An OT and Corpus-Based Analysis of English Loanwords in Mandarin:
Cases of Coda Adaptation

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This paper aims to investigate the coda adaptations of English loanwords in Mandarin. On the one hand, we account for the loanword phonology through constraint-ranking in the framework of Optimality Theory (Prince & Smolensky 1993, McCarthy & Prince 1993, McCarthy & Prince 1995). On the other hand, we establish a loanword corpus, including 947 common English loanwords in Mandarin, aiming to analyze loanwords objectively on the basis of scientific statistics.

Previous studies draw an arbitrary conclusion for lack of adequate research data. Shih (2004) studies English loanwords in Mandarin from Silverman's (1992) perspective, as illustrated below.

(1)   Shih (2004) (modified)

		Perceptual Level		Operative Level
Eric	→	[e.ri$\underline{k}^h$]	→	[aj.li.$\underline{k}^h$ə]/[aj.r^{w}ej.$\underline{k}^h$ə]
Glen	→	[$\underline{k}$len]	→	[$\underline{k}$ə.lan]
Frank	→	[$\underline{fr}$en$\underline{k}^h$]	→	[$\underline{fu}$.lan.$\underline{k}^h$ə]

In (1), the underlined stop codas in the Perceptual Level are preserved by vowel epenthesis in compliance with Mandarin phonotactics. Relevant constraints are thus ranked as 'MAX-C-IO >> DEP-V-IO' , which is also supported by Guo (2001) in his study on the Mandarin transliterations of 46 American state names and 88 typhoon names.

However, our statistic result shows that stop consonants can be lost too, and, in particular, such instances of coda deletion account for nearly 40% in disyllabic or polysyllabic loanword data, with a few examples listed below.

(2)   English   Mandarin

[hɪp hap]	*Hip Hop*	→	[ɕi.xa]	嘻哈
[fræŋkfɚt]	*Frankfort*	→	[fa.lan.k^hɤ.fu]	法蘭克福
[k^hodɑk]	*Kodak*	→	[k^hɤ.ta]	柯達

To account for this, we rank MAX-IO(S) and DEP-IO(S) in the same level; that is, preservation and deletion are both the major adaptation strategies for an illicit English coda. In monosyllabic loanwords, however, coda consonants are mostly preserved. We believe that it is constrained by 'MINIMAL WORD', since Mandarin prosodic structures tend to be disyllabic (Hsiao 2006), and thus codas in monosyllabic loanwords are mostly preserved by vowel epenthesis to form a second syllable.

In brief, based on the corpus, this paper reviews past OT works on Mandarin loanword phonology, and attempts to provide a new interpretation for the coda adaptations of different consonant classes, such as fricatives, affricates, and retroflexes.