

## Mandarin final 3<sup>rd</sup> tone in disyllables: a morphosyntactic approach

Mandarin Chinese has four lexical tones, the third one (T3) is commonly called “falling-rising” tone, with separate low and high parts, noted as [L.H] by Yip (2002). This tone is involved in two phenomena: the T3 sandhi, namely two adjacent T3s turning the first one into T2 (Chao 1968; Dell 1973; Yip 1980; Yip 2002; Duanmu 2007); and incomplete tone, giving partial realization [L] when T3 is followed by another tone.

However, T3 in final syllable can be fully realized as [L.H], or partially as [L]. In some cases, both are accepted, but there are some morphosyntactic constraints. Duanmu (2007: 238), following the idea of Hoa (1983), claims in a production test that in disyllables, VO structure favors the production of final full T3 [L.H], while Modifier-Noun structure tends to reduce it to partial [L]. Duanmu then impute this observation to the stress issue. Duanmu’s account has some limits: first, he only considers VO and MN structures (but see Arcodia & Basciano 2021 for all possible Mandarin morphological structures), and thus is not empirically well-founded; second, he roughly gives VO and MN disyllables two different metrical structures without any motivation (Duanmu 2007: 245): VO having interestingly an “empty beat” while MN has not.

In this contribution, I argue that perception prevails over production and designed a test of grammaticality with a corpus including not only (subdivided) VO and MN structures, but also coordinate compounds, Verb-Complement, Adv.-Adj. and Numeral-Cl. ones. A native speaker of Mandarin has been asked to answer if T3’s fully and partial realizations are accepted or unaccepted (without considering emphasis that assumes the expressive function in Trubetzkoy’s term). If the results confirm that final T3’s realization is highly constrained (selected examples in the table below), they are much more nuanced than Duanmu’s VO *vs* MN division.

Table 1

	Morphosyntactic structure	Example	Full T3 [L.H]	Partial T3 [L]
(1)	V.-O.(Pronoun)	jiao4-ni3 ‘to call you’	unaccepted	accepted
(2)	V.-O.(N.)	he1 shui3 ‘to drink water’	accepted	accepted
(3)		re4 shui3 ‘to heat water’	accepted	unaccepted
(4)	Modifier(Adj.)-N.	re4 shui3 ‘hot water’	unaccepted	accepted
(5)	Modifier(N.)-N.	qi4-shui3 ‘soda’	accepted	accepted
(6)	Adv.-Adj.	hen3 xiao3 ‘very small’	accepted	accepted
(7)	Coordinate noun	jiu3-shui3 ‘drinks’	unaccepted	accepted
(8)	Coordinate adj.	you1-mei3 ‘beautiful’	unaccepted	accepted
(9)	V.-Complement	jiao4 xing3 ‘to wake up’	accepted	accepted
(10)	Numeral-Cl.	yi4-ba3 ‘one’	unaccepted	accepted

Hyphen is used to mark boundary of two morphemes; otherwise, we have disyllabic syntagms. (1) and (2) are both VO structures, but have different behaviors, suggesting that pronouns (clitic) and nouns are to be represented in different ways. (3) and (4) are homonyms, to distinguish them, re4 shui3 as VO and as MN have the opposite tonal pattern. (4) and (5) have both MN structure, but in (4) an adjective modifies the noun to form a noun phrase, whereas in

