The absolute and contextual forms of 'one' and 'two' in Mandarin Chinese

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poster paper

Background

•Greenberg's (1978) cross-linguistic observation: numerals may have different forms depending on their function.

•Mandarin '2' has two forms: the absolute form refers to abstract mathematical entities; the contextual form enumerates entities.

(1) a. {liǎng/*èr} zhī māo '2 cats'
{2.CONT/2.ABS} CL cat

b. {*yí/yī} jiā {*liǎng/èr} shì sān.
{1.CONT/1.ABS} plus {2.CONT/2.ABS} COP 3
'One plus two is three.'

•**Greenberg's generalization**: if a numeral has the absolute form, then all the lower numerals must also have the absolute form.

•Mandarin '1' is an apparent **counterexample**: '1' has just one lexical form *yi.*

•But '1' surfaces in three different tones: *yī* (T1), *yí* (T2) and *yì* (T4). Common view: *yī* is the citation form, which undergoes two-way tone sandhi (e.g. Chao 1968; He 2015).

Claim 1

•Mandarin is not actually an exception to Greenberg's generalization–'1' has two forms just like '2'.

•'1''s two forms differ in whether they undergo tone sandhi–the contextual form does (2), while the absolute form does not.

	absolute form	contextual form
'1'	yī	yì/yí
'2'	èr	liǎng

Claim 1, cont'd

(2) /yì/ → [yí] /__ ɔ̀

Evidence 1

•Only yì and yí can enumerate; only yī can refer to abstract mathematical entities:

(3) a. {yì/*yī} zhī māo '1 cat'
{1.CONT/1.ABS} CL cat

b. {yí/*yī} gè xuéshēng '1 student'
{1.CONT/1.ABS} CL student

Evidence 2

•In approximate expressions two numerals appear in sequence; the numerals must appear in the same form but not mix-and-match:

(4) a. {yì/*yī} {liǎng/*èr} zhī māo
{1.CONT/1.ABS} {2.CONT/2.ABS} CL cat
'1 to 2 cats'

b. bǎi fēn zhī {*yì/yī} {*liǎng/èr}
100 divide of {1.CONT/1.ABS} {2.C/2.ABS}
'1% to 2%'

Claim 2

•The two forms of '1' and '2' are not distinguished by use as Greenberg claimed, but rather by the morphological context:

(5) *Empirical generalization*
The contextual form occurs if the syntactic sister of the numeral is pronounced and linearly follows it; otherwise the absolute form occurs.

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Claim 2, cont'd

Evidence that the two forms are allomorphs

•Normally units of weight occur with the contextual form (e.g. *{liǎng/*èr} xiǎoshí* '2 hours'), but to avoid adjacent identical sounds, *èr* is used instead with the unit of weight *liǎng* (*{*liǎng/èr} liǎng* '2 liangs').

Select evidence 1 for (5)

(6) [dì {*liǎng/èr}]gè xuéshēng 'the 2nd student'
-th {2.C/2.ABS} CL student

Select evidence 2 for (5)

•In multi-digit cardinals, the multiplier of 'hundred' may appear in either form, a fact this poster will not focus on:

(7) liǎng qiān {liǎng/*èr} bǎi '2200'
2.CONT thousand {2.CONT/2.ABS} hundred

•The lowest base can be omitted, but its multiplier must have the absolute form:

(8) liǎng qiān {*liǎng/èr} '2200'

Claim 3

•(5) is phonologically-conditioned allomorphy.

•Assuming that exponence starts from the most embedded node (e.g., Bobaljik 2000; Embick 2010), the contextual numeral is less syntactically embedded than its sister.

(9) *Allomorphy rule*

a. numeral → contextual form / __ X, and X is pronounced

b. numeral → absolute form

•This suggests the enumerating cardinal is a head that takes the ClassifierP as its sister.