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Review

Paul Newman (ed.) (2017). *Syllable weight in African languages*. (Current Issues in Linguistic Theory 338.) Amsterdam & Philadelphia: John Benjamins Publishing Company. Pp. x + 219.

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This volume is a collection of twelve articles on the topic of syllable weight, drawing on mostly primary data from African languages. African languages have contributed enormously to the development of phonological theory over the decades (see e.g. Odden 1995, Hyman 2003), but this is the first volume dedicated specifically to what they can teach us about syllable weight. As Paul Newman points out in his introduction, African languages are also an appropriate testing ground, given the formative role played especially by Afro-Asiatic languages in the development of the theory of syllable weight. The sample of languages in the current volume is genealogically and geographically diverse. It comprises Niger-Congo, Nilo-Saharan and Afro-Asiatic languages from all across the continent, and the selection is exemplary in demonstrating the many roles that syllable weight can play in morphophonology.

The papers range in length from 14 to 20 pages. While all of them address the question of syllable structure, some feel as though they circle around the question of syllable weight, without addressing it directly. That said, every chapter is rich in data, often novel, making the volume an excellent resource for future theoretical work, as well as pedagogical materials. The authors represent a diverse group of voices, including a number of African scholars, and range in rank from graduate students to well-established senior and emeritus scholars. The gender distribution, however, is heavily skewed towards male authors (two-to-one).

Syllable weight in African languages will be of interest to specialists and non-specialists alike. Paul Newman's introduction and the reprint in Chapter 1 of his seminal 1972 paper 'Syllable weight as a phonological variable', together with Matthew Gordon's overview paper in Chapter 2, provide a solid, accessible introduction to issues surrounding syllable weight and existing literature on the topic (including data from non-African languages). The remaining chapters present new scholarship that advances our understanding of the language- and process-specific nature of syllable weight. The most common topics addressed include tone, stress, minimality and reduplication. The role of syllable weight in contour-tone distribution is discussed for Hausa (Newman; Chapter 1), the Nilo-Saharan Sara-Bagirmi languages (Keegan; Chapter 7), Southern Kenyan Maa (Griscom & Payne; Chapter 9) and Kusaal (Musah; Chapter 11), representing languages from all three major phyla, while other tonal phenomena sensitive to weight are covered for other Chadic languages (Newman; Chapter 1) and the Mara

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Bantu languages of Tanzania (Aunio; Chapter 12). The question of stress arises for Maghrebi Arabic, as it pertains to the distribution of schwa (Souag; Chapter 3), Amharic (Sande & Hedding; Chapter 4) and Pulaar (Mc Laughlin & Wiltshire; Chapter 10). Syllable weight and minimality is discussed for Fur (McKeever; Chapter 8), Southern Kenyan Maa (Griscom & Payne; Chapter 9) and Pulaar (Mc Laughlin & Wiltshire; Chapter 10). Reduplication effects are also found across all three phyla, specifically in Amharic, Fur and Pulaar. In addition to the above topics, two chapters focus on the role of syllable weight in metre and song, namely Dell & Elmedlaoui's chapter on Tashlhiyt Berber (Chapter 5) and Schuh's chapter on Hausa (Chapter 6).

The volume begins with the reprinting of Newman (1972). Newman resisted the urge to modify this original influential work, except to fix errors, add a few updated references and provide a clearer set of examples for Hausa. In 2020, the term 'syllable weight' is common parlance in phonology, so I found it quite eye-opening to read the work that cemented that terminology and established its cross-linguistic validity. After an outline of syllable-weight phenomena in a number of languages, including many classical languages, the chapter focuses on data from the Chadic language family, specifically Bole, Kanakuru and Hausa. Both Bole and Kanakuru display predictable tone patterns on certain categories (verbs in Bole, verbal nouns in Kanakuru) based on the weight of the initial syllable; interestingly, in Kanakuru the weight of the initial syllable controls the tone of the *second* syllable, with heavy initials triggering a following Low tone and light initials triggering a following High. Several data patterns are discussed for Hausa, including two cases of templates involving syllable weight (for a class of abstract nouns and for pronouns), the restriction of a falling contour tone to heavy syllables, and a beautiful case of weight polarity with a verbalising suffix *-a(a)*.

Chapter 2 is an overview by Matthew Gordon, 'Syllable weight: a typological and theoretical overview'. For anyone interested in an introduction to the literature on syllable weight, this chapter would be a good place to start. In a concise and impressive survey, Gordon covers the role of moras, weight-by-position, language- and process-specificity of syllable weight, the phonetic basis for weight, the exceptional behaviour of final syllables and the role of onsets in determining weight. Gordon does not restrict himself to African languages, a choice which allows him to provide a comprehensive overview, though many of his examples are from the continent. The typological survey he lays out primes the reader for the issues that come up in subsequent chapters, such as whether coda consonants contribute to weight or whether all phonological processes in a language (e.g. stress and reduplication) define heavy and light in the same way.

Chapter 3, Lameen Souag's 'Syllable weight and morphophonologically induced resyllabification in Maghrebi Arabic', addresses the distribution of schwa in Maghrebi Arabic. In most of these dialects, all short vowels have merged to schwa, but this vowel is not permitted in open syllables, which Souag analyses as being due to a ban on light syllables. The chapter considers both diachronic and synchronic accounts of the data, including analyses in which the schwa undergoes metathesis, is epenthetic, or is underlying but deleted. Most of the analyses are couched in optimality-theoretic terms, but, without explicit tableaux, the argumentation is sometimes difficult to follow. Nevertheless, the chapter is rich in both data and references, and provides an excellent introduction to a complex set of alternations. One question I was left wondering about is whether the concept of syllable weight remains applicable in a language with no light surface syllables. That is, would a learner

posit a light–heavy distinction if the phonology disallowed one of those two categories? One way to understand the distribution would be to propose that the Maghrebi Arabic dialects represent an extreme case of minimality, in which the bimoraic minimum is at the level of the *syllable* rather than the stem or the word.

The next chapter, 'Syllable weight in Amharic', by Hannah Sande & Andrew Hedding, is based on primary data from Amharic, a Semitic language spoken in Ethiopia. The authors make the convincing argument that Amharic represents a type of language predicted by Hayes' (1989) moraic theory, in which geminates are moraic but other coda consonants are not. Given the absence of long vowels in the language, this sets up the dichotomy between (C)VG as heavy syllables and (C)V(C) as light. Evidence for this weight distinction comes from two arenas. First, while default stress in Amharic falls on alternating odd syllables (i.e. trochees from the left), syllables closed by the first half of a geminate attract stress. This attraction is so strong that it can even create stress clash if there are consecutive geminated syllables. Further evidence comes from adjectival plurals, where two patterns are found: if the adjective contains a geminate, the geminate consonant and preceding vowel are reduplicated (e.g. *saff* → *safaff* 'wide (PL)'); all other adjectives are suffixed with *-occ* (e.g. *takac* → *takacocc* 'lazy (PL)'). Sande & Hedding situate the case of Amharic amongst other reported cases in which geminates are moraic and thus produce heavy syllables (Davis 2011), including Fula, San'ani Arabic and Cahuilla.

Chapter 5, entitled 'Syllable weight in Tashlhiyt Berber', is written by François Dell & Mohamed Elmedlaoui. Tashlhiyt Berber is famous as a language in which any segment, including obstruents, can act as a syllable nucleus (e.g. Dell & Elmedlaoui 1985). In this paper, the authors draw on evidence from metre in traditional songs to show that open syllables are light, and syllables with a coda consonant are heavy. However, in direct contrast with Amharic, geminate consonants act as what they call 'hinge consonants', which can pattern as either heavy or light, depending upon the needs of the metre. They defend a moraic underpinning of the heavy–light distinction based on the metrical equivalence of two light syllables *vs*. one heavy, bolstered by templatic plurals which obligatorily consist of four moras, regardless of syllabification. Following on the heels of Sande & Hedding's chapter, it seems that the weight distinctions in Tashlhiyt Berber would not be predicted by Hayes' moraic typology, suggesting that further cross-linguistic work ought to be done on geminates to develop a more articulated typology of their behaviour.

Dell & Elmedlaoui's chapter transitions seamlessly to Chapter 6, Russell G. Schuh's 'The psychological reality of syllable weight', which likewise looks at versification to determine syllable weight in Hausa. Versification, Schuh argues, allows us to probe what speakers know about their own phonology, since distributing syllables across a metrical template turns implicit knowledge into observable behaviour. It can be a source of evidence for a weight distinction even in languages where such distinctions are not very active in the regular phonology (though, as Newman shows in Chapter 1, such is not the case for Hausa). Schuh's analysis considers both the abstract metrical templates and their text setting, i.e. how the words are set to music. Like Tashlhiyt Berber, he demonstrates that a heavy position can be filled by either a single heavy syllable or two light syllables. He goes further, showing that singers maintain awareness of the metrical template even in musical settings that largely neutralise the heavy *vs*. light distinction by forcing more syllables into fewer musical beats. In these cases, the downbeat always aligns with a strong syllable, and, while heavy

syllables are sung on notes of multiple durations, light syllables are all performed on short (eighth) notes.

Chapter 7 transitions to Nilo-Saharan languages, with John M. Keegan's 'Syllables and syllable weight in Sara-Bagirmi languages', a group of Central Sudanic languages spoken in Chad. Keegan's chapter lays out syllable structure in the three subgroups of the family, and posits a three-way distinction between light, heavy and superheavy syllables. Heavy syllables, including those closed by sonorant codas, are characterised by being bitonal. Some of the most compelling evidence for weight comes from tonal preservation and compensatory lengthening of the following vowel when a sonorant coda is resyllabified as an onset (after the addition of a vowel-initial suffix). In addition to describing the synchronic state of affairs, Keegan offers some insights into how the modern syllable shapes (especially heavy syllables) arose diachronically.

Chapter 8, 'Reduplication in Fur: prosodic structure and sonority', by Ashley L. McKeever, provides novel data showing that, *contra* Gordon (2006), syllable weight is phonologically distinctive in Fur. Specifically, it is active both in defining a bimoraic minimal word and in reduplication. The reduplication facts are complex, involving both full and partial reduplication, which in most cases appear to be lexically determined. However, there is evidence that most prefixing reduplication aims for bimoraicity: (C)VC, CV.CV and CV.CVC bases can undergo full reduplication (with the word-final coda appearing not to contribute a mora in the case of CV.CVC), but forms with a heavy initial syllable or trisyllabic forms can only undergo partial reduplication, which is often, but not exclusively, suffixal (-CV).

The last Nilo-Saharan chapter is Richard Griscom & Doris L. Payne's 'Non-uniform syllable weight in Southern Kenyan Maa (Maasai)'. The chapter describes a case of 'phenomenon-specific' weight categorisation, wherein which kinds of syllables count as light and heavy depends upon the particular process or phenomenon, rather than being uniform across the language. For the purposes of syllable templates, CVVVC counts as heavier than either CVC or CVVC, and is restricted to word-final position. For verb-root minimality, the minimal monosyllabic form must include either an onset or a coda; both appear to contribute some weight (see e.g. Ryan 2014 on onset weight), and are thus heavier than V. Finally, for the purposes of bearing contour tones, only the nucleus contributes weight: (C)V(C)(C) is light, (C)VV(C) is heavy and (C)VVV(C) is superheavy. The chapter contains an impressive amount of data, including phonetic analysis of vowel sequences in complex nuclei.

Chapter 10 transitions to Niger-Congo languages, with Fiona Mc Laughlin & Caroline Wiltshire's 'Syllable weight in the phonology of Pulaar'. The authors provide an overview of the documented role that syllable weight plays in stress assignment in several varieties, before turning to their own (instrumental) study of Senegalese Pulaar stress. In some described varieties, syllable weight plays no role, while in others, the rightmost heavy syllable attracts stress away from away from the default initial position (in some dialects, though, a final heavy syllable is extrametrical, so that only non-final heavy syllables have this effect).

The most complex case is found in Niang's (1997) description of Mauritanian Fuutankoore Pulaar stress, where the heaviest non-final syllable (from the scale CVVC > CVV > CVC > CV) attracts stress, and in cases of ties, the leftmost syllable is stressed. The authors tested the closely related Senegalese dialect, and found no effect of syllable weight on the stress system. However, syllable weight is operative in reduplication, compensatory lengthening and word-minimality.

Chapter 11, A. Agoswin Musah's 'Syllable weight and tonal patterning in Kusaal: a moraic perspective', draws data from the Gur/Mabia family, a very different branch of Niger-Congo. Kusaal is spoken in Northern Ghana by some 450,000 people. Musah shows that the heavy *vs.* light distinction in Kusaal is a question of one *vs.* two moras, with only complex nuclei (long vowels or diphthongs) yielding bimoraic syllables. In other words, coda consonants (even sonorants) do not contribute weight. He draws his evidence from the fact that contour tones are restricted to heavy syllables, suggesting that the mora is the tone-bearing unit. While I question the 'either/or' approach to syllable-internal constituents like rhyme and coda *vs.* the use of moras, the chapter is clearly written and full of primary data.

The last chapter, Lotta Aunio's 'Syllable weight and tone in Mara Bantu languages', moves to the other side of the continent, and investigates the role of syllable weight in a group of Bantu languages spoken in Tanzania. Aunio's work also looks to tonal evidence for syllable weight, but with a very different set of facts. Like many other Bantu languages, the Mara group displays a H *vs.* toneless contrast, with the position of the H tone lexically determined in nouns and largely determined by TAM (tense/aspect/mood) in verbs. Giving ample exemplification, Aunio demonstrates that heavy syllables have a tendency to attract the H tone away from its predetermined location, but that the details of this attraction differ based on TAM category. In Ikoma, for example, H always retracts to a heavy penult in the past tense, but only optionally in the conditional. Of further interest, very closely related languages show considerable variation in how syllable weight interacts with tone assignment. The phenomenon in this chapter bridges the gap between tone and stress and is likely to serve as fertile ground for future research.

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