Positional-strength is Universal and BRANCHINGNESS-strength is Phonotactic-specific

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One of the most distinctive features of GP is its analysis of phonological strength. Many phonological approaches determine segmental strength with reference to an extra-grammatical scale (like the sonority hierarchy, markedness scales) or module externally (from phonetic factors, articulatory difficulty, ease of perception (salience), functional loads, frequency...). In GP, the relative strength of a phonological ‘segment’/position can be read directly from the representation. Phonological strength follows from:


Enguehard & Luo (E&L) (2017) programmatically claim that feature sharing is (or will be determined to be) sufficient to model phonological strength. Moreover, they predict that positional strength factors, such as Licensing (Ségéral & Scheer 2001) can be dispensed with. I will demonstrate that there is already enough evidence to show that E&L are wrong and that phonological strength cannot be unified under the single condition of feature sharing. For starters, I will show that Tuscan and Spanish lenition are incompatible with E&L’s model. Not all strong positions can be long, even ‘abstractly long’ without abandoning autosegmental core assumptions and Bidirectional Licensing Constraints provide a better typology (Ulfsbjorninn & Lahrouchi 2016). To understand how this kind of strength actually works, I will begin by taking the conclusions from Russo & Ulfsbjorninn (under review). This Element Theory analysis of Neapolitan shows that voiced stops lenite (even word-initially), except when they are (i) geminates [bː], or they follow (ii) voiced fricatives [zb], or (iii) nasals [mb]. These strong environments all involve feature sharing: (i) of all features, (ii) of [H, L], and (iii) of [ʔ]. Meanwhile, other post-consonantal positions (where voiced stops share no elements) are weak: /rb/ > /rv/. Therefore, lenition in Neapolitan is not conditioned by position and feature sharing does have a strengthening effect. However, it’s not the case that any two positions that share any feature are strong. The shared features that lead to strengthening must be named by the specific phonotactic. In Neapolitan, the leminated natural class (voiced stops) is defined by the element set: [ʔ,H,L]. The strengthening effect caused by feature sharing exists as a BRANCHINGNESS-condition acting in response to this language-specific phonotactic: C = [*? & {H, L}].1 I take these conclusions and use them to reanalyse the foot-median ‘protected environment’ of English T-lenition (Harris & Kaye 1990). I propose that the BRANCHINGNESS-condition is again responsible for this unexpected foot-medial strength: SBE - [ˈnɛːptə] *[nɛːptə] ‘raptor’, [ˈpæstə] *[pæstə] ‘pasta’, [ˈfɛːto] *[fɛːto] (but cf. [ˈfɛːwʔə]) ‘shelter’, GA - [ˈnɛːptə] *[nɛːptə] ‘raptor’, [ˈnɛːftə] *[nɛːftə] ‘nafta’, [ˈfɛːto] *[fɛːto] ‘shelter’, [ˈmaːrɪ] ‘martyr’, [ˈwɪntə] *[ˈwɪntə] (but cf. [ˈwɪntə]) ‘winter’ (see 1 beneath). Again, the BRANCHINGNESS-condition only acts in response to a language specific phonotactic, this time: C = [ˈʔO, H & {ʔ}]. Crucially, while the BRANCHINGNESS-condition accounts for much of the phonological strength of the data, there is still evidence for purely positional forces (stress - licensing) determine aspiration; therefore, these two kinds of strength cannot be conflated. Interestingly, on this view, geminates will never be weak (cf. Kenstowicz & Pyle 1973; Schein & Steriade 1986; Hayes 1986) because they are both positionally strong and BRANCHINGNESS-strong. I will conclude that phonological strength cannot be reduced to a single property. Having multiple ‘players’ (Scheer 2004) in phonological strength is a design feature, not a bug. There is no duplication of explanation, positional strength (‘Coda’-mirror, updated: Scheer & Ziková (2010), Balogné-Bérecs & Honeybone (2012)), is universal (lightly parametrized), while BRANCHINGNESS-strength is language specific and can only exist with reference to a particular phonotactic.

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1 Tuscan is purely positional. Spanish has two: C = [*ʔ & {H, I, L}] and C = [*ʔ & {H, L}] (COR homorganicity, noise and stopness).
(1) Sharing-driven strength in English foot-medial position

Phonotactic: \[ C = |^*O, H \& \{?\} | \]

Elements for 'coronality' and 'noise' cannot be 'added' to 'occlusion' under a C.

Condition: BRANCHINGNESS (of phonotactic elements): |?| |H| saves structure.

Result: |O, H| cannot be added to |?| in C (debuccalisation)