

Speech rate and phonology: two cases

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The traditional division between phonology and phonetics has been questioned in a growing body of recent work. This paper looks at two cases that bear on this issue. First, Standard Chinese has two tonal rules, and acoustic data are used to confirm that by the usual criteria one is phonological and one is phonetic. However, the ‘phonological’ rule takes place in domains that are partially speech-rate dependent, and thus presumably not determined until the phonetics. It is argued that an OT analysis that includes durational constraints on foot size can handle the facts, and furthermore this can be done in a one-step grammar, even though the process has sometimes been described as iterative.

The second case comes from nasal coda loss in Chinese. This shows two properties that suggest it is phonetic: it is gradient, and it preserves the formant transitions that encode the place features of the lost nasal. However, it also has properties that suggest it is phonological: it appears to be conditioned by the Syllable Contact Law, and it is sensitive to the quality of the surrounding vowels. Finally, it is, rather startlingly, more likely in slow speech than in fast speech. It will be suggested that there may be two processes of coda loss, one phonological and one phonetic, and that this is a case of a change that is in the midst of the phonologization of a phonetic process.