

## TEXTBOOK REVIEW

**Phonological acquisition:** Child language and constraint-based grammar. By ANNE-MICHELLE TESSIER. Basingstoke: Palgrave Macmillan, 2016. Pp. 414. ISBN 9780230293779. \$55.

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**INTRODUCTION.** This book has clearly been written by someone who researches, teaches, and loves phonological acquisition. There are many audiences who are interested in child speech: linguists, clinicians, teachers, psychologists, and so forth. Each audience presents its own challenges, of course. Tessier has succeeded in producing a book that will fit into the undergraduate linguistics curriculum because it seeks to both describe and explain (in the Chomskyan sense) the developmental paths and patterns of child phonological acquisition. T also ensures that the book is well grounded in phonological theory, which is important for two reasons. One is that any account of language acquisition depends on the model of what is being acquired (and that is what phonological theory provides). Second, any discussion of child phonology needs to tackle the question of whether child grammars are consistent with the principles and properties of the grammars of primary languages (say adult French, or Norwegian). It would certainly work in a course dedicated to child phonology, but I can also see it working as one of the texts for a course on phonological theory.

**BRIEF SUMMARY.** At first blush, many researchers and students alike might be forgiven for thinking that phonological acquisition is a specialized niche in the linguistic academy. However, as the book ably demonstrates, in order to be able to deeply probe the intricacies of the field, the researcher needs to be conversant in: child development, auditory perception, articulatory phonetics, phonological theory, and psycholinguistic methodology. It is, hence, a field that brings together many different perspectives in order to be able to understand the phenomena in question.

The structure of the book reflects this broad perspective. Ch. 1 ('A phonological refresher') introduces such things as the International Phonetic Alphabet, spectrograms, syllabic structure, sonority, and stress (and metrical feet), as well as concepts such as competence/performance and production/perception that are important when it comes to understanding what children know and can do.

Ch. 2 ('Infant speech acquisition') outlines the research paradigm, which has demonstrated that a lot is going on in that first year of life. Children can perceive, discriminate, and anticipate many phonological elements long before they are producing them. As T notes, in her engaging style, 'after reading Chapter 2, you will never look at drooling babies the same way again'. She explores high-amplitude sucking and head-turn preference methodologies to gain insight into the perceptual world of infants, and examines the early production stages of babbling (canonical and variegated). All of this sets the stage for Ch. 3 ('Early phonology: The shapes of syllables'), which introduces some of the basic machinery of OPTIMALITY THEORY (OT), focusing on syllabic constraints (such as NoCoda and NoComplexOnset) as well as issues of the nature of the input forms. Thus, tableaux and the notion of optimizing syllabic shapes in output are presented to the students. This is done in a way that interleaves the discussion of child outputs with the constraint-based phonologies of language such as Samoan, Yakuts, and Portuguese. T provides useful signposts for students who want to know more about the representations (are stress or syllables included?) or constraints (functional grounding). In this way, a phonological acquisition course would blend well with an advanced course on phonological theory. I have often found it to be the case that there is a sizable group of students who come to appreciate the theory if it is grounded in acquisition data. Speaking personally, much of what I know of syntactic theory came from reading work on L2 syntax. It works for phonology too.

Ch. 4 ('Early phonology: Word sizes and shapes') looks at larger prosodic units such as metrical feet (iambus and trochees) and constructs such as the minimal word, which influence the phonological outputs of children. These data allow for an exploration of markedness and faithfulness constraints in order to explain developmental paths.

Ch. 5 ('Early phonology: Consonants') outlines OT accounts of child consonantal inventories. What similarities and differences do we see when we compare, say, English, Spanish, and Cantonese two-year-olds? How does Place develop? What of Manner?

Ch. 6 ('Early phonology: More consonants and phonotactics') looks at how syllabic structure (i.e. onset or coda position) can influence production accuracy, working through data sets of Polish onsets, Finnish geminates, and various positional allophones. There is also a discussion of consonant harmonies, which are of great interest to phonological acquisitionists because of the question of how this common child phenomenon meshes with the somewhat rarer adult phenomenon. This leads to a section on OT analyses of chain-shift phenomena (i.e. the puzzle-puddle-pickle problem). The chapter concludes with a discussion of how to account for variation in child output.

Ch. 7 ('Lexical influences and interactions in phonological learning') tackles the question of how children can determine what the input forms of actual words are (not just the constraints on their production). It also explores the role of lexical frequency (as well as lexical avoidance) and lexical neighborhoods in production. This foray into the lexicon provides the bridge to Ch. 8 ('Acquiring morpho-phonology'). For example, how do kids learn the allomorphy of English plurals ([s], [z], [əz])? T also explores plural allomorphy via Hungarian vowel harmony systems. This gets into the interesting areas of paradigm uniformity (and the morphological question of whether paradigms are epiphenomenal). She also tackles the issue of irregulars and overregularization.

Ch. 9 ('Children's bilingual phonological acquisition') will, in my experience, be of interest to many undergraduate students as well. T tackles an introduction to the complex question of how two phonologies get into one brain, addressing segmental inventories, syllable structure, and prosodic structure.

The book concludes with Ch. 10 ('Some OT theories of phonological learning'), which addresses the *acquisition* part of the book title within the framework of language learnability through an OT lens. The issue to be confronted is the formal mechanism (or learning algorithm) by which the learner moves from a well-defined initial state, processes some primary linguistic data (positive evidence), and converges on an end-state grammar. Issues of reranking mechanisms, error-driven learning, gradual learning, weighted constraints, and stochastic learning are all covered.

**INSTRUCTOR'S PERSPECTIVE.** Of interest pedagogically are the many exercises found throughout the text, which allow students to learn about phonological acquisition by doing it. I like the way the exercises were not all grouped at the ends of the chapters but rather strategically placed so as to be undertaken when they made most sense in terms of the delivery of new material to the students.

Also, spread throughout the book are examples and discussions of various methodologies used to gather data and test hypotheses about child speech—approaches such as longitudinal versus cross-sectional studies, elicitation studies, phonological corpora studies, and, of course, the famous wug tests!

**SUMMARY.** This book is clearly the product of a dedicated, passionate researcher and an experienced and engaged teacher. It builds on previous works on phonological acquisition such as Hannahs & Young-Scholten 1997, Kager et al. 2004, and Drescher 2009. T has crafted a much more accessible TEXTBOOK than these earlier primary sources. To me, the intersection of language acquisition and linguistic theory is a wonderful place. Sadly, it is a place that can be undervalued in linguistics departments. The existence of books such as this will, I hope, encourage more departments to reach out to more students in these domains. Some will find the way into phonological theory by appreciating the child data, and some will come to understand the complexity of

the child data by learning more about the theory. Linguistics departments and programs are always looking for ways to attract more students to rigorous study of linguistic issues. T's work will provide one more avenue to achieve this goal. I would hope that department curriculum committees might consider adding courses on child phonology, and that phonologists teaching theoretical courses would consider using this resource as a way to provide both broader data sets and a fine pedagogic guide to their students.

## REFERENCES

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