

## Register, Contour, and Markedness in Chinese

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In the literature of tonology, it is generally assumed that contour tones are more marked than level tones, as they are more “complicated”, or more difficult to produce and perceive (Yip 2002, Zhang 2002). In terms of level tones, Yip (2002) suggests that, in a two-toned system, low tones are less marked than high tones. Chen (2000) emphasizes on the fact that if a language has one tone, it is almost always a high tone, suggesting that high tone would be *structurally* the unmarked one.

The goal of this research is to propose a tonal representation capable of *naturally* accounting for the notion of tonal markedness, the linearity of contour tones, and diverse sandhi systems of Chinese dialects. We work under the assumption of a universal tonal periodic skeleton HLHL postulated by Brandão de Carvalho (2002), analogue to the syllabic skeleton CVCV proposed by Lowenstamm (1996). Based on the principles of government phonology, this model permits to explain two major characteristics of Asian tonal systems—the register and the contour.

We conjecture that Chinese tones are constrained by a portion of this periodic skeleton: a tonal template HLHL. Chinese contour tones can be analyzed in a succession of two level tones defined by an intratonal government relationship H/L encoding the notion of register. Starting from the principles of government and the hypothesis according to which the intratonal head of the governing syllable governs its melodic homologue in the governed syllable, this model would shed light on the paradoxical character of contour tones; it could furthermore elucidate diverse sandhi systems of Chinese dialects, and some frequent phenomena in African tonal languages, such as polarity and downstep.

Our hypothesis is that the rising tone, and even the level tone are more marked than the falling tone in Chinese because, just like the falling-rising tone of Mandarin, it implies two contours HL rather than one. This observation is largely confirmed by the topology. In a statistics on 187 tonal languages, Zhang (2002) noticed that 37 languages have a falling tone without the rising one. Only three languages have a rising tone without the falling one: Margi, Lealao Chinantec and Zengcheng. Concerning level tones, we assume that they are more marked than contour tones since they have not only two contours HL, but also a *median* empty tone. Their existence should imply the presence of contour tones, but the opposite is false. This assumption is supported by empirical facts, where a language can have *only* contour

tones without level tones, as in Shanghai and Chengtu. We will finally provide empirical evidence to show that the high register is structurally unmarked, rather than the low one.

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