However, the volume does not include quantitative analyses of native-like language production which could have been used to account for word formation.

REFERENCES

Anderson, Stephen R. 1992. *A-morphous morphology*. Cambridge: Cambridge University Press.

Barðal, Jóhanna. 2008. *Productivity: Evidence from case and argument structure in Icelandic*. Philadelphia: John Benjamins.

Blevins, James P. 2005. Word-based declensions in Estonian. In *Yearbook of morphology 2005*, ed. Geert Booij and Jaap van Marle, 1–25. Dordrecht: Springer.

Di Sciullo, Anna Maria, and Edwin Williams. 1987. *On the definition of word*. Cambridge, MA: MIT Press.

Lieber, Rochelle. 2016. *Introducing morphology*. Cambridge: Cambridge University Press.

Lieber, Rochelle, and Pavol Štekauer. 2014. *Oxford handbook of derivational morphology*. New York: Oxford University Press.

Stewart, Thomas W. 2013. The sub-types of initial lenition in Scottish Gaelic. In *After the storm: Papers from the Forum for Research on the Languages of Scotland and Ulster Triennial Meeting*, ed. Janet Cruickshank and Robert McColl Millar, 100–116. Aberdeen: Forum for Research on the Languages of Scotland and Ireland.

Silverman, Daniel. 2017. *A Critical Introduction to Phonology. Functional and Usage-Based Perspectives*. 2nd edition. London: Bloomsbury. Pp. xxi + 360. US $33.95

Reviewed by Dušan Nikolić, *University of Calgary, Calgary, Alberta, Canada*

While phoneticians are primarily concerned with physical manifestations of sounds, phonologists develop theories about the abstract properties of these sounds; they explore speech sounds that constitute a linguistic system. Silverman introduces phonology as the discipline of describing the functional aspects of sound substitution changes within this system. Phonology, according to the author, focuses primarily on sound substitutions that change, maintain, and merge meaning. The book, centred on these three major notions, contains three main parts with seven chapters overall, and an appendix.

The author opens the book with the chapter "Setting the Scene". As its name foreshadows, the chapter begins with a discussion of what phonetics and phonology explore, attempting to sketch out the dividing line between these two fields by making broad reference to phonetics as the branch of linguistics that explores physical aspects of sounds, whereas phonology "explores its functional aspects" (p. 4). The author argues that phonology deals with alternating and non-alternating sound substitutions – "the replacement of one sound with another" (p.4) – and that there are three kinds of such sound substitutions. First, a non-alternating sound

substitution is a meaning-changing substitution in which lexical items such as [**b**]rick and [**t^h**]rick completely change the meaning when one sound is replaced with another. Second, meaning-merging and meaning-maintaining sound substitutions involve alternation in which segments are switched without inducing a difference in meaning, but only in their phonetic realizations. Meaning-merging sound substitutions create homophones, pairs of words produced identically with a difference in meaning (e.g., 'pho**m**e book' and 'foa**m**'), whereas the meaning-maintaining substitutions result neither in homophony nor in the change of meaning (e.g., [fɪɫ] 'fill' and [fɪlɪŋ] 'filling'). Meaning-merging sound substitutions indicate that "single phonetic values sometimes correspond to multiple semantic ones" (p.32), and the meaning-maintaining sound substitutions suggest that a single semantic value could be associated with multiple phonetic values. Every chapter ends with a section on how to understand these sound changes through examples from world's languages; for example, the first chapter concludes with examples that mark the past tense in English and the past tense in Dutch. In this part, the author introduces the fourth possible phonological relationship between the sounds – that there is *no* phonological relationship of one sound to another. The author suggests that there is no way of telling whether the past tense suffixes in English and Dutch illustrate meaning-merging or meaning-maintaining sound substitutions, as there is not enough data to support either. The inconclusivity of the claims and what I am going to present in the rest of the book review represent a neat preamble into the main criticism of the book, which is that the author unnecessarily divides one and the same sound substitution into two distinct ones: meaning-merging and meaning-maintaining.

Chapter 2 expands on the meaning-changing sound substitution, which, as its name suggests, means that when a single phoneme is substituted with another phoneme, the meaning of a word changes. The author provides three examples of meaning-changing sound substitution. First, there is a sound substitution of the three voiceless stop consonants [p], [t], and [k] in words 'top', 'tot', and 'tock', which illustrates a meaning-changing process. Second, an almost identical sound substitution is indicated by the words 'Tim', 'tin', and 'ting' reflecting the substitution of the nasals [m], [n], and [ŋ]. Lastly, the author illustrates the point by referring to vowel substitution in words such as 'fellow', 'follow', and 'filo', where the substitution of the vowels [ɛ], [ɑ], and [aɪ] introduces the change in meaning. The author endeavours to show how the acoustic differences of these sounds and the sounds surrounding them underlie the perception of different categories of consonants, and how the transitions between the segments are the most informationally rich components of speech, that no writing system can fully capture.

In Chapter 3, the author explores the meaning-merging sound substitution, which is typical in, for example, nasal place assimilations as in "phone book", where [n] assimilates to [m] under the influence of the bilabial [b]. While the author explains that the 'merging' sound substitutions result in homophones, the author does not provide details on why this kind of substitution is called "meaning-merging". Instead, the author provides a lengthy elaboration on how certain articulatory and acoustic cues are preserved in certain environments, while other cues are absorbed by the following speech sound. Although a matter of speculation, presumably,

contrastive speech sounds (e.g., [n] and [m]), are 'merged' in a certain phonological environment without changing the meaning of the words. For example, in the Dutch morpheme *in,* [n] almost aways assimilates to [m] or [ŋ] in front of [p] or [k] (e.g., [ɪmpɑk] and [ɪŋkɛik]). Contrary to this example, [m] and [ŋ] retain their phonetic properties and do not assimilate into the following stop consonant (e.g., [omkɛik] and [lɑŋten]). The assimilation thus takes place when the likelihood of miscommunication is virtually impossible due to the contextual cues. The author extends this argument by going through Korean's distribution of alveolar obstruents, the patterning of Cantonese and Mandarin unreleased stops [pˀ tˀ, kˀ, m, n, ŋ], the vowel harmony in Hungarian, and voicing interactions present in Russian morphology. Meaning-merging sound substitutions are thus substitutions of otherwise contrastive sounds in different phonetic environments. Since they do not change the meaning of the items, they are not meaning changing, but meaning merging.

The fourth chapter distinguishes four examples of the meaning-maintaining sound substitution. This type of sound substitution is exemplified in English in the pair of words [ɹʌ̃nz] 'runs' and [ɹʌ̃nɹ] 'runner' where the former [n] is shorter while the latter [n] is longer. The author furthers the argument for meaning-maintaining sound substitutions by exploring English clear [l] and dark [ɫ], Corsican alternations involving [p], [b] and [ß], Taiwanese tone alternations, and Seoul Korean stop-tone alternations. The author accepts the view that these phones are in complementary distribution, but notes that there are some examples of complementary distribution "lacking alternation but instead possessing a *static* (or non-alternating) distribution of sounds" (p.129). For example, in Akan, "[k] and [tɕ] never alternate with each other despite their complementary distribution" (p.143), that is, the lack of alternation is due to the phonetic attributes of what likely used to be a single speech sound in the language, namely the consonant [k]. The similar claim is made for New York English [æ] and [æə] (e.g., [æə] appears in NY word 'ban', while [æ] is a part of 'bat'), and for Japanese [g] and [ŋ], with the difference that, in the latter, "sounds in complementary distribution that alternate everywhere else do so upon truncation and reduplication as well" (p.141). The Korean [l] - [ɾ] (alveolar lateral – alveolar tap) alternation is examined in the last part of the chapter. [l] and [ɾ] are realized in different environments, and are argued to present meaning-maintaining sound substitutions. Although the author insists on avoiding more traditional, textbook terminology, the meaning-maintaining sound substitutions actually represent allophones and allophonic variations.

Chapter 5 talks about variation in speech as a trigger and mechanism for the development of the phonological categories. The author presents three models of category development that are all based on speech variation: prototype, exemplar, and probability-matching model. The author argues that the probability matching and the exemplar model fare better on the development of categories, while the prototype model fails to explain a somewhat inconsistent nature of variation in speech. The author then moves on to elaborate on the probability-matching model rather than the exemplar model, because they consider the probability-matching model to underlie the cognitive strategies necessary for the creation of the phonological categories. The chapter describes how probability matching induces both the phonetic stability of a category and the phonetic change of a category. The probability matching model is

supported with examples on how dispersion of vowels occurs cross-linguistically. An entire sub-chapter on the Trans-velar labial harmony illustrates the ways in which, from generation to generation, although the variation of tokens is not pushed in any particular direction due to the intrinsic phonetic pressures, a variant of a token just happens to prevail over other variants. This type of change is called *isotropic*. In contrast, the author illustrates an *anisotropic* change with examples from Comaltepec Chinantec, an Otomanguean language from Mexico, whereby certain variants are more favoured to prevail over other variants. The chapter therefore explains the two types of a possible variation in category development.

In Chapter 6, the author explores the ways in which phonetically isotropic or anisotropic changes, alongside semantic changes, may interact to affect a single phonological system. The phonetic 'forces', as the author calls them, are phonetic variations in speech, while the semantic 'forces' are the contextual parameters that interact with phonetic properties in order to preserve the efficiency of communication. For example, the chapter discusses voicing mechanisms and spirantization in Corsican, in which [t] is realized as [d] between the vowels, but in order to preserve the distinction between the intervocalic and initial [d], Corsican [d] varies towards [ð]. In Corsican voicing and spirantization, the variation is anisotropic, and, as the author maintains, it presents a simpler version of variation where a number of contrastive sound patterns have only two alternants. American English, on the other hand, represents a more complex case of lenis and fortis consonant alternations. Alternations involve only two sound patterns, but each of the two categories has *four* context-dependent alternants. The lenis series of stops, [b, d, g], is always realized in a phonetically natural way irrespective of the context or the semantic 'forces', while the fortis series of stops, [p, t, k], is realized in a phonetically less natural way. The lenis consonants are anisotropic, while the fortis consonants reflect an isotropic change. The author goes on to explore the sound change in the sounds at different word positions, concluding the chapter with an exposition of two verbal markers that are realized as three different variants in Lithuanian that succumb to both phonetic and semantic 'forces'.

The final major part of the book, aptly named *Loquor ergo es* (I speak, therefore you are), examines the contradictory nature of communicative interaction, presupposing that a speaker might want to "ease the burden of their interlocutors while increasing their own" (p.243), i.e. they are either being altruistic, or they are simply being selfish and satisfying their own need to get their ideas across. The reason why the author explores these speaker variables is to argue that phonology is, after all:

> a self-organized system of substantive social conventions that evolves passively over generations of speakers. The regularities we observe in phonological systems are due to a complex interaction of phonetic and cognitive pressures acting over generations and generations of language use, and can be understood only when considering the communicative function of language itself. Hence, *loquor ergo es* (p.246)

The chapter ends with a comprehensive summary of the main points the author has made in the entire book and by exploring the diachronic patterns of morphological alternations in Sea Dayak, an Indonesian language. The very end of the book is

reserved for a quite rich Appendix wherein the author describes the main character-
istics of articulatory and acoustic phonetics.

   A Critical Introduction to Phonology is a thought-provoking and bold descrip-
tion of phonological theory. However, I believe there are two main concerns with
the text worth considering. My primary objection to the phonological theoretical
paradigm presented in the book is that the strong need for a division between
meaning-merging and meaning-maintaining sound substitutions is not well
described, and lacks more substantial arguments. One of the tenuous arguments
for the division is that 'runs' and 'runner' are different from 'fill' and 'filling'
(p.113) in phonological terms, as the former are an examples of meaning-
merging, while the latter exemplify meaning-maintaining sound substitutions of
lengthened [n] and normal [n], and [ɫ] and [l], respectively. The meaning, in
fact, in both these alleged types does not change, so there is no need to separate
the types of the phonological patterning as all these examples could be subsumed
under the meaning-maintaing substitutions. Morevoer, the phonetic realizations of
these sounds tell us that they are allophones of the same phonemes, namely, /n/ and
/l/, respectively (Clark and Yallop 1994, Zsiga 2013). It is also quite unclear *how*
the meaning 'merges' in the homophonous pairs, and how it is different from the
allophonic variations that are exemplified in the meaning-maintaining sound sub-
stitutions. In addition, the author claims that certain changes are not quite straight-
forward. For example, Dutch alterations involving [tə] and [də] (past tense suffix
alternants) are not meaning-maintaining sound substitutions (pp. 32–36). They
are, instead, the consequences of voicing assimilation, as in the words such as
[maftə] ('slept') and [rumdə] ('praised'). Likewise, Lithuanian verbal marker
alterations (pp. 233–238) are classed as belonging to either both or no group, as
the "data are insufficient to reach a confident determination" (p.238). Had the
author dispensed with redundant terminology such as meaning-merging and
meaning-maintaining sound substitutions, they would be able to clearly analyse
what kind of sound changes occur in Dutch and Lithuanian. It is quite evident
that both are what the author calls meaning-maintaining sound substitutions, as
their morphophonemic variation is merely context-dependent. Second, in line
with the previous argument, the book's overreliance on functionally-based phon-
ology, albeit seemingly flexible, turns out to be too rigid, as it does not succeed
in motivating all three sound substitutions. The author has a tendency to draw con-
clusions about patterns based on "logical necessity" (p.114). This kind of thinking
appears too often in the book and presents purely circular argumentation. The
author cannot support the premise that "*functional identity overrides physical
similarity in the determination of category membership or non-membership*"
(p. 112). In fact, the greatest fallacy of such reasoning is that abstract properties
of speech sounds are not necessarily functional (Zsiga 2013). Therefore, to argue
that phonology is a system derived entirely via language use is, while admittedly
tempting, an overstatement.

   The author's decision to argue for a completely functionally-based phonology
needs to be acknowledged. It is surely a theory that sheds a new light on how one
should approach phonology. Yet, contrary to the author's opinion that this book is

for anyone who has any interest in linguistics, I contend that the book would be well suited only for linguists or perhaps language enthusiasts, as it explores phonological and phonetical complexities at various levels and provides examples that non-experts would struggle to understand.

REFERENCES

Clark, John Y., and Colin C. Yallop. 1994. *An introduction to phonetics and phonology*. Oxford: Blackwell.

Zsiga, Elizabeth C. 2013. *The sounds of language: An introduction to phonetics and phonology*. Oxford: Wiley-Blackwell.

Jacques François (dir.). 2021. *L'expansion pluridisciplinaire des grammaires de constructions*. Caen : Presses universitaires de Caen. P. 276. €20.00.

Compte rendu par Patrick J. Duffley, *Université Laval*

Cet ouvrage collectif constitue une bonne introduction aux grammaires de constructions développées depuis une quinzaine d'années dans le cadre général de la linguistique cognitive. Hoffmann et Trousdale (2013) définissent les constructions comme des « appariements forme-sens conventionnalisés », non pas limités aux signes linguistiques tels que conçus par Saussure, mais étendus à tous les niveaux de description grammaticale, comme par exemple :

1. des constructions lexicales : *apple* [æpl] – 'apple'

2. des constructions idiomatiques : *X takes Y for granted* [X TAKE Y fə ɡɹɑːntɪd] – 'X doesn't value Y'

3. des constructions comparatives : *John is taller than you* [X BE Adjcomparatif ðən Y] – 'X is more Adj than Y'

4. des constructions résultatives : *She rocks the baby to sleep* [X V Y Z] – 'X causes Y to become Z by V-ing'

Le volume s'articule en quatre sections. La première a un caractère introductif et comporte deux chapitres traitant, l'un du processus de schématisation (Dominique Legallois, « Illustrations et réflexions sur une opération cognitive fondamentale : la schématisation en linguistique – du lexique aux constructions grammaticales »), et l'autre de la vision des constructions proposée par la grammaire cognitive de R. Langacker (Philippe Gréa, « Grammaire cognitive et construction. Le cas de *type* et *mode de* N »).

La deuxième section est consacrée à une extension de l'approche constructionniste à la diachronie. La contribution de Leïla Ben Hamad (« L'évolution de *pendant* en français: un cas de constructionalisation ») trace le développement de la forme *pendant* de son origine participiale à son statut actuel de préposition, tandis que celle de Raja Gmir (« *Connaître* : de la désémantisation à la