BOOK REVIEW

Eguren Luis, Olga Fernández-Soriano & Amaya Mendikoetxea (eds.). 2016. *Rethinking Parameters*. New York: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780190461737.001.0001

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A syntactic parameter was conceived during the Principles and Parameters (P&P) era as an innately given choice point that is set by a child during language acquisition; different grammars correspond to different settings of the parameters. For instance, the *Wh*-Parameter was proposed to give two options for the formation of *wh*-questions – either languages move *wh*-words overtly at S-Structure (*wh*-movement languages; e.g. English) or covertly at Logical Form (*wh-in-situ* languages; e.g. Mandarin), as famously argued in Huang (1982). By conceiving of UG as including invariant principles and these open parameters, the P&P approach stimulated research into two main issues: (i) whether these innate parameters could provide a solution to Plato's Problem – how children acquire language given an impoverished input; and (ii) whether a UG containing parameters could account for cross-linguistic variation. *Rethinking Parameters* (2016) is a welcome contribution to current debates on this research topic, since it provides a rich sampling of how different conceptions of the parameter fit (or not) within a Minimalist approach to syntax. In a thorough introduction, the editors delve into the ways parameters were conceptualized during the Government & Binding area – for instance, how the Head Parameter could be related to properties of the X'-component:

(1) A parameterized principle in the phrase structure module
    a. Principle: X' → X ; Complement (where ; signifies an unordered pair)
    b. Parameter: Heads X precede/follow their complements.

<div align="right">(p. 4, via Biberauer 2008:19)</div>

As formulated above, variation in complement-head ordering is analyzed as resulting from a parametric choice at the X'-level. However, a parameter which exploits directionality in the phrase structure module would be impossible to formulate within certain conceptions of Minimalism. How should parameters be rethought in current syntactic theory, then? This issue and others thus form the backbone of the volume:

(2) Driving questions in *Rethinking Parameters*
    a. Are parameters provided by UG or do they emerge during the acquisition process?
    b. Are parameters located in the narrow syntax, in the lexicon,[1] or in the mapping from the syntax to the interfaces?
    c. Are there macroparameters, microparameters, both, or neither?
    d. If there are macroparameters, do cascade effects exist?
    e. Can third factor mechanisms (Chomsky 2005) inform a new conception of "parametric" variation?

The collection is divided into two parts, each of which seeks to answer the questions above at different levels of granularity. "Part I: the nature of variation and parameters" is composed of five chapters that deal with big picture issues, whereas the five chapters in "Part II: Parameters in the analysis of linguistic variation: Case studies" tackle the empirical landscape from different parametric perspectives. In what follows, I provide a synthesis of each chapter and assess the collection as a whole.

In "*Language variability in syntactic theory*", **David Adger** addresses intraspeaker variation, an oft-neglected question for generativists. For example, Adger's variety of Scottish English allows for either of the following expressions – note that the placement of the verbal complement can vary without any semantic difference:

(3) a. She's awfy big getting.
    b. She's getting awfy big.
      'She's getting very big.'   (p. 52)

Adger proposes that the Minimalist conception of feature checking can account for this variability. Assuming that uninterpretable features do not impact semantic interpretation, but only affect pronunciation, variability within a single grammar should be possible – the grammar produces a pool of variants, in which semantically equivalent forms differ in their featural component, thus yielding different pronunciations. These variants are fed to an extragrammatical usage component that is sensitive to factors such as frequency and sociolinguistic context, which then determines the selection of one variant over another. The chapter thus fits into the larger narrative of attributing variation to the presence/absence of features on lexical items, advocated here as well by contributors Gallego and Roberts.

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[1] That parametric variation is restricted to differences in the featural makeup of certain lexical items (e.g. functional heads) was called the "Borer-Chomsky Conjecture" (BCC) in Baker (2008).

Cedric Boeckx's "*Considerations pertaining to the nature of logodiversity*" is a critique of the classical notion of parameter and its current descendants. Building on works like Newmeyer (2005), Boeckx argues that the promise of the parameter as a solution to Plato's Problem has not been fulfilled. He contends that (i) cascade effects triggered by macroparameters do not hold; (ii) approaches taking parametric variation to reside in the featural make-up of the lexicon propose a "(hyper) active and far from minimal pre-syntactic lexicon" (p. 76) whose properties are yet to be fleshed out; and (iii) typological concerns have muddied the effort to seek an explanation of Plato's Problem. Boeckx concludes that there is no syntactic parameterization and variation is limited to differences in PF realization.

Adriana Fasanella & Jordi Fortuny (F&F) focus on how parametric theory has frequently neglected Plato's Problem in their chapter "*Deriving linguistic variation from learnability conditions*". For F&F, macroparameters are problematic from an acquisition perspective, since the acquirer needs evidence from global properties of their target language to set the parameter; microparametric schemata/hierarchies are also questionable, since they are formalized over abstract syntactic notions (e.g. Agree) that are impossible to detect directly from the input. F&F consider a third factor explanation to be a good starting point in developing a new kind of parametric syntax. They propose the "Chunking Procedure", a mechanism of data analysis that guides the learner towards determining (i) whether morphs/heads[2] are phonologically bound to other morphs/heads, and (ii) whether morphs/heads are monomorphemic or not. The "Chunking Procedure" allows for the acquisition of patterns that would not be directly detectable from the input via syntactic bootstrapping. F&F's proposal thus attributes crosslinguistic variation to the morphophonological component, yet what's special about their approach is how they take learnability considerations as a starting point, rather than an afterthought.

Many microparametric approaches assume that parametric variation boils down to differences in the featural composition of lexical items (LIs) between grammars. **Ángel Gallego** explores these computational atoms in "*Lexical items and feature bundling: Consequences for microparametric approaches to variation*", seeking to answer the question of why LIs are syntactically complex, yet seem opaque to syntactic computation. After reviewing the lexicalist and decompositionalist positions, Gallego proposes that LIs are built from a syntax of higher-order complexity (Uriagereka 2008) and that the opaqueness of LIs can be derived via reprojection (Hornstein & Uriagereka 2002). Overall, Gallego provides a

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2. F&F define morphs/heads as follows: "A linguistic form α, viewed as a string of phonemes, is a morph or head if it is meaningful and does not contain any meaningful non-empty proper substring." (p. 112)

stronger foundation to this type of microparametric approach and addresses criticisms such as Boeckx's regarding an underdeveloped theory of LIs.

Ian Roberts argues that macroparametric effects emerge from a hierarchically structured aggregate of microparameters in "*Some remarks on parameter hierarchies*". Roberts summarizes and expands upon the results of the "Rethinking comparative syntax project" (ReCoS), proposing that the macro- vs microparametric distinction is not a UG primitive, but arises when the three factors of language acquisition interact. In particular, third factor learning strategies during acquisition (Feature Economy and Input Generalization) should play a key role in rethinking how linguistic variation is constrained. Roberts illustrates the proposal with four hierarchies – word order, null arguments, word structure, and discourse configurationality. Throughout, Roberts points out typological and diachronic predictions of the model, while also speculating about the kinds of features that are allowed to vary and which are invariable in UG.

To summarize, the chapters in Part I lay out the core foundational issues underlying the debate around parameters, opening possibilities for further investigation. Adger's proposal makes strong predictions regarding the kinds of intra-speaker variability that should be observed (only in areas of the grammar where uninterpretable features are at play) and differs from analyses positing multiple grammars. F&F's focus on acquisition brings up difficult questions regarding the explanatory adequacy of any parametric proposal in addressing Plato's Problem – for instance, their reanalysis of the cascade effects of macroparameters such as the Polysynthesis Parameter (Baker 1996) in terms of their "Chunking Procedure" is thought-provoking and should be taken seriously. While Roberts's chapter deals with acquisition as well, I would have welcomed a discussion on whether the predictions made by the parameter hierarchies regarding the acquisition path are borne out. Finally, Boeckx's critiques provide a counterpoint to the strengths of Gallego's and Roberts's proposals, allowing the reader to assess all current conceptions of parameters before delving into Part II.

Leah Bauke's "*Parametric variation in nominal root compounding*" opens Part II by advocating for the microparametric perspective, while also locating some variation in the PF component. Bauke takes the Root Compounding Parameter as formulated (and re-formulated) by Roeper and Snyder (2005) as a starting point to evaluate the empirical and conceptual validity of syntactic parameters. The parameter attempts to capture the distinction between languages that allow for productive nominal root compounding (German) vs. languages that do not (Spanish). While the parameter is supposed to have cascade effects on the grammar, Bauke presents arguments that the correlations do not hold, regardless of how the parameter is formulated. Bauke thus rejects the parameter and analyzes productive and non-productive compounding in German as arising via two

strategies that stem from different syntactic derivations that depend on the featural composition of the nominalizing *n*-head. Romance languages disallow the productive strategy completely due to differences in the placement of the Number node in the nominal spine, in addition to a different PF ordering requirement from German.

Youngmi Jeong provides a short but forceful critique of macroparameters in "*Macroparameters break down under the weight of evidence: The NP/DP parameter as a case study*." Jeong focuses her criticism on Bošković (2005, 2008)'s proposal that a parameter divides languages into two types – those without articles project only an NP, whereas those with articles project a DP. Crucially, Bošković argues for rich cascade effects from the setting of the parameter in areas of the grammar that are not easily detectable in the input. However, Jeong finds conceptual problems with the proposed parameter: (i) the cascade effects seem to only be tendencies; and (ii) there is only a one-way correlation between lack of articles and many of the effects, which does not aid the acquisition process. Inspired by Leu (2008) and taking East Asian classifier languages as her primary empirical domain, Jeong proposes that all languages project the D layer, but differences arise from whether determiners are phonologically expressed; furthermore, some languages project a second D layer, capturing Bošković's insight regarding the effects of more or less structure in the nominal domain. However, Jeong maintains that her proposal leads to uniform selection of DPs by V and NPs by adjectives, whereas Bošković must propose variation in this domain, which is conceptually problematic.

Éric Mathieu reanalyzes the *Wh*-Parameter through the lens of prosodic variation in "*The wh parameter and radical externalization*", thus aligning himself with proposals that locate variation wholly within the PF component. Mathieu takes inspiration from Richards' (2010) proposal to link *wh*-movement to PF wellformedness conditions, focusing on French *wh-in-situ* as his empirical domain. Unlike Richards, however, Mathieu links the existence of *wh-in-situ* to the strategy used in a language to associate focus with prosody, in particular the use of intonation/pitch accents. After addressing the conditions that govern *wh*-movement versus *wh-in-situ* in French, Mathieu expands his empirical domain to a range of languages, showing typologically how *wh*-movement languages tend to have lexical stress, while *wh-in-situ* languages do not, in addition to other correlations regarding whether focus is marked demarcatively or culminatively.

Guido Mensching & **Anja Weingart** (M&W) address one of the best-studied parameters in "*The Null Subject Parameter and the lexicon in minimalist syntax*". The authors consider in detail the featural composition of *pro* in some Romance languages, arguing that two properties that have been consistently shown to correlate with null subjects – free inversion and the absence of overt expletives – follow from an analysis that takes *pro* to come in different featural flavors, sometimes

within the same language. M&W propose that there are three different types of *pro* – expletive *pro*, referential *pro*, and stage *pro* – and the availability of all or a subset of these can explain a range of data in Italian, European Portuguese, Romanian, and Spanish. M&W's analysis falls squarely into a microparametric approach, which they argue maintains some of the correlations of the classic formulations of the Null Subject Parameter, while avoiding the empirical pitfalls of an overarching macroparameter.

Chris Reintges & **Sonya Cyrino** (R&C) provide a perspective from linguistic change in "*Rethinking parameter theory diachronically: A macrocomparative approach to the analyticization of the verbal tense-aspect systems of Brazilian Portuguese and Coptic Egyptian*". R&C take the change from synthetic to analytic structure in the tense-aspect systems of two typologically unrelated languages as a case study of how macroparametric change appears to be at work. R&C first discuss the history of the P&P approach, in particular the details of microparametric proposals adhering to the BCC. R&C then delve in depth into the details of the diachronic development of the verbal tense system in Brazilian Portuguese, which is currently in the process of changing towards a fully analytic system, versus the system in Coptic Egyptian, which is closer to full analyticization but retains some aspects of a synthetic system. R&C argue that these synthetic residues could be captured in microparametric terms, but that the overall character of a language is more adequately analyzed macroparametrically.

The contributions in Part II examine the approaches given in Part I through the careful investigation of several empirical domains – nominal root compounding, the NP/DP distinction, *wh*-movement, null subjects, and diachronic change in tense systems. Overall, the argumentation against macroparameters is very strong, given Bauke, Jeong, Mathieu, and M&W's chapters, while R&C's contribution is the sole proponent of keeping the macroparameter as a tool for diagnosing the overarching flavor of a language. The approaches that locate some or all variation in the PF component (Bauke, Jeong, Mathieu) are excellent examples of how empirical generalizations can be reanalyzed in order to keep the syntax invariant, suggesting that such an approach can be pursued more broadly. However, it's an open question whether all variation can be rethought in PF terms – for instance, M&W's analysis of a null element (*pro*) with different featural structures does not rely on variation at PF. One component that is missing in Part II is the contributors' lack of attention towards Plato's Problem – in fact, Jeong is explicit in stating that her analysis replacing the NP/DP parameter has little to say regarding acquisition. Given that Boeckx, F&F, and Roberts's contributions discussed the acquisition issue, it would have been fruitful for the authors in Part II to explore not only how their approaches fare in modelling cross-linguistic variation, but also how they provide insight into acquisition.

Nevertheless, the editors of the volume collected an excellent set of papers which should inspire further debate on the parameter and its place within current syntactic theories, a topic that is very much relevant as we continue to discuss the limits of linguistic variation and search for a solution to Plato's Problem.

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