

Onset prominence in Wubuy reduplication

Wubuy (also known as Nunggubuyu) is an endangered Gunwinyguan (non-Pama-Nyungan) language of Australia. Its reduplication (Heath 1984: 37–42) has not, to our knowledge, received a generative treatment. Prefixing reduplication is productive and frequent (Heath 1980), indicating, among other things, “repetition or prolongation” in verbs and plurality in nouns. Without exception, the reduplicant is monosyllabic $C\check{V}$ - when the base begins with an obstruent, as in (1), and disyllabic $(C)\check{V}C_1\check{V}$ - when the base begins with a sonorant, whether a sonorant consonant, as in (2), or a vowel, as in (3), where coalescence yields long vowels. (Additionally, a small subclass of sonorant-initial stems take the $C\check{V}C_1\check{V}$ - reduplicant, as expected, but harden its initial to an obstruent, e.g. *bara-wara*-; we set these aside in this abstract.) Our analytical focus is this variation in reduplicant size as conditioned by onset sonority. Other aspects of the reduplication, such as its vocalism, instantiate tractable generalizations familiar from other languages.

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| (1) | a. | ma- di =dilila-ŋi | “it was dripping” | (Heath 1980: 17) |
| | b. | ŋu- gu -gulmuŋ=ga:ju:: | “he cut up its belly” | (21) |
| | c. | wini- bu =buri | “they were sitting” | (24) |
| | d. | wa- ga -ga:-la | “other side” | (31) |
| | e. | niwu- ba =baga aŋ=ju-ŋa: | “he cut the eyes in it” | (88) |
| (2) | a. | ŋi- jama =jama: | “it kept doing that” | (18) |
| | b. | wini- ŋamba =ŋambir-ni | “they bathed” | (17) |
| | c. | wini- wudu =wudi-Ø | “they were still up” | (17) |
| | d. | liri -liribala-wala-waj | “along below” | (20) |
| | e. | wu- adba -adbiða: | “it is tied” | (107) |
| (3) | | wuna: ga :garaŋga: | “they looked for him” | (18) |
| | | via /wuna- aga -a=garaŋga:/ | | |

The alternation between mono- and disyllabic reduplicants in itself is nothing new. In Boumaa Fijian, for instance, the reduplicant is monosyllabic (CVV-) when the base is heavy-initial and otherwise disyllabic ($C\check{V}C\check{V}$ -) (Dixon 1988), reflecting a foot. A foot-based analysis is not viable for Wubuy, in which $T\check{V}$ reduplicants (where T is an obstruent) are unstressed and $T\check{V}$ is not otherwise footed for stress or minimality (cf. Hore 1981, Heath 1984, Baker et al. 2019, Nyhuis et al. 2020).

As another potential strategy, in some languages, phonotactics motivate variation in reduplicant size, as when markedness overrides a default size. In Nakanai, for instance, a reduplicant is frequently disyllabic (e.g. *palo-palo*), but monosyllabic if it would contain two obstruents (e.g. *ba-beta*; Johnston 1980), violating *2OBS per Spaelti (1997). This latter approach is untenable for Wubuy, as no viable phonotactic markedness constraint motivates the size variation. One cannot, for instance, exploit obstruent unmarkedness, as McCarthy et al. (2012) do with *MAR/LIQ for Sanskrit, in which the least sonorous member of a cluster is copied (e.g. *du-druv-* rather than **ru-druv*). If the default is disyllabic, obstruent unmarkedness yields **baga-* for (1e); if monosyllabic, it yields **ja-* for (2a). Cross-syllable phonotactics (e.g. regulating sonority combinations in CVC) are equally unhelpful, given

that all sonority combinations arise due to reduplication: T-T in (1a), N-N in (2a), T-N in (2b), and N-T in (2c). One would have to say that a consonant cannot follow TV *within the reduplicant*, that is, say, *TVC_{RED}. Even if this were accepted as a possible markedness constraint, it amounts to stipulating the description.

We offer a typologically principled solution in terms of weight. As background, a number of languages and systems distinguish between the weights of TV and NV. In such cases, TV is always heavier than NV (the reverse of the effect of sonority on weight in the coda; on this reversal, see Gordon 2005 and Ryan 2019b). Stress systems that have been argued to exhibit TV > NV include Arabela, Karo, Pirahã, Ngalakgan, Tümpisa Shoshone, and even English, statistically (Gordon 2005, Baker 2008, Topintzi 2010, Ryan 2014, 2019b). Beyond stress, onset sonority plays a role in phrasal end-weight, again always such that TV outweighs NV (Cooper and Ross 1975, Campbell and Anderson 1976, Pinker and Birdsong 1979, Oden and Lopes 1981, Müller 1997, Parker 2002, Ryan 2019a). As a third weight-sensitive system exhibiting TV > NV, Ryan (2014, 2019b) adduces evidence from poetic meter.

We argue that Wubuy (and with it, reduplication) joins this typology, in that the reduplicant is minimally a particular kind of heavy syllable, namely, TV. Heavy syllable targets are commonplace for reduplication, but this is the first case we are aware of in which sonority affects weight in this context. The core of the analysis proceeds as follows. First, because ANCHOR-L is undominated, RED cannot skip a syllable to achieve the TV target. For example, *wuḍi* cannot reduplicate as **ḍi-wuḍi*. Next, disyllabic size is the default, in the sense that it is what emerges if a TV target cannot be achieved. Disyllabic reduplicants are readily analyzed as feet; the TV target here is effectively superimposed on (i.e. outranks) such a system. What, then, enforces the TV target? RED=TV would ostensibly violate the dictum of McCarthy and Prince (1995) to the effect that reduplicants are defined as prosodic constituents. But it was always assumed in that theory that the reduplicant can be defined not just as a constituent per se (e.g. syllable), but as a *heavy constituent* (e.g. bimoraic syllable). Given the previous paragraph, TV is well positioned cross-linguistically to qualify as a heavy constituent, even though it cannot be analyzed as bimoraic in many cases, including this one. On this approach, then, the templatic theory of RED could be expanded without letting in arbitrary targets such as RED=NV.

Since the mid-90s, some analysts have attempted to do away with templates like RED=X, pursuing instead the view that reduplicant size is a byproduct of TETU, the emergence of the unmarked. As we discuss, while atemplatic workarounds may be possible for Wubuy, constraint indexation to RED is unavoidable (as also in Gouskova 2007). Outside of RED, there is no evidence for the unmarkedness of TV as an affix in Wubuy (on the contrary; cf. (1–3)) such that one might gain any insight from exploiting language-general markedness. Furthermore, independent challenges to pure-TETU approaches to reduplication have been mounted (e.g. Spaelti 1997, Gouskova 2007). We conclude by examining the historical origin of sonority-conditioned reduplicant size variation in Wubuy in light of comparative data.

Selected abbreviated references. Gordon, Matthew (2005) “A perceptually-driven account of onset-sensitive stress,” *Phonology*. Gouskova, Maria (2007) “The reduplicative template in Tonkawa,” *Phonology*. Heath, Jeffrey (1980) *Nunggubuyu myths and ethnographic texts*, (1984) *Functional grammar of Nunggubuyu*. Ryan, Kevin (2014) “Onsets contribute to syllable weight,” *Language*, (2019) *Prosodic weight*. Spaelti, Philip (1997) *Dimensions of variation in multi-pattern reduplication*, UCSC dissertation.