

**Supplementary Table 1.** Descriptive statistics of stimulus characteristics.

| Stimuli | Character frequency<br>(/Million) | Positional consistency | Phonological consistency | Semantic transparency |
|---------|-----------------------------------|------------------------|--------------------------|-----------------------|
| 恨       | 148.87                            | 0.7222                 | 0.3874                   | High                  |
| 痕       | 52.37                             | 0.0556                 | 0.3874                   | High                  |
| 很       | 1545.68                           | 0.7222                 | 0.3874                   | Low                   |
| 银       | 275.36                            | 0.7222                 | 0.0584                   | High                  |
| 牲       | 52.75                             | 0.5000                 | 0.7163                   | High                  |
| 笙       | 18.07                             | 0.2500                 | 0.7163                   | High                  |
| 胜       | 246.22                            | 0.5000                 | 0.7163                   | Low                   |
| 性       | 851.64                            | 0.5000                 | 0.2831                   | High                  |
| 洋       | 193.13                            | 0.7273                 | 0.9207                   | High                  |
| 痒       | 17.34                             | 0.1818                 | 0.9207                   | High                  |
| 样       | 1964.55                           | 0.7273                 | 0.9207                   | Low                   |
| 鲜       | 141.49                            | 0.7273                 | 0                        | High                  |

Note: Statistic data of the characters were obtained according to a large-scale modern Chinese balanced corpus developed by Dr. Sun Maosong (Department of Computer Science and Technology, Tsinghua University). The semantic transparency of the semantic inconsistent characters were significantly lower than other characters (all  $ps < .005$ , Bonferroni corrected). The specific score of each character is:

恨(M=5.30; SD=1.94)、痕(M=4.46; SD=1.46)、很(M=3.18; SD=1.42)、银(M=6.27; SD=1.07); 牲(M=5.76; SD=1.23)、笙(M=5.49; SD=1.46)、胜(M=2.76; SD=0.90)、性(M=3.91; SD=1.70); 洋(M=5.91; SD=1.72)、痒(M=4.85; SD=1.46)、样(M=3.33; SD=1.67)、鲜(M=5.09; SD=1.45)

### Supplementary notes

Example questions of evaluating orthographic and phonological consistency:

- (1) Orthographic consistency: “To what extent do you think the position of radical "X" in the Chinese character "Y" is consistent with the position of that radical in other Chinese characters.”
- (2) Phonological consistency: “To what extent do you think the pronunciation of the Chinese character "Y" composed of radical "X" is consistent with the pronunciation of other Chinese characters composed of the same radical.”