

From tone sandhi in Chinese dialects to tone patterns in Chinese poetry: A new analysis

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ABSTRACT

Modern Chinese dialects have complex tonal systems and distinct types of tone sandhi, which are of considerable interest to modern phonology and can be regarded as a testing ground for modern phonological theories. The study of tonal systems and types of tone sandhi phenomena in Chinese dialects has resulted in numerous research papers from scholars in China and abroad, including many doctoral dissertations, and has even inspired the development of some important phonological theories, e.g., Yip (1980), Bao (1990), Chen (2000), etc.

How to account for different types of tone sandhi? Are they amenable to a unified phonological treatment? These questions currently remain tantalizingly unanswered. Many proposals have been made in previous work, both descriptive and theoretically driven, from the perspective of pre-generative, early generative phonology, and Optimality Theory. Overall, the literature to date has been more successful in explaining tone sandhi in individual dialects than in finding a unified interpretation for tone sandhi across different dialects. This applies even to Matthew Y. Chen's landmark study *Tone Sandhi: Patterns Across Chinese Dialects* (2000), which remains the most comprehensive study of tone sandhi in Chinese dialects to date. In the words of Wang Jialing (2001: F33), "While Chen's study provided a successful analysis of tone sandhi in individual dialects, it appears to lack a unified theoretical framework to satisfactorily account for various types of tone sandhi as found in different dialects."

This presentation focuses on four representative Chinese dialects for discussion, namely, Beijing (Mandarin), Shanghainese (Wu), Xiamen or Amoy (Hokkien), and Guanzhou (Cantonese). These four dialects, each representing four distinct types of tone sandhi, have been comprehensively described and analyzed in previous research.

This presentation puts forward the following proposals. (1) The trigger of these Chinese dialects' tone sandhi is related to a prosodic mechanism, namely the accentual system. (Note: that the issue of whether Chinese dialects in general and Beijing Mandarin in particular have stress remains unsettled.) (2) The tone sandhi in these four dialects can be accounted for by two autonomously operating accentual mechanisms: one is stress and the other is pitch accent. (3) Stress is placed on the leftward syllable, whereas pitch accent is placed on the rightward syllable. (4) The two accentual mechanisms belong to different phonological hierarchies, but they may be superimposed on the same morphosyntactic unit (which may be a word, a phrase, or a larger unit). As a result, a word or a phrase can simultaneously have stress on a leftward syllable and pitch accent on a rightward syllable. For convenience I will refer to this special type of accentual system as "stress on the left, pitch accent on the right" (SL, PR).

This analysis was originally inspired by my research on the prosodic organization of Tibetan. Manifestations of stress in Old Tibetan, modern Tibetan varieties, and Tibetan poetry are diverse and even contradictory. A unified explanation is nonetheless possible, as proposed in Atshogs (2005, 2012, 2020), by positing two different accentual mechanisms operating independently. As discovered in later work, the same analytical approach also allows to explain the long-standing problem of Mongolian stress (Atshogs 2017), i.e., the issue of whether Mongolian word-level stress falls on the word-initial or the word-final syllable, which has long been disputed in view of conflicting acoustic, phonetic, and phonological evidence.

Each of the four Chinese dialects chosen in our study have very different tone sandhi types. In Beijing Mandarin, with the so-called tone 3 sandhi among other kinds of tone sandhi, it is the last syllable that retains the lexical tone. In Shanghainese, on the other hand, it is the first syllable that retains the lexical tone, whereas the tones are neutralized on all of the following syllables. The special tone sandhi type represented by Amoy is called a "tone circle", because the tone of the first syllable in the sandhi domain is replaced by other tones in turn, eventually forming a complete

“circle”. The tone sandhi type represented by Guangzhou has been previously analyzed as having “almost no rules” (Wang, 1990: 434). However, in the present analysis it is demonstrated to be regular. All four tone sandhi types are argued to reflect the same type of prosodic organization: “stress on the left, pitch accent on the right (SL, PR)”.

I further propose that the same analysis is also applicable to tone patterns in Chinese poetry. Tone patterns in regulated verse have been analyzed in two different ways. Duanmu (2004, 2016) argues for a “stress peak placed in odd-number positions.” On the other hand, in the analysis of Fabb & Halle (2008), “heads” of “groups” (traditionally “groups” are called *feet*) always occur in the even-number positions in a line of poetry. The present analysis (‘SL, PR’) reconciles these two opposing views.

Naturally, it is not my intention to imply that all types of tone sandhi in Chinese dialects are necessarily accounted for by the same accentual mechanisms, as discussed presently. However, for these four typical Chinese dialects with very different tone types, and for the tonal meters of regulated verse, this analysis provides a relatively consistent explanation. Thus, they may be of interest for application to more patterns across Chinese dialects. This analysis also provides new circumstantial evidence for the debate on stress in Beijing Mandarin.

References (partial list)

- Atshogs, Yeshes Vodgsal (意西微萨·阿错). 2003. *Zanghan yuyan zai daohua zhong de hunhe ji yuyan shendu jiechu yanjiu* (藏、汉语言在倒话中的混合及语言深度接触研究 / *Research on Mixing of Tibetan and Chinese in Daohua and Relative Languages Deep-contact Study*). Ph.D. dissertation, Nankai University.
- Atshogs, Yeshes Vodgsal (意西微萨·阿错). 2005. *Guanyu wutunhua de shengdiao yu yunlu* (关于五电话的声调与韵律 / *On the tone and prosody of Wutunhua*). Linguistics Salon of School of Literature, Nankai University, Nov. 15. Also, In: Chamtsang Padma Lhungrub (ཅམ་ཅང་པད་ལྷུང་རུབ།) 2009. *A mdovi yul skad kyi sgra gdangs la dpyad pa* (མ་མཐོང་ཡུལ་སྐད་ཀྱི་སྐད་གྲངས་ལ་དབྱེད་པ། / *A Phonetic and Phonological Study of Amdo dialect of Tibetan*), 250-251, Xining: Qinghai Ethnic Publishing House.
- Atshogs, Yeshes Vodgsal (意西微萨·阿错). 2012. *Gong tong zang yu de zhong yin ji qi yan bian* (共同藏语的重音及其演变 / *Stress pattern of Proto-Tibetan*). The 4th International Conference in Evolutionary Linguistics (CIEL-4), Peking University, Nov. 9-11.
- Atshogs, Yeshes Vodgsal (意西微萨·阿错). 2015. *Wutunhua de shengdiao* (五电话的声调 / *The tones of Wutun*). *Studies of the Chinese language* (中国语文), (1): 84-97.
- Atshogs, Yeshes Vodgsal (意西微萨·阿错). 2017a. *Wutunhua de zhongyin* (五电话的重音 / *The stress of Wutun*). *Minority languages in China* (民族语文), (1): 84-97.
- Atshogs, Yeshes Vodgsal (意西微萨·阿错). 2017b. *Zang-aertai xi yufalieu zhong de yunlu wenti* (藏-阿尔泰系语法流中的韵律问题 / *On the Prosody of the Tibeto-Altaic Grammatical Drift*). The 4th International Conference on Chinese Prosodic Grammar (ICCPG-4), Kaifeng: Henan University, Jun. 3-4.
- Atshogs, Yeshes Vodgsal (意西微萨·阿错). 2018. *Zangyu de jumo yuqici yu shengdiao, yunlu de guanxi ji xiangguan wenti* (藏语的句末语气词与声调、韵律的关系及相关问题 / *On the relations among sentence-final particles, tone and prosody in Tibetan and related issues*). *Studie in prosodic grammar* (韵律语法研究), (1): 38-61.
- Atshogs, Yeshes Vodgsal (意西微萨·阿错). 2020. *Zangyu zhongyin wenti taolun* (藏语重音问题讨论 / *Stress phenomena in Tibetan language*). *Studie in prosodic grammar* (韵律语法研究), (2):47-81.
- Bao, Zhiming. 1990. *On the Nature of Tone*. Ph.D. dissertation, Massachusetts Institute of Technology.
- Chen, Matthew. Y. 2000. *Tone Sandhi: Patterns Across Chinese Dialects*. Cambridge University Press.
- Duanmu, San. 1993. Rime Length, Stress, and Association Domains. *Journal of East Asian Linguistics* 2(1): 1-44.
- Duanmu, San. 1995. Metrical and Tonal Phonology of Compounds in two Chinese Dialects. *Language* 71(2): 225-59.
- Duanmu, San. 1999. Metrical structure and tone: evidence from Mandarin and Shanghai. *Journal of East Asian Linguistics* 8(1), 1-38.
- Duanmu, San (端木三). 2016. *Yinbu he zhongyin* (音步和重音 / *Foot and stress*). Beijing Language and Culture University Press.
- Fabb, Nigel and Morris Halle. 2008. *Meter in Poetry a New Theory*. Cambridge: Cambridge University Press.
- Wang, Li (王力). 1957 / 1990. *guang zhou hua qian shuo* (广州话浅说 / *A Brief Discussion of Guangzhou Dialect*). Beijing: Language & Culture Press.
- Yip, M. 1980. *The tonal phonology of Chinese*. PhD dissertation, Massachusetts Institute of Technology.