Contrast neutralization results from weak perceptibility: Evidence from a dialect of Polish

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I work under the assumption that sound change is diachronic, phonetically-based and listener-oriented. Three natural sources of sound change are instantiated: CHANGE, which involves misperception of an acoustic signal, CHANCE, which results from phonological ambiguities in a phonetic signal, and CHOICE, whose source lies in the intrinsic variability of speech along the hyper-to-hypo-articulated continuum. Standard Polish (SP) and the Kurp dialect of Polish (KD) exhibit different realizations of labials with secondary palatal articulation /p̂, b̂, f̂, v̂/ (Friedrich 1955, Zduńska 1965, Czaplicki 1998, 2000, Kochetov 1998, Cavar 2004). While both dialects preserve palatality of labials, it takes a different form. For instance, in SP the palatality of /p̂/ surfaces as the glide [j], producing [pj], and in KD the labial is accompanied by a palatal sibilant fricative [p̂Å]. The different development of palatalized labials in SP and KD can be explained under CHOICE as a gradual shift in the frequency of synchronic variants, leading to restructuring in the grammar: [p′asek, pjasek, p̂qasek, p̂asek] → [p̂qasek, p̂qasek, pjasek, p̂asek] ‘sand’. While in most positions SP realizations mirror KD realizations, there are important differences in the preservation of contrasts between palatalized and plain labials, say /p̂/ vs. /p/ and /f̂/ vs. /f/, in the two dialects:

<table>
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<th></th>
<th><em>V_i</em></th>
<th><em>#</em></th>
<th><em>c</em></th>
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<tbody>
<tr>
<td>SP</td>
<td>maintained</td>
<td>lost</td>
<td>lost</td>
</tr>
<tr>
<td>KD</td>
<td>maintained</td>
<td>maintained</td>
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It is claimed that different realizations of the palatal element in the two dialects ([j] and [c]) bear on contrast maintenance/neutralization. Within EP, contrast neutralization in SP before a homorganic vowel is classified as an instance of CHANGE and results from the difficulty of localizing the source of palatality in a homorganic sequence of glide + vowel: CFiVFi → CVFi (Fi stands for [palatal]). Word-final neutralization in SP is due to the weak perceptibility of the palatal glide in this position (lack of CV transition cues and uninformative release of labials; Kochetov 2004, Kochetov & So 2007) and exemplifies CHANGE (C Fi# → C#). In contrast, the perceptibility of the KD realization [c] is not compromised in these positions because of the strong internal cues of sibilants (C Fi#) and distinctness from the following palatal vowel (C FiVFi). Finally, the loss of contrast after the palatal sibilant [c] in KD meets the description of CHANCE: C FiCj → C FiC. Such a reanalysis is correctly excluded in SP because [j] is auditorily distinct from [c]: C FiCj.

Acoustic and auditory research has shown that it is more difficult to distinguish between different nasalized vowels than between their oral counterparts and that nasalized vowels have a considerably weaker acoustic energy than oral vowels (Wright 1986, Beddor 1993, Delvaux et al. 2002). As a result, the perceptual space of nasalized vowels is shrunk when compared to that of oral vowels. It follows that nasализation of a vowel may give rise to neutralization of contrasts. The Kurp data support this prediction. Mid vowels followed by nasals, irrespective of whether they come from historical nasal vowels or from V+N sequences, show a range of realizations. The realizations of the front /e/ followed by a nasal present a continuum of /aN : æN : eN : eN : iN/ and the back /o/ accompanied by a nasal is realized as /σN/:/oN/ or /uN/; for instance pret ‘rod’ is realized as [pr̃e̞nt], [pr̃e̞nt] or [prent] and on ‘he’ is variably pronounced as [œn], [on] or [un]. This variability shows signs of contrast neutralization and receives a formal treatment as an instance of CHANGE: the weak acoustic cues of nasalized vowels are subject to various reanalyses. A similar loss of contrast is reported in some dialects of American English, where pin and pen have merged.
References


