

BOOK REVIEW

Harry van der Hulst: *Asymmetries in vowel harmony: A representational account*. With assistance from Jeroen van de Weijer. Oxford: Oxford University Press, 2018, pp. xix + 503.

1. Introduction

As the title suggests, the aim of the book is to give a representational (in other words, not rule-based and not even constraint-oriented) account of a widely discussed area of phonology, the issue of vowel harmony, broadly construed¹ (and across all relevant languages). But the book offers far more than that: in addition to a truly innovative theory of vowel harmony and a large number of case studies, some of which are elaborated in great detail, showing how that new theory works when confronted with an ample variety of vowel harmony systems in the world's languages, it includes an extensive annotated bibliography of the area (especially in the first chapter, but also interspersed throughout the volume). As such, it is no easy read, but it is also an extremely rich source of information on the current state of the art, as well as the history of pertinent research.

The book consists of eleven chapters, organized into two major parts, preceded by a preface and a list of abbreviations, and followed by an extremely large list of references (35 densely printed pages), as well as a language index and a subject index.

¹ Including cases of umlaut, ablaut, mutation, and metaphony, to name just a few vowel interactions that are not normally considered as cases of vowel harmony.

2. Part I: A new theory of vowel harmony

This part comprises three chapters. Chapter 1 (“Opacity and transparency in vowel harmony”, 3–50) is partly based on van der Hulst (2017b), the entry on vowel harmony in *Oxford Bibliographies Online*. Accordingly, especially as the chapter progresses, the introductory character of the text decreases, and the annotated bibliography character gains ground.

First of all, the set of principles that the author’s own account of vowel harmony will be based on is spelt out as follows (pp. 3–4):

- (1) a. Phonological primes are unary (they are called *elements*).
- b. Elements are grouped in opponent pairs forming *classes*.
- c. Classes form a *hierarchical organization*.
- d. Combinations of elements, and of classes, invoke a *head-dependency relation*.
- e. Segments are minimally specified in accordance with [...] a *fixed hierarchy of elements*.
- f. Vowel harmony involves the *licensing* of elements in nuclei, with licensers being licensed elements in adjacent nuclei.
- g. Licensing is strictly *local* (either with respect to nuclei or, less often, some other element tier).
- h. Alternating vowels contain the harmonic element as *variable*.
- i. A variable element is only phonetically interpreted if it is licensed.

The first four principles are those of the author’s metatheory called **Radical CV Phonology** (RcvP), introduced in some more detail in the second chapter. (1f) is derived from approaches to vowel harmony in Government Phonology, while (1h) presents a genuine innovation of the book under review. As it turns out later, along with **alternating** vowels, the author also represents all **neutral** vowels as involving variables that, however, do not have to be licensed in order to be phonetically interpreted. Rather, neutral vowels with variable elements (the unary counterpart of underspecification) behave transparently whenever the harmonic elements in them are **licensed**, and opaquely when they are not.² In addition to the kind

² Although absolute neutralization à la Vago (1973) is explicitly rejected (p. 17), it turns out later that a “mild” variety of abstractness will be subscribed to. For instance, in a palatal harmony system where [i] behaves transparently, some instances of [i] will leave the phonological component with their variable (I) licensed, while others with their variable (I) unlicensed. Although the latter situation would predict the surface occurrence of a back [ɨ], phonetic implementation will make sure that all [i]’s and “[ɨ]’s” are realized as front. Accordingly, the author claims (p. 189) that a suffix

of licensing referred to in (1fg), dubbed “lateral licensing”, another kind of licensing, “licensing-by-position” (or positional licensing) is also introduced later on.

Having thus set the stage, the chapter goes on to discuss opacity and transparency, starting with fully symmetrical harmony, then turning to the behaviour of neutral vowels, to other vowel behaviours (triggering vowels, target vowels, opaque vowels, transparent vowels, blocking vowels, absorbing vowels, Trojan vowels, and hybrid vowels), also friendly vowels vs. hostile vowels, and positive vowels vs. negative vowels (vs. ambiguous vowels). The difference between “perceptual transparency” and “genuine transparency”, as well as some potential problems for the theory like the unexpected behaviour of neutral [i] and [e] in palatal systems and other types of unexpected transparency and opacity are also discussed.³ Next, root control systems vs. dominant-recessive systems are differentiated. The chapter concludes by a review of literature on some general aspects of vowel harmony that will not necessarily reappear in the rest of the volume, such as issues of terminology and typology, mechanisms of vowel harmony, the role of rules and/or constraints in descriptions of vowel harmony, harmonic domains, conditions on triggers and targets, directionality, vowel harmony and loanwords, and various approaches to data and methods.

Chapter 2 (“The RcvP model”, 51–111) presents the author’s underlying (meta)theory of phonology, **Radical CV Phonology**. Section 2.2 offers a synopsis of RcvP. Rather than trying to present an outline of that synopsis here, I refer the interested reader to the full text whose synopsis is included in this chapter, i.e., van der Hulst (in preparation), the manuscript of which is available at <http://harry-van-der-hulst.uconn.edu/publications/Unpublished-manuscripts>. In 2.3, the author focuses on the minimal (redundancy-free) representation of vowel systems within his model (abandoning what were just introduced as the “real” representations of segments for a more conventional and more user-friendly set of element labels⁴), and discusses the role of constraints that are needed to narrow down the set of all possi-

which is usually called non-alternating (like terminative *-ig* in Hungarian) in fact **does** alternate (between two phonetically identical outputs [ig] and [iɡ]).

³ A separate section is devoted to participating consonants which, as the author admits, is a “catalogue” of some such cases that he offers for further study.

⁴ Two pairs of these labels, V used for ‘non-low’ vs. *V* (in italics) meaning ‘advanced tongue root’, and A ‘low’ vs. *A* (in italics) standing for ‘retracted tongue root’, respectively, are not easy to distinguish for the naked eye and hence not really user-friendly.

ble vowel structures to the set that is valid for a given language.⁵ Sections 2.4–9 address issues like underspecification, markedness and enhancement, articulatory and acoustic correlates of elements, and the affinity between palatality and advanced tongue root.

Chapter 3 (“Harmony as licensing”, 112–154) presents the crux of the matter: the idea that in order for an element to be licensed in a certain vowel, and hence be phonetically implemented, it has to be lexically specified there **as a variable**. The (immediate) source of licensing is an adjacent vowel in the appropriate direction that involves a locally present, **non-variable** instance of the same element. (In order to account for the unbounded character of vowel harmony, applying across a series of affixes if needed, the source of licensing does not have to bear the given element in a non-variable manner lexically: it may start out as a variable specification that becomes non-variable by a previous application of the licensing mechanism.)⁶

Having discussed the main proposal in sections 3.2 (“Licensing and lexical representations”) and 3.3 (“Dominant-recessive harmony”), the author then goes on to deal with issues of directionality and cyclicity of licensing in 3.4–5. In Section 3.6, he addresses “what is perhaps the most central topic in the study of vowel harmony: the behavior of vowels that fail to alternate” (pp. 112–3). Section 3.7 (“Why the variable approach is better than the abstract approach”) deals with the matter of abstractness, followed by conditions on licensing (3.8) and skewed harmonic counterparts (3.9).

3. Part II: Case studies

This part, over twice as long as the first, comprises seven chapters. The first of these (“Palatal harmony”, 157–196) begins with discussing the behaviour of neutral vowels in Balto-Finnic languages, devoting separate sections to Finnish and to three other Finnic languages (Votic, Khanty, and Seto). As part of the discussion of Finnish, but on a more typology-oriented note, the author presents a reply to Rebrus and Törkenczy (2015a; b) and a

⁵ The author meticulously discusses ways in which the standard IPA transcription symbols can properly be made to correspond to his elemental representations, yet throughout the volume, data are cited now in IPA, then in other transcription systems, or in the orthography of the given language or even in mixtures of orthographic and transcription symbols; probably the transcription conventions (roughly) follow the sources from which the data are cited.

⁶ A succinct presentation of the theory introduced in this chapter and used in the rest of the book is van der Hulst (2017a).

brief summary of Polgárdi (2015). The chapter then turns to Hungarian.⁷ Finally, chapter 4 ends with brief comments on other cases of palatal harmony.

Chapter 5 (“Labial harmony”, 197–241) first discusses the vowel harmony system of Turkish, both palatal and labial, including issues like irregular suffixes, harmonizing epenthetic vowels, disharmonic roots, and the interaction of consonants and harmony. Next, in a section entitled “A typology of labial harmony”, the author discusses logical combinations of palatal and labial harmony, defective patterns in labial harmony, the interdependency between labial and palatal harmony, and defective patterns in palatal harmony. The chapter then turns to three other Turkic languages (Yakut, Bashkir, and Azerbaijani), Yowlumne (formerly known as Yawelmani), cases of harmony by non-licensing, and concludes by a catalogue of dependencies.

Chapter 6 (“Aperture harmony”, 242–288) analyses lowering and raising harmony in Bantu languages (Kikuyu, Kimatumbi, Esimbi and Shona on the one hand, and Nzebi, Kinande, Zulu and some other Bantu languages on the other). Some of these languages are discussed in considerable detail, others are devoted a few lines or a couple of paragraphs at most. After brief mentions of Lhasa Tibetan and Farsi, the chapter concludes by discussing raising and lowering in Pasiego Spanish and metaphony in Italian dialects. Chapter 7 (“Typology of African tongue root systems”, 289–330) and Chapter 8 (“Case studies of African tongue root systems”, 331–364) are devoted to a detailed discussion of ATR and RTR harmonies, formalised in terms of licensing *V* and licensing *A*, respectively, as well as a third type that the author dubs “rtr harmony” and for which he argues that it involves licensing of headed A (meaning that it is in fact a case of height harmony, rather than, as assumed in the literature, that of tongue root harmony). The case studies in chapter 8 involve Niger-Congo languages (Wolof, Okpe, Ogori, C’Lela, Tunen, Yoruba), Nilo-Saharan languages (Maasai, Turkana, Bari, Lango, Moru-Madi), and Afro-Asiatic languages (Somali and Kera).

Chapter 9 (“Asian tongue root systems”, 365–401) discusses Tungusic and Mongolian languages, while chapter 10 (“Other cases of vowel harmony”, 402–441) offers a panorama of other Asian systems (Middle Korean and Chukchi), North American systems (Nez Perce, Coeur d’Alene, Menomini), one South American system (Karajá), Australian systems (Djingili, Warlpiri, Nuangumardu), Austronesian systems (Kimaragang

⁷ I will offer some comments on this section of the book in a separate section below.

and Javanese), Arabic systems (Maltese, Palestinian and Tigre), Indian systems (Assamese and Telugu), as well as laxing harmony in Romance languages (Andalusian Spanish, Pasiego Spanish and Canadian French). The chapter concludes by a brief consideration of stress-induced harmony: Germanic umlaut, palatal harmony in Chamorro, retroflex harmony in Yurok, nasal harmony, and Sumerian as an example of vowel harmony in ancient languages.

The last chapter of the book (“Summary and areas for further research”, 442–456) revisits and summarises the main points made throughout the book, with some special attention paid to system dependency, opacity vs. transparency (once more), and dependencies among tiers.

4. Hungarian

With respect to Hungarian vowel harmony (section 4.4), the presentation of the basic data and their preliminary analysis is followed by small sections on antiharmonic neutral roots, disharmonic roots, and non-alternating suffixes. Subsection 4.4.3 (“On harmony that cannot be represented”, 186–192) discusses the “dark secrets” (Rebrus et al. 2012) of Hungarian vowel harmony, taking up the challenge suggested by the subsection title (based on the title of Rebrus et al. 2013).

In order to account for the “count effect” (stems ending in more than one neutral vowel have a strong tendency to select a front suffix vowel; some display vacillating behaviour, while some consistently take front suffixes) the author borrows the notion of “Proper Government” (an empty nucleus must be adjacent to a non-empty nucleus that properly governs it and hence makes it possible for that nucleus to surface empty, i.e., not to be phonetically interpreted) from Government Phonology (GP). However, standard GP assumes that the governing nucleus is situated to the right of the governed one (iambic proper government), while the present author uses this notion in the opposite (left-to-right) direction (given that vowel harmony is stem-to-suffix).⁸ Also, the effect of proper government is likewise reversed: “The most straightforward way to apply this idea is to say that the empty nucleus in the fourth syllable [of *analízis* ‘analysis’] must be governed by the preceding syllable, which necessitates the licensing of

⁸ It is true that there is another, more recent branch of PG that assumes what is called trochaic proper government (see Polgárdi 1998), but the author here claims that proper government goes in this direction in **any** GP analysis (“an empty nucleus must be adjacent to (usually preceded by) a non-empty nucleus”, p. 187).

its variable element”, 187).⁹ That is, here proper government is used for licensing the surface **presence** of an **element**, whereas GP uses it for licensing the surface **absence** (more exactly, non-interpretation) of a **vowel** (an empty nucleus). In order for this account to work, the author assumes furthermore that the third vowel in the above example has a **non-variable** I element (even though he repeatedly claims throughout that **all** neutral vowels have variable (I)). Whether or not one accepts this account, the vacillating behaviour of a large subset of such stems is not covered by it; this is not even attempted. What is more, it says nothing of the numerous “count effect” cases involving [e:] or [ɛ] as one or both of the nuclei concerned.

Turning to Rebrus et al.’s “polysyllabic split” (antiharmonic behaviour is only possible if the stem contains a single neutral vowel; stems consisting of more than one syllables with neutral vowels always take front suffixes), this is claimed by the author to be “reminiscent of the count effect and therefore the account can be the same” (p. 188). First, in this case there is no vacillation at all, hence the account cannot be the same. And second, more crucially, the point that “there can be no sequence of empty nuclei” works for items like *kilincs* ‘door handle’ or *bíbic* ‘pewit’, but it does not work for items like *kerék* ‘wheel’ or *néni* ‘auntie’, also covered by the polysyllabic split. For these, we could take recourse to another mechanism, positional licensing, originally proposed for lexical items that could be antiharmonic but in fact are not (like *víz* ‘water’). However, this alternative solution would fail to account for the very fact that polysyllabic all-neutral stems are never antiharmonic.

Rebrus et al.’s third point concerns truncation. As the present author summarises the issue, in “mixed stems with a neutral vowel that is followed by a non-neutral vowel [...], when the latter is deleted, the result looks like a ‘neutral vowel root’” but such truncated roots “‘stay loyal’ to the harmonizing behavior of the non-truncated root” (p. 188) as in *piszok* ‘dirt’, *piszk-os* ‘dirty’, *piszk-unk* ‘our dirt’ or *béna* ‘lame’, *bén-ít-hat* ‘may make lame’. The author suggests that this issue is not problematic “if we assume that positional licensing is only invoked for neutral vowel roots and is thus not applicable to mixed roots, not even after truncation” (p. 188). This appears to be a simple way out; but note that it does not work for cases like *Év-á-nak* ‘Eve-dat’ vs. *Év i-nek* ‘Eve-diminutive-dat’. The author offers an explanation for the latter case, too, but the two explanations cannot

⁹ Although this sentence is ambiguous, at least one of its interpretations (and the one that the accompanying display supports) is as given in the text. No attempt to resolve the ambiguity is observable.

be both valid at the same time, hence neither half of the truncation issue is really explained.

The phenomenon of “harmonic uniformity” means that “the harmonic properties of stems remain constant within the paradigm of forms that are derived from this stem, even when suffixation creates sequences of two neutral vowels that would, when part of the stem, lead to vacillation” (p. 189). In the alternative solution offered by the author, “the key idea is that the so-called non-alternating suffixes *do* alternate between a front and back alternant” (both of which are phonetically implemented as front, cf. footnote 2 above). The last subsection dealing with Rebrus et al.’s cases of “harmony that cannot be represented” concerns their “transparency hierarchy”. In refuting this notion, the author states “There is an extensive literature on the *probability* of variation, but I will not deal with this aspect of the system [...] I will focus on the *possibility* of vacillation” (p. 190).¹⁰

Before rounding off the discussion of Hungarian vowel harmony by two short sections on “how transparent vowels do *not* behave and why” and a discussion of rounding harmony, respectively, the author concludes his discussion of Rebrus et al.’s points by saying that these authors are “overly pessimistic”, adding that they “raise important issues [...] but, as I have shown, the different behaviors of the neutral vowels can be accommodated in the *representational* theory proposed here” (p. 190). In view of the problems raised in this section, we can conclude that the author is perhaps “overly optimistic”; in general, it appears that his framework makes it possible to accommodate **any** strange property of harmony systems, given sufficient stretch of imagination.

5. The quality of production

As it may have become clear from the foregoing, this book is an important achievement in several respects. Unfortunately, from the reader’s point of view, the effect is somewhat spoiled by the exceptionally high number of typographical errors occurring throughout. As the author of a recent book review in *Phonology* aptly remarks, “[such] deficiencies are often quite out of the reach of the modern author’s hands, [...] and the now commonplace practice of outsourcing various stages of editing and typesetting renders post-proof errors far more likely” (Bishop 2019, 177). However, the sheer number of errors here, typographical and other sorts alike, is far beyond

¹⁰ This sounds like a fair restriction of self-imposed tasks, except that the possibility of vacillation is never returned to with respect to Hungarian.

what is “customary” in recent publications in the field of linguistics. Furthermore, given that the book under review relies heavily on “representations” (charts, tree diagrams, or transcriptions), the reader is often hard put to figure out what may have been the author’s original intention, especially since those representations are often not sufficiently accompanied by prose comments that would make it easier to see what is just a typo and what is indeed intended. Let us hope that Oxford University Press will at the shortest possible notice present the community of phonologists with a revised version of the book in order for it to occupy, as soon as possible, the place in the literature of vowel harmony it deserves.

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