

REVIEWS

RENÉ KAGER, JOE PATER & WIM ZONNEVELD (EDS.), *Constraints in Phonological Acquisition*. Cambridge: Cambridge University Press, 2004. Pp. ix + 417. ISBN: 0-521-82963-1.
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Constraints in Phonological Acquisition (CPA henceforth) consists of eleven chapters written by internationally renowned researchers in the area of phonological language acquisition in the framework of Optimality Theory (OT; Prince & Smolensky 1993). As indicated in its preface, this book has its roots in the Third Biannual Utrecht Phonology Workshop, organized by two of the editors, Kager & Zonneveld, in June 1998 at the UiL-OTS, the Research Department for Language and Speech of Utrecht University. Because some of the articles included in the volume date back to 1995 (e.g. Gnanadesikan's), and considering the relatively recent advent of OT as a framework for linguistic analyses (circa 1993), the CPA in its current and previous incarnations should be considered a classic and thus one starting point for all subsequent work on phonological acquisition within the framework. As such, this volume constitutes a significant contribution to the field and, in general, has stood the test of time, despite some of the shortcomings that will be addressed later.¹

The review is divided into three parts. It starts with an overview of the articles included in the CPA, which is then followed by a general critique of the volume. It ends with some general recommendations and concluding remarks.

The volume begins with an introductory chapter written by the editors which outlines the field of language acquisition, provides a historical perspective on the subject, and presents some of the acquisition issues that are addressed in the subsequent chapters of the book. The authors then proceed with a detailed and comprehensive introduction to OT, followed by an updated overview of the ten subsequent articles taking into account current developments in phonological theory and OT, as well as a discussion of some of the implications and extensions of these studies.

Under the assumption that 'many of the same issues that confronted earlier attempts to connect child phonology and phonological theory continue to apply today' (45), the second chapter, 'Saving the baby: making sure that old data survive new theories' by Lise Menn, outlines the history of output constraints in acquisition, a concept that the author instigated in a 1980 article (Menn 1980). As a member of the 'second generation of research in child phonology' and with an admittedly limited knowledge of OT, Menn discusses an inventory of challenges and accomplishments of the OT enterprise in explaining child language (L1) acquisition phenomena. The author humbly acknowledges, however, that some of the problems raised in her assessment of the theory are based on other researchers' remarks, since she is 'not in a position to judge . . . the adequacy of the author's treatment' (62).

The third chapter, 'Markedness and faithfulness constraints in child phonology' by Amalia Gnanadesikan, has been circulating as an unpublished manuscript on the Internet for more than a decade (see the Rutgers Optimality Archive – ROA – at <http://roa.rutgers.edu/>

¹ The scope of this review will be limited to the volume as a whole and its contributions to the field of constraint-based language acquisition. For a comprehensive critique of each of the chapters included in CPA, see Dinnsen (2004).

view.php3?id=77), and is by far the oldest in the volume and one of the most cited works in constraint-based L1 acquisition. The study involves a longitudinal investigation of the author's daughter's acquisition of onset clusters in positions of phonological prominence, namely word-initial and stressed positions. In the analysis, Gnanadesikan argues that the phenomena observed in the development of consonant clusters (i.e. onset simplification and coalescence) show universal patterns of acquisition similar to what is observed crosslinguistically in languages as unrelated as Sanskrit and Navajo. This observation leads the author to conclude that the child's grammar comprises the same set of constraints and ranking properties that are required for adult languages.

As was the case with the previous chapter, the contribution by Heather Goad & Yvan Rose, 'Input elaboration, head faithfulness, and evidence for representation in the acquisition of left-edge clusters in West Germanic', examines the process of onset cluster reduction in developing L1 phonologies of three West Germanic varieties: Dutch, English, and German. To explain the paradoxical sonority/head patterns observed in the acquisition of these clusters (e.g. while the *stop* is preserved in /s/+stop and stop+sonorant clusters – the 'sonority pattern', it is the *sonorant* that survives in /s/+sonorant clusters – the 'head pattern'), the authors appeal to an analysis in which prosodic structures are fully represented in the input. Assuming that the inputs for speakers of languages characterized by these two patterns differ in terms of how onsets are prosodified in their grammars (onset headedness), the authors claim that the high ranking of the constraint MAXHEAD(ONSET) is able to decide on the consonant that surfaces from the input cluster.

The following chapter, 'Phonological acquisition in Optimality Theory: the early stages', by Bruce Hayes, was composed simultaneously with, but independently from Alan Prince & Bruce Tesar's contribution in chapter 8, as indicated in separate sections of the article. Consequently, the two articles present relatively similar proposals regarding the learning of phonotactics in which modifications to Tesar & Smolensky's (1993) Constraint Demotion Algorithm are put forward. In brief, Hayes develops a learning algorithm, the Low Faithfulness Constraint Demotion Algorithm, which places faithfulness constraints as low as possible in the child's grammar. As a result, these are outranked by markedness and output-output constraints. The chapter includes a concise overview of empirical research in L1 acquisition as well as discussions of learnability issues such as divergent views on language acquisition, the grammar's initial state, the learning of phonotactics and morphophonemic alternations, constraint ranking algorithms (e.g. Boersma's 1997 and Boersma & Hayes' 2001 Gradual Learning Algorithm), and the effects of production and perception on developing grammars.

Clara C. Levelt & Ruben van der Vijver's chapter, entitled 'Syllable types in cross-linguistic and developmental grammars', is another chapter in the volume devoted to the acquisition of syllable structure. The authors, however, consider a wider range of factors that affect the different paths of acquisition, namely syllable types, language typology, and production frequency in the language surrounding the language learner. By means of a crosslinguistic inventory of syllable types (e.g. based on Blevins 1995), a set of markedness constraints (some of which are argued to be locally conjoined), and a general constraint requiring faithfulness to the input, the authors build a factorial typology that does not accurately mirror the learning paths observed in the development of syllable structure by children learning Dutch as their L1. An investigation of a corpus of child-directed speech leads the authors to conclude that the unexpected (but invariable) learning path chosen by Dutch children is largely due to the frequency of specific syllable types in the speech surrounding the language learner (e.g. the more frequent V-shaped syllables are acquired before the less frequent CCV and CVCC types, even though the factorial typology proposed by the authors predicts that these three syllable types are equally expected).

As the title of Joe Pater's article indicates, 'Bridging the gap between receptive and productive development with minimally violable constraints', chapter 7 attempts to capture

the disparities that exist between receptive and productive competence in L1 acquisition, e.g. when the perceptual representations are more marked than the representations observed in production. To account for these gaps, the author proposes that faithfulness constraints be decomposed into their perception-specific counterparts, which interact with markedness constraints via a single grammar (following Smolensky 1996, and contra Hayes, this volume).

As already mentioned above in the context of Hayes' articles in chapter 5, Prince & Tesar's chapter 'Learning phonotactic distributions' proposes a relatively similar strategy (the Biased Constraint Demotion algorithm) for approaching learnability issues such as the child's ability to acquire knowledge that is beyond what can be observed (positive evidence). As is the case in Hayes' approach, the proposed learning algorithm is biased against faithfulness (ranked at the bottom of the hierarchy) and in favor of markedness constraints in the development of grammars.

The chapter by Shikego Shinohara, 'Emergence of Universal Grammar in foreign word adaptations', is dedicated to the study of the loanword phonology of French by Japanese native speakers. In the study, the author claims that a number of emergent patterns observed in the production of borrowed words from French are reflections of the effect of Universal Grammar: unmarked features not attested in the host language (e.g. the avoidance of accent placement on weak, epenthetic vowels) arise in the learning of new borrowed items.

In the tenth chapter in the volume, 'The initial and final states: theoretical implications and experimental explorations of Richness of the Base', Lisa Davidson, Peter Jusczyk & Paul Smolensky present the initial stages of their work in which they assess the 'psychological reality' of one of the tenets of OT: Richness of the Base, a principle that stipulates that there are no restrictions on inputs. The authors formulate operational hypotheses to explain acquisition performance data using the tools provided by (generative) phonological theory. The overall results indicate that Richness of the Base may play an important role in explaining human linguistic performance.

The volume closes with Wim Zonneveld & Dominique Nouveau's chapter entitled 'Child word stress competence: an experimental approach', in which the authors examine the word-level stress competence of three- and four-year-old Dutch children. In the study involving the pronunciation of existing and nonsense words, children show a considerable knowledge of the complex Dutch stress system and, while they are able to correctly imitate word stress patterns predicted by the metrical theory of Dutch, they have difficulty in imitating words with irregular or prohibited patterns. The authors capture this observation by the adoption of NO-CLASH, a constraint prohibiting stress clash, which is undominated in the emerging grammar of Dutch children, despite being lower ranked in the grammar of adult speakers.

To summarize, the articles included in the *CPA* cover an extensive selection of topics and languages that empirically validate some of the hypotheses and theoretical mechanisms proposed in the volume and in the other OT literature on language acquisition. The volume illustrates some relatively recent and relevant advances in constraint-based phonological acquisition research. However, as is the case with any enterprise of this magnitude, it contains shortcomings, some of which will be addressed in the remainder of this review.

Let us start with the title of the book and its scope. Assuming that the term 'language acquisition' encompasses the acquisition of both first and subsequent languages (L2), the title is a misnomer. In the volume, there is not a single chapter dedicated to L2 phonological acquisition, even though the title, the summary on its back cover and its preface lead the reader to think otherwise: 'The remaining chapters address... and second-language acquisition' (back cover); 'One will find both first and second language acquisition data represented here' (preface, page ix). When L2 acquisition is alluded to, this is usually done in the formulation of topics for further research (e.g. 'Two general issues for further research arise...: the

extent to which these UG reflecting patterns also emerge in second language acquisition'; Shinohara, 316), or to corroborate hypotheses about L1 acquisition (e.g. 'knowing the articulated depiction of the final ranking... is important not just for precisely accounting for the partial nativisation of foreign words, but also for second language acquisition'; Davidson et al., 341). One could argue that the first vs. second language distinction is irrelevant in the context of a framework (OT) that assumes an innate hypothesis for both L1 and L2 acquisition, in which universal linguistic principles are available to both types of learners. This assumption, however, is controversial and has generated heated discussions over the last three decades (e.g. Bley-Vroman, Felix & Ioup 1988; White 1989, 1998; Cook 1994).

Another limitation of the volume is that, for the most part, it consists of slightly edited versions of papers that have been in circulation on the Internet since they were originally made available by the authors in the Rutgers Optimality Archive (<http://roa.rutgers.edu>), on the authors' home pages or on other web sites. A web search conducted in November 2006, for instance, located every single one of the articles included in the volume. Considering that all of its articles are easily available on the Internet and that the book is only available in hardback format, which translates into exorbitantly high prices (hardback: £65.00 or US\$110.00; eBook format: US\$88.00; source: <http://www.cambridge.org>), I would strongly hesitate recommending the purchase of the book for mere personal use.

Finally, the volume has a considerable number of editing inconsistencies, especially involving in-text citations and the reference list. For instance, the entry for Prince & Smolensky's (1993, published in 2004) article, which appears in almost every single article of the *CPA*, gives two different versions of the title, in a variety of formats that differ in length and detail (e.g. compare the reference by Davidson et al. on page 290 with that of Prince & Tesar on page 367). The same applies to references to Boersma & Hayes (2001): while it is correctly cited in Hayes' article, for instance, it is sometimes referred to as a 1999 manuscript (e.g. in Davidson et al.). These discrepancies could have been avoided had the editors included a single reference list for all the chapters in the volume. Other minor editing drawbacks include: (1) incorrect publication dates (e.g. Anttila's article 'Deriving variation from grammar' was published in 1997, not in 1998, as indicated in Davidson et al.); (2) absence of references to the languages analyzed or mentioned in the volume in the index section; and (3) lack of updating of references that had already been published by the time the *CPA* became public (e.g. Alderete 2001 cited as a 1995 manuscript in Goad & Rose, and Boersma & Hayes 2001, cited as a 1999 manuscript by Davidson et al.).

To conclude, this is a worthy volume the contents of which, since their first exposure at a workshop almost a decade ago, have influenced a generation of L2 researchers working within the constraint-based framework of Optimality Theory. Written by internationally reputable scholars in the field, the volume clearly accomplishes its main goal: to present an illustration of the progress that phonology has achieved over the last decade. As such, it is obligatory reading for anyone interested in or conducting research in the field of language acquisition within OT, with the proviso that it be used in tandem with other, more current research. Despite a very detailed and easy-to-follow introduction to OT and language acquisition in chapter 1, the book is not highly recommended for the faint of heart or the OT-untrained phonologist. It is strongly recommended, however, to researchers and specialists in language acquisition and phonology in general.

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NICOLE MÜLLER (ED.), *Multi-layered Transcription*. San Diego, CA, Oxford & Brisbane: Plural Publishing Inc, 2006. Pp. xi + 175. ISBN: 1-59756-024-3.
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As stated in the preface, *Multi-layered Transcription* is mainly intended for students, practitioners, and researchers in the areas of speech-language pathology, clinical phonetics and linguistics. In fact, the volume can be useful for everyone who intends to transcribe and describe different speech events (even in cases of multilingual communication).

Each of the book's eight chapters provides a number of useful step-by-step, well-analyzed examples of detailed transcription, tables and drawings that make the reading process much easier. The book can be divided into three topical sections, comprised of articles relating to the transcription of verbal (chapters 2–4) and nonverbal (chapter 5) aspects of human interaction, as well as general principles and recommendations for the transcription of spoken text (chapters 1, 6–8).

Nicole Müller, Jack Damico and Jackie Guendouzi try to answer the difficult question 'What is transcription and why should a researcher deal with it?' This part will be especially interesting for discourse analysts and phoneticians. In this context, the term TRANSCRIBING refers to the PROCESS of transferring or translating speech, spoken language, and nonverbal aspects of human interaction. It is obvious that the TRANSCRIPT is the product resulting from