

# Sound and Thought in Chinese

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# Why does sound connect to thought?

- Yuan-Ren Chao (1976):

“I venture to think that if the Chinese language had words of such incommensurable **rhythm** as male and female, heaven and earth, rational and absurd, there would never be such far-reaching **conceptions** as *yin-yang*, and *qian-kun*.”

*(Aspects of Chinese Sociolinguistics. Stanford University Press)*

# Previous Studies

The complex issue of how language influences thought has been studied experimentally by

- psychologists
- anthropologists
- linguists, and
- cognitive neuro-scientists

with respect to

- categorization and recall
- sensitivity to spatial direction
- perception of quantity
- counting, and
- counterfactual reasoning

# Problems and New Proposal

- Problems of previous efforts
  - Barely touched on higher-order habitual thought patterns, whose use crucially involves language (and not just nonverbal behavior).
- A different perspective
  - Chinese language development
  - *Theoretically*: how did the linguistic change affect thought patterns?
  - *Practically*: how was language change correlated with thoughts development?
- Aim

To explore how language interfaces with thought patterns that may be specific to Chinese culture.

# The Focus of this talk: Disyllabicity and Dialectical Thinking

The correlation between:

- the rise of disyllabicity

(The Warring States period, ca.475-221 BC)

- the emergence of dialectical thinking

(The Warring States period, ca.475-221 BC)

in Chinese civilization

# What are the patterns of Chinese Thinking?

- 1. polarity 东西
- 2. opposite 左右
- 3. symmetry 大小
- 4. centrality 过犹不及，叩其两端之
- 5. correlation 乾坤、阴阳
- 6. complementary 相反相成
- 7. holistic 合二而一
- 8. dialectic 祸兮福所倚

# 注意!!!

- Dialectical
  - Chinese Dialectic ✓
  - Hegelian Dialectic ✗

# Argument on language → thought

- Sapir and Whorf's hypothesis  
“the differences in linguistic structure between languages are reflected in people's habitual thinking processes.”
- Nisbett Richard (2003:160)  
“Language does indeed influence thought so long as different languages are plausible associated with different systems of representation.” “structural features of the language compel different thinking processes....different language underlie different mental representation.”





# Argument on Chinese Thoughts

## 1. Richard J. Smith (1983:112)

“Thus, each character became a convenient rhythmic unit. This feature of the language naturally encouraged the Chinese, perhaps more than any other culture group, to think and write in terms of polarities..... Many, if not most, of these polarities can be correlated directly with yin and yang --- an expression of the central Chinese notion that ideas are complemented and completed by their opposites.”

## 2. Bodde Derk (1991)

“Everything has been the polarity of the *yang* and *yin* principles, each with its many correlative qualities and functions.”



3. “Chinese attempts to classify the objects phenomena, and concepts of the natural and human worlds **according to correlative thinking**” Bodde (1991:97) *Chinese Thought, Society, and Science*
4. “symmetry signifies an evenly divided duality” (Bodde 1991: 108)
  - complementary pairs as **light/darkness** or heat/cold,
  - non-complementary opposites as **mind/body** or good/evil.
5. “Another concept (Centrality) I believe to be genetically derived from ... symmetry.” (Bodde 1991: 108)



# What is Chinese Language?

## ----Polarity Thinking Effects

### Yang

Brightness

Heat

Dryness

Hardness

Activity

Incipience

Dispersion

masculinity

Heaven

sun

south

above

roundness

Odd numbers

### Yin

darkness

cold

wetness

softness

quiescence

completion

consolidation

femininity

earth

moon

north

below

squareness

even numbers



# Different types of Centrality

A / B  
ABCD / EFGH

AB / CD  
ABC / DEF

落霞 与 孤鹜 齐飞  
秋水 共 长天 一色

A C B  
D

四季，四体...

A C B  
E D

五德、五行



# The thought of numbers

- [ 1 ] [一 N] = the entire N 一身、  
= no comparable compatible one  
[寡人、寡兄、寡妻]
  - [ 2 ] pairs of two individual
  - [ 3 ] number of insertion (参 : 渗)
  - [ 5 ] middle =午, X
- 
- **Odd number** > central
  - **Even number** > symmetry

Granet (1934:279):

*1* is not, in Chinese eyes, a number like other numbers, because by itself, it is a symbol of Unity, Totality, Entirety. Added to even numerical groups, it provides the vital pivot or nexus that changes symmetry into centrality, but it cannot by itself constitute a numerical category.

# Nothing uniquely Chinese

“There is **nothing uniquely Chinese** about such **(correlative) thinking**” (Bodde, 1991:98)

- “On the very threshold of modern science, Kepler (Johannes 克伯勒, 1571-1630), whose three laws of planetary motion are the first true laws of nature since the Greeks, was trying to fit them into the **symmetries** of a cosmos in which sun, stars and planets correlate with the person of the Trinity.” (Graham, 1986:8)



# The Key Feature of Chinese Thought

- **Complementary**

1. “It is important to differentiate this kind of polarity from the Zoroastrian/Manichean struggles of light against darkness and good against evil... In Chinese thinking, the *yin* and *yang* complement rather than struggle against one another.” (Bodde 1991:100)
2. “To understand and appreciate one state of affairs requires the existence of its opposite;
3. “*Yin* and *Yang* only exist because of each other...the principle of *yin-yang* is the expression of the relationship that exists between opposing but interpenetrating forces that may complete one another, make each comprehensible, or create the conditions for altering one into the other.” (Nisbett 2003)

4. “It is true that *yin* and *yang* stand in an oppositional relations to one another...but there is basically a relationship in which the existence of one is sustained by the existence of the other, and it is essentially a cooperative *relationship*.” (Osumu, 1996)





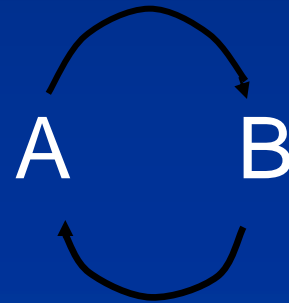
# How to be unique?

A and B are interdependent of each other;

non-unique

$A \longleftrightarrow B$

unique

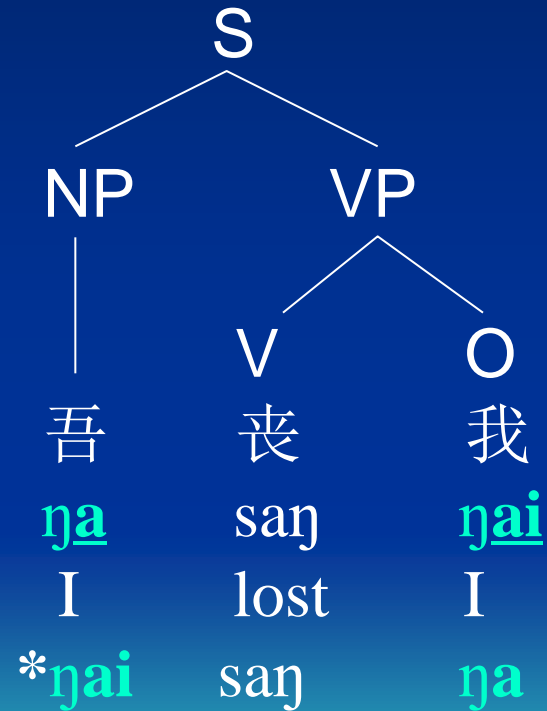


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# The Chinese Sound —

## Monosyllable foot in archaic Chinese

1500 – 300 BC



# Contrastive Pronouns

彼丈夫也，我丈夫也，吾何畏彼哉？

《孟子·滕文公》 Mencius (ca. BC. 372-289)

\*prjajʔ zhangfu ye, \*ŋaiʔ zhangfu ye, \*ŋa he wei prjajʔ zai?

He man prt. I man prt, I why afraid he prt.

‘HE is a man, I am a man, how come I am afraid of HIM.’



# The Prosody of two syllable line poem

上古二言诗行的韵律

斷竹，續竹； 飛土， 逐肉。

\*doonʔ \*tug, \*yjog \*tug; \*pʷl \*lhaaʔ, \*l'ʷwg \*njug  
cut bamboo, connect bamboo, fly earth, chase flash  
'Cut a bamboo (and) string it (into a bow); fly the pellet (and) hunt animals.'



# Chinese Sound —

## Disyllabic foot after Warring State

Before 475 BC

After 475 BC



# Development Disyllabicity

## 1. 并列合成词 Parataxis and Anagram compounds

衣裳

*yīshāng*

shirt skirt

‘clothes’

圖書

裳衣

*shāng yī*

skirt shirt

‘clothes’

書圖

## 2. 偏义复词 Polar Compound and partial Compound (using one meaning of the two parts)

動靜

*dòng-jìng*

move-quiet

‘activity’

肆諸市朝

*sìzhū shì-cháo*

kill it-at market-(imperial) court

‘To execute him at the market

(cf. Execution is not allowed in the imperial court).’

# Stress is Relative

## —— the new theory of linguistic prosody

- Liberman 1975, Liberman and Prince 1983
- **The Discovery of Relative Prominence**  
“In any constituent on which the strong-weak relation is defined, the element of strong is metrically **stronger than** the element of weak.”  
(Liberman and Prince 1983:23)

“The stress assignment in metrical phonology is a matter of denoting the **relative prominence** of sister constituents. Thus, **there is no absolutely ‘strong’ or ‘weak’**, but ‘stronger than’ and ‘weaker than’, i.e., (Hogg and McCully 1987:65)



音步 = 韵律词 = 复合词

Prosodic Hierarchy

韵律层级

Prosodic Word (PrWd)

韵律词

|

|

Foot

音步

|

|

$\sigma$  syllable

音节

|

|

$\mu$  mora

韵素





# The Cosmic terms developed: Yin-yang and Qian-kun

“During the early Zhou 周, when the words *yang* and *yin* first appear in the *shi Jing* 詩經, they merely mean “sunshine’ and ‘shade’ and have no cosmic significance.”

—— Bodde 1991: 101

- 《詩經·大雅》說：“既景乃岡，相其陰陽。”
- 《左傳·莊22》“乾為天，坤為土。”
- “I have no trouble believing their (郭店 slips and 馬王堆 copies) common ancestor was in circulation between 300 and 250 B.C., and possibly earlier.”

—— Robert Henricks, *Lao Tzu's Tao Te Ching*,  
Columbia University Press. 2000)



# The Developments of PrWd and the Result of Polarity Awareness

[During and after the Warring State Period (475 BC)]

## Polarity Expressions

- life and death
- morning and evening
- haven and earth
- male and female,
- rational and absurd
- good and evil
- Yin and Yang

生	死
旦	暮
乾	坤
男	女
智	愚
善	恶
阴	阳

PrWd

[by disyllabic **Prosodic Word formation**]

# Prosodically Ungrammatical

## 字不双，法不容！

- 宋何罪之有？ 《左传》  
Song he zui zhi you?  
Song What guilt it have?
  - 羔羊之皮 《诗经·羔羊》  
Gao yang zhi pi  
Lamb sheep 's skin
- \*宋何罪有？  
\*song he zui you  
Song what guilt have?
  - \*羊之皮  
\*yang zhi pi  
\*sheep 's skin

Kong Yingda (574-648):

“The text says lamb with sheep, because lamb is also a kind of sheep, it mentions both lamb and sheep in order to **balance the sentence.**”



# Prosodic Grammar discovered by Ancient Commentators

孔颖达 (574-648)

- “视民如禽兽” 《诗经·小雅·何草不黄·序》

Shi min ru qin shou

Look people like bird beast

Kong: 经只言兽耳，言‘禽’以足句the classic text says only beast, adding bird on it in order to *fulfill the sentence*.

- 芟夷我农工，虔刘我边陲

shan yi my farm-harvest, qian liu my edge-frontier

Kong: 重言‘杀’者，以圆文也The reason of repeating ‘kill’

*is to perfect the language.*

# Negative Evidence Inspires ideas

- L2 Learning Experience:
  - Positive evidence accumulates knowledge while negative evidence stimulates ideas.
- L1 Learning Experiences:
  - “In indo-European languages learning, to speak and write grammatically is to some extent a logical exercise...and the history of logic has been tied up with the history of grammar.”
- “Logic as a discipline will develop **only with** consciousness of thinking illogically.” --- Graham
- “Dialectic as a discipline will develop only with consciousness of thinking unbalancedly. --- ? ?”
- Sentences without a element as the subject is **ungrammatical**;
- Sentences without a disyllabic unit as the stress is **ungrammatical**;

# Reading and writing Chinese is a word-relational exercise

- \***买和读**了一本书      **购买和阅读**了一部莎翁巨著  
buy and read a book
- \***阅读+报**  
read newspaper      **读+报**, 读+报纸
- 复印文件 =>      **印+文件**,      **复印+件**  
Copy document      copied document, to copy a document
- \***[负+责任]** 这项工作      **[负+责]** 这项工作  
take responsibility of this job

# 《郭店老子》 *Lao Zi Found at Guodian*

## Dialectical-Thought



- 又亡之相生也 The mutual production of being and non-being,
- 難易之相成也 The mutual completion of difficult and easy,
- 長崙之相型(形)也 The mutual formation of long and short,
- 高下之相涅(盈)也 The mutual filling of high and low,
- 音聖旨相和也 The mutual harmony of tone and sound,
- 先後之相墮(隨)也。 And the mutual following of front and behind.

# Correlation Between Relative Stress and Relative thought

- Liberman 1975

Relative Prominence =



\*f  
|  
S  
陽

\*f  
|  
W  
陰



# The Extreme of Dialectic

- *Tao Te Ching* (Ch-36)
- To shrink something you need to expand it first;
- To weaken something you need to strengthen it first;
- To abolish something you need to flourish it first;
- To take something you need to give it first.



# The appearance of “相” ‘each’ in Archaic Chinese

- 《易经》 37 cases of [相+V]
- 【经】相遇, 【传】
- 相遇, 言相克也。天地相遇, 物相遇而後聚, 相遇也。
- 相见乎离, 万物皆相见, 与天地相似交相爱也。相保也。相承也
- 老夫女妻, 过以相与也、二气感应以相与不相与也。雷风相与
- 屈信相感 情伪相感而利害生。刚柔相易、六爻相杂, 八卦相错物相杂, 故曰文
- 刚柔相推、日月相推、寒暑相推而岁成、刚柔相推而生变化
- 其志不相得、五位相得而各有合, 近而不相得则凶、雷风不相悖、水火不相射
- 雷风相薄、阴阳相薄、刚柔相摩, 八卦相荡
- 爻恶相攻而吉凶生、远近相取而悔吝生、同声相应, 同气相求.....

No true complementary notions found in [相+V] before the Warring States Period.



# Questions to be explored in the future

- How did ancient Chinese use antonymic terms to designate physical dimensions, relations, and attributes?
- How did the increase of disyllabic forms contribute to particular modes of concept formation and complex thought in the development of the Chinese lexicon?
- How did the Chinese way of conceptualizing time, space and direction evolve in relational opposites and metaphors?

# Final Remarks

- “The Greek language itself encouraged a focus on attributes and on turning attributes into abstractions (i.e., white > Whiteness, kind > kindness).” (2003:9). “This practice may foster thinking about the properties as abstract entities that can then function as theoretical explanations.” (2003:156)
- How is the dialectic thinking associated with Chinese language grammar or grammatical devices?
- What is the dialectical value in terms of a universal principle? (The theory of Traditional Chinese Medicine 中醫?)

