Derivational phonology without cyclicity
Dmitrii Zelenskii

The information of syntactic structure (constituency) is obviously used twice in Standard Generative Phonology (Chomsky & Halle, 1968): once in boundaries and once in derivational cycles. The fact was quickly noticed, yet of the two possible solutions most linguists chose abandoning boundaries rather than cycles. Beside Lexical Phonology (Kiparsky, 1985) and its newer OT-based establishment (Kiparsky, 2000), the proposal is found in Rotenberg's (1978) dissertation and many other works.

Generative Phonology, Lexical Phonology and Rotenberg all assumed that constituency is directly available for phonology. Steriade (1982, p. 13) explicitly mentions that boundaries are to be superseded by constituency. In view of Distributed Morphology (Halle & Marantz, 1993), however, the assumption is deeply problematic, and even more so if Wurmbrand's (2016) postsyntactic agreement, clear evidence of constituency being unavailable even before Vocabulary Insertion, is accepted. Same is true of proposals with non-terminal spellout (such as Nanosyntax (Starke, 2009) or spellout of spans (Merchant, 2015)).

As spell-out happens phase-by-phase (Chomsky, 2001), (Bošković, 2003)), one could expect that phases would correspond not only to Chomsky's (Barriers, 1986) barriers but also to (Chomsky & Halle, 1968)'s derivational cycles in Minimalism. However, the original proposal on phases of Chomsky (2000) implied they were much bigger (CP, vP, DP) than the usually assumed derivational cycles. While phases' size was hotly debated (see (D'Alessandro & Scheer, 2015) for a review and a rather radical solution of modularity of phases' effects), I remain unconvinced that a match is going to be found, because neither islandhood nor, importantly, limitations on postsyntactic operations in any way correlate with derivational cycles.

Therefore, cycles are to be abolished on theoretical grounds (and all rules are to be considered postcyclic). Since phonological processes are, in fact, sensitive to structure (hence the "Strict Cyclicity Condition" of LP), boundaries can be re-introduced. For space considerations I omit thorough rebuttal of Rotenberg and other people's counterarguments.

The original source of (#) boundaries in (Chomsky & Halle, 1968), introducing them around every lexical category and then deleting some, is obviously untenable even if syntactic structure were available, as Rotenberg (1978, p. 8) correctly notes.

I suggest a different solution: all # and = (with a single exception, see this paragraph's last sentence) and some + boundaries are in the lexicon as part of the exponent; if an edge of a morpheme has neither, + is automatically added. Most roots in languages like Finnish (lacking prefixes overall) and Russian (having special phonological treatment of prefixes, cf. *otygrat'* < *ot#igr+a+t'* and *kotik* < *kot+ik*) will have an # in their beginning. Additionally, every phase inserts # before and after itself after (or during) VI.

A question arises: why are boundaries usually found on the edges of exponents? I tentatively assume that it is merely an acquisition bias (not unlike homonymy bias, also known to be violated) and that, in fact, boundaries can be found inside exponents (so in Russian *s'+owo#dn'a* 'today'); my additional research will hopefully determine whether this is true.

References

Bošković, Ž. (2003). Agree, phases, and intervention effects. *Linguistic Analysis, 33*, pp. 54–96.

Chomsky, N. (1986). *Barriers.* Cambridge, MA, USA: MIT Press.

Chomsky, N. (2000). Minimalist inquiries: The framework. In R. Martin, D. Michaels, & J. Uriagereka (Eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik* (pp. 89–155). Cambridge, MA: MIT Press.

Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale: A life in language* (pp. 1–52). Cambridge, MA: MIT Press.

Chomsky, N., & Halle, M. (1968). *The Sound Pattern of English.* New York: Harper & Row, Publishers.

D'Alessandro, R., & Scheer, T. (2015). Modular PIC. *Linguistic Inquiry, 46*(4), pp. 593–624.

Halle, M., & Marantz, A. (1993). Distributed Morphology and Pieces of Inflection. In K. Hale, & S. Keyser (Eds.), *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger* (pp. 111–178). Cambridge: MIT Press.

Kiparsky, P. (1985). Some consequences of lexical phonology. *Phonology, 2*(1).

Kiparsky, P. (2000). Opacity and cyclicity. *The linguistic review, 17*(2–4), pp. 351–366.

Merchant, J. (2015). How much context is enough? Two cases of span-conditioned stem allomorphy. *Linguistic Inquiry, 46*(2), pp. 273–303.

Rotenberg, J. (1978). *The syntax of phonology.* Cambridge, MA: MIT Press.

Starke, M. (2009). Nanosyntax: A short primer to a new approach to language. *Nordlyd, 36*(1), pp. 1–6.

Steriade, D. (1982). *Greek prosodies and the nature of syllabification.* Cambridge, MA: MIT Press.

Wurmbrand, S. (2016). Formal and semantic agreement in syntax: A dual feature approach. In *Proceedings of the Olomouc Linguistics Colloquium* (pp. 19-36). Olomouc: Palacký University.