

A STEP-BY-STEP GUIDE TO LINGUISTIC STUDIES IN PHONOLOGICAL THEORIES

Ana Carolina CANGEMI*

Fonologia, fonologias: uma introdução (2017) [*Phonology, Phonologies: An Introduction*, edited by Dermeval da Hora and Carmen Lúcia Matzenauer, comprises studies on Phonological Theories. The work is dedicated to Gisela Collischonn (in memoriam), admirable phonologist, who so prematurely left us. In the Introduction the editors promise to take the reader to the “world of sounds”, understood both as the substance of human languages as well as a unit of their respective grammar. The eleven chapters that make up the book are structured around six questions¹:

1. What is _____ Phonology²?
2. What does _____ Phonology study?
3. How to analyze linguistic phenomena using _____ Phonology?
4. Could you give me an example?
5. What are the main research lines?
6. What should I read to know more?

In the first chapter, “Fonologia Estruturalista” [Structuralist Phonology], by Juliene Pedrosa and Rubens Lucena, the Saussurean concept of *langue* is seen as a foundation for later formalizations of phonological theories. Specifically, regarding Structuralist Phonology, the authors introduce the founding theorists and the fundamental aspects of the study of a language. When analyzing phenomena of the language, the authors refer especially to Brazilian linguist Joaquim Mattoso Camara Jr. and, consequently, bring as examples phenomena involving consonant and vowel sounds of Portuguese.

The second chapter, “Fonologia Gerativa” [Generative Phonology], by Seung Hwa Lee, starts with a presentation of the main theoretical assumptions of Generative Phonology (a branch of Generative Grammar). In it, the author discusses topics such as 1) the major theorists in the field of Generative Phonology, 2) the definition of

* São Paulo State University (Unesp), School of Humanities and Sciences, Araraquara - São Paulo - Brazil. Professor of the Department of Linguistics. ana.cangemi@unesp.br. ORCID: 0000-0001-5395-9862

¹ Also including notes and references pertaining to each chapter.

² The underscored blank spaces preceding “Phonology” indicate the type of Phonology dealt with in the chapters, for example, Generative Phonology, Lexical Phonology, Prosodic Phonology, and so forth.

what it is and 3) the scope of its study. The author emphasizes the main objective of the theory (to make explicit the linguistic knowledge/faculty of the speaker-listener of each language) as well as its product (the construction of a phonological grammar of a language that could describe the phonological knowledge of the speaker-listener of that language in terms of the system of rules). In order to exemplify a linguistic phenomenon in the light of the theory, Lee discusses the idea and the rules involving a *conspiracy* process, by using the sound alternations of Portuguese archiphoneme / S /. Finally, there is a systematic elaboration on Generative Phonology. Therefore, the chapter is a valuable contribution towards the description and explanation of the phonological knowledge of the speaker/listener.

The third chapter, “Teoria dos Traços” [Distinctive Features Theory], was produced in partnership between Carmen Lúcia Matzenauer and Ana Ruth Moresco Miranda. The authors initially provide a historical overview of theory and subsequently (in a very objective and clear way) familiarize the reader with the minimum units forming the internal structure of segments as well as the two approaches to features: i) attributes of segments, and ii) autosegments. It should be emphasized that such perspectives are originally linked to different theoretical models, the first referring to the Classical Generative Model, the second to the Autosegmental Model. By fulfilling data produced by Brazilian children, the authors offer examples that illustrate the dynamics of the phonological grammar of Brazilian Portuguese. It is finally stressed that distinctive features have an important descriptive and explanatory power. Hence the importance of theoretical knowledge for the advancement of studies of the phonological component of linguistic systems. Carefully written and reader-friendly, this chapter harmonizes the transition from linear to nonlinear models,³ which will be fully approached in the five chapters following it.

The fourth chapter, by Dermeval da Hora and Ana Vogeley, introduces “Fonologia Autosegmental” [Autosegmental Phonology]. This nonlinear approach provides the basics for a multidimensional understanding of phonological processes. The way the reader can benefit from the descriptions, with multi-layered arrangements of phonological representations with respect to the suprasegmental aspects, for example, is remarkable. Thus, the authors devote a part of the chapter to prosodic phenomena. Although Autosegmental Phonology is considered a theory and not just a descriptive model, it is important to understand its mode of representation (tree diagrams), the conditions under which phonological rules and processes are established, and the principles of its functioning. The authors, then, assign another part of the chapter also to these topics. Finally, the coordination of the components of the articulatory

³ The theoretical models of linguistic phonology are commonly divided into two groups: i) linear models (CHOMSKY, 1968) and ii) nonlinear models (SELKIRK, 1984; NESPOR;VOGEL, 2007; GOLDSMITH, 1999). Linear models regard speech as a linear combination of segments or distinctive features, that is, there is a one-to-one relationship between the segments and the matrices of feature values. Nonlinear models understand the phonology of a language as an organization in layers (*tiers*). In this model, the one-to-one relationship is reviewed. Features can extrapolate (or not) a segment and they can also be linked to more than one unit, function alone or in association with them.

apparatus during the production of sounds in speech is dealt with using data extracted from Portuguese.

The fifth chapter, “Teoria Lexical” [Lexical Theory], written by Leda Bisol, addresses phonological theory concerning words as regards to two types of components, i) the lexical component and ii) the postlexical component. This theory, which is grounded on generative models of analysis, integrates phonology and morphology in the lexical component. Therefore, prosodic entities, the syllable, enunciation, the processes of word formation and the elements of a word are examined in a singular way. The author also highlights the key aspects of lexical theory, the ordering of rules and their effect on the serial model. Finally, there is a cyclical analysis of a Portuguese word composed by a root and a thematic vowel.

The sixth chapter, “Fonologia Métrica” [Metrical Phonology], by José Magalhães and Elisa Battisti, is aimed at the organization and formalization of relations of prominence (ranging from the smallest, such as the syllable, to larger ones, such as clauses) in the phonological domain). Although Metrical Phonology studies the system of relative prominence of a language as a whole or in terms of its accentual pattern, some theoretical assumptions, objects and processes of investigation are given special attention. For example, the formation of a structure with binary components by means of relative prominence hierarchically organized is one of the issues of application of the theory. In order to exemplify the models of analysis described in the chapter, the authors work with Latin, Portuguese and other natural languages.

The seventh chapter, “Fonologia Prosódica” [Prosodic Phonology], by Luciani Tenani, highlights the interface between Phonology and other components of grammar. The author points out that Prosodic Phonology stands as a formal theory about prosodic structures, which can be defined by the identification of information on the syntactic or morphological qualities which are relevant to characterize the domains of application of phonological rules. After showing that there can be no necessary isomorphism among the constituents, the author calls attention to the plurality of proposals for prosodic hierarchies. Regardless of the various proposals, it is possible to adopt a set of procedures for analysis in the light of Prosodic Phonology. By using data drawn from Portuguese, the author exemplifies such procedures and reflects especially on accentual shock in the language.

The eighth chapter, written by Ubiratã Kickhöfel Alves, deals with “Teoria da Síllaba” [The Syllable Theory]. The chapter begins with a discussion of the challenge of characterizing the syllable. The author extends the difficulty to the representational level, to the formal mechanisms of analysis of the syllabication process in a language as well as to universal constraints on syllabication. Specifically, in relation to the representational structure in Syllable Theory, three sets of proposals are presented for its characterization: i) the autosegmental structure, ii) the tree-diagram structure and iii) the moraic structure. Linguistic phenomena can be analysed by adopting more than one approach. Some analyses may be carried out, for example, taking a rule-based approach, or a syllabic-model approach or a constraint-based approach. It should be

emphasized that, in addition to the different approaches, it is necessary to consider the distribution segments into the syllable, following universal principles of syllabification. A set of principles is presented in the chapter. Finally, the author points out that studies that look into the syllabic structure of the system are still an inexhaustible source of investigation. This chapter also marks the end of the section on non-linear theories in the book, which now turn to the model created in the 1990s: Teoria da Otim(al)idade. [Optim(al)ity Theory].

In the ninth chapter, entitled “Teoria da Otimidade” [Optimality Theory], by Luiz Carlos Schwindt and Gisela Collischonn, the theory that had a major impact especially on phonological studies is introduced. According to the authors, this theory can be considered a development of the Generative Theory, in terms of formal descriptions and the search for universals. However, a methodological differentiation can be noticed when it is compared to the generative models that preceded it. From the beginning of the chapter, the authors fulfil examples to initially elucidate the theory. The first example is within the scope of the syllabic structure of Portuguese. As the analysis of the syllabic structure is prioritized in this chapter, the essential properties of the phonological model are highlighted. It is important to emphasize that the task of the Optimality Theory is to promote the mapping of linguistic forms which have been effectively realized together with their underlying forms. Undoubtedly, the theory brings advances to phonological analysis, but there are problems, too. At the end of the chapter, the authors reflect on some of these problems.

The tenth chapter, “Teoria de Exemplares” [Exemplar Theory], written by Thaís Cristófaró Silva and Christina Abreu Gomes, introduces a representational model formulated, *a priori*, for the study of visual perception and categorization in the realm of Psychology. According to the authors, three aspects are within the scope of Exemplar Theory: i) phonetic detail, ii) the effects of frequency on mental representations, and iii) emergence and grammatical management of abstract representations. Experimental methodologies are grounded on the expectation of presenting empirical evidence so as to corroborate tendencies of generalization in abstract grammatical representations. In the context of the phenomenological analysis there is the examination of the effects of frequency and lexical similarity by means of research into the corpora of the language under study.

The eleventh and last chapter, “Fonologia de Laboratório” [Laboratory Phonology], by Eleonora Cavalcante Albano, addresses a methodological position which can be applicable to any phonological theory. It is considered that the association between Phonetics and Phonology should be sufficiently clear to support experimental hypotheses. The method, which was developed at *LabPhon Association*⁴, is intended for the scientific study of the elements of a spoken or signed language as well as of its organization, grammatical function and role in communication. According to the author, in this respect, the method shares the same objects of traditional Phonology (in terms of its

⁴ From <https://www.labphon.org/>. Access on: 27 Feb. 2018.

system and phonic processes), but in a more particular way. Thus, phonetic detail plays an essential part in shedding new light on the the nature of phonic contrasts, for example.

Fonologia, Fonologias: uma Introdução (2017) fulfills its promise to offer the theoretical tools for the reflection on the phonological components of languages (especially Portuguese), as it describes the main phonological theories. Moreover, the book stands as a broad and dense study that allows for the understanding of phonological theories and methods, fostering debates and further developments. With the contribution of renowned Brazilian scholars and researchers, the book is reader-friendly from beginning to end, objectively offering more than the answers to the six questions around which its chapters are organised. Theoretical frameworks, issues and results are gathered together in this useful work, which certainly leads the reader to the “world of sounds.”

CNPq (Grant 407836/2017-9)

CANGEMI, A. Um passo a passo para estudos linguísticos em teorias fonológicas. *Alfa*, São Paulo, v.63, n.1, p.219-223, 2019.

REFERENCES

CHOMSKY, N. **The sound pattern of English**. New York : Holt, Rinehart and Winston, 1968.

GOLDSMITH, J. (ed.) **Phonological theory: the essential readings**. Malden: Blackwell Publishers, 1999.

HORA, D.; MATZENAUER, C. **Fonologia, fonologias: uma introdução**. São Paulo: Contexto, 2017.

NESPOR, M.; VOGEL, I. **Prosodic Phonology**. Dordrecht: Foris Publications, 2007. Obra original de 1986.

SELKIRK, E. **Phonology and syntax**. Cambridge, Mass.: MIT Press, 1984.

Received on 28 February, 2018

Approved on 06 August, 2018

