Symposium on Languages in China: Typology & Acquisition, March 11, 2024

Refining the typological profile of Sinitic

Hilary Chappell
Linguistics & Modern Languages Department, CUHK
&
EHESS, Paris

Background - the Sinitic mantra

Sinitic languages — have evidently been celebrated for a protracted period as examples of isolating languages with simple syllable structure.

- lacking in inflectional morphology
- possess only a minimal amount of derivational morphology
- rigid, nigh indestructible morpheme boundaries that do not undergo erosion
- = "impoverishment" view

- overlooks the astonishing diversity of morphological features that can be identified across the hundreds of dialects and varieties to be found in ten main branches of Sinitic.
- As a whole, these features are relatively little explored from a pan-Sinitic angle, and are certainly less well-known outside of the Chinese linguistics domain.
- Yet even recent research in typology upholds the view of Sinitic as an isolating language with unassailable morpheme boundaries

View of limited co-evolution of form and meaning

- standpoint prominent in recent research on East and Southeast Asian languages:
- Bybee et al (1994), Bisang (1996, 2004), Ansaldo,
 Bisang & Szeto (2018)— little if no phonetic erosion accompanies grammaticalization
- "tone systems and the discreteness of syllable boundaries in EMSEA languages contribute to the **relative morphophonological stability** of grammaticalized items in these languages."

(Ansaldo, Bisang & Szeto, 2018: 225) (EMSEA = East and Mainland Southeast Asian -HMC)

Arcodia (2013) & Lamarre (2015) have argued cogently against such views

Influence of written tradition

- a view influenced by the written tradition in China spanning over 2000 years and 19th c. European typology
- Classical period 5th 3rd century BC
- morphosyllabic writing system with regular spacing between each character
- orthographic conventions \rightarrow the same in contemporary Standard Chinese
- but even the written form of Classical Chinese (Late Archaic Chinese) possesses derivational morphology and compound words!!

莊子Zhuangzi text ca. 300 BC

出日	者	莊 周	夢	為	胡	蝶
Χī	zhě	zhuāng zhōu	mèng	wèi	hú	dié
one	NMLZ	(Proper noun)	dream	be	butterfly	T

栩	栩	然	胡	蝶	也
хŭ	хǔ	rán	hú	dié	yě

vibrant ADV_{<like}

butterfly

 PRT_{COP}

« Once, Zhuang Zhou dreamt he was a butterfly.

A vivid, vibrant butterfly ... »



- Essentially, the written language is not well-equipped to represent polysyllabic words, as such, nor combinations of reduplicated forms, let alone innumerable cases of fusion or tone morphemes
- casts a 'cloak of obscurity' over the actual speech forms

Objectives

• to propose a refinement of the typological profile of Sinitic languages by briefly considering three main types of morphological features :

- (i) agglutinative
- (ii) fusional and (iii) non-linear

• Outcome: argue for a revised typological profile for Sinitic

1.

Agglutinative features

Word length in Standard Chinese

- contrast between writing system & its iconic representation of discrete morpheme boundaries and reality of spoken *word*
- study by Wu, Adda-Decker & Lamel (2020)
- 220 hour speech corpus of journalistic Mandarin
- **38.6% monosyllabic** 753,794 tokens
- **52.8% disyllabic** 1,029,489 tokens
- 5.9% trisyllabic
- 2.1% tetrasyllabic

Verb complexes

To take one example, verb complexes in Sinitic languages provide a succinct way of showing agglutinative features for directional verb compounds

diào-xià-lái 掉下来

'fall down (towards speaker)

fall-down-come

pá-shàng-qù 爬上去

'climb up (away from speaker)

climb-up-go

lim-be⁷-chui

 $khoan^3-e^7-tshin^7$

drink-NEG-drunk

look-able-clearly

'not able to make drunk

'able to see clearly'

by drinking'. **瞓睡覺** fan-saai-gaau 'all fall asleep' p.175

• An even higher proportion is recorded for the 汉语大词典 (Hanyu Da Cidian, The Comprehensive Dictionary of Chinese Words)

(1975)

81.5% Disyllabic 279, 719 tokens

8.7% Trisyllabic 29, 801 tokens

9.2% Tetrasyllabic 31,534 tokens

Wei & Qiu (2016) claim that Mandarin disyllabic words are in the majority in this dictionary, monosyllabic words included.

图书馆,委员会, 動結式 — less clear for other Sinitic languages

2.

Fusion and reduplication processes: the creation of tone morphemes and tone patterns

(i) Tone morphemes

- Consider tone morphemes as an instance of suprasegmental nonlinear morphology (Bickel & Nichols 2005, 2013)
- their evolution involves phonetic erosion, tone change and fusion,
- creates new portmanteaux morphemes that code a variety of grammatical functions.
- Focus on (i) pluralization of personal pronouns pan-Sinitic and
- (ii) perfective aspect marking in Yue dialects
- (iii) tone patterns in reduplication

Tone sandhi & changed tone

 Phonological tone sandhi involves a change in pitch and contour conditioned by features of context

Xiamen Southern Min

- morphologically-conditioned tone, also attested in Sinitic languages, is distinct from phonological in that the modified tone value signals grammatical meaning.
- Its function is equivalent to processes of derivation and inflection in other, unrelated language families.
- = 'grammatical' or 'morphological tone' cf. Matthews & Yip (2011: section 1.4.2)

Origin of tone morphemes

• Tone morphemes are the trace of a former segmental morpheme, an affix, which undergoes:

- (i) assimilation, coalescence with host morpheme into a portmanteau form: *Noun/verb* + *suffix*
- (ii) loss of its segmental phonemes to the point of total attrition of the original segmental morpheme
- (iii) final stage only trace transferred to the new host syllable = its tone, a suprasegmental affix

Syllabic reduction, vowel change, tonal contraction and fusion

Hui'an Southern Min directional verb

puã¹ khi³-lai⁰~khi⁰-lai⁰ ~khai⁰ lau²-⁴tiŋ³。

move up-come upstairs

'Carry (it) upstairs.'

Hui'an Southern Min inchoative aspect — only *khai*⁰ can be used

```
tua<sup>5</sup> khai<sup>0</sup> lo<sup>0</sup>
big INCH SFP
'It is getting bigger now.' (Chen & Wu 2015)
```

• Sporadic examples? No, quite regular for grammatical function words in Sinitic



Examples of tone morphemes in Sinitic

- plural formation of pronouns
- diminutives
- distal, medial and proximal distinctions on demonstrative pronouns
- perfective aspect as a feature of two micro-areas in China
- multisyllabic tone patterns for reduplication of verbs to code delimitative and conative meanings and
- for reduplicated adjectives -- approximation and intensification

(i) Pluralization

- General description for pronominal systems in "Standard Average Chinese":
- singular form is the base to which a plural suffix is added
- cf. Mandarin —mən PL or Cantonese tei⁶ PL
- ta⁵⁵-men

k'øi²³-tei²²

3SG.PL 'they'

- Less well-known is the large number of Sinitic pronominal systems that make use of both fused plural forms and tone change
- source is frequently obscure for the PL marker
- Pan-Sinitic

Fused plural forms in Southern Min (Taiwan & Xiamen)

	Singular		Plural	
1.	gua ²	我	gun ² lan ² _(inclusive)	阮 咱
2.	li ²	汝	lin ²	恁
3.	i¹	伊	in ¹	1 因

Penang Hokkien:

我儂

gua¹-lang⁵

'1PL'

汝儂

lu¹-lang⁵

'2PL'

伊儂

 i^1 -lang⁵

'3PL'

= Common semantic field for plural suffixes in Sinitic

Fused plural form with $-k < [ʊk^{55}]$ 屋 'home, family' & tone change

Szeyap (Siyi) Yue 四邑话 personal pronoun paradigms

000000000000000000000000000000000000000	www.communication.communication.communication.communication.communication.communication.communication.communication.com						
	1 <u>sg</u>	1PL	2sg	2 _{PL}	3sg	3PL	
Doumen 斗门镇	ŋɔ ³³	ŋɔk ²¹	nei ³³	niak ²¹	khui ³³	khiak ²¹	
Jiangmen Baisha 江门白沙	ŋai ²³	ŋok ²¹	lei ²³	<u>liok</u> ²¹	khui ²³	khiok ²¹	
Xinhui Huicheng 新会会城	ŋɔ ²³	ŋɔk ²¹	nei ²³	niak ²¹	khui ²³	khiak ²¹	
Xinhui Xiaogang 新会小刚	ŋɔ ²⁴	ŋɔk ²¹	nei ²⁴	niak ²¹	khøy ³³	khiak ²¹	
Heshan Hecheng 鹤山鹤城	ŋɔ ³³	ŋɔk ²¹	nei ³³	niek ²¹	khui ³³	khiek ²¹	

Data and table adapted from Gan (2001:58)

Sinitic pluralization strategies: further signs of attrition

- segmental forms are the same for the singular and plural series of pronouns, (if not similar)
- differentiated by
- (i) lengthened vowels and tonal values
- (ii) only tonal values

Vowel lengthening & tone change

Wanrong dialect 万荣话 (Central Plains Mandarin, Shanxi)

personal pronoun paradigm

	1	2	3
SG	nr 55	ņ.j ⁵⁵	<u>tha</u> 55
PL	nx: 51	n.i.*51	<u>t</u> ha: ⁵¹

Identical segmental forms + tone change

Longhui (Xiang, Hunan) 隆回湘语 personal pronouns

	Singular	Plural
1.	o ³¹	o ³⁵
2.	n ³¹	n ³⁵
3.	t¢i ³¹	tçi ³⁵

Heshan 鹤山话 (Yue, Guangdong) personal pronoun paradigms

+‡+							
		1sg	1 _{PL}	2sg	2PL	3SG	3PL
	Heshan Yayao 河山雅瑶	ŋɔ ³³	ŋɔ ²¹	nai ³³	<u>nai</u> ²¹	<u>kui</u> ³³	<u>kui</u> ²¹
	Heshan Shaping 鹤山沙坪	ŋɔ ³³	ŋɔ ²¹	nei ³³	nei ²¹	<u>ky</u> ³³	<u>ky</u> ²¹

Curious case of Kaiping Yueshan

开平月山 (Yue, Guangdong)

	1	2	3
SG	nok^{21}	niεk ²¹	k ^h iεk ²¹
PL	ŋɔk ²¹	niεk ²¹	k ^h iεk ²¹

Stage 1: Free lexical form adopted to express plural meaning: 'family ~home', 'people', etc.

Stage 2: Lexical form morphologizes to a segmentable and bound plural suffix

Stage 3: Loss of initial consonant of suffix and contraction of suffix to coda —

Taiwanese Southern Min [-n] or vowel lengthening of medial as in

Wanrong – V:

Stage 4: Tone change only

Stage 5: Tone copying by analogizing the value of the singular pronouns, leading to identity of the singular and plural forms

Stage 6: Renewal of plural form by a new lexical element as the suffix

Gan (2012) observes use of Standard Cantonese [-tei²²] 'PL' 地 to disambiguate in certain dialects

	1	2	3
SG	nok^{21}	niεk ²¹	k ^h iεk ²¹
PL	ŋɔk ²¹	niεk ²¹	k ^h iεk ²¹

CYCLE OF PLURAL PRONOUN EVOLUTION

- Stage 1: Free lexical form adopted to express plural meaning: 'family ~home', 'people', etc.
- Stage 2: Lexical form morphologizes to a segmentable and bound plural suffix
- Stage 3: Loss of initial consonant of suffix and contraction of suffix to coda —

 Taiwanese Southern Min [-n] or vowel lengthening of medial as in

 Wanrong V:
- Stage 4: Tone change only
- Stage 5: Tone copying by analogizing the value of the singular pronouns, leading to identity of the singular and plural forms
- Stage 6: Renewal of plural form by a new lexical element as the suffix

(ii) Aspect marking in Sinitic (i)

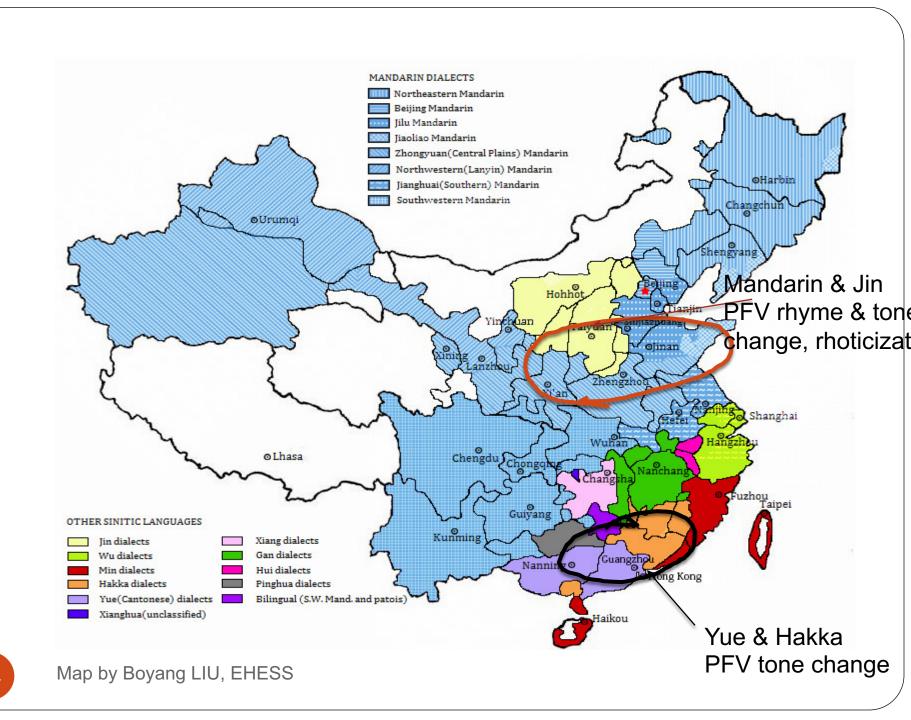
- The majority of Sinitic languages make use of suffixes or clitics to mark aspectual values such as perfective and durative, also experiential
- two micro-areas where perfective aspect indicated either by
- (i) verbal allomorphy (stem alternation, rhyme change, rhoticization)
- (ii) tone change
- (iii) combinations of these (see Arcodia 2013a, 2013b, Lamarre 2009, 2015)

Aspect marking in Sinitic (ii)

- focal areas :
- (i) **Northern Sinitic languages**: Mandarin dialect groups and the Jin branch
- area from western Shaanxi to Shanxi, Hebei, Henan and as far as eastern Shandong
- (see Arcodia 2013a, 2013b, Lamarre 2009, 2015, Shi Youwei 2003, Wang Guiliang 2014,)

(ii) Southern Sinitic languages :

- many Yue dialects including Cantonese and a few Hakka dialects in Guangdong & Jiangxi—
- Totally discontinuous areas



Perfective tone change in Cantonese – high rising tone 35

Guangzhou Cantonese tone change

Hong Kong	Basic verb stem	Gloss	Verb stem +	Gloss
Cantonese			tone change	
Mid level	høi ³³ 去	' <u>go</u> '	<u>høi</u> ³⁵	'went'
Mid checked	fat ³ 發	'emit'	<u>fat</u> ³⁵	'emitted'
Low level	mai ²² 賣	'sell'	mai ³⁵	'sold'
Low falling	lei ²¹ 嚟	'come'	<u>lei</u> 35	'came'
Low rising	mai ¹³ 買	'buy'	mai ³⁵	'bought'
Low checked	lok² 落	'fall'	<u>lok</u> ³⁵	'fell'
	High register tone category	ories		
High level	tsem ⁵³ 斟	' <u>pour</u> '	tsem ^{55*}	'poured'
High rising	se ³⁵ 寫	'write'	<u>s</u> ε: ^{355*}	'wrote'
High checked	tsuk⁵捉	'catch'	tsuk ^{5*}	'caught'

(Adapted from Cheung 2007:152-153 and Shan 2013:650)

Hong Kong Cantonese minimal pair

High rising tone 35 < perfective suffix -tso³⁵

```
k<sup>h</sup>øi<sup>23</sup> lok<sup>22</sup>-tso<sup>35</sup> t<sup>h</sup>oŋ<sup>21</sup> la<sup>33</sup>! 但咗堂喇。
3SG finish-PFV class PRT
'Her class is over now.' (lit.:She's finished class.')
```

```
k<sup>h</sup>øi<sup>23</sup> lok<sup>35</sup> t<sup>h</sup>oŋ<sup>21</sup> la<sup>33</sup>! 但落<sub>咗</sub>堂喇。
3SG finish.PFV class PRT
'Her class is over now.'
```

Data from Samuel Hung-nin Cheung (2007: 152); see also Matthews & Yip (2011: 31)

Guangzhou Yue

'First of all he wanted to go, but now he's changed his mind again.'

本来佢想去嘅,而家又变味 卦嘞。

Restriction determined by lexical verb class in Yue

An important feature to note is that this tone change is often restricted to high frequency verbs in Yue dialects (Gan 2012 : 72)

- 'eat', 'go', 'buy', 'walk' etc
- Some scholars view its use as non-productive in urban centres
- steadily being replaced by the overt perfective aspect marker tso^{35} $\stackrel{}{\Box}$, a verb suffix, and other aspect markers; preserved in rural varieties

Cantonese Yue PFV morphologization – a Southern Sinitic cycle

Evolution of the perfective tone morpheme in Yue dialects and Hakka

Stage I: <u>Verb</u> – perfective enclitic or suffix with its full tonal value

Stage II: In informal or fast speech, omission of the segmental perfective morpheme is accompanied by transferral of its tone value onto the verb stem, replacing the original base tone. The changed-tone verb form thus alternates with the verb in its base form, modified by the overt perfective marker.

Stage III: A special tone morpheme is created for the perfective, as seen in less urbanized varieties of Yue and Hakka with little or no alternation with the overt aspect marker.

Stage IV: Under the influence of the standard language, Mandarin, the overt perfective marker is re-introduced in more educated and formal speech styles of urban centres, from where it diffuses into the less urbanized varieties (cf. Wang & Lien 1993 on the process of diffusion)

(iii) Reduplication

- common agglutinative-fusional pattern is verb reduplication in Sinitic languages for expressing the delimitative aspect
- In the Jin dialects of China, this is commonly accompanied by the use of a prefix GE ½ such as in Jiexiu dialect
- the process combines prefixation by $k\Lambda ?^{53}$ on both verb forms with diminutive suffixation on the reduplicant, thereby creating a new fused syllable rhyme.

Jiexiu dialect 介休方言 (Jin, Sinitic)

 $k\Lambda^{253}-k^{h}\tilde{e}^{35}$ $k\Lambda^{253}-k^{h}ar^{35}$

圪看圪看儿

Pref-look Pref-look.Dim

'Take a little look.' (Zhang Yimei, 1991: 53)

Reduplication & tone patterns

- Reduplication can create new tone patterns which code a specific meaning:
- Reduplication of adjectives in Kaiping Yue to form new words
- AA form with different tone patterns for

Citation forms:

fui¹¹- fui¹¹ 'fat'

```
huŋ<sup>11</sup> 红'red', sau<sup>11</sup> 瘦 'thin', fui<sup>11</sup> 肥 'fat'
huŋ<sup>15</sup>-huŋ<sup>11</sup> huŋ<sup>11</sup>-huŋ<sup>15</sup>
'very red' 'a little red'
sau<sup>11</sup>-sau<sup>11</sup>
'very thin' 'a little thin'
```

Kaiping Yue 开平话

Citation forms:

huŋ¹¹ 红'red', sau¹¹ 瘦 'thin', fui¹¹ 肥 'fat'

 hun^{15} - hun^{11} hun^{15}

'very red' a little red'

 sau^{35} - sau^{33} sau^{35} - sau^{35}

'very thin' 'a little thin'

 fui^{15} - fui^{11} fui^{15}

'very fat' 'a little fat'

See also 'cf. Matthews & Yip (2011: 31-33 for Hong Kong Cantonese reduplication tone patterns)

Conclusion

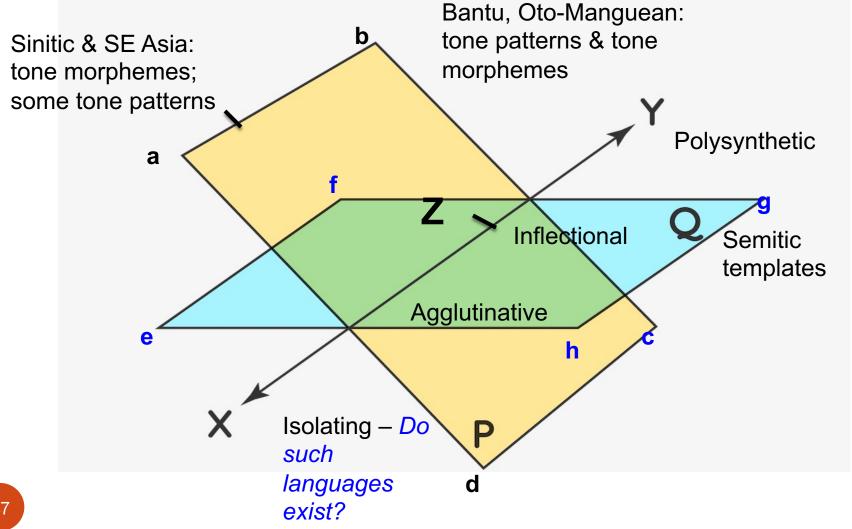
- Sinitic certainly possesses some isolating features, but these have been exaggerated —
- probably based on the written tradition of Classical Chinese, an elevated literary style from period 5th -3rd c. BC & the persistance of 19th c. European descriptions and classifications
- Adjust typological profile for Sinitic to include its agglutinative features, the widespread use of tonal distinctions in grammar and morphology, as well as portmanteaux morphemes

- Morpheme boundaries are *not* rigid & indestructible in Sinitic
- Sinitic languages are polysyllabic and agglutinative, the high correspondence between syllable and morpheme notwithstanding.
- Moreover, like any other natural language, they are subject to processes of fusion for all types of phonetic erosion (as outlined in Heine & Kuteva 2007)

• add creation of new tonal contours and new syllable types which results in Sinitic as an outcome of loss of suprasegmental properties of the pre-fusion syllable to Heine & Kuteva's list

- Propose a typological figure
- includes **non-linear suprasegmental morphology** on an intersecting plane with segmental morphology

Plane Q – segmental morphology Plane P – nonlinear suprasegmental morphology



REFERENCES:

- Ansaldo, Umberto, Walter Bisang, and Pui Yiu Szeto. 2018. Grammaticalization in isolating languages and the notion of complexity. In *Grammaticalization from a Typological Perspective*, edited by Heiko Narrog and Bernd Heine, 219–234. Oxford: Oxford University Press.
- Ansaldo, Umberto, and Lisa Lim. 2004. Phonetic absence as syntactic prominence: Grammaticalization in isolating tonal languages. In *Up and Down the Cline The Nature of Grammaticalization*. (*Typological studies in language* 59), edited by Olga Fischer, Muriel Norde and Harry Perridon, 345–362. Amsterdam/Philadelphia: John Benjamins.
- Arcodia, Giorgio. 2013. Grammaticalisation with coevolution of form and meaning in East Asia? Evidence from Sinitic. *Language Sciences* 40:148–167.
- Bickel, Balthasar and Nichols, Johanna. 2007. Inflectional Morphology. In Shopen, Timothy (ed.), *Language Typology and Syntactic Description*. Cambridge: Cambridge University Press. (2nd edition).
- Balthasar Bickel and Johanna Nichols. 2013. Fusion of Selected Inflectional Formatives. In: Dryer, Matthew S. & Haspelmath, Martin (eds.) *TheWorld Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at http://wals.info/chapter/20, Accessed on 2017-07-07.)

REFERENCES (II)

- Bisang Walter. 2008. Grammaticalization as an areal phenomenon: The case of East and Mainland Southeast Asian Languages and its consequences for concepts of complexity and maturation. *Yǔyánxué Lùncóng* 《語言學論叢》38: 64-98.
- Bisang Walter. 2009. Grammaticalization without Coevolution of Form and Meaning: The Case of Tense-Aspect-Modality in East and Mainland Southeast Asia. In Walter Bisang, Nikolaus Himmelmann and Bjorn Wiemer (eds.), *What makes Grammaticalization? A look from its Fringes and its Components*. Berlin: Mouton de Gruyter. 109-138.
- Bybee, Joan, Revere Perkins and William Pagliuca. 1994. *The Evolution of Grammar Tense, Aspect, and Modality in the Languages of the World*. Chicago: Chicago University Press.
- Lamarre C., 2015, The morphologization of verb suffixes in Northern Chinese, in C. Guangshun, R. Djamouri & A. Peyraube (eds.), *Language Contact in North-Western China*, Paris, École des Hautes Études en Sciences Sociales, p. 275-307.
- Matthews & Yip. 2011. Cantonese: A comprehensive grammar. 2nd edn. Abingdon, Oxford: Routledge.
- Wei, Huangfu & Bing Qiu. 2016. Quantitative Relation of the Length and the Count of Senses for Chinese Polysyllabic Words. In: Dong, M., Lin, J., Tang, X. (eds) *Chinese Lexical Semantics*. CLSW 2016. Lecture Notes in Computer Science, vol 10085.

 Springer.

• Zhang, Yimei. 1991. *Jiexiu Fangyanzhi* 介休方言志 [The Jiexiu gazetteer]. Taiyuan: Shanxi Gaoxiao Lianhe Publishers.



Thank you for your attention!

Cycle of typological change

Edward Sapir (1921: 120-146) although he viewed Chinese as a 'definitely of an isolating cast' without the use of any formal elements such as affixes (1921:129), considers that 'A language may be both agglutinative and inflective, or inflective and polysynthetic, or even polysynthetic and isolating, ..."(p.123) 'Chinese, for instance, has no formal elements pure and simple, no "outer form," p.125

Nonlinear morphology: Type I

ABLAUT NONLINEAR MORPHOLOGY:

e.g. — in Semitic languages where a stem template that is modified :

Modern Hebrew:

šamar-ti

'I guarded' guard.PST -1SG.PST

?e-šmor

1SG.FUT-guard.FUT

'I will guard'

Nonlinear morphology: Type II

TONAL NONLINEAR MORPHOLOGY

- Tense-aspect contrasts coded by tone alone well-described for languages in Africa:
- Kisi (Atlantic, Guinea)

Ò cìmbù

3SG leave.PRES.HABITUAL 'She usually leaves'

Ò cìmbú

3SG leave.PST.PERFECTIVE 'She left'

(examples from Bickel & Nichols 2007)

- ➤ Bybee et al (1994), Bisang (1996, 2004), Ansaldo, Bisang & Szeto (2018)— little if no phonetic erosion accompanies grammaticalization
- > mainly affects tonal values and possibly vowel qualities
- Chen and Wu (2015) Arcodia (2013a, 2013b) & Lamarre (2009, 2014, 2015) all argue against this view
- Consider some straightforward examples first of all of fusion showing that Sinitic is far from being exotic by being spared from the process of fusion