

Charlotte Galves, Sonia Cyrino, Ruth Lopes, Filomena Sandalo and Juanito Avelar. *Parameter theory and linguistic change*. Oxford: Oxford University Press, 2012. Pp. 416.

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## 1. Overview

This volume has its origins in the 11th Diachronic Generative Syntax (DiGS) Conference, held at the University of Campinas, Brazil, in July 2009. It consists of an introduction plus 16 full chapters, all dealing with problems of historical syntax from a generative perspective. The overarching theme is the relation between diachronic linguistics and the Principles & Parameters (P&P) approach to the architecture of the grammar; each chapter is an independent case study.

Guido Mensching's chapter, "Parameters in Old Romance word order", investigates two structures in the Old Romance languages, XP-V-Subject and Auxiliary-XP-Participle, arguing that both are reflexes of the same parameter setting. In line with much recent work, Mensching appeals to information-structural triggers for movement, but eschews the cartographic approach in favour of an analysis appealing only to a limited set of functional categories.

In "Micro-parameters in the verbal complex", Chris Sapp tackles the question of permutations in the verbal complex in Middle High German, a topic much discussed for modern German and Dutch varieties but little investigated for earlier stages. Sapp's variationist analysis sheds light on various non-categorical factors appearing to influence the likelihood of the two possible orderings. He argues that the fixing of verb cluster possibilities that took place in modern German is not due to a change in the headedness of the VP, but rather to a sociolinguistic change from above.

"Language acquisition in German and phrase structure change in Yiddish", by Joel Wallenberg, tests Yang's (2000) acquisition algorithm in the empirical domain of the change from Tense-medial to Tense-final in the history of Yiddish. Wallenberg observes that the algorithm wrongly predicts that the Tense-final grammar should have remained stable, and suggests a revised synchronic analysis in antisymmetric terms (Kayne 1994), which removes the problem by preventing examples of verb (projection) raising from counting as evidence for Tense-final.

Adriana Cardoso deals with “Extraposition of restrictive relative clauses in the history of Portuguese”. Observing that extraposition is permitted in a very limited set of contexts in present-day Portuguese and that earlier stages of the language allowed it much more liberally, she suggests that the modern construction is amenable to a Kaynean stranding analysis while its historical source is generated via coordination. The change to the more limited form of extraposition was then triggered by the loss of certain forms of scrambling.

In their chapter on “Doubling-*que* embedded constructions in Old Portuguese”, Ribeiro & Torres Morais present evidence for a split CP in this language. Their main empirical focus is on complementizer-doubling contexts in embedded clauses; this, they argue, is possible when Frame/Topic constituents are Merged in SpecFinP. A similar construction is also attested in present-day Brazilian Portuguese, but with the Frame/Topic constituent occupying a dedicated functional specifier, and in the modern language the overt complementizer competes with a zero realization.

“Brazilian Portuguese and Caribbean Spanish: Similar changes in Romania Nova”, by Mary Kato, addresses the parallel loss of null subjects and of VS word order in interrogatives in both of these varieties. Kato suggests that what causes these changes is the emergence of weak pronouns in both languages, since weak pronoun subjects may occupy a position different from that of strong pronouns and full DPs.

The chapter by Reintges on “Macroparametric change and the synthetic-analytic dimension” is a defence of the utility of the notion of macroparameters for the study of syntactic change. Reintges proposes an innovative parameterization of phasehood whereby TP is phasal iff the language has rich verbal tense inflection, arguing that this sheds light on the various morphosyntactic changes that constituted the shift from the essentially agglutinating Old Egyptian to the essentially isolating Coptic. This analysis challenges the lexicocentric conception of parameters dominant within current Minimalism.

The subject of Bernstein & Zanuttini’s chapter, “A diachronic shift in the expression of person”, is a change in the expression of person in Appalachian English dialects. Observing that these dialects permit transitive expletive constructions, they tie this fact to the broad presence of verbal *-s* in both Appalachian English and its ancestor Older Scots, which they consider indicates person expression on the verb. Appalachian English is then a variety in transition to a more standard-English-like state.

Whitman & Yanagida, in “The formal syntax of alignment change”, take a type of change that has been widely discussed in the typological literature and examine it through the lens of Minimalist assumptions. Taking as a baseline the proposal that ergative case is assigned to arguments in SpecvP, they draw upon data from

Indo-Iranian and Japanese, arguing against the commonly accepted view that ergativity may arise through reanalysis of passives.

Elliott Lash applies Roberts & Roussou's (2003) approach to grammaticalization to the genesis of a comparative particle in "The diachronic development of the Irish comparative particle". Lash shows that the verbal form *daäs* is reanalysed as an enclitic  $C^0$  element in pre-Old Irish; a second reanalysis then causes this clitic form to become part of the preposition *oldaäs*. On the basis of this second reanalysis, which does not involve a parametric change and which is thus not obviously grammaticalization in the formal sense, Lash argues that not all cases of syntax-becoming-morphology are accounted for under Roberts & Roussou's approach.

Chapter 12, by Ana Maria Martins, addresses "Deictic locatives, emphasis, and metalinguistic negation". Martins shows that the European Portuguese locative particles *lá* 'there' and *cá* 'here' have developed into markers of metalinguistic negation, reaching this role via an emphatic stage. It is proposed that the emergence of *lá* and *cá* in the later roles can be understood as upward reanalysis in the sense of Roberts & Roussou (2003), and therefore that pragmaticization follows the same pathway as grammaticalization in this regard.

Again on the topic of negation, the chapter by Biberauer & Zeijlstra focuses on "Negative changes: Three factors and the diachrony of Afrikaans negation". Their starting point is that standard Afrikaans exhibits a typologically unusual form of negative concord, which they propose raises learnability problems. These problems then lead to the reanalysis of Afrikaans negation and the emergence of a more common form of negative concord attested in the colloquial speech particularly of younger speakers. They argue that the pattern found in the standard is only acquirable under strong assumptions about learning biases.

In her chapter on "Romanian 'can'", Virginia Hill investigates the grammaticalization of Romanian *putea*, again assuming the upward-reanalysis approach of Roberts & Roussou (2003). From its roots as a lexical verb, *putea* "can" gets reanalysed as a control verb and as a raising verb, then as a functional head via clause union, and finally as a pragmatic marker; the original forms are retained in a situation of layering, such that *putea* can be found in multiple different configurations in modern Romanian.

The chapters by Gianollo and Longobardi focus on parallel convergent innovation in related languages, an issue not often discussed in diachronic generative syntax but well known in traditional historical linguistics. As Gianollo notes in her chapter on "Prepositional genitives in Romance and the issue of parallel development", this type of change poses a serious problem to models of change that predict a "random walk" (Battye & Roberts 1995: 11) through the space of possible grammars. Gianollo proposes a neostructuralist solution to the problem, in which the predisposition for change can be traced back to the language system itself. Her

empirical domain comprises genitives in the history of the Romance languages: she proposes that the rise of noun-genitive order in Late Latin gave rise to a series of structural ambiguities which led to reanalyses in the individual Romance languages.

The volume closes with chapters by two of the heavy hitters of parametric theory. While most work in diachronic generative syntax seeks to relate adjacent stages of a language to one another, Longobardi's chapter "Parameter theory, historical convergences, and the implicational structure of UG" aims to use parameters to solve problems such as language classification that have more often been the purview of traditional historical linguists. In this chapter, part of a larger research programme (see e.g. Longobardi & Guardiano 2009), he addresses apparent cases of convergent innovation — *prima facie* problematic for the use of syntactic parameters to determine relatedness — and suggests that they may instead be due to the rich implicational structure of Universal Grammar (UG).

The final chapter, by Ian Roberts and dealing with "Macroparameters and Minimalism", presents a radical rethink of parametric theory itself. Roberts proposes reviving the notion of macroparameter by reconceptualizing it as an aggregate of microparameters acting in unison. These macroparameters then sit at the top of parametric hierarchies, which define learning paths as well as diachronic trajectories. Roberts presents four hierarchies relating to head-complement order, null arguments, polysynthesis/incorporation and alignment. The hierarchies are argued to follow from a domain-general principle of Input Generalization (Roberts 2007: 275), and hence avoid the evolutionary problem posed by the classic heavily specified innate 'switchboard' model of parametric theory.

## 2. Evaluation

The appearance of a volume explicitly concerned with the role of parametric theory in diachronic explanation is timely, not least because the theory itself has come under heavy fire from various directions in the last 10 years (cf. Newmeyer 2004, 2005, Boeckx 2010, 2011). Criticisms have focused on its ability to capture typological variation and its evolutionary plausibility, as well as (relatedly) the tension between the Minimalist urge to attribute as little as possible to UG and the need for a solution to 'Plato's Problem'. This challenge, "to explain how we know so much, given that the evidence available to us is so sparse" (Chomsky 1986: xxvii), is what motivated the introduction of the P&P conception of grammatical knowledge, replacing earlier treatments which posited a relatively unconstrained array of rules and transformations.

The need for such a conception seemed to be backed up by a string of problematic results in the formal learnability literature: Gold (1967), for instance, showed that under certain assumptions about learning, there exist unlearnable classes of languages (see Johnson 2004). By positing a finite set of possible grammars defined by the possible combinations of parameter values, P&P sidestepped some of these concerns. This acquisition-based rationale for P&P needs to be borne in mind when assessing the future of parametric theory: it is necessary for any alternative to traditional P&P to have something to say about Plato's Problem. Critics of P&P rarely take up this challenge: Newmeyer's (2004, 2005) focus is exclusively on the typological dimension, and Boeckx (2010, 2011), while arguing that P&P itself does not solve the problem, by his own admission does not provide an alternative solution.

With Plato's Problem in mind, as well as the heavy emphasis placed upon first language acquisition as the locus of syntactic change within the diachronic generative literature since at least Lightfoot (1979), it is surprising to see little reference made in this volume to either the literature on learnability or acquisition. Wallenberg's chapter is a welcome exception, combining Yang's (2000) model of acquisition with observations on the acquisition of word order in German. Elsewhere, however, where suggestions about acquisition are made, they are usually not explicit enough to be formally evaluable. The chapter by Biberauer & Zeijlstra is a case in point: they suggest, plausibly, that the acquirer will posit interpretable rather than uninterpretable features unless there is strong positive evidence for uninterpretability.<sup>1</sup> The problem is that it is difficult to know how to falsify this kind of claim, since it is not embedded in a theory of acquisition that makes clearly testable predictions. More formally specified theories have been explored in the diachronic syntax literature (e.g. Clark & Roberts 1993, Niyogi & Berwick 1995, Briscoe 2000, Yang 2000, 2002), but have always occupied a fairly marginal position. Hill's chapter suggests, meanwhile, that the learner "may reset the parameters in two ways concurrently" (p. 279), which is likely to create problems from a learnability perspective. The hand-waving around issues of acquisition in this volume stands in stark contrast to the level of formal rigour achieved in the synchronic syntactic analyses, which is generally very high. Without engaging acquisition issues, diachronic explanations and solutions to Plato's Problem are

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1. This approach seems to predict that uninterpretable features will be susceptible to being re-analysed as interpretable where insufficient positive evidence is available; interestingly, this is exactly the opposite of what is predicted by van Gelderen's (2009) principle of Feature Economy.

both likely to remain out of reach: parametric theory needs a learning theory to complement it.<sup>2</sup>

Some chapters comply with the parametric theme only in a window-dressing sense. Of those that engage with it more fully, most adopt what has come to be known as the “Borer-Chomsky” approach to parameterization (cf. Borer 1984, Chomsky 1995, Baker 2008:353), according to which variation is located in the featural specification of individual items in the lexicon. This perspective has some significant advantages: it centralizes variation in a component of the grammar that we know must be acquired, and it evades the charge of evolutionary implausibility. However, it runs into other concerns not shared by the traditional switchboard perspective on parameters. Firstly, by apparently eliminating the core-periphery distinction it renders mysterious the difference between syntactic phenomena that become fixed during the critical period and purely lexical phenomena that remain plastic later in life; the distinction between ‘core’ and ‘trivial’ parameters, drawn in Sapp’s chapter based on Uriagereka (2006), may be one way of approaching this question, though it requires independent motivation. Secondly, existing acquisition algorithms from the learnability literature, such as those mentioned in the previous paragraph, rely on the traditional switchboard conception of P&P, and it is far from clear how the lexicon (including its syntactic aspects) might be acquired.

A few contributions (Reintges, Roberts) defend the notion of macroparameter. The parameter hierarchy research programme outlined in the chapter by Roberts is particularly intriguing, either as the shape of things to come or as a last-ditch attempt to rescue parametric theory — or both. Substantial work will be necessary to construct plausible hierarchies, which must meet a number of criteria: they must constitute reasonable developmental and diachronic pathways and be derivable from third-factor (Chomsky 2005) considerations, all while accommodating the attested typological variation. Focusing for the moment solely on the diachronic angle, the hierarchies proposed in Roberts’s chapter are not very convincing as pathways. For instance, in the hierarchy on p. 321, rigidly head-final (least marked) and rigidly head-initial (second-least marked) are adjacent options. If languages move up and down the hierarchies, the prediction is made that it should be possible to change from one to another in a single historical step. Attested cases of transition between ‘types’, however, seem to be mediated by ‘mixed’ systems where ordering is relativized to categories, as in the histories of English and Ethiopian

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2. This point has been made forcefully by David Lightfoot (1995, “Why UG needs a learning theory”). Unfortunately, Lightfoot’s own cue-based approach to acquisition (Lightfoot 1991, 1999), mentioned in passing in Longobardi’s chapter, has never been fully fleshed out enough to be computationally or mathematically evaluable.

Semitic (e.g. Biberauer et al. 2009). But these systems reside at the bottom of the hierarchy, and so a change from head-initial to head-final as found in Ethiopian Semitic would involve descending the hierarchy gradually before suddenly shooting back up to the top; if stages on the hierarchy can be skipped over like this, then the hierarchies themselves do not constitute restrictive diachronic pathways. Future work may reveal these to be mere teething problems, but the construction of plausible hierarchies will be a challenge at the very least.

As with past DiGS volumes, the great strength of this book is in its combination of rigorous syntactic analysis with careful philological study. For the most part the languages addressed are familiar ones, though some (e.g. Old Irish, in Lash's chapter) have rarely been the subject of generative work. The book has been well edited and typeset, and it is difficult to find errors, though there are a few (e.g. "Benvensite", p. 180; "parameters settings", p. 197; lack of small caps on "mrk", p. 266). Overall, the volume is full of new and interesting data and ideas, and is undoubtedly a valuable contribution to work on historical syntax, despite the potential problems mentioned above.

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