

the interpretation intended by the speaker. Goodwin convincingly shows that the aphasic is able to build meaningful and varied conversational chunks by making use of a rich prosodic system, which even allows him to encode rather complex topic–comment structures.

Having looked at a variety of papers in this excellent collection, it is striking to see that most papers try to avoid the accusation of being too impressionistic and thus provide detailed phonetic analyses of the prosodic phenomena investigated. This may be taken as an important step towards a fruitful combination of the advantages of different types of approaches. Nevertheless, the strictly functional view of spontaneous data in social interaction in CA approaches will have to be combined with quantitative experimental techniques, including statistical analyses, to enable a systematic investigation of the relation between prosodic forms and functions. To conclude, the book is not only highly relevant for specialists in the field – in fact for all linguists adhering to approaches that deal with prosody or spoken language in general – but also for graduate and undergraduate students of linguistics.

References

- Couper-Kuhlen, Elizabeth & Margret Selting (eds.). 1996. *Prosody in conversation* (Interactional Studies: Studies in Interactional Sociolinguistics 12). Cambridge: Cambridge University Press.
- de Ruiter, Laura. 2010. *Studies on intonation and information structure in child and adult German* (MPI Series in Psycholinguistics 54). Wageningen: Ponsen & Looijen.
- Gussenhoven, Carlos. 2004. *The phonology of tone and intonation*. Cambridge: Cambridge University Press.
- Hutchby, Ian & Robin Wooffitt. 2008. *Conversation analysis*, 2nd edn. Cambridge: Polity Press.
- Selting, Margret, Peter Auer, Dagmar Barth-Weingarten, Jörg Bergmann, Pia Bergmann, Karin Birkner, Elizabeth Couper-Kuhlen, Arnulf Deppermann, Peter Gilles, Susanne Günthner, Martin Hartung, Friederike Kern, Christine Mertzluff, Christian Meyer, Miriam Morek, Frank Oberzaucher, Jörg Peters, Uta Quasthoff, Wilfried Schütte, Anja Stukenbrock & Susanne Uhmman. 2009. Gesprächsanalytisches Transkriptionssystem 2 (GAT2). *Gesprächsforschung* 10, 353–402.
- ten Have, Paul. 2007. *Doing conversation analysis: A practical guide*, 2nd edn. London: Sage.

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Patterns in child phonology is an introductory textbook for university modules in phonological development. Offering an engaging introduction to phonological analysis, based on rich data sets, it also aims to present and evaluate different theoretical approaches to language acquisition. This is in fact stressed throughout the book as the primary objective of the authors, Wyn Johnson & Paula Reimers (henceforth J&R). We read in the introduction that the authors ‘do not necessarily espouse any particular theory and leave the reader to make up his or her mind as to [the] relative explanatory powers [of the discussed approaches]’ (p. vii). The authors’ ambitious goal to bring together research from various approaches and to encourage students to think outside the limitations of a particular theory leads at times to problems.

The book is structured as follows: an introduction to data analysis (Chapters 1 and 2) is followed by a discussion of various theoretical approaches (Chapters 3 and 5), an overview of infant perception studies (Chapter 4), and finally a more advanced section

on Optimality Theoretical (OT) accounts of child language processes (Chapters 6 and 7). The reader is encouraged to consider phonological acquisition as proceeding through the interaction of the infant with the input, but aided by a narrow innate language faculty. This point of view has been gaining popularity in the Minimalist Program framework in the past several years (first expressed in Hauser, Chomsky & Fitch 2002, and leading to more specific proposals, e.g. in Hornstein 2009) as an alternative to the previous Government & Binding hypothesis, presupposing a rich innate grammatical structure. Throughout the book, J&R make a persuasive case for the importance of input in language development. We read: ‘there is already adequate evidence that the influence from the ambient language has been underestimated far too much and far too long in child phonology’ (p. 115). If the book were meant as an introduction to OT, it would constitute a valuable source of information about both theory and analysis in the framework. Suggesting a well-motivated proposal for future research, i.e. the interaction of input with the grammar, could then be considered an additional merit. However, the stated theory neutrality considerably weakens this potential contribution for three reasons, one theoretical and two practical.

First of all, J&R seem to suggest that one should avoid subscribing to any linguistic theory. This is perhaps most clearly stated in their concluding remark: ‘We are hopeful that future research would bring together researchers from various disciplines where they would converge on being faithful to what is uttered through the mouth of each child; data without any biases of theory or belief, since developmental phonology is predicated on patterns found in child phonology’ (p. 230). While unbiased research is undoubtedly a worthy ideal, it is not equivalent to assuming no theoretical background. On the contrary: particular linguistic theories are all based on the decades of research that shaped them. Would it be possible for science to progress if we were to disregard such research and start from scratch in every analysis? This is not to say that one should put theory above everything else, but data mean nothing without a research question, and research questions are linked to theories. For this reason, theory-neutrality is always an illusion.

Apart from this general concern, which could be considered a matter of personal belief, I would like to focus on two more serious, practical problems. First, while it is entirely natural for researchers and authors to choose which data and which approach to work with, they cannot choose not to make a clear statement about which framework is being presented; such a statement is absolutely essential in teaching and in textbooks. Second, phonological acquisition and the ‘nature-or-nurture’ (or, the generative–cognitive, formal–functional, etc.) debate is an issue quite separate from phonological development. When addressing several complex issues in a textbook, one risks either running out of space or making one’s point less consistent than one would want it to be. Let me now explain how the above two problems affect the book.

As regards the first of the problems, I have found it difficult to reconcile the fact that roughly half of the book is devoted to OT analyses with J&R’s assurance that it is theory neutral. Chapter 1 invites the reader to discover the most common phonological patterns found in children (reduplication, deletion, harmony, etc.) on the basis of a rich collection of data from various studies. Frequent references to language typology show how these processes are linked to those found in adult languages, as well as strengthening the point, which recurs throughout the chapter, that ‘child phonology is no different from any adult phonology in the view that different strategies are used in order to deal with disfavoured structures’ (p. 12). Once it is made clear that children’s production is not random, but rather displays a certain degree of regularity, and that the regularity does not generally extend beyond strategies attested in adult languages, Chapter 2 introduces some theoretical explanations of the patterns discussed. In doing so, it focuses on the most cross-linguistically frequent processes, which underlines their ‘universality’. The overall picture of child language that the reader gets after the first two chapters is perhaps best summarised in the conclusion to Chapter 2: ‘children’s earliest word forms are more or less similar across languages, but they differ from their target (adult) word forms in ways that are systematic and predictable’ (p. 45).

It must be noted that J&R repeatedly express their reservations about phonological explanations based in acoustics, phonetics and articulation. For example, the possibility that reduplication in first words may have its source in babble is only briefly mentioned in the concluding remarks of the book. This preference for explanations rooted in formal linguistics is clearly stated in this commentary on the discussion of David Stampe's *Natural Phonology* (Stampe 1979), 'the theoretical aspect of basing [Natural P]honology on phonetic capacities . . . questions its status as a theory of acquisition (or even of phonology), since it cannot account for phonological phenomena lacking phonetic motivation . . . or acknowledge the fundamental difference between child and adult grammars' (p. 59). This preference is also apparent in Chapter 3, which is an overview of markedness accounts of language acquisition. The chapter opens with a thorough discussion of the notion of markedness, and evaluates the ideas of Jakobson (1941), Stampe, and finally OT.

In sum, while the first three chapters may seem theory-neutral to a first-year student, the reader familiar with the field will be able to form a clear picture of the approach to acquisition that J&R are presenting. The initial data analysis with references to markedness, the carefully selected data sets focusing on regular and fairly universal processes (as opposed to individual strategies often observed in children, such as word templates or jargon), the detailed formal accounts of the data, the openly expressed scepticism regarding phonetic explanations, all constitute a very well-staged introduction to the OT account of language acquisition. This account is indeed presented explicitly in the second half of Chapter 3, and continues in more detail in Chapters 6 and 7, which offer a variety of more advanced OT explanations of various child language processes. Therefore, it is clear that the book in fact does subscribe to a particular theory, and I believe it would be considerably less confusing for the students if they were aware of that.

The other main problem is that of trying to include an in-depth theoretical discussion in a book that is also intended to deal with data analysis and to present an overview of research in the field. Limited space may lead to simplifications that can sometimes be detrimental to the case one wants to present.

Chapter 4 in particular suffers from this problem. It is built around the classic studies by Bertoncini & Mehler (1981), Werker & Tees (1984), Jusczyk (1997/2000) and others, which arguably can be considered essential for any introductory child phonology textbook. Nonetheless, the well-organised presentation of findings in the area of categorical perception, supplemented with tables, loses some of its clarity because of the fact that it is intertwined with recurring discussion of the theoretical issue of innateness. Unfortunately, J&R equate lack of a language-specific mechanism with lack of human-specific abilities, when they ask 'whether the infant learner has a biological predisposition to perceive speech' (p. 104). Many non-nativists would no doubt respond that, indeed, the essential biological predisposition of the infant to perceive, learn and produce speech is located in the human brain, with all the cognitive abilities that it provides. What the results of categorical perception studies in other mammals show is not that chinchillas are just as capable of learning a language as humans, as this would be a hypothesis all too easy to disprove. What they show is that humans can use mechanisms that are clearly not language-specific (as apparent in chinchillas) in language acquisition, and that language most likely evolved to take advantage of the predispositions of the brain.

In the end, the position J&R take on the 'nature-or-nurture' debate is perhaps best summarised in the following passage from the book: 'the general picture that emerges from various infant perception studies in different fields is that they appear to indicate that language is not specific to humans [sic!], but, at the same time, they do not provide sufficient evidence to deny this idea [of a language-specific mechanism] either' (p. 103). Indeed, this is perhaps the single most frequent argument in favour of Universal Grammar (UG): that no-one has yet disproved it. While this is true, it could as easily mean that the concept of UG is unfalsifiable. The only thing one can do is try to demonstrate that language could be learned without it, which is the premise of much psycholinguistic research. Even that would not DISPROVE

the existence of UG, however. Moreover, the unfalsifiability also means that the existence of UG cannot be PROVED either. Thus, there is a limited number of ways to support the hypothesis. J&R choose to motivate their position thus: ‘an analogy can be made between language learning and infants learning to walk – just as all normally developing infants are born with legs that they cannot use for walking until a time that is biologically determined, the human infant may well be equipped with innate language learning mechanisms which develop according to a pre-determined time schedule and environmental conditions’ (p. 103). Indeed, the argument from other biologically predetermined skills, leading generativists to talk about the ‘language organ’, is also a frequent one in the literature. Yet, such analogies typically lack references to research in developmental biology. For instance, Esther Thelen and colleagues, in a series of fascinating studies on learning to walk (for an overview, see Thelen & Smith 1994), have been able to demonstrate that there is no pre-programmed time schedule for learning to walk. According to this research, throughout the first year of life, babies can be made to perform step-like movements by manipulating factors that are seemingly unrelated (e.g. weight, posture, attention), which strongly suggests that there is no walking-specific pre-programmed mechanism, but that there is instead the emergence of the skill in context. Therefore, the UG hypothesis has no strict parallel in developmental biology research about learning to walk.

The final point I would like to discuss concerns Chapter 5, which deals with ‘non-linguistic’ approaches to language acquisition, i.e. those rooted in psycholinguistics rather than in formal linguistics. As with the ‘nature-or-nurture’ question, emergentist approaches are presented in a somewhat misleading way, namely as strictly frequency-based. We read: ‘whether it is statistical learning, algebraic learning, connectionist approach, or even computer modeling, they are all based on occurrence frequency of various linguistic units and patterns in the input, and anything that cannot be accounted for in terms of the input will have to be attributed to other extra-linguistic factors, such as physiological constraints or poor motor control’ (p. 126). Having stated the premise in this way, J&R argue that it is impossible for such frequency-based models to explain the U-shaped curve in development (e.g. over-regularisation), cross-linguistic patterns, and the fact that frequency in adult language does not always predict order of acquisition (as is the case with [ð], which is very frequent in English, yet usually acquired late). Indeed, all this is true of any theory that claims that language acquisition relies exclusively on input frequency. However, as with the claim that language is not human-specific, I am not aware of any theory that would make that claim. And again, just as with language not being human-specific, this way of phrasing the argument suggests that denying the existence of an innate language-specific mechanism equals denying the existence of any cognitive structure in the mind. However, no one could possibly defend the hypothesis that learning is based solely on input, because, to put it simply, no learning can happen without the mind. The only point of disagreement between nativists and emergentists in this matter is about the content of the mind. There is no disagreement as to whether all and only humans possess brains equipped with mechanisms which enable them to acquire language. Therefore, both the U-shaped curve and the fact that input frequency is not all that matters show that there is internal organisation in the mind, and the cross-linguistic patterns show that this organisation, along with its constraints, stems from the nature of the human brain, and as such is compatible with both approaches (albeit not yet fully explained by either). Unfortunately, a clear statement of the essential differences between the two approaches is missing from the book. This, along with the simplified version of the emergentist approach, makes the theoretical discussion obscure.

In the end, then, the ‘nature-or-nurture’ discussion presented in the book leaves the reader with the feeling that no definite conclusions can be drawn. This is predictable, given that if we had any unequivocally accepted evidence one way or the other, the dispute would be resolved. More importantly, however, the discussion does not allow for a fully comprehensible presentation of phonological development. The fact that the authors attempt to address two quite separate issues: phonological acquisition and the ‘nature-or-nurture’ debate, causes both

topics to suffer from insufficient presentation. Despite the promising title, not much about patterns, processes, and path of acquisition is provided in any systematic way. The conclusion to be drawn is perhaps that an informed decision about the explanatory powers of linguistic theories can only be made on the basis of much more in-depth knowledge than what any one- or two-term module can provide.

References

- Bertoncini, Josiane & Jacques Mehler. 1981. Syllables as units in infant speech perception. In Winifred Strange (ed.), *Speech perception and linguistic experience*, 171–206. Baltimore, MD: York Press.
- Hauser, Marc D., Noam Chomsky & W. Tecumseh Fitch. 2002. The faculty of language: What is it, who has it and how did it evolve? *Science* 298, 1569–1579.
- Hornstein, Norbert. 2009. *A theory of syntax: Minimal operations and Universal Grammar*. Cambridge: Cambridge University Press.
- Jakobson, Roman. 1941. *Kindersprache, Aphasie und allgemeine Lautgesetze*. English edition 1968, *Child language, aphasia and phonological universals* (translated by Allan Keiler). The Hague: Mouton.
- Jusczyk, Peter. 1997/2000. *The discovery of spoken language*. Cambridge MA: MIT Press.
- Stampe, David. 1979. *A dissertation on natural phonology*. New York: Garland.
- Thelen, Esther & Linda B. Smith. 1994. *A Dynamic Systems approach to the development of cognition and action*. Cambridge, MA: MIT Press.
- Werker, Janet & Richard Tees. 1984. Cross-language speech perception: Evidence for perceptual reorganization during the first year of life. *Infant Behaviour and Development* 7, 49–63.

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Intended for a reader unfamiliar with the subject, Richard Ogden's textbook covers topics which traditionally form the core curriculum of introductory university courses in phonetics. The material is presented in two stages: the first four chapters set the basic framework by giving an overview of speech production mechanism, place and manner of articulation, and types and levels of transcription. Further chapters present the classification of sound types (vowels, approximants, plosives, fricatives, nasals) and airstream mechanisms. Each chapter is followed by a summary, a set of exercises with answers and discussion and suggestions for further reading. The material is illustrated with spectrograms, waveforms, diagrams and – somewhat unusually – natural conversational data alongside more formal utterances, all of which serve to exemplify the phenomena under discussion. A fresh approach is to leave non-pulmonic airstream mechanisms till the end and then demonstrate that clicks and ejectives, which a beginner might view as somewhat exotic, are in fact abundant in English speech where they have a conversational function.

Like many other textbooks, Ogden's volume may serve simply as a compendium of basic knowledge. However, the provision of a descriptive framework is not an end in itself, but serves as a tool which enables readers to explore phonetics independently, reflect on their own speech and describe that of others. This works at two levels: by allowing the mastery of key concepts as well as training of skills indispensable to a phonetician's trade such as transcription and interpretation of spectrographic data. Ogden's hands-on approach engages