Should fortition have a place in diachronic phonological typology?

While the concept 'lenition/weakening' has a firm place in historical phonology, its counterpart 'fortition/strengthening' is more nebulous. For example, Blevins (2015, 490) writes that "[i]t is striking how often the prevalence of leniting sound changes leads to models where fortition is simply ruled out." In this paper, I argue that this is the right thing to do: there are good reasons to rule out fortition/strengthening as a coherently definable type of segmental change. Blevins disagrees: "while regular sound changes involving strengthening are, overall, less common than weakening ... they ... require a place in any sound change typology." I give two arguments to the contrary: **(i)** with a rational definition of 'fortition', changes typically adduced as examples of it do not fit with what is predicted to exist; **(ii)** changes which *do* seem to fit in with such a definition in fact turn out, on careful analysis, not to be fortitions after all. This is framed by the recognition that change can involve quite different types of innovations – underlying restructuring/reanalysis is not the same as change in rules – and that diachronic phonological typology must recognise this when comparing changes.

What should count as 'fortition'? Bybee (2015, 479) is succinct: "fortition – the **opposite of lenition**". Cser (2015, 201) agrees: it is "[t]he presumed **mirror-image of lenition**". This gives a rational definition: fortition is the 'opposite of lenition'. Lenition involves spirantisations and debuccalisations (Lass 1984), and can be assumed to **reduce stricture** through the introduction (through '**rule addition**') of realisations of a fricative-type (such as [β~v, ð, ɣ]) in segments which were previously purely stops (of the type /b, d, g/ → [b, d, g]), or realisations of a nonbuccal-type (such as [h]) in segments which were previously purely buccal (of the type /f, s *or* x/ → [f, s *or* x]). Lenitions are **weakly unconditioned**: they are not caused by their environment, but may be inhibited in environments which are 'strong,' a notion which is "relative, not absolute" (Ségéral & Scheer 2008, 140), which means that lenitions can only occur in strong environments (such as initial position) if they also occur in weak environments, such as medial and final position.

If fortition is the 'opposite of lenition', then the question is really: can a language innovate changes which are the opposite of lenitions? If the changes in (1) are lenitions (likely with positional conditioning), then those in (2) would be fortitions (with the opposite conditioning); and if changes of the type given in (2) occur (endogenously and monoquantally), then fortition does indeed exist.

(1) {/b, d, g/ → [b, d, g]} > {/b, d, g/ → [β~v, ð, ɣ]} {/s/ → [s]} > {/s/ → [h]}

(2) {/β~v, ð, ɣ/ → [β~v, ð, ɣ]} > {/β~v, ð, ɣ/ → [b, d, g]} {/h/ → [h]} > {/h/ → [s]}

To state argument (i): cases of changes that are typically adduced as fortitions are *not* like those in (2). For example, when describing *strengthening in Romance*, Recasens (2002, 336) writes that "**[j] may yield a palatal stop, fricative or affricate**"; and to consider Germanic, the replacement of dental fricatives by stops is commonly described as the "[f]ortition of **dental fricatives**" (eg, Hickey 2007, 77). What such changes actually have in common is that they are ways of **removing marked or non-canonically-consonantal segment-types**: dental fricatives and glides – this observation fits well with the broad empirical study of cases of 'fortitions' discussed in Bybee & Easterday (2019), which finds only those two types of change. This may involve the addition of stricture, but that is not the defining nature of the change, and they are not the clear inverse of (1). Changes involving v > b or ɣ > g, or h > s *could* count as cases of fortition, but that is not what we see here.

To state argument (ii): Hualde (2013, 248) writes that, in Spanish "phrase-initially (and after certain consonants) OSp ***v* has become [b]**"; and Moulton (1954, 1) assumes that "/bh dh gh/ ... gave the spirants [β ð ɣ] at some stage in Germanic; and that **these spirants later became stops in certain environments**". Both of these changes seem to count as authentic fortitions. However, in fact, neither actually involved the addition of a rule of the type /fricative/ → [stop]. The Spanish case involved the merger of /β/ with /b/ (because both were realised as [β] in several environments), which led to the loss of /β/ through the **reanalysis** of occurrences of [β] as realisations of /b/, rather than /β/. The Germanic case, in fact, never actually occurred. As Luick (1914-40) and Vennemann (1984) argue, rather than the IE Mediae Aspiratae developing fricative reflexes and then losing them again (through fortition because they turned back into stops), they remained stops in Germanic, and have been subject to spirantisation (lenition) in expected positions in some of the Germanic languages.

If arguments (i) and (ii) hold beyond the data considered here (which I think they do), there is no reason to believe that fortition (as defined here: as a coherent type change which is the 'opposite of lenition') occurs in historical phonology.

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