Appendix to section 2

Lenition is sometimes compared to a putative opposite type of change, known as “fortition”. Changes of the opposite type to most lenitions (e.g. h > x or f > p), however, are either not found or not common, and they typically involve the repair of phonologically “odd” segments, such as 0, w or j.

Some work also extends the “weakening” metaphor (which lenition is typically linked to) to the notion that certain types of segments are inherently weaker than others and are thus more likely to change. This includes some of the work in Minkova (2009) and Lutz (1991; this volume is also well worth consulting for other ideas about phonological weakness in the history of English, including material on the weakness of /r/ and /l/, which is relevant to the next section of this appendix). I do not consider this type of “inherent phonological weakness” here; rather, I consider “positionally endowed weakness”, which relates the extent to which we expect a segment to change to the environment in which it occurs (see Honeybone 2008 for a consideration of different ways in which the term “weakness” and its pair-mate “strength” have been used in phonology).

References


Appendix to section 3

If lenition does include deletion, or at least vocalization, then many British and British-influenced varieties of English show considerable relevant effects in the (history of) their liquids. The phenomena known as non-rhoticity and l-vocalization
involve patterns of the surface occurrence of the English rhotic and lateral, which fit with much of what is discussed in the main body of this piece. These phenomena have been analyzed in many different ways. I do not consider them in detail here; rather, I simply show how they can, from a certain viewpoint, be seen as cases of lenition.

The data in (a) compare the realization in isolation of representative words in GA, a rhotic variety of English, with those from a non-rhotic variety from the north of England, which I have labelled GN, for “General Northern”, in part following Watt (2002). The transcriptions use [r] for the rhotic segments, to avoid having to worry about phonetic detail or the difference between rhotic realizations.

(a)

<table>
<thead>
<tr>
<th></th>
<th>GA</th>
<th>GN</th>
</tr>
</thead>
<tbody>
<tr>
<td>raft</td>
<td>['raft]</td>
<td>['raft]</td>
</tr>
<tr>
<td>Henry</td>
<td>['henri]</td>
<td>['henri]</td>
</tr>
<tr>
<td>around</td>
<td>[ə'raund]</td>
<td>[ə'raund]</td>
</tr>
<tr>
<td>very</td>
<td>['veri]</td>
<td>['veri]</td>
</tr>
<tr>
<td>orchid</td>
<td>['ɔrkid]</td>
<td>['ɔkid]</td>
</tr>
<tr>
<td>star</td>
<td>['star]</td>
<td>['stər]</td>
</tr>
</tbody>
</table>

A comparison of Present-Day GA and GN shows that the rhotic occurs in onsets in both varieties (word-initial [ #__ ] in raft and post-coda [ c.__ ] in Henry) and in both types of intervocalic environment (the “stronger” foot-initial [ v__ ṽ ] in around and the “weaker” foot-medial [ ṽ__v ] in very). The environments where standard non-rhotic accents lack a rhotic are the two coda environments (medial pre-consonantal [ __.c ] in orchid and word-final [ __# ] in star). Flapping and medial d-spirantization can be seen as cases of lenition because they occur in the intervocalic weak positions, even though they do not occur in the coda positions; the rhotic has been lost in GN and similar dialects in the inverse set of weak environments: in the coda positions but not intervocally. Harris (1994: 232) also describes “conservative dialects spoken in the Upper South of the United States,” which also lack the rhotic in words such as very, meaning that the foot-medial intervocalic position is also weak in these varieties in terms of non-rhoticity. The diachrony of this
case of $r$-loss is complicated and occurred over a long period (see e.g. Wells 1982; McMahon 2000), but it can be seen as $r > \emptyset$, which fits into Lass’s lenition trajectory.

There have been several waves of $l$-vocalization in the history of English, and one quite recent one has left a similar pattern in some dialects for the lateral to that shown for the rhotic in (a). This $l$-vocalization likely originated in London English and is currently spreading exogenously through British varieties. Wells (1982: 259) describes it as “probably less than a century old in London”. The data in (b) compares General Northern with London English (the transcription of the vocalized lateral uses one of the possibilities offered by Wells 1982).

(b)  

<table>
<thead>
<tr>
<th></th>
<th>GN</th>
<th>LE</th>
</tr>
</thead>
<tbody>
<tr>
<td>laugh</td>
<td>['laaf]</td>
<td>['laːf]</td>
</tr>
<tr>
<td>Burnley</td>
<td>['bɜːnlɪ]</td>
<td>['bɜːnlɪ]</td>
</tr>
<tr>
<td>aloud</td>
<td>[ə'laʊd]</td>
<td>[ə'læːd]</td>
</tr>
<tr>
<td>silly</td>
<td>['sɪli]</td>
<td>['sɪli]</td>
</tr>
<tr>
<td>Belfast</td>
<td>['beɪfɑːst]</td>
<td>['beɪfɑːst]</td>
</tr>
<tr>
<td>fill</td>
<td>['fɪl]</td>
<td>['fiu]</td>
</tr>
</tbody>
</table>

The $l$-vocalization change can be expressed as $l > ɔ$. This fits as a case of lenition in some sense, although it does not exactly feature on Lass’s trajectory—it involves the realization of a consonant as a vowel, which is a more sonorous segment, so it may be reasonable to view it as a case of lenition. The environments in which /l/ can be vocalized are the same as those in which rhotics are absent in standard non-rhotic dialects: codas. As is clear from the GN transcriptions in (b), this is also where /l/ is realized as “dark” in many varieties, so it is likely that the dark-$l$ forms a diachronic stage in the picture: $l > \ddagger > ɔ$ (see Bermúdez-Otero and Trousdale, this volume, for further discussion), which also raises the question of whether $l$-darkening should count as a case of lenition.

Given that both non-rhoticity and $l$-vocalization occur word-finally, sandhi phenomena are possible when a word is phrase-medial and before a vowel-initial
word. These are well attested, as described in many places (e.g. Wells 1982). Non-rhoticity has led to linking-\(r\), which has also been reanalyzed as intrusive-\(r\), and linking-\(l\) is also attested (see e.g. Johnson and Britain 2007), as is, in a small number of varieties, intrusive-\(l\) (see e.g. Gick 2002).

References
Watt, Dominic. 2002. “‘I don’t speak with a Geordie accent, I speak, like, the Northern accent’: Contact-Induced Levelling in the Tyneside Vowel System’. *Journal of Sociolinguistics* 6: 44–63.

Appendix to section 3.1
There is a large literature on flapping, and I discuss only certain issues here. Carr and Honeybone (2007) give some further details, and also refer to Iverson and Ahn (2007), who pursue the line of argumentation that the sonorizing and flapping parts of the phenomenon, described together below, should, in fact, be separated.

References
Appendix to section 3.4

There is also evidence for the “Southern English Fricative Weakening” (SEFW) from present-day nonreference traditional dialects, as shown in (c). This is taken from fieldworker transcriptions of twentieth-century southern dialects, which were recorded for the *Survey of English Dialects* (SED; Orton et al. 1962–71). These show transcriptions of initial lenis fricatives where reference English has fortis segments.

(c)

[v] in *farmer*
[ð] in *thumb*
[z] in *six*
[ʃ] in *shilling*

This evidence indicates that the SED fieldworkers wanted to transcribe a difference that they perceived between the laryngeal state of the fricatives in southern traditional dialects and those in reference English. While a contrast between two series of fricatives has developed in reference English since OE, no such contrast is recorded here. Rather, the fieldworkers equated the fricatives of these southern varieties with only one of the series that exist in present-day reference English—the series that is typically referred to as “voiced”.

Reference


Appendix to section 4

The Government Phonology and Dependency Phonology approaches to lenition work with models of segmental structure to predict which type of changes will pattern together. For example, Harris (1994), following the impetus of Lass (1976), sees all cases of lenition as the literal weakening of a segment—as the loss of (privative pieces of) segmental structure (e.g. a stop “loses” its closure in spirantization, and a segment loses its oral articulation in debuccalization); this is expected in
environments where segmental licensing is weak (Harris also offers a predictive theory of licensing).

Kirchner’s Optimality Theory (OT) approach to lenition essentially ignores both diachrony and complex cases of environmental patterning, focusing on the “primacy of intervocalic position as a context for lenition” (2004: 315). It uses the massively powerful effort minimization constraint Lazy, which knows in advance the potential effort required for every phonological configuration, and ranks all candidate outputs in terms of this (although there is no simple definition of articulatory effort, and it is not clear that fricatives are easier to pronounce than stops, for example, because fricatives require a controlled amount of distance to be kept between articulators, whereas stops only require articulators to run into each other). This constraint is balanced by a vast number of faithfulness and fortition constraints, and the innovation of any lenition requires this machinery to be spontaneously reranked, so that Lazy comes to dominate faithfulness (although the OT model predicts the demotion of Lazy to be just as likely as its promotion). The whole position which assumes that lenition involves the reduction of articulatory effort (as Kirchner, and some others, have assumed) is demolished by Kaplan (2010), who shows through carefully controlled experimental investigation that intervocalic sonorization and spirantization do not result from articulatory effort reduction. She induced behavior that involved speakers using less effort in speech, but this did not increase the amount of sonorization or spirantization as they spoke.

References
Kirchner, Robert. 2004. ‘Consonant Lenition’. In *Phonetically-Based Phonology*, ed. Bruce Hayes, Robert Kirchner, and Donca Steriade, 313–45. Cambridge: Cambridge University Press.