**Longyou (Wu) Tones and Tone Sandhi**

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Longyou is a Southern Wu dialect spoken in Zhejiang province, China (Longyou county: population 400,000, located circa 375 km southeast of Shanghai). This paper analyzes the tones and tone sandhi processes based on a corpus of data elicited from two female native speakers.

**Tonal inventory** There are 8 lexical tones in Longyou. Our data suggest that Longyou is quite conservative: we find that Longyou tones correspond regularly to the eight tones of Middle Chinese (henceforth MC; based on MC reconstructions from Baxter & Sagart 2014).

<table>
<thead>
<tr>
<th>Tone</th>
<th>Upper Region</th>
<th>Lower Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC</td>
<td>level 445</td>
<td>rise 45</td>
</tr>
<tr>
<td></td>
<td>fall 53</td>
<td>entering 5</td>
</tr>
<tr>
<td>Longyou</td>
<td>level 211</td>
<td>rise 313</td>
</tr>
<tr>
<td></td>
<td>fall 131</td>
<td>entering 2</td>
</tr>
<tr>
<td>example</td>
<td>cu 313</td>
<td>mei 131</td>
</tr>
<tr>
<td></td>
<td>tʰie 313</td>
<td>pʰie 445</td>
</tr>
<tr>
<td></td>
<td>laŋ 313</td>
<td>lau 131</td>
</tr>
<tr>
<td></td>
<td>fɛn 445</td>
<td>leʔ 131</td>
</tr>
</tbody>
</table>

Normalized pitch curves of our data cleanly separate the eight tones into upper and lower regions of the pitch space, as found in many other Wu dialects. The major Longyou innovation is that the MC rising and falling tones of the lower register have become complex tones with internal turning points: 313 and 131.

**Present study** Our corpus consists of 76 lexical items recorded in isolation (citation) and frame sentence contexts, and set of 64 A+B nominal compounds recorded in the same manner. The compounds reveal three major sandhi changes, which we describe in detail below.

**Sandhi 1: A₃₁₃ → A₃₁** The dipping 313 tone loses its rise to become 31 in the first position of the compound, as in (1). This process parallels the so-called half-tone sandhi of Standard Mandarin.

(1) a. lao₃₁₃ ‘old’   b. wəʔ₃ ‘house’   c. lao₃₁ wəʔ₃ ‘old house’

**Sandhi 2: A₄₅ → A₃₁** The upper register rise 45 changes to lower register fall 31 when the following syllable’s tone is drawn from the upper register, as in (2). This process can be analyzed as a dissimilation for register that changes 45 > 313 followed by the first sandhi change to 31. A comparable sandhi in the Taiwanese Hakka dialect Sixian (Hsiao 2008) bears a striking resemblance to this Longyou process.

(2) a. dzì₄₅  ‘paper’   b. pʰie₃  ‘piece’   c. dzì₃₁ pʰie₃ ‘scrap of paper’

**Sandhi 3: B₃₁₃ → B₁₃₁** The final major sandhi in Longyou changes the dipping 313 to the dome-shaped 131 in the second position of the compound by raising its inflection point from a valley to a peak, as in (3). It is blocked when the first syllable has tone 131 — an OCP effect, shown in (4).

(3) a. gʰ₄₄₅ ‘high, top’   b. chj₃₁₃  ‘school’   c. gʰ₄₄₅ chj₃₁₃ ‘college’
(4) a. ze₃₁  ‘vocation’   b. chj₃₁₃  ‘school’   c. ze₃₁ chj₃₁₃ ‘vocational college’

**Implication** Our overall conclusion is that Longyou tonal contrasts as well as sandhi processes support the Chinese tonal model proposed by Bao (1999) which provides a formal representation of both register and contour — the two hallmarks of Chinese tone. Our findings contribute to the phonetic documentation and phonological analysis of understudied Chinese dialects.