, but also to other properties.

4. **Corpora and methodology**

In my work I used two speech corpora, which have the same informational content in both Portuguese varieties. The first corpus is constituted by readings of Bible texts in two Catholic masses, one of them in Portugal and the other in Brazil, both of them transmitted in the same day on TV (TVE / Rio and RTP / Lisbon). The second corpus is composed by parts of speech from Walt Disney’s *The Lady and the Tramp* movie, translated from English to EP and BP.

From these texts I extracted a set of sentences that have the same focused constituent but different order. I marked the intonational contours of these sentences, as well as the intonational phrase boundaries – according to Nespor and Vogel (1986)’s algorithm. The intonational contours transcription was made with the speech analysis computer program *Praat* (http://www.fon.hum.uva.nl/praat) and based on Pierrehumbert (1980) and Pierrehumbert and Beckman (1988).

5. **Data presentation and discussion**

The data of our corpora corroborate the affirmation that EP and BP satisfy the FSA differently. The examples below show that in EP the focalized phrase is always on the right edge of the intonational phrase, whereas in BP the main prominence is moved to the constituent marked [+F] in the syntactic tree. 1a and 1b illustrate the case of subjects and 2a and 2b illustrate the case of adverbs:

(See graphs 1a and 1b)

(1a) In EP: [Não são permitidos cães]  
L* H* H*L%
(Not – are – allowed – Dogs – Dogs are not allowed.)

(1b) In BP: [Cães não são permitidos]  
H* L* H L L%
(Dogs – not - are – allowed – Dogs are not allowed.)

(See graphs 2a and 2b)

(2a) In EP: [O Vagabundo safá-se sempre]  
H L H* L H* L L%
(The Tramp – escapes – always – The Tramp always escapes.)

(2b) In BP: [O Vagabundo sempre consegue se safar]  
H L H* L H* L H L*L%

According Nespor and Vogel (1986:189), the intonational phrase formation algorithm is:

Intonational Phrase formation

I. An I domain may consist of

a. all the φs in a string that is not structurally attached to the sentence tree at the level of s-structure, or
b. any remaining sequence of adjacent φs in a root sentence.

II. I construction

Join into an n-ary branching I all φs included in a string delimited by the definition of the domain of I.

The same authors assert that the formulation of the basic I formation is based on the notions that the ends of intonational phrases coincide with the positions in which pauses may be introduced in a sentence (Nespor and Vogel, 1986:188).

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6 The intonational phrases (Is) are delimited in the sentences by the square brackets “[ ]” and the tonal events (H or L) are aligned below of the respective syllable in which they occur.
(The Tramp – always – gets – to escape – The Tramp always gets to escape.)

These patterns are systematically found in the corpora. We can observe that the focused constituents in EP sentences – the subject cães (dogs) in (1a) and the adverb sempre (always) in (2a) – appear after the verb, on the right boundary of the intonational phrase, whereas the same focused constituents appear in BP sentences before the verb and close to the left boundary of the intonational phrase.

Our examples confirm the affirmation that EP seems to choose 1) to satisfy FSA principle and BP seems to choose 2) to satisfy the same principle, however, our EP and BP examples go against Nespor and Guasti’s affirmation that languages that have null subject would choose number 1), whereas languages that don’t have null subject would choose 2), taking into account that these Portuguese’ varieties are languages that have null subject.

It is necessary to say that the null subject properties differ between the languages (about the properties of null subject in BP, see Duarte, 1995 and Kato and Negrão, 2000) and also other questions, such as rhythmic questions, can play some role in the FSA principle satisfaction. As Maria Bernadete Marques Abaurre suggested in personal communication, taking into account that the initial boundary of the intonational phrase is already necessarily prominent in EP7, the only place that is left to focus elements in EP is the right boundary of intonational phrase.

6. Final considerations

In this presentation were discussed the options chosen by languages to satisfy FSA principle, according to Nespor and Guasti (2001), and the choices made by EP and BP to satisfy the same principle.

The choices made by EP and BP to satisfy the FSA principle seem to reveal that the choices made by languages to satisfy this principle is not only related to the setting of ± pro, but also to questions of other nature, such as rhythmic questions. The investigation of these linguistic phenomena shows us that there seems to be a complex relationship between rhythm, lexical filling of the subject positions and focus strategies in languages.

Bibliographical references


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7 In EP, beginnings of intonational phrases are always associated to a tone, see Frota and Vigário (2000), generally prominent, see graphs (1a) and (2a).
Phonology is the study of the organization and use of human speech sounds in a language. People who study phonology are referred to as phonologists. Semantics is the study of meaning in a language. People who study semantics are called semanticists. The subfield of semantics focuses on the relationship between words and referents, the relationship between words and language users, and the relationship between words and other words. The courses will be on syntax, semantics and phonetics/phonology. Below, I am providing brief descriptions of the courses: Syntactic Analysis: This course is an introduction to basic goals and methods of current syntactic theory through a detailed analysis of a range of phenomena, with emphasis on argumentation and empirical justification. Semantics and Pragmatics: This is the first in a two-course sequence designed to provide a foundation in the scientific study of all aspects of linguistic meaning. First of all, â€œsemanticsâ€​ is a noun. Actually, the term needed here is â€œsemanticsâ€​. So, the question is â€œWhat is the relationship between â€œsemanticsâ€​ and phonology? Semantics and phonology are two terms in Linguistics. Phonology is the study of the sound systems of particular languages. Semantics is related to meaning studies in several ways phonemes can distinguish meanings by means of establishing so-called minimal pairs such as ben and pen. The exchange of one phoneme by another one leads to a difference in meaning; thus the two items must be two different phonemes. Semantics and Other disciplines. Linguists are not the only scholars with an interest in semantics. The semantics-related N400 amplitude difference correlated with individual L2 proficiency, while phonological similarity suppressed the N400 amplitude in the semantically unrelated condition. ERP source analysis suggests that these ERP dynamics are underpinned by cortical generators in the left IFG and the temporal pole. Phonology by itself: Masked phonological priming effects with and without orthographic overlap.