

## On the context dependent/independent tonal neutralization in Chinese dialects

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In my previous papers (Iwata 2001a, b, 2004), I proposed the simplest typology of tone sandhi for Chinese dialects: any sandhi pattern falls in either one of the four types in terms of neutralization.

- ( $\alpha$ ) Context dependent, local      ( $\beta$ ) Context dependent, systematic  
( $\gamma$ ) Context independent, partial    ( $\delta$ ) Context independent, complete

A contributing factor to tonal neutralization is stress accent, and the above four types could occur to both post-stress and pre-stress positions so that two types of neutralization are often coexistent in one dialect. Tonal neutralization is much more prominent in the post-stress positions than in the pre-stress positions, hence the ( $\delta$ ) type (context independent, complete) mostly appears in the post-stress positions. However, some dialects exhibit the identical neutralization pattern in pre- and post-stress positions ('mirror type').

'Context dependent' types mostly emerge in the pre-stress positions. 'Context' here refers to tonal categories (noted as Ia, Ib, II etc.\*) or tonal features (register and contour) of the following syllable. Here are some instances:

- (1) Ia [213], III[21] → [23] / \_\_\_\_\_ III[21] (Dezhou, Shandong Province)
- (2) II [214] → Ib[35] / \_\_\_\_\_ II[214] (Beijing)
- (3) II[24] → Ib[51] / \_\_\_\_\_ II[24] (Ganyu, Jiangsu Province)
- (4) IIIa [212], IIIb [242], IVa [24] → Ia[55] \_\_\_\_\_ High  
→ Ib[53] \_\_\_\_\_ Mid, Low (Fuzhou, Fujian Province)

(1)-(3) are the cases of the ( $\alpha$ ) type (context dependent, local), in which neutralization occurs to limited members of tone combinations. (4) is a typical instance of the ( $\beta$ ) type (context dependent, systematic), in which all tones obey such phonological rules as described above. Notably, (1) and (2) can be explained in terms of phonetic dissimilation of two successive low (or low concave) tones, while the tonal alternations found in (3) and (4) are unexplainable in terms of phonetics. This is at least in part due to that phonetic features of tones are changeable and often change during the short time but that morpho-phonological alternation rules are likely to be preserved in spite of such phonetic changes.

The neutralized form is often identical with that appearing as the monosyllabic citation form, as (2)-(4) above, while there are cases, as in (1), where the phonetic output of neutralization is the form which does not appear as the citation form ([23]).

In this paper, I will focus the discussion on the ( $\beta$ ) type and the ( $\gamma$ ) type (context independent, partial). The fact that these two types are geographically distributed adjacently in South China would suggest a historical relationship between them. In both types, neutralization is characterized by the 'leveling' of tone contour, but the ( $\gamma$ ) type includes the subtype, in which tonal alternation proceeds in a clockwise way and the occurrence of neutralization is to limited members of the tones, e.g., in Amoy: Ia[55] and Ib[24]→IIIb[33]→IIIa[11]→II[51]→Ia[55].