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## **Micro-Variation meets Complex Systems Theory – An introduction to seven case studies on Portuguese**

### **1 Setting the scene**

A 'modern classic' of Portuguese variational linguistics suggests to us that *O Português são dois* (Mattos e Silva 2004). This title – borrowed from Carlos Drummond de Andrade's poem *Aula de Português* – verbalizes a linguistic reality not only evident to scholars, but equally intuitive to non-linguist speakers of Brazilian Portuguese (BP) alike: unmonitored BP of communicative immediacy in the sense of Koch/Oesterreicher (1985) differs considerably from the Portuguese taught in Brazilian schools. Simplifying a great deal at this point, the latter – but not the former – is mostly based on an exogenous and idealized norm of European Portuguese (EP). In other words, a good deal of the "catchiness" of *O Português são dois* ultimately also resides in its alluding to a striking number of salient (and not so salient) properties that distinguish BP from EP. The purpose of this introduction is not to enter into the often polemic debate on whether the linguistic differences between BP and EP justify considering the respective varieties two different languages altogether, as some have claimed (cf. Bagno 2011: 21, 202ff., for example). Instead, it seeks to point to the potential dangers of interpreting the research program of *O Português são dois* too literally, and to argue that somewhat similar considerations are relevant at the theoretical level as well: While elsewhere emphasis on theoretical differences has led to a stronger separation between research groups of different theoretical persuasions, (Brazilian) Portuguese linguists have found a unique way to achieve a fruitful collaboration between the two major approaches to linguistic variation, i.e. traditional sociolinguistics and the generative Principles and Parameters Model (cf. Kato 2006). In addition, a third model is currently gaining ground in Brazil, namely a complex systems approach (Castilho 2007, this volume). Given previous experience with the two more traditional approaches, it seems desirable to extend this dialog and mutual exchange of ideas and results to the complex systems approach. The present volume therefore brings together studies which make use of all three approaches.

A first potential risk brought about by a superficial understanding of *O Português são dois* is that of understating the numerous commonalities between BP and EP (or, if one prefers, between unmonitored vernacular BP and the Portuguese taught in the Brazilian school system). After all, it is these commonalities that are the main argument of scholars who advocate – contra Bagno (2011) and others (see above) – that EP and BP do belong to one and the same diasystem and might even have the same underlying grammar (cf. Mateus 2003: 51, for example). Secondly, if understood in an exclusive sense, *O Português são dois* conceals the fact that variation in Portuguese must not be reduced to the well-known contrast between EP and BP.

In fact, Portugal's colonial past has led to a situation in which Portuguese is nowadays spoken not only in Europe and South America (also as a minority language in Paraguay, Uruguay, and Argentina, in addition to Brazil), but also in Africa (Mozambique, Angola, Cape Verde, São Tomé e Príncipe), and Asia (Macau, India, East Timor). In some of these countries, we are also witnessing the still highly underresearched emergence of new endogenous standard varieties of Portuguese that differ from both EP and BP (cf. Hagemeyer 2016; Cardoso 2016, for example) and which, in some cases, coexist with Portuguese-based creoles (cf. Carvalho/Lucchesi 2016, for example). Similarly complex, yet fundamentally different situations of linguistic variation involving Portuguese also obtain in numerous North American and European countries in which Portuguese is present as a heritage language as a consequence of labor migration (cf. Silva 2015, for example) and in immigrant communities in Brazil that maintain their heritage languages (Altenhofen 2013; Jungbluth, this volume). Lastly, one should also not downplay the fact that even *within* the two "discursive strongholds" of Brazil and Portugal, linguistic usage of Portuguese varies greatly along Coseriu's (1977) well-known dia-dimensions. In this vein, dialectology has revealed diatopic differences in both Portugal (cf. Brissos 2016, for example) and Brazil (cf. Cardoso et al. 2014, for example). The same holds true, *mutatis mutandis*, of diastratic and diaphasic variation. Classic examples of studies on the latter are João Andrade Peres' and Telmo Mória's *Áreas Críticas da Língua Portuguesa* (1995) for EP, and Mary Kato's *O Português são dois ... ou três?* (2012) for BP, which, as the very title insinuates, skillfully develops and differentiates many of the ideas originally developed in Mattos e Silva (2004). Diaphasic variation is also touched upon by Mória and de Oliveira (this volume); the former – as well as Becker (this volume) – additionally explore different acceptability judgments within groups of speakers of one and the same variety.

As already mentioned, the two most widespread theoretical approaches to the phenomena of linguistic variation sketched in the previous paragraph – the generative Principles and Parameters Model and the sociolinguistic model of variation and change – have always been in closer contact in (Brazilian) Portuguese linguistics than in many other linguistic fields (cf. Kato's 2006 "happy marriage"). Simplifying somewhat, the generative approach contributed fine-grained grammatical analyses (see also Tavares Silva, this volume) which were often subsequently picked up in the design of sociolinguistic studies. The effect of this "happy marriage" was that the results of the sociolinguistic studies ended up covering a wider range of theoretical interest. At the same time, the sociolinguistic findings themselves frequently challenged too simplistic models of parametric variation, leading to formalizations that are more adequate and have a better empirical grounding (Martins, this volume). More recently, a new perspective on variation has been gaining ground, especially in Brazil, namely Complex Adaptive Systems Theory (see Beckner et al. 2009 for an overview) or Multi-Systemic Theory, as it is sometimes called in Brazil (Castilho 2007, this volume; Paiva & Nascimento 2009; de Oliveira, this volume). Unlike the former blending of generative and sociolinguistic methods, which to some extent pursued complementary interests, Complex Adaptive Systems Theory argues for an architecture of grammar that is not readily compatible with the established model of autonomous syntax from the Principles and Parameters Theory. It remains to be seen whether a similarly fruitful collaboration will result from the integration of the new approach. Preliminary tentative proposals and a relevant discussion can be found in Nascimento (2009).

The contributions to the present volume all address different aspects related to the complex of problems implicitly inherent to *O português são dois*. From both a synchronic and a diachronic perspective, as well as from very different theoretical starting points, the seven authors tackle issues of variation in Portuguese that exceed the coarse-grained and overly simplistic binary distinction between BP and EP, contributing to the dialog between the approaches based on parametric micro-variation and Complex Adaptive Systems Theory.

## 2 Contributions to this volume

**Ataliba Teixeira de Castilho's** paper "Do microcosmo conversacional para a formulação de princípios linguísticos" advocates what he calls a *multi-systemic approach to language*, a conceptualization of natural language based on the epistemology of complex systems. Although relying on Brazilian Portuguese data for the purpose of exemplification, de Castilho's approach is universal in nature and centers around linguistic processes instead of linguistic products. Concretely, the idea is that human language – according to the author "a socio-cognitive reality" – consists of four simultaneously operating but autonomous (sub)systems that can be investigated most aptly in conversations: the lexicon, semantics, grammar, and discourse, where neither is privileged over any other. The categories building these four systems are what de Castilho calls "non-opposing", i.e. vague, indeterminate, ambiguous, polysemous, non-exclusive, and polyfunctional. All four linguistic (sub)systems are assumed to be administered by a socio-cognitive device able to perform three different operations (or as de Castilho himself calls them: "cognitive movements"): *activation*, *reactivation*, and *deactivation*. These three operations can apply at the level of any of the four different (sub)systems of language and are at the origin of three different principles: the *principle of projection*, the *principle of recursion*, and the *principle of ellipsis*. All these principles of language are, again, applicable at the lexical, semantic, grammatical, and discursive level and are thus at the base of lexicalization, semanticization, grammaticalization, and discursivization, respectively.

In her contribution "Emergence of a complex system: routinized plurilingual language use in Brazil", **Konstanze Jungbluth** investigates multilingualism effects in a community of German descendants in Rio Grande do Sul, the southernmost state of Brazil. This qualitative study aims to describe the complexity of the scenario under investigation as a network of social organization. After sketching the history of the German settlements in Brazil, the author focuses on the linguistic practices in the rural areas of the city of Pelotas in the state of Rio Grande do Sul where a Pomeranian dialect is spoken alongside Standard German and the official language, Brazilian Portuguese. The situation is therefore characterized by trilingualism. Subsequently, the author analyzes three contact phenomena, namely the phonically (but not functionally) coinciding German and Portuguese discourse marker *né/ne*, verbal derivation with roots and affixes from different languages, and cross-linguistic nominal composition. Examples of effortless code-switching and mixing are presented as further evidence for what is called an "emerging fusion-lect". It is argued that the use of this linguistic practice can lead to unintelligibility for German and/or Brazilian Portuguese speakers from outside. The paper ends with

prospects for possible further developments of this fusion-lect and its uncertain future, taking into consideration, among other things, the tendency of the younger generation to move away to larger cities as well as the rising prestige of Standard German among this same generation.

**Martin Becker's** contribution "More about the PPC – the PPC and its interaction with quantifiers in a diachronic perspective" is a fine-grained, corpus-based diachronic study on the micro-variation between the Portuguese compound perfect (Port. *pretérito perfeito composto*) and the simple preterite (Port. *pretérito perfeito simples*). Focusing on occurrences of the two tense forms with different quantificational adverbs (e.g. *já* 'already', *sempre* 'always', *x vezes* 'x times'), the author shows how the contemporaneous system – in which the compound perfect is used differently from that of other Romance languages – emerged. In contemporary Portuguese, this tense form is largely restricted to durative, iterative, and gnomic/ generalizing readings. A further condition to be fulfilled is that of quantificational indefiniteness: Unlike in Spanish, for instance, the contemporaneous Portuguese compound perfect must refer to an *indefinite* number of instances of a certain eventuality type. Yet, Becker's paper then also substantiates that the readings prevailing in contemporary Portuguese are innovations that emerged in the 17<sup>th</sup>/18<sup>th</sup> century and that the indefinite quantification condition is just as much a 20<sup>th</sup>-century development as is the integration of the utterance time into the interval of reference. Before the 17<sup>th</sup> century, in turn, the Portuguese compound perfect was, in line with cross-linguistically well-established grammaticalization clines, typically used as a resultative. Subsequently, this resultative reading gradually ceased to be exploited in favor of two innovations of the 15<sup>th</sup> and 16<sup>th</sup> century, respectively: the inferred summative and the incremental readings, which became frequent in the 17<sup>th</sup>/18<sup>th</sup> century and which the author argues have fulfilled a bridging function between the original resultative reading and the modern iterative reading. Finally, Becker also documents how older resultative (and other) readings are retained in the writings of some 19<sup>th</sup> and 20<sup>th</sup>-century speakers of Portuguese, which attests to even synchronic micro-variation regarding the precise use of the Portuguese compound perfect.

**Josane Moreira de Oliveira's** study "A expressão do futuro verbal em português: um caso de macro e de micro-variação" applies Castilho's multi-systemic approach to language (see above), and – like Becker's contribution – is a diachronic, corpus-based study focusing on the VP. Unlike the latter, however, de Oliveira is concerned with the expression of the future which in Brazilian Portuguese can be achieved by a large array of different variants. From a macro-perspective, and considering written data only, the author first sheds light on the diachronic competition between the simple future (*viajarei*), the *haver*-future (*hei de viajar*), the present *pro futuro* (*viajo*), and the *ir*-future (*vou viajar*), showing that the first two are almost equally frequent in the 13<sup>th</sup> century, while the latter two are sporadically attested only from the 14<sup>th</sup> century onward, before then gaining ground considerably in the 18<sup>th</sup>/19<sup>th</sup> century (at the expense of the *haver*-type especially). Subsequently, de Oliveira shows that from a diatopic perspective, the *ir*-future is nowadays generalized in the spoken registers of nearly all regions of Brazil, except for the extreme South. As for written journalistic data, she reveals the absence of strong differences between the different Brazilian regions (20–30% of periphrastic forms). Globally speaking, Brazilian (and Angolan Portuguese) journalistic writing uses the *ir*-future less than European Portuguese journalistic writing. That a constant rise of the *ir*-future is,

however, also true of Brazilian Portuguese is then shown via a diachronic analysis of *Turma da Mônica* (a Brazilian comic book series for children), as well as by data produced by students from Brazilian primary and middle schools. The macro-perspective on the expression of the future in Portuguese is complemented by a micro-analysis of three further future forms used considerably less frequently than the *ir*-future: the simple future (*viajarei*) in spoken registers, the gerund-future (*estarei viajando/vou estar viajando*), and the present *pro futuro* (*viajo*). As regards the simple future, de Oliveira argues for a frequency-motivated retention effect in spoken registers, valid only for certain irregular verbs (especially *ser* 'to be', *ir* 'to go', and *poder* 'can'). The gerund-future, in turn – a rather recent development still subject to normative pressure – is gaining considerable ground and is analyzed as an aspectual form typical of *formal orality*. Finally, the present *pro futuro* is, according to de Oliveira, a proximal, certain future.

**Claudia Roberta Tavares Silva's** paper entitled "Distribution of reduced pronominal forms in subject position: free variation and complementary distribution in the grammar of certain varieties of Brazilian Portuguese" tackles a controversial question concerning the grammar of BP subject pronouns from a generative perspective: that of whether, in doubling constructions of the type *você cê*, lit. 'you(.) you' (unavailable in EP and positively biased for the 2<sup>nd</sup> person in BP), *cê* is or is not a syntactic clitic. Deviating from what is defended in previous work by other authors, Tavares Silva argues that *cê*-like elements are not adjoined to T<sup>o</sup> – i.e. are not syntactic clitics (with the concomitant full form *você* occupying Spec,TP). Instead, she takes the position that the respective elements have a "hybrid nature". Specifically, and as evinced by the application of Kayne's (1975) tests for cliticization ([+/- obligatory adjacency], [+/- possible coordination with DP], [+/- possibility of modification], [+/- possibility of focalization], and [+/- obligatory host]), Tavares Silva defends that BP *cê*-elements in double-subject constructions can occupy two different syntactic positions and, thus constitute a case of structural micro-variation: Firstly, they can be located in Spec,TP with the concomitant full form *você* in a left-dislocated Spec,TopP-position (à la de Cat 2005); secondly, they can be a D<sup>o</sup> in a DP occupying Spec,TP with the concomitant full form *você* in Spec,DP. In this second case, Tavares Silva argues for the reduced *cê*-form as a post-syntactic lexicalization of the value of the person feature of the full subject DP in Spec,TP, the specification of which depends on the syntactic *Agree*-operation between the two, ultimately motivated by the impoverishment of the inflectional paradigm of the verb in BP. The fact that BP double-subject constructions are structurally ambiguous and more complex than in French is taken by the author to also explain why their acquisition is known to be rather late. Tavares Silva defends that there is no direct link between the Null Subject Parameter and double subjects: BP is a partial-null subject language, French a non-null subject language. Neither has strong inflectional morphology; nevertheless, both languages – as shown by the author – display important differences.

In his contribution entitled "Micro-variation and parametric change: proclisis in 'neutral [XP]V contexts' in Brazilian writing", **Marco Antônio Rocha Martins** argues for the occurrence of a parametric change in the grammar of Brazilian Portuguese clitics, based on a multivariate and diachronic analysis of proclitic constructions. It is argued that the grammar of Classical Portuguese was characterized by the so-called V2-property (a generative implementation of the well-know obser-

vation that some languages put the finite verb in second position in the sentence, whereas the first position may be occupied by different kinds of constituents). This property is lost at some point in the 19<sup>th</sup> century in Brazilian Portuguese, giving rise to a generalized SV sentence structure which stabilizes in the 20<sup>th</sup> century in spoken as well as written language. It is argued, through detailed syntactic analyses, that proclitic structures in Classical Portuguese and modern Brazilian Portuguese fundamentally differ structurally in abstract syntax. The micro-variation found in the data is explained to be due to the fact that older examples of proclisis in Brazilian Portuguese in Martins' corpus fulfill the syntactic criteria of the V2 language type. These are not maintained, however, the later examples instead fulfilling the criteria of the SV type. The theoretical explanation offered by the author is that the phi-features in the TP domain became deficient in Brazilian Portuguese, restricting the possible constituents that could appear in preverbal position in Classical Portuguese to the sentential subject in Brazilian Portuguese.

**Telmo Mória's** contribution "Norma e variação em orações relativas complexas do português europeu" is a newspaper corpus-based study of the micro-variation observable in EP relative clauses headed by *em relação a* 'in relation to' when associated with a topic value (e.g. *estivemos a conversar sobre o incêndio do Palácio de Buckingham, em relação ao qual ninguém esperava que ele fosse tão devastador*, lit. 'We were talking about the fire in Buckingham Palace, with regard to which nobody thought it would be so devastating'). Furthermore, it is concerned with relative clauses with the pronoun *cujo* 'whose', prototypically used for relativizing genitive complements. As regards the former, Mória distinguishes between two types, one without coreferentiality between the topic constituent and a constituent located within the comment, and one which does feature such a coreferential element. As with many phenomena situated in the realm of micro-variation, the acceptability of both types – though widely attested in journalistic texts – is subject to enormous inter-speaker variability (the canonical alternatives being juxtaposition or, in case of the second type, relativization with *que/o qual*). Mória then proceeds to present a detailed, fine-grained inventory of the corpus data which feature attestations without coreference, as well as attestations with coreferential elements in the comment, fulfilling the syntactic function of subject, direct object, prepositional complement, and adverbial adjunct, respectively. The second part of the contribution is devoted to *cujo* 'whose', generally associated with genitival constituents that are either nominal complements or modifiers introduced by the preposition *de* 'of' (e.g. *a pessoa cuja amiga ...* 'the person whose friend ...'). Mória's journalistic data feature a considerable number of attestations that deviate from this normative pattern. These cases of micro-variation, again subject to differing acceptability judgments by speakers, comprise seven different subtypes, among which, for instance, cases in which *cujo* co-occurs with a possessive determiner, resulting in a double marking of definiteness (e.g. *o médio Arilson [...], cuja sua venda ao futebol alemão foi recentemente acordada*, lit. 'the midfielder Arilson [...], whose his sale to German football was recently agreed upon'), and others in which *cujo* is separated from the nominal predicate on which it is semantically dependant (e.g. *na sessão [...] vão intervir duas personalidades independentes cuja divulgação dos NOMES está ainda sob reserva*, lit. 'two independent personalities will speak in the section [...] whose divulgation of the names is still with reservation'). Finally, Mória shows that many of the non-canonical uses of *cujo* alternate with equally non-canonical relativizations with *em relação a* 'as for'.

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