Supplementary Table 1 Duration information (measured in milliseconds) of the original stimuli: (1) the initial fricative /x/ without vocal-fold vibration; (2) the voicing portion of the first syllable (S1); (3) the voicing portion of the second syllable (S2); (4) the end of S2 characterized by strong creaky voice, not amenable to F0 manipulation. The last row is used for the duration normalization of the stimuli.

| Stimulus       | Portion |   |   |   |
|---------------|---------|---------|---------|---------|
| /xə ma³/      | (1) 185 | (2) 282 | (3) 176 | (4) 190 |
| /xuan² ma³/   | (1) 187 | (2) 231 | (3) 287 | (4) 199 |
| /xai³ ma³/    | (1) 176 | (2) 241 | (3) 247 | (4) 290 |
| /xao³ ma³/    | (1) 167 | (2) 202 | (3) 276 | (4) 192 |
| Average       | (1) 179 | (2) 239 | (3) 247 | (4) 218 |

Supplementary Table 2 Intensity information (measured in dB) of the original stimuli: (1) the initial fricative /x/ without vocal-fold vibration; (2) the voicing portion of the first syllable (S1); (3) the voicing portion of the second syllable (S2); (4) the end of S2 characterized by strong creaky voice, not amenable to F0 manipulation. The last row is used for the intensity normalization of the stimuli.

| Stimulus       | Portion |   |   |   |
|---------------|---------|---------|---------|---------|
| /xə ma³/      | (1) 57.4 | (2) 72.0 | (3) 73.2 | (4) 56.8 |
| /xuan² ma³/   | (1) 54.7 | (2) 73.6 | (3) 71.0 | (4) 52.8 |
| /xai³ ma³/    | (1) 60.9 | (2) 72.7 | (3) 72.9 | (4) 51.6 |
| /xao³ ma³/    | (1) 60.3 | (2) 72.4 | (3) 72.3 | (4) 50.4 |
| Average       | (1) 58.6 | (2) 72.7 | (3) 72.4 | (4) 52.9 |

Supplementary Table 3 A summary of the results of the split-half analysis

| Effect                                      | Window (ms) | Measure       | Result                        |
|---------------------------------------------|--------------|---------------|-------------------------------|
| MMN in the UR-match & Non-sandhi deviant Condition (#1) | 200 to 300 | Mean amplitude | First half > Second half     |
|                                             |              |               | (p < 0.001)                   |
| Early negativity in the UR-match & Sandhi deviant Condition (#2) | 50 to 200   | Mean amplitude | First half > Second half     |
|                                             |              |               | (p < 0.001)                   |
| S1-S2 transitional positivity (#1-#4)      | 250 to 400   | Mean amplitude | First half < Second half     |
|                                             |              |               | (p < 0.001)                   |
|                                             |              | Signed area amplitude | First half < Second half |
|                                             |              |               | (p < 0.001)                   |
| S1-S2 transitional positivity as an effect of UR relation (#5 and #6) |              | Mean amplitude | First half < Second half     |
|                                             |              |               | (p = 0.07)                    |
|                                             |              | Signed area amplitude | First half < Second half |
|                                             |              |               | (p = 0.08)                    |
| S2 negativity (#1 - #4)                    | 550 to 700   | Mean amplitude | First half < Second half     |
|                                             |              |               | (p < 0.001)                   |
|                                             |              | Signed area amplitude | First half < Second half |
|                                             |              |               | (p < 0.001)                   |