

# The Preference for Bisyllabicity in Mandarin and Cantonese -- A Summary

## 0. Introduction

Mandarin and Cantonese both show a marked preference for bisyllabicity. In this brief paper I review the literature on the subject, buttressing the argumentation with additional data as appropriate. Both core and external evidence are considered.

## 1. Mandarin

### 1.1 Core Evidence

#### 1.1.1. Word Formation

The overwhelming majority of words in Mandarin are bisyllabic. Basic word formation involves the juxtaposition of two monosyllabic morphemes, thus /mei/ (beautiful) + /li/ (beautiful) -> [meili] (beautiful). Given the pronounced constraints on syllable structure in Mandarin (C(G)V<sup>(T)</sup>(N)), it is not surprising that the language has evolved this superficially redundant pattern of word formation. Were monosyllabic words preferred, the consequent homophony would result in extensive lexical ambiguity.

Another lexical level results from the compounding of truncated words: two bisyllabic words may be truncated to one syllable/morpheme each, and then may be combined, again resulting in a bisyllabic output. Thus [meili] + [yishu] (skill-technique) -> [meishu] (fine arts). This and more examples follow.

[mei+li] + [yi+shu] (beautiful+beautiful) + (skill+technique) beauty + art	->	[mei shu] fine arts
[nai+you] + [ka+fei] (breast+oil) + (coffee) milk + coffee	->	[nai ka] creamed coffee
[shi+fan] + [da+xue] (teacher+mold) + (big+study) teacher's school + university	->	[shi da] teacher's university
[gong+gong] + [ma+lu] (public+common) + (horse+road) public + road	->	[gong lu] public road

Besides nominal compounding, there are several types of verbal compounding, subject-predicate compounding, verb-object compounding, adjectival compounding, etc. Outputs are always bisyllabic.

#### 1.1.2. zi-Suffixation

The common phenomenon of zi-suffixation usually involves monosyllabic nouns which acquire surface bisyllabicity with the dummy-suffix zi. Note that when these monosyllabic nouns occur in compounds, zi never surfaces.

/xie/ shoes	->	[xie zi]	(cf. [pi xie]) skin shoes (leather shoes)
/zhuo/ table	->	[zhuo zi]	(cf. [fan zhuo]) food table (dining table)

/ping/ bottle	->	[ping zi]	(cf. [hua ping]) flower bottle (vase)
/bao/ bun	->	[bao zi]	(cf. [rou bao]) meat bun
/mao/ hat	->	[mao zi]	(cf. [xiao mao]) little hat (cap)

### 1.1.3. Prefixation

Prefixation is rather rare in Mandarin. One instance of prefixation occurs with family names, indicating the social relationship the speaker bears to the listener. Thus someone surnamed Ming might be called "xiao Ming" by an intimate or an elder (where [xiao] means "little", or "lao Ming" by a junior (where [lao] means "old, honorable"). While most family names are monosyllabic, a small class of bisyllabic names exists (e.g., Duanmu, Ouyang). Prefixation is unavailable for such names, indicating that surface bisyllabicity is preferred.

ming (surname)	->	[xiao ming], [lao ming] "little", "old, honorable"
but		
duanmu	->	*[xiao duanmu], *[lao duanmu]
ouyang	->	*[xiao ouyang], *[lao ouyang]

A similar pattern emerges with the prefix [a-], indicating familiarity. [a-] may be prefixed to a monosyllabic given name [a-Lan] ((familiar) Lan), or [a-gou] ("doggie"). Bisyllables may never take [a-], however.

### 1.1.4. Reduplication

Reduplication is productive in Mandarin, though possesses certain idiosyncratic lexical restrictions. Reduplication is always full, and involves an array of morphological categories. Almost always, the output of reduplication is a simple copy of the base, thus resulting in bisyllabicity.

hao good	->	hao hao (very good)
chang often	->	chang chang quite often
kan look	->	kan kan look a bit

Bisyllabic forms may also be reduplicated. Sometimes, each morpheme of the base is reduplicated independently.

jian dan (simple + single) simple	->	jian jian dan dan quite simple
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gao xing                   ->    gao gao xing xing  
(high + mood)           quite happy  
happy

Other times, the entire base is copied.

tao lun                   ->    taolun taolun  
(discuss + discuss)     discuss a bit  
discuss

yan jiu                   ->    yanjiu yanjiu  
(grind + study)           reasearch a bit  
research

While these various patterns of reduplication may be subject to a number of interpretations, the least costly analysis involves the preference for bisyllabicity attested elsewhere in the grammar.

#### 1.1.5. Stress

(Hoa (1983) and Shih (1991) discuss stress in Mandarin. I'm very skeptical about this stuff and only mention it here for completeness' sake. If you want the full refs., let me know.)

### 1.2. External Evidence

#### 1.2.1 Loanwords

Research into Mandarin loanword phonology is scanty. Hsu (1993) finds that form-final stops are deleted in forms perceived as polysyllabic (e.g. Edward -> [ai te hua], England -> [ying ke lan]), but salvaged by epenthesis of a rightward vowel if the input is perceived as monosyllabic (e.g. Ford -> [fu ta], Mark -> [ma ke]). These findings, though not fully regular, are consistent with the more consistent patterning found in Cantonese loanword phonology (Silverman 1993, Yip 1993) (to be discussed in Section 2), where the preference for bisyllabicity is quite apparent.

#### 1.2.2 Secret Languages

Yip has analyzed Chao's important work here. Basically, an input form is subject to a bisyllabic output template with some prespecified material and some segmental acrobatics. All languages are named after how [ma] (horse) would appear. Thus in the May Ka language, the first syllable has the base's onset with a prespecified rime, while the second syllable has a prespecified onset with the base's rime. Different languages in different dialects have variations on this. The main point for present purposes is that all outputs are always bisyllabic.

### 2. Cantonese

#### 2.1 Core Evidence

##### 2.2.1. Prefixation

Hypocoristics (Yip 1990b), in which a high tonal suffix attaches to a monosyllabic name, are prefixed by a- if the base is monosyllabic.

pai[HM]                   ->    a[M] pai[H]   (The Lame)  
fei[M]                    ->    a[M] fei[LH] (The Fat)

When hypocoristic tonal suffixation applies to disyllabic forms, a-prefixation does not apply.

wong[ML] mou[ML] ->    wang[ML] mou[MH] ('The Yellow-Haired One'), mang[L] pei[L]  
->    mang[L] pei[LH] ('Deformed Nose')

This phenomenon is found in several other lexical classes, usually referring to humans (Whitaker 1955/6): familial relationships ([po[H]] -> [a[M] po[H]] ('grandmother'), the numerical order of children or servants ([ng[L]] -> [a[M]ng[LH]] ('no. five', but [sap[L]sei[M]] -> [sap[L]sei[MH]] ('no. fourteen'), but also pet names ([wu[HM]] -> a[M]wu[H]] ('Blackie')). Thus the output in Cantonese hypocoristics is always bisyllabic.

### 2.2.2. Reduplication

There is evidence from native processes of reduplication indicating a preference for bisyllabicity. Various productive morphological processes involve full reduplication of monosyllabic bases. The output is always bisyllabic.

Examples of reduplication follow.

pAk	(white)	->	pAk pAk tey (rather white DE)
		->	pAk pAk (very white)
mAn	(slow)	->	[mAn mAn tey (rather slow DE)
		->	mAn mAn (very slow)
sAy	(small)	->	sAy sAy tey (rather small DE)
		->	sAy sAy (very small)

In a variation on this theme, a reduplicated form with *yat* (one) intervening on the surface may be optionally truncated to a plain reduplicated form.

tok yat tok	(measure one measure)	->	tok tok (to measure (once))
kwAng yat kwAng	(stroll one stroll)	->	kwAng kwAng (to walk around (for a while))
t'iw yat t'iw	(jump one jump)	->	tiw tiw (to jump (once))

Yip (1990a) argues the the bisyllabic element in Cantonese is specifically iambic in quality. For arguments against this approach, see Silverman 1993.

## 2.2 External Evidence

### 2.2.1. Loanwords

(See Silverman (1992), especially Sections 5.1-5.3 (pp.315-320). This also discusses Yip's analysis.)

### 2.2.2. Secret Languages

(See above.)