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FIVE COMMENTS ON  
 “A CHINESE PHONOLOGICAL ENIGMA”  
 BY PROFESSOR GEOFFREY SAMPSON

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Professor Sampson's paper discusses a key issue in Chinese exegesis, philology and linguistics with traditional assumptions and contemporary explorations. The argument and the analysis given by Professor Sampson are very inspirational and thought-provoking. In the following, I would like to provide some preliminary thoughts on the issues involved in his paper.

1. ABOUT READING OLD CHINESE ALOUD

There seem to be opposing views of the same fact. On the one hand, some scholars may think that "homophony in the Old Chinese of three thousand years ago may not have been strikingly greater than in modern European languages." On the other hand, most people agree that "No-one can understand a passage of 文言 read aloud without sight of the script." The question is, if Old Chinese is indeed like modern European languages in terms of homophony, then it should not be the case that no one can understand it when read aloud. In fact, even if both statements are true, there is a hidden factor in the latter statement that "No one can understand a passage of 文言 read aloud without sight of the script." That statement assumes that the passage of 文言 is read aloud in modern pronunciation, not in archaic pronunciation, which is determined by archaic phonology (which may not be known forever in a strict sense). This may further imply that we may not fully understand classical texts by reading them with the modern phonological system.

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## 2. SOME EVIDENCE FOR MORAIIC FOOT STRUCTURE IN ARCHAIC CHINESE

I am aware of the following statement made by Professor Sampson:

But when things reach the point where a largely monomorphemic vocabulary has to be replaced by a largely bimorphemic vocabulary in order to preserve intelligibility, as happened in Mandarin, it seems certain that the language as it would have been without vocabulary replacement would have exceeded any tolerable level of ambiguity.

The process of replacement of a monomorphemic vocabulary by a bimorphemic vocabulary of classical documents started around the Warring States Period<sup>1</sup> and it is traditionally called "disyllabication," which implies, implicitly or explicitly, a monosyllabic origin of the language. Whether Old (Proto-) Chinese was purely monosyllabic or not, recent studies show that Archaic (or proto-) Chinese may have had a different prosodic structure from Medieval Chinese (Pulleyblank 1962:58-144), Pan 2000, Zhengzhang 2003, Behr 2004). For example, emphatic forms (thus, heavier), as contrasted with non-emphatic counterparts (hence, weaker) as seen in (1) indicate that mora, rather than syllable (as in Medieval and Modern Chinese), was taken into account for prosodic weight in Old Chinese (before 300 BC). For example (the phonological reconstructions are based on Baxter 1992):

- 1) a. 吾喪我。《莊子·齊物論》  
 \*ŋra sang \*ŋaj?  
 I lost I  
 'I lost myself.'
- b. 彼丈夫也，我丈夫也，吾何畏彼哉？《孟子·滕文公》*Mencius* (ca. BC. 372-289)  
 \*pɾaj? zhangfu ye, \*ŋaj? zhangfu ye, \*ŋra he wei pɾaj? 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.'

In these examples, pronouns are used in stressed positions (the object position, for example, as seen in [1a]) or contrastively, heavier forms such

as \*ŋaj? (containing more than one mora) are favored over their counterpart lighter ones, such as \*ŋra (containing only one mora) for the first person pronoun 'I'.

Another example given by Pan Wuyun is the distinction encoded through vowel alternations between stressed (or emphatic) and unstressed (weakened) forms for OC demonstratives. 此 此 and 是 是 are among the stressed (or emphatic) forms. Thus, we may like to consider, or at least be aware of, the suggestion that Archaic Chinese may be a quantity-sensitive language (Feng 2013). If so, the contracts below 此/是 and 茲/之 can be characterized as a heavy syllable (which is more sonorant or has more moras) vs. a light syllable (which is less sonorant or has fewer moras). It also makes sense in terms of **Focus Prosody Correspondence Principle** (Zubizarreta 1998:88): the focused element is stressed (or heavier).

- 2) 茲 \*ts -ə  
 此 \*tsh -e?  
 之 \*j -ə  
 是 \*dj -e?<sup>2</sup>

Further evidence supporting this hypothesis comes from the two-syllable per line structure of the earliest poems, such as in (3).

- 3) 斷竹， 續竹； 飛土， 逐肉。  
 \*ton? \*trjuk, \*ljoks \*trjuk; \*pjej \*hla?, \*drjiwk \*njuk  
 cut bamboo, connect bamboo, fly earth, chase flesh  
 'Cut a bamboo (and) string it (into a bow); fly the pellet (and) hunt animals.'

The poem in (2) indicates that one syllable could form an independent foot (because poetic lines are generally not formed by fewer than two feet, and thus the two-character line in early Archaic Chinese poem must be considered a moraic foot structure). However, this type of moraic foot structure was replaced by a syllabic foot structure later, giving raise to the "disyllabication" in the language.<sup>3</sup>

## 3. THE CHANGE OF PROSODIC SYSTEMS

As stated in footnote (3), we learned this:

Synonym compounds are of course only one type of Chinese compound, and it may well be that they seem disproportionately salient to Western linguists because European languages contain little or nothing that is analogous. But that very fact strengthens my point. I know of no language other than Chinese which uses compounding of synonyms as a word-formation technique, so there must presumably be some special reason why Chinese uses it. I cannot think of any alternative to the pressure of homophony as an explanation.

One possibility that has been introduced in the literature for this type of peculiar linguistic behavior in Chinese is that it stems from a prosodic reason. That is, coordinating (including synonym and antinomy) compounds in classical Chinese were motivated by prosody (see Feng 1997). To see how prosody triggers the synonym (and/or antinomy) formation, let us first look at the following statistics ("Total Comp" = Total compound words, "CC" stands for Coordinating Compounds, and MH for Modifier Head Compounds, taken from Feng 1997):

Percentage of CC and MH compounds in *Confucius*, *Mencius* and *Lunheng*

Chronology	Texts	Total Comp	Total CC	%	Total MH	%
c. 550 BC	<i>Confucius</i>	180	48	26.7	67	37.2
c. 300 BC	<i>Mencius</i>	333	115	34.5	100	30
c. 100 AD	<i>Lunheng</i>	2088	1401	67.24	517	24.76

If the coordinating structure is used to create disyllabic phrases (or template of the prosodic system), and if the creation of disyllabic forms is required only when the disyllabic foot requirement became stronger, we would further expect that a reverse situation that would occur in the language. That is, there would eventually be more disyllabic combinations that were formed by coordinating structures than by subordinating structures. This is so because when the prosodic requirement becomes stronger and stronger, making use of naturally-occurring phrases would not be efficient and productive. As a result, the phrases created for prosody would come to dominate in late stages. This analysis is supported by Cheng's (1992) statistical data given in the Table above, which suggests that the bi-morphemic compound and the synonym compound may be motivated by a change of prosody from a

bi-moraic foot structure (one syllable one foot) to a disyllabic foot structure (two-syllable one foot).

#### 4. ABOUT FUNCTIONALISM'S ACCOUNT

The hypothesis that "languages avoid adopting sound-changes which would create many homophones" would be considerably more established if Labov's article (1987) on "The Overestimate of Functionalism" had been mentioned and evaluated. A relevant issue I would like to mention is an idea that tendency has pervasive explanatory power only if it reflects a supporting rule determined by the system of the language.

#### 5. ABOUT TERMINOLOGY

In terms of terminology, there have been many different labels and terms for similar concepts: mono-morpheme, phoneme, word, *zi* 字 and *ci* 词 in the literature and in this paper. In modern Chinese, if one talks about *zi* 字 (such as in the theory of *Zi-benwei* 字本位 'Character-based theory'), it is confusing in the sense that *zi* 字 sometimes refers to a bound morpheme (which is not a free word), and sometimes refers to a free morpheme, although in classical Chinese most 字 are monosyllabic words. The most useful term for Chinese in this regard, as far as I can see, is root-morpheme. They are all monosyllabic, because hardly any di-/poly-syllabic mono-morphemes are roots in the morphological process of the language (see Feng 2009 for a relevant argument), functionally speaking.

#### NOTES

1. It is worthwhile to distinguish disyllabic forms that were produced by the system of prosodic morphology from that were produced/occurred sporadically in the language for proper nouns. For example, there were trisyllabic words in Archaic Chinese like Buzhou Mountain 不周山, but the prosodic morphological system at that time had hardly produced trisyllabic words like 喪家犬 *sangjia quan* 'lost-home dog' which was normally formed, instead, as *sangjia zhi quan* 'lost-home 's dog' 喪家之犬. Of course, More examples from paleographic corpus should be examined to substantiate the hypothesis suggested here in future research.

2. Different reconstructions of the forms in (2) by different scholars also exhibit the same pattern, i.e., the vowels of 此 and 是 are more sonorous than that of 茲 and 之.
3. Evidence for existence of two syllable line poem in archaic Chinese can be found in *Yijing The book of change*. Thank Behr wolfgang for pointing out this question for me.

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