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Phantom stress in tone sandhi: evidence from Shaoxing Wu Chinese Wen, X.

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English Summary

In Sinitic varieties, stress has been widely considered to condition tonal behaviors. Yet, two problems associated with stress-based accounts of tonal behaviors warrant further consideration and motivate this dissertation. First, existing research is typologically limited, focusing mainly on varieties with typical left- or right-dominant sandhi patterns. Second, there is a persistent lack of independent evidence for identifying stress in these varieties. Against this background, this dissertation investigates the potential interaction between tone sandhi and stress in Shaoxing Wu Chinese, a Northern Wu exhibiting complex tone sandhi patterns. Through a series of controlled acoustic experiments across disyllabic words, trisyllabic compounds, and phrasal structures of varying lengths, this dissertation evaluates whether stress can consistently account for tonal realizations across different domains in Shaoxing Wu, which might serve as independent evidence for stress beyond tonal realizations. In doing so, we aim to achieve a better understanding of tone-stress interaction in Sinitic varieties, as well as the mechanisms underlying complex tone sandhi patterns.

Chapter 1 situates the dissertation within the broader literature on tone-stress interaction in Sinitic varieties, introduces Shaoxing Wu Chinese as the empirical base, and lays out the key research questions. It also provides an overview of the dissertation's structure.

Chapter 2 investigates disyllabic tone sandhi at the word level in Shaoxing

Wu and its potential interaction with stress. The results confirm that both left- and right-dominant sandhi patterns coexist within disyllabic words of Shaoxing Wu: words starting with Rising tones exhibit left-dominant patterns, with the final syllable neutralized; words starting with Falling tones display right-dominant features, with the final syllable potentially preserving its underlying contour. Despite the distinction in sandhi dominance patterns, no direct durational evidence supports a stress-based account: the final syllable was consistently longer than the initial one, regardless of sandhi dominance pattern. These findings establish a solid empirical foundation for the subsequent chapters while questioning the adequacy of stress-based accounts.

Chapter 3 extends the investigation to trisyllabic compounds, examining whether stress can systematically condition tonal realization and sandhi domain formation across disyllabic words and trisyllabic compounds, even in the absence of overt acoustic correlates. The results show that all 2+1 and the vast majority of 1+2 compounds form one single sandhi domain, with tonal contours primarily conditioned by the initial syllable alone, which is incompatible with stress-based predictions. This demonstrates that stress is not as effective in explaining complex tone sandhi patterns as it is for typical left- or right-dominant patterns. Comparing tone sandhi patterns across sequences of different lengths, we further propose that sandhi contours in Shaoxing Wu Chinese might extend from a substituted initial tone, with the substitution occasionally conditioned by the historical category of non-initial tone(s).

Chapter 4 examines the reported distinction between verb-object (VO) and subject-predicate (SP) structures in Shaoxing Wu. While differences in tonal realizations between phrases and words/compounds have often been cited as supporting evidence for tone-stress interaction, the VO-SP distinction is not predicted by stress-based accounts and is rarely documented in other dialects. Controlled experiments show that disyllabic VO and SP structures display different patterns of tonal contour neutralization in their initial syllables, again contrary to predictions made by stress-based accounts. Furthermore, the distinction disappears in quadrisyllabic cases, suggesting an interaction between

syntactic structure and constituent size that stress cannot adequately capture. Instead, this might reflect boundary effects of different prosodic constituents, whose formation is conditioned by both syntax-prosody correspondence and size constraints.

Chapter 5 summarizes the main findings of this dissertation, discusses their theoretical implications, and outlines directions for future research.

Taken together, this dissertation demonstrates that stress-based accounts, while influential, do not generalize well to dialects with complex sandhi patterns. In Shaoxing Wu Chinese, we observed no independent acoustic correlates of stress beyond tonal patterns themselves, and stress fails to provide a coherent account of tonal realizations across different domains. These findings call for a more empirically grounded approach to tone-stress interaction in Sinitic varieties and highlight the importance of investigating complex sandhi patterns. Moreover, the tone sandhi patterns in Shaoxing Wu Chinese reveal more general tendencies across Northern Wu, and offer new empirical evidence on how morphosyntactic structure and constituent size interact in prosodic constituent formation.