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Dissimilation of Sonorants in English

Kazunori Kan, Keigo Yamada and Shoichi Yamada

Dissimilation is a sound change by which two segments of certain similarity become more distinct in properties such as place and manner of articulation. A few selected examples are as follows:

(1) a. OE purpre > ME purple   b. ME randon > ME random

In English, the dissimilation rule applies to a string containing two identical (in most cases) sonorant segments, and eliminates such co-occurrence by changing one of them into another sonorant. Considering these and other examples, it is empirically safe to say that the attested patterns of the sound change amount to only those in (2), and therefore it is highly probable that there is a certain restriction here:

(2) l→n;   l→r;   m→n;   n→l;   n→m;   n→r;   r→l;   r→n

Intended as an investigation of dissimilation of sonorants in English, this research makes special reference to the questions as to what makes the phenomenon take place and how its patterns are generated.

In much of the phonological literature on similar phenomena, the Obligatory Contour Principle (OCP), which forbids identical elements to be adjacent within a certain domain, is considered to be the trigger of dissimilation, and the following type of analysis is proposed. As in similar dissimilatory phenomena in many other languages, the OCP applies to features. The OCP is violated if certain identical OCP features are adjacent on a certain place or manner tier, or both tiers under the precondition that certain OCP-subsidiary features are identical; it then triggers dissimilation as in (3):

(3) a.   *p u r p r e   >   p u r p l e

OCP-subsidiary feature→ [approx]	+	+		+	+
OCP-subsidiary feature→ [cons]	+	+		+	+
OCP feature→ [lat]	-	- ←OCP violation		-	+

 b.   *r a n d o n   >   r a n d o m

| OCP-subsidiary feature→ [nasal] | + | + | | + | + |
| OCP feature→ [coronal] | + | + ←OCP violation | | + | |

In (3a) the two *r*'s which *purpre* contains lead to adjacency of the two [-lat]'s, and thus to the OCP violation, which is preconditioned by the identical features [approx] and [cons] shared by the two *r*'s; then one of the two *r*'s is changed into *l* to eliminate that violation. As for (3b), *randon* involves adjacency of the successive [coronal] features of the two *n*'s, which, together with the precondition that they have identical [nasal] features, violates the OCP. To eliminate the violation, the word undergoes dissimilation, resulting in *random*.

We indeed agree with the previous studies in attributing dissimilation to a consequence of

the OCP, but this type of analysis bears several problems: it does not, for example make clear i) which features are necessarily referred to as relevant OCP features or OCP-subsidiary features if any, and ii) how adjacency in OCP-featural tiers is expressed; in (3a), for example, the *r* dissimilation analysis requires the ad hoc assumption that the *p* between the two *r*'s is not underlyingly represented as [-lat] to ensure that adjacency of the [-lat]'s of the two *r*'s which violates the OCP, as it stands. Note that only the *r* dissimilation must arbitrarily refer to a minus feature.

Now, in order to make up for these shortcomings of the above featural analysis, we propose the method of grouping and schematize when the OCP is violated and how the violation is eliminated. The method classifies the sounds subject to dissimilation into several groups as in (4) on the basis of their similarity:

(4)
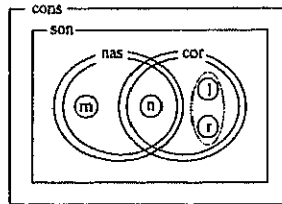
In (4), a single circle shows excessive similarity (usually identity) among its members; the OCP is violated and triggers dissimilation if such sounds co-occur. On the other hand, a double circle shows adequate similarity; only within a double circle can one sound change into another by dissimilation. Additionally, a dotted circle (in specific, grouping /l/ and /r/) displays certain similarity between the members, indicating that they are more likely to alternate with each other (namely, /l/ with /r/ and vice versa) than with a sound outside (namely, /n/).

For more concrete exposition, let us reanalyse the cases of *purpre* > *purple* and *randon* > *random* in turn. The two *r*'s co-occurring in the former violates the OCP since the two *r*'s are elements grouped in the same single circle. Then, one or other of the two must be dissimilated into another sound in a different single circle and in the same double circle, that is, *l* or *n*, consequently becoming *l*. As for *randon*, it contains two *n*'s, similarly violating the OCP, and exactly the same procedure as in the case of *purple* gives the right outcome: either of the two *n*'s is dissimilated and becomes another sound in a different single circle and in the same double circle, namely *m*.

In this manner, this schema, unlike the possible traditional kind of analysis, succeeds in precisely stipulating when the OCP is violated and how the violation is eliminated without any inconsistent reference to features on tiers, more naturally accounting for the patterns in (2) by making use of the similarity structure of English sonorants. The same schematization also gives a principled account for sonorant assimilation in English, and this gives strong justification for our approach.