

Article

Where Do Chinese Doublets Come From?—The Doublets from Prehistory to the Era of the Book of Poetry

Di Jiang *

Institute of Ethnology and Anthropology, Chinese Academy of Social Sciences, Beijing 100028, China

* Corresponding author. E-mail: jiangdi@cass.org.cn

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ABSTRACT: The earliest writing in China is the oracle bone inscriptions of the Shang Dynasty, which records early Chinese, also known as oracle bone Chinese, which are all monosyllabic-words (1300 BC). In the Bronze Inscriptions of the Western Zhou Dynasty and later handed down documents, doublets appear (beginning in 1046 BC). At present, the philological academy believes that the doublets recorded with two Chinese single-characters come from reduplication of two single-character symbols, but there is no complete argument and reliable evidence. This article, by using the opposite method of argument, reversely assumes that the single-characters (monosyllabic words) come from doublets and tries to demonstrate it. The article proves the truth of the origin of doublets based on the word distribution and semantic correspondence between doublets and single-characters in “the Book of Poetry”, that is, doublets are the source and single-characters are flows. Among them, 39.66% of the doublets have no corresponding single-characters, and they are the characters created to record doublets; 41.92% of the meanings of doublets have nothing to do with the meanings of single-characters, which proves that the doublets does not come from the combination of single-characters; 12.46% of the meanings of doublets are interpreted as the meanings of single-characters, which are the subjective errors of later generations of interpreters; the remaining 5.66% are only associated with proclitics and enclitics rather than single-characters. Finally, the article proposes that doublets originate from a unique mechanism of expressive morphology, which is a new type of etymological theory outside the morphological grammar system, and can create various polysyllabic ideophones, including the onomatopoeia or mimetic words. The article proves that a language begins with the creation of words. In the prehistoric period before the oracle bone inscriptions, Chinese ancestors had invented a large number of distinctive doublets (AA), couplets (AB) and other polysyllabic words (xA, or ABB, ABA'B), or ideophones. Due to the difficulty of writing, the doublets were hidden in spoken language for hundreds of years. It was not until the time of “Book of Poetry” and “Book of History” in the bronze inscriptions of the Western Zhou Dynasty that it entered the history and has continued to this day. Doublets are the earliest Chinese words and the beginning of Chinese civilization.

Keywords: Doublet; Single-character; Classification for character usage; Expressive morphology; Word creation; The Book of Poetry



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1. The Impossibility of Single-characters as a Lexical Origin and a New Hypothesis of the Doublet Origin

The origin of doublets in the Book of Poetry (shī jīng 1046–771BCE) is generally believed to be the overlapping or reduplication of single-characters or monosyllabic words. Why does a syllable reduplicate? There are many different opinions, such as the reasons of semantic enhancement [1] (p. 235), rhetorical technique [2] (pp. 57–60), baby talk [3] (pp. 366–369), reduplicated morphology [4] (pp. 428–429), [5] (p. 18) and enhancement of morphology [6] (p. 153), [7] (pp. 79–87), [8] (p. 6). Among them, Shi (2009) [9] put forward a new point of view and gave a seemingly rigorous argument.¹

Shi (2009) [9] suggests that AA-form doublets did not appear in the Shang Dynasty, and by the time of “the Book of Poetry” in the middle and late Western Zhou Dynasty, there were already a large number of them, revealing the logical development process of AA-form doublets from nothing to existence, from less to more. Shi also suggests that the function of the A-form is to describe the modality, and the AA-form to describe the modality as well. If the number of AA-form is more than that of A-forms, it shows that “the monosyllabic state adjective in the pre-Qin period has been very poor in its exclusive use, and its function of expressing the modality is weakened, so other means are needed to support and strengthen its descriptive function” [9]. Furthermore, Shi found that from the Book of Poetry to the Songs of Chu (chǔ cí), the number of monosyllabic state adjectives decreased significantly, while the number of enclitics increased (浩然、叢爾), and the doublets were the most “ways to help monosyllabic state adjectives

enhance their descriptiveness”, and thus asserted: “Therefore, we believe that the motivation of AA-form doublets is the weakening of the pragmatic function of monosyllabic state adjectives in the pre-Qin period [9].²

According to Shi’s argument, at least the following questions need to be clarified.

1. If the AA-forms come from the A-forms, the judgement should be proved by statistic data.
2. If the AA-forms come from the A-forms, the correspondence on the senses between AA-forms and A-forms should be perfectly achieved.
3. If the A-forms in the AA-forms are state adjectives, how could they be reduplicated in the age of the Book of Poetry when the reduplicative morphology did not appear?

Let’s look at the first question. According to Shi’s statistics, there are 73 corresponding forms of monosyllabic state adjectives in all doublets (353) in the Book of Poetry [9], in other words, only 73 A-form monosyllabic adjectives constitute AA-forms. This means that the vast majority of doublets (280) do not appear to enhance the descriptivity of the A-forms, and to say the least, there is no evidence that most doublets come from A-forms, and the evidence for reduplication is seriously insufficient. According to Kennedy (1964) [10], among the 360 doublets in the Book of Poetry, 139 Chinese characters are only used in doublets and do not appear anywhere else in the Book of Poetry, that is, they do not appear alone. “They seem to have been created for this particular construction”. From this point of view, an AA-form from a A-form has been water without a source. These two facts clearly do not support the idea that doublets come from monosyllabic state adjectives.

The second question. Shi (2010) [11] mainly discusses the purpose, function, and method of enhancing the descriptiveness of monosyllabic state words, but only a few cases are given in terms of the correspondence between AA-form and A-form meanings. In particular, Shi (2010) [11] presents the total number of doublets and single-characters, but does not list the table of doublets or single characters, which can easily confuse the different relationships between doublets and monosyllabic words (Chinese characters), for example, the doublets created by the use of loan-characters have little relationship with the original meanings of Chinese characters, only the shape of the characters is the same.

The third question lacks empirical evidence. Shi [11] believes that “most of the doublets are the reduplication of monosyllabic state adjectives”, and proposes that “the semantic range of state adjectives is narrow, and there is no obvious ‘quantity’, and the reduplication is only to emphasize the descriptiveness of the A-form and enhance vividness and subjectivity”. It is a plausible proposition that by comparing the reduplication of modern property adjectives to obtain degree increments, it is renamed as reduplicating state adjectives to enhance descriptiveness. Because reduplication is a morphological process with grammatical value, what reduplication or affixation achieves is to determine the value change in the grammatical domain or grammatical category, such as the alternation of singular and plural nouns, the alternation of perfect and imperfect verbs. However, the “descriptiveness (vividness and subjectivity)” proposed by Shi seems to be a subjective evaluation concept, not the ontological and objective nature of state adjectives, and it is difficult to determine the value changes in it. Furthermore, in the Age of the Book of Poetry, reduplication as a morphological method has not yet been developed (Kennedy 1964) [10]. Therefore, the theory of motivation to constitute doublets in order to strengthen the descriptiveness of monosyllabic state adjectives cannot be established.

Based on the above discussion, this paper attempts to re-propose the proposition. We assume that since some AA-forms and A-forms are morphologically and semantically related, we might as well assume that the monosyllabic state adjectives come from doublets, and check whether there is indeed an ontological connection between the two. We begin by observing the data.³

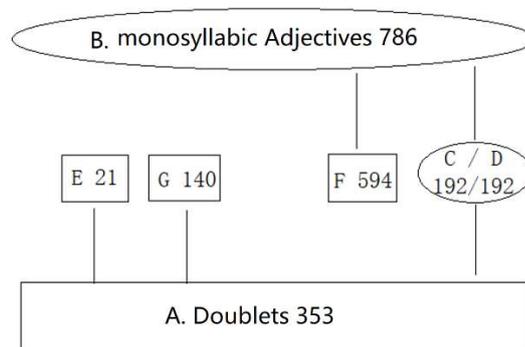


Figure 1. The relationship between doublets and monosyllabic adjectives and related data. (A) 353 doublets, 669 occurrences; (B) 786 monosyllabic adjectives with 3334 occurrences⁴; (C) 192 doublets corresponding to homonymous single-characters, appearing 422 times; (D) 192 single-characters corresponding to doublets, appearing 1810 times; (E) 21 doublets corresponding to single-characters of disyllabic words, appearing 44 times⁵; (F) 594 monosyllabic adjectives without corresponding doublets, appearing 1525 times; (G) 140 single-characters only for doublets, appearing 208 times.

In Figure 1 The monosyllabic adjectives of C and D are associated with doublets, and the data are 192 items, but the perspectives are different. C indicates that 192 items of doublets have evolved into monosyllabic words, and 353 items still retain

the form of doublets. D, on the other hand, means that 192 of the 786 monosyllabic words have been combined into doublets. Whichever view is taken, there may be a semantic or functional relationship between doublets and single characters, but it may also be a relationship of the same form. This is the question to be discussed below.

E indicates that this part of doublets has not yet been monosyllablized. However, it remains to be seen whether the same characters between disyllabic words and doublets are the result of coincidence or evolution. F shows that at least about 75.57% of the characters have not been reduplicated from the point of view of doublets produced by character combinations. G means that from the perspective of the character usage in the Book of Poetry, each character in doublets neither appears independently nor is a constituent unit of any word other than doublets. What does this mean? 140 items of G (139 items of G. Kennedy's statistics) are not a small number, and they appear 208 times, which cannot be accidental. So, we agree with Kennedy (1964) [10], these character items were created specifically to record doublets. The people of the West Zhou Period and the Spring and Autumn Period have mastered the method of inventing Chinese characters, and they are happy to use this skill to record the sounds spoken in their spoken language. Such sounds have never been recorded before, and they need the help of Chinese phonetic methods and techniques, so they are very natural and inartificial.

The above discussion provides only prima facie evidence for conjectural results and has not yet been demonstrated. The correspondence between the single-characters of C and D and doublets only reflects the superficial relationship in the character forms, and does not discuss whether there is a real relationship in the meaning and function of the two. We need to really demonstrate the original nature of doublets in the Book of Poetry at a deep level.

2. Doublets Classification Based on Distribution of Character Usages

By index on the database of the Book of Poetry, we find that there are three kinds of character distribution relationships between doublets and single-characters.

The terms herein are agreed as follows: A doublet refers to Chinese words consisting of two-homographic characters, called “重言 chóngyán” in Old Chinese. A couplet refers to Chinese words consisting of two characters, often alliterated or rhymed, called “联绵 liánmián”. A proclitic refers to disyllabic words with an initial-sound character, “词头词 cítóuci”, including “有字式 yǒuzìshì (characters with initial-sound yǒu)”; “其字式 qízìshì”, “斯字式 sīzìshì,” etc. An enclitic refers to structures with a post-auxiliary character, “(后附)衬字(结构) chènzi”, which are temporarily classified as couplets. A single-character refers to a monosyllabic state adjectives, which is a morpheme or a word. A disyllabic-word (“复音词”) includes couplets, proclitics, enclitics, and compound words [11–13].⁶

2.1. Type I: Characters among Doublets Never Appear as Isolated Single-Characters

In this type there are 140 doublets (39.38%), which are what G. Kennedy called “Chinese characters created to record doublets” (1964) [10]⁷. They do not appear in any other word-structures, and cannot be used alone, and do not form any disyllabic words in the Book of Poetry. The list is as follows (doublets are listed in single-character. The same to other lists of the paper below):

藹 āi, 嗽 áo, 傍 bēng, 萃 bēng, 怩 bì, 燁 yè, 儻 biāo, 灑 biāo, 怍 bǐng, 啁 tān, 蟬 chán, 蚩 chī, 冲 chōng, 愒 chuò, 佻 cǐ, 踧 dí, 怛 dāo, 蹲 cún, 峨 é, 萼 pèi, 幡 fān, 駢 fēi, 霏 fēi, 啞 bēng, 杲 gǎo, 仡 yì, 罔 gé, 耿 gěng, 瘡 guān, 浩 hào, 焯 hè, 噉 hè, 蕞 hōng, 惶 huáng, 煌 huáng, 叻 huì, 翊 huì, 踏 jí, 濺 jí, 伎 qí, 矍 cè, 矫 jiǎo, 潜 jiē, 斤 jīn, 菁 jīng, 兢 jīng, 赳 jiū, 踽 jǔ, 鞞 xuàn, 悁 yuān, kuài, 駢 kuí, 连 lián, 粼 lín, 栾 luán, 律 lǜ, 芒 máng, 浼 měi, 幪 méng, 沕 nǐ, 绵 mián, 藐 miǎo, 蕤 nǐ, 浓 nóng, 庞 lóng, 旁 bēng, 伾 pī, 傲 qī, 鏘 qiāng, 躑 jiǎo, 譙 qiáo, 翘 qiáo, 钦 qīn, 駢 qín, 傍 qióng, 俛 qiú, 祛 qū, 渠 qú, 瞿 qú, 穰 ráng, 穰 ráng, 陜 réng, 慷 cǎo, 汕 shàn, 駢 shēn, 湜 shí, 叟 sǒu, 穉 suì, 傚 cuō, 惕 tì, 籓 tì, 趑 tián, 佻 tiáo, 僮 tóng, 博 tuán, 焯 tūn, 脱 tuì, 丸 wán, 韡 wèi, 濊 huì, 刁 xí, 滄 xi, 僊 xiān, 晓 xiāo, 儻 xiāo, 瀟 xiāo, 噐 xiāo, 欣 xīn, 嫫 qióng, 岩 yán, 咽 yuàn, 泱 yāng, 洋 yáng, 嚶 yāo, 驿 yì, 奔 yì, 殷 yīn, 呦 yōu, 滌 yōu, 俣 yǔ, 噉 yù, 麇 yǔ, 彘 yù, 蛎 yuān, 啍 yún, 战 zhàn, 罩 zhào, 暂 zhé, 晰 zhé, 蜚 zhé, 蕤 zhēn, 殖 zhí, 揜 zhì, 惴 zhui, 淳 zhun, 啍 tun, 灼 zhuó, 訛 zī

The Book of Poetry is one of the earliest documents in China with the largest number of Chinese characters. But even so, the statement by G. Kennedy makes us know that the era of the Book of Poetry is still an era of large-scale creation of words and characters, and the “Chinese characters created to record doublets” in the Book of Poetry is the result of the creation of characters in this era.

However, with the help of “Lexicon of Pre-Qin Oracle, Bronze Inscriptions and Bamboo Scripts” (*Shang and Zhou Dynasties to the Spring and Autumn Period and the Warring States Period*), we have a new understanding of this part of Chinese characters.⁸ The Chinese characters used by doublets mentioned by G. Kennedy can also be divided into two groups, one is the characters that do not exist in the oracle and bronze inscriptions, and it is judged that the doublet recorder created new Chinese characters from the shape by using the rules of associative and pictophonetic characters. For example, there are 110 Chinese characters such as 藹 āi, biāo 儻, fēn 霏, huáng 煌, etc. Second, most of the Chinese characters represent the names of people, places, clans, family emblems and other specific meanings in Shang Dynasty, Western Zhou Dynasty and Spring and Autumn Period oracle bone inscriptions and bronze inscriptions. For example: chī 蚩, jīn 斤, páng 庞, páng 旁, xiāo 噐, gǎo 杲, luán 栾, ráng 穰, there are 12. The other 18 characters are from the Warring States Period, such as fēi 駢, kuài 唵, hào 浩, máng 芒, qīn 钦, and zhàn 战. Strictly speaking, these characters appearing in the inscriptions on bronze and tortoise shells have nothing to do with the meaning of doublets. We may

think that doublets in the Book of Poetry only use such characters to create words, and some of them may have homophones with the borrowed characters, especially the onomatopoeia or mimetic words.

Of course, this kind of creation may not be unique to the recorder of the Book of Poetry, but is gradually created and shared by the whole society. According to other documents, for example, the “The Book of Documents 《尚书》” of the same period has “jīngjīng 兢兢, hào hào 浩浩, yìyì 亿亿”, and the Chinese characters “lǜ 律, tì 惕, xiāo 嚣” used separately, and later, the “Songs of the South 《楚辞》” of the Warring States Period has “fēnfēn 雰雰, hào hào 浩浩, gǎo gǎo 杲杲, rángráng 穰穰, tiántián 阗阗”. These common characters prove that the creation of Chinese characters is an inevitable and indispensable way to record new words. It can also be inferred that the views of G. Kennedy are wise and desirable. For example, “biāo 儻”, “biāo 灑” are actually different characters created for onomatopoeia or mimetic words in different contexts. Since the Chinese characters are created especially for doublets, they must not be a combination of single-characters.

2.2. Type II: Characters in Doublets Are Homographic to Single-Characters

From the database, it is found that the number of homographs between doublets and single characters is 192 pairs.⁹ A symbol homograph is the cornerstone of the idea of using single-character to form doublets. Do the facts support it? We further observe the relationship between the meaning of the two characters, which can be divided into two sub-groups.

Type IIa: the meaning of doublets is unrelated to the meaning of single-characters, with 148 cases (41.92%) and 271 occurrences. The details are listed as follows:

印 áng, 敖 ào, 板 bǎn, 薄 bó, 奔 bēn, 蔗 biāo, 鏢 biāo, 采 cǎi, 懣 cǎn, 苍 cāng, 草 cǎo, 掺 xiān, 虫 chóng, 仇 chóu, 楚 chǔ, 旦 dàn, 登 dēng, 涤 dí, 棣 dì, 丁 dīng, 耳 ěr, 发 fā, 番 fān, 反 fǎn, 肺 pèi, 冯 píng, 逢 péng, 弗 fú, 苜 fú, 浮 fú, 皋 gāo, 关 guān, 管 guǎn, 灌 guàn, 臙 wú, 虺 huǐ, 隳 huì, 活 huó, 緝 qì, 几 jǐ, 济 jì, 渐 chán, 将 qiāng, 交 jiāo, 骄 jiāo, 胶 jiāo, 揭 jiē, 嗟 jiē, 孑 jié, 桀 jié, 捷 jié, 矜 jīn, 京 jīng, 究 jiū, 居 jū, 檻 jiàn, 溃 kuì, 离 lí, 栗 lì, 邻 lín, 令 líng, 迈 mài, 枚 méi, 梦 mèng, 靡 mí, 勉 miǎn, 莫 mù, 泥 ní, 孽 niè, 旆 pèi, 彭 péng, 蓬 péng, 平 píng, 栖 xī, 戚 qī, 祁 qí, 祈 qí, 俟 sì, 契 qiè, 强 qiāng, 踰 qiāng, 漆 zhēn, 青 jīng, 悻 qióng, 裳 cháng, 蛇 yí, 牲 shēn, 绳 shéng, 施 yì, 湿 shē, 实 shí, 藪 sù, 绥 suí, 琐 suǒ, 汤 shāng, 滔 tāo, 慆 tāo, 陶 yáo, 提 chí, 佗 tuó, 橐 tuó, 唯 wéi, 臺 wěi, 温 yùn, 沃 wò, 闲 xián, 宪 xiàn, 萧 xiāo, 偕 xié, 泄 yì, 驛 xíng, 休 xiū, 许 hǔ, 涓 xuān, 谗 xuè, 熏 xūn, 言 yán, 厌 yàn, 晏 yàn, 央 yīng, 阳 yáng, 养 yǎng, 业 yè, 依 yī, 猗 yī, 揖 jí, 抑 yì, 绎 yì, 逸 yì, 殷 yīn, 英 yīng, 营 yíng, 黓 yong, 优 you, 与 yú, 愈 yù, 渊 yuān, 爰 yuán, 跃 yuè, 牂 zāng, 凿 záo, 泽 shì, 增 zēng, 湛 dān, 招 zhāo, 烝 zhēng, 秩 zhì, 濯 zhuó

Many scholars have done a lot of researches on this phenomenon. Xiang [14] concluded that “chóngchóng 蟲蟲” is the appearance of hot air transpiration, which has nothing to do with the insects; “shīshī 湿湿” is the appearance of cow’s ears shaking, which has nothing to do with the “wet with water”; “dēngdēng 登登” is the sound of smashing a wall with great force, which is not related to the “climbing”. In fact, this clearly points out that the correspondence between single-characters and characters in doublets is possibly that when doublets were created, people borrowed existing Chinese character symbols to record doublets. For example, “fúfú 弗弗” (蓼莪: 飘风弗弗) should be a loan word from “fāfā 发发”, “jiāojiāo 胶胶” (郑风: 鸡鸣胶胶), in Mao H, Zheng X (2018) [15], “胶胶, 犹啾啾也”. It is also a loan word. “cāngcāng 鸪鸪” (商颂: 八鸾鸪鸪), the original word may be “qiāngqiāng 锵锵”. Phonetic loan is a more convenient and concise way than creating new characters, so there are a large number of them. Here are a few examples (Table 1):

Table 1. The meaning of doublets is unrelated to that of single-characters.

Doublets	Doublet Explain in Mao’s	Single-character Explain in Mao’s	Doublet Explain in Xiang’s	Single-character Explain in Xiang’s
敖	敖敖, 长貌	敖, 游也	身材高大的样子	游玩; 骄傲
旦	信誓旦旦然	旦, 明	真诚恳切的样子	明; 明亮
登	登登, 用力也	登, 成也	用力筑墙声	由低处到高处
棣	棣棣, 富而闲也	棣, 唐棣也	雍容娴雅的样子	树名
弗	弗弗, 犹发也	弗, 去也	风疾吹声	否定副词, 不
灌	灌灌, 犹款款也	灌, 丛生也	情意恳切的样子	灌木
溃	溃溃, 乱也。	溃, 遂也	同“愤愤”, 昏乱的样子	乱; 盛怒的样子
邻	邻邻, 众车声也	邻, 近	通“辚辚”, 车行声	邻里; 邻近的人
迈	迈迈, 不说也	迈, 行也	怨恨的样子	行; 远行
靡	靡靡, 犹迟迟也	靡, 无也	步行缓慢的样子	无; 没有
蓬	蓬蓬, 盛貌	蓬, 草名也	茂盛的样子	蓬草
祈	祈祈, 徐也	祈, 求也	舒徐的样子	向鬼神祷告
漆	漆漆, 众也	漆, 水名也	众多的样子	河流名
青	青青, 茂盛貌	青, 青玉	通“菁菁”茂盛的样子	蓝色或绿色
施	施施, 难进之意,	施, 移也	徐行的样子	设置; 蔓延
藪	藪藪, 陋也	藪, 菜肴也	鄙陋的样子	蔬菜
宪	宪宪, 犹欣欣也	宪, 法也	高兴, 得意	法则; 榜样
萧	言不喧哗也	萧, 蒿也	马鸣声	祭祀用蒿子
休	休休, 乐道之心	休, 息也	安闲自得	停止
晏	晏晏, 和柔也	晏, 鲜盛貌	温和愉悦的样子	鲜艳; 华美
殷	殷殷然, 痛也	殷, 众也	通“殷殷”。忧伤的样子	众多
爰	爰爰, 缓意	爰, 于也	从容缓慢的样子	何处; 哪里

Comparing the ancient interpretation of *MaoZhuàn* with the modern annotation of Xiang (2014) [16], the meanings of single-characters listed above are completely different from those of doublets. For example, “我有旨酒，嘉宾式燕以敖 I have delicious wine, you may enjoy my brew.” (Book of Odes: to guests), whose word is interpreted as “áo 敖, wandering” in *MaoZhuàn*. In contrast, “shuòrén áoáo, shuìyú nóngjiāo 硕人敖敖，说于农郊，the buxom lady goes along, she passes outskirts to be wed.” (The Duke’s Bride)”, *MaoZhuàn* explains “áoáo 敖敖, long appearance”, that is tall appearance in the Dictionary of Book of Poetry by Xiang (2014) [16]. Obviously, the two are not the same thing at all. The English verses used in the paper are translated by Xu YC [17].

The use of loan characters to create new symbols and new words is one of the ways in which doublets are created, and the main point is to borrow sounds of existing characters. This is stated by Qiu [18]: “A character or a picture of something is borrowed as a phonetic symbol to record words that have the same or similar sound as the name of the word or the name of the thing. In this way, words for which it is difficult to create ideographs can also be recorded in writing”. We are convinced that Qiu’s insightful view could not be more aptly applied to the doublets in the Book of Poetry. The use of single characters to create doublets is only a phenomenon of recording phonetic words in writing, and has nothing to do with the reduplication of single characters (morphology).

Type IIb: the meanings of doublets are related to the meanings of single-character words, including direct and extended meanings. There were 44 cases (12.46%, 149 times). This group of words is listed below.

哀 āi, 安 ān, 苾 bì, 惨 cǎn, 粲 càn, 迟 chí, 绰 chuò, 蹙 cù, 怛 dá, 泛 fàn, 芬 fēn, 甫 fǔ, 高 gāo, 好 hào, 皓 hào, 赫 hè, 桓 huán, 皇 huáng, 黄 huáng, 简 jiǎn, 皎 jiǎo, 駟 jìng, 纠 jiū, 矐 juàn, 蹶 guì, 蓼 liǎo, 烈 liè, 明 míng, 冥 míng, 穆 mù, 凄 qī, 萋 qī, 悄 qiǎo, 肃 sù, 显 xiǎn, 吁 xū, 炎 yán, 夭 yāo, 噫 yì, 翼 yì, 幽 yōu, 悠 yōu, 昭 zhāo, 振 zhèn

This paper judges the semantic relationship between a doublet and a single-character word mainly based on *MaoZhuàn*, and uses other documents when a word is not explained in *MaoZhuàn*. It is interesting that the meaning of a doublet is not the same as the original meaning of a single-character word, but Xǔ’s Origin of Chinese Characters sometimes directly uses the meaning of a doublet in the Book of Poetry as the original meaning of a single-character word. (Xiang, 1987) [14]. This also shows that the meaning of doublets is one of the sources of the meaning of single-characters (Xǔ, 1991) [19]. Please see the Table 2.

Table 2. Examples with related meanings between doublets and single-character words.

	Doublets in <i>Maozhuàn</i>	Single-characters in <i>Maozhuàn</i>	Explanation in Origin of Chinese Characters
哀	[笺]哀哀者，恨不得得养父母报其生长之苦。	[笺]（哀我填寡）可哀哉，我穷尽寡财之人。	闵也。从口衣声。
苾	[笺]苾苾芬芬然香。	[笺]（苾苾芬芬）苾苾芬芬，有馨香矣。	馨香也。从艹必声。
粲	粲粲，鲜盛貌	（于粲洒扫）粲，鲜明貌	为米六斗太半斗，曰粲。从米叔声。
绰	绰绰，宽也。	（绰兮宽兮）绰，缓也。	
蹙	[笺]蹙蹙，缩小之貌。	（政事愈蹙）蹙，促也。	蹙，迫也。从足戚声。
怛	怛怛，犹切切也。切切，忧劳也。	（中心怛兮）怛，伤也	怛，慥也。从心旦声。
泛	[笺]泛泛然东西无所定	（亦泛其流）亦泛泛其流，不以济渡也。	泛，浮兒。从水凡声。
甫	甫甫然大也。	（无田甫田）甫，大也。	男子美称也。从用、父，父亦声。
皓	皓皓，洁白也	[向熹]明亮；洁白。	皓，日出兒。从日告声。
赫	赫赫，显盛貌。	（以赫厥灵）赫，显也。	赫，火赤兒。
桓	桓桓，威武貌	（玄王桓拨）桓，大。	桓，亭邮表也。从木亘声。
皇	皇皇，美也。	（上帝是皇）皇，美也	皇，大也。从自。自，始也。
黄	[笺]冬则衣狐裘黄黄然。	（绿衣黄里）黄，正色。	黄，地之色也。
皎	[集疏]皎皎，黎白也。	（月出皎兮）皎，月光也。	皎，月之白也。从白交声。《诗》曰：“月出皎兮。”
駟	駟駟，良马腹干肥张也。	（在駟之野）牧之駟野，则駟駟然。	駟，牧马苑也。从马同声。《诗》曰：“在駟之野。”
纠	纠纠，犹繚繚也。	[笺]（其笠伊纠）见戴纠然之笠。	绳三合也。从纟、斗。
矐	[笺]矐矐，有往仕之志也。	（矐言顾之）矐，反顾也。	矐，顾也。从目弄声。《诗》曰：“乃眷西顾。”
蹶	蹶蹶，动而敏于事。	（天之方蹶）蹶，动也。	蹶，僵也。从足厥声。一曰跳也。
蓼	蓼蓼，长大貌。	（蓼彼萧斯）蓼，长大貌。	蓼，辛菜，蒿虞也。从艹蓼声。
烈	烈烈，威也。	（载播载烈）傅火曰播，贯之加于火曰烈。	烈，火猛也。从火列声。
冥	[笺]冥冥者，蔽人目明，令无所见也。	（嘒嘒其冥）冥，幼也。	冥，幽也。
穆	穆穆，美也。	（于穆清庙）穆，美。	穆，禾也。从禾穆声。
凄	凄凄，凉风也。	（凄其以风）凄，寒风也。	凄，云雨起也。从水妻声。《诗》曰：“有渰凄凄。”
萋	萋萋，茂盛貌。	（卉木萋止）[向熹]茂盛；美盛。	艸盛。从艸妻声。《诗》曰：“萋萋萋萋。”
悄	悄悄，忧貌。	（劳心悄悄）悄，忧也。	悄，忧也。从心肖声。《诗》曰：“忧心悄悄。”
肃	肃肃，敬也。	（曷不肃雝）肃，敬。（肃雝显相）肃，敬。	持事振敬也。从聿在肅上，战战兢兢也。
吁	吁吁，大也。	（洵吁且火）吁，大也。	诡讹也。从言于声。一曰吁，蓄。齐、楚谓信曰吁。
炎	炎炎，热气也。	（秉畀炎火）炎火，盛阳也。	火光上也。从重火。凡炎之属皆从炎。
夭	夭夭，其少壮也。	（夭之沃沃）夭，少也。	屈也。从大，象形。凡夭之属皆从夭。
噫	如常阴噫噫然。	（终风且噫）阴而风曰噫。	噫，阴而风也。从日壹声。《诗》曰：“终风且噫。”
翼	翼翼，敬也。	（有严有翼）翼，敬也。	翼，敬也。从飞异声。
悠	悠悠，忧也。悠悠，远意。	（悠悠哉哉）悠，思也。	悠，忧也。从心攸声。
昭	[严粲《诗缉》]其音昭昭然明亮。	（于昭于天）昭，见也。	昭，日明也。从日召声。
振	振振，群飞貌。	（振露于飞）振振，群飞貌。	振，举救也。

Observing these examples, we can see that the meaning of most doublets is consistent with the meaning of single-characters, mainly in the following groups. First of all, some content annotations directly show the relationship between the two meanings. For example, in the Book of Poetry, “是烝是享, 苾苾芬芬. shìzhēngshìxiǎng, bībìfēnfēn. During the sacrifice the fat burned gives smell nice”. Zheng’s Notes said, “Since there are animals to offer, it is fragrant in bībìfēnfēn”, compared with the single-character word “苾苾孝祀, 神嗜饮食. bìfēnxiàosì, shénshìyǐnshì”, Zheng’s Notes interpreted it as “bìfēn, there is fragrance”. The line “bìfēn” in the doublet clause is used as “bìfēn” in the clause with a single-character word, which obviously follows the meaning of the former. For another example, “于粢酒埽, 陈馈八簋. yú càn sǎo, chén kuì bā guǐ. Sprinkle and sweep the yards And arrange eight round dishes” (Book of Odes, Felling Wood), the exegesis of the single-character word in *MaoZhuan* is: 粢 (càn), bright appearance. Contrast the doublet: “西人之子, 粢粢衣服. xī rén zhī zǐ, càn càn yī fú. But as slaves the poor ones Serve all the officers. The son of a Westerner, can clothes” (Book of Odes, East and West, 小雅·大东), *MaoZhuan* explaining “粢粢 càn càn, fresh appearance”, the meaning of the two words is similar, very much like in the mutual explanation.

Second, some have the same meaning with doublets through the equivalence of proclitics. For example, “世之不显, 厥犹翼翼. shì zhī bù xiǎn, jué yóu yì yì. From age to age they’re blest; They work with care and zest.” (Book of epics-heaven’s decree), *MaoZhuan* “yì yì 翼翼, respect”. However, we have noticed that the former sages have put forward the view that “doublets are equivalent to youzishi (words with initial-sounds “yǒu 有”)” (Wu Ge, 1987:616 [20]). Take the verse as an example: “yǒu yán yǒu yì, gòng wǔ zhī fú 有严有翼, 共武之服. Careful and strict we’d be; In battle dress we stand. (Book of Odes-General Ji Fu)”, in *MaoZhuan* “yì, respect.” Here yì = yǒu yì 有翼, and yǒu yì is yì yì 翼翼. This phenomenon will be discussed below again.

There is also a kind of direct use of doublet meaning to explain single graphic words, such as: “振振鹭, 鹭于下. zhèn zhèn lù, lù yú xià. Like egrets white, Dancers alight”. (鲁颂 Lu Song Hymns of Lu: The Ducal feast), The doublet exegesis “zhèn zhèn, the appearance of flying”; And the sentence with single graphic word “振鹭于飞, 于彼西雝. zhèn lù yú fēi, yú bǐ xī yōng. Rows of egrets in flight, Over the marsh in the west”. (周颂-振鹭 ZhouSong· Hymns of Zhou: The Guest Assisting at Sacrifice), the interpretation of *MaoZhuan*, “振振, 群飞貌, zhèn zhèn, qún fēi mào” directly applies the meaning of the doublet to the single-graphic word.

From the whole doublet system, Type I and Type IIa have occupied 81.58% (288 items), the former is to create characters for doublets, and the latter is to borrow other characters for doublets, which have nothing to do with the meaning of single-character words. Therefore, it can be inferred that the doublets in the era of Book of Poetry have their own meanings. According to the above analysis, the number of type IIb is relatively few, and it seems that the meaning of doublets is the same or similar to that of single-characters, but the real reason is that the meaning of a single-character is copied from the meaning of doublets. Statistically, type I and type II (IIa and IIb) accounted for 94.05% of all doublets. That is, almost all doublets cannot come from the combination of single-characters.

However, there are still a few doublets of Type IIb that are somewhat special in nature, and from the current perspective, they have a certain “modernity” characteristic, that is, they show the characteristics of property adjectives of the later generations of the Book of Poetry, which will be named as IIbx. Table 3 lists some of these example words.

Table 3. Contrastive meaning of doublets and single-character words.

Doublets	Mao Notes on Doublets	Mao Notes on Single-Characters	Origin of Chinese Characters
高高	[箋]天高又高	(崧高维岳)崧, 高貌. 山大而高曰崧	崇也. 象台观高之形. 从门, 口
惨惨	惨惨, 犹戚戚也 惨惨, 犹不乐也	[向熹] (劳心惨兮)忧愁不安	毒也. 从心参声
迟迟	迟迟, 舒行貌	(汤降不迟) 不迟, 言疾也	徐行也. 从辵犀声. 《诗》曰: “行道迟迟.”

The modernity of words and expressions contains their historical processes, so there are differences in degree. For example, the monosyllabic bases of gāogāo (tall), cǎncǎn (miserable) and chíchí (late) have acquired the nature of modern property adjectives, for example, they can be modified by degree adverbs: hěngāo (very high), zuìgāo (the highest); hěncǎn (very miserable), jícǎn (extremely miserable); lüèchí (slightly late), tài chí (too late). They can be reduplicated: gāogāo gèzi (tall man), gāogāo jǔzhe (hold highly); cǎnyǎn yīnfēng (miserable gloomy wind), chíchí wèidòng (delayed in action), as well as other morphological and syntactic features. However, this is a later story, and about 3000 years ago they did not show the characteristics of property adjectives in the Book of Poetry. There are still a few similar words: hàohào (a happy look), jiǎnjiǎn (large), ānān (a calm look), míngmíng (wise), xiǎnxiǎn (remarkable), yōuyōu (far-reaching).

Type IIbx is likely to be the beginning of the idea of doublet reduplication. For this reason, we have to make it clear that the correlation between the meaning of doublets and single-characters comes from the interpretation of scholars in later times, which is subjective. For example, in *MaoZhuan*: “xiéxié 偕偕, strong appearance” (偕偕士子, 朝夕从事. being an officer strong, I’m busy day and night for the royal affairs); while the single-character “偕” in *MaoZhuan* is “together, all together” (执子之手, 与子偕老. give me your hand I’ll hold and live with me till old). There is no relationship between the two word meanings, and “偕偕” may be a loan character. However, in the Origin of Chinese Characters, “xié 偕” is also explained as “strong”, and directly indicates that the meaning of the character comes from the doublet of the verse: 偕偕士子.

A more enlightening study is that of Shen (2011) [8], who proposed a classification perspective on modern Chinese parts of speech that goes beyond convention, arguing that Chinese nouns, verbs, and adjectives are a large category that makes up a super-noun, opposite to ideophones. Compared to adjectives, whether single-characters or doublets, whether in the era of the Book of Poetry or in modern times, a doublet is a category of words that has not yet been deeply studied. Not only in the Book of Poetry, but throughout the pre-Qin period and even in modern times, it has always been on the side of ideophones with opposite to nouns, verbs, and adjectives, causing many confusion. People mistakenly view a doublet as the predecessor of reduplication, or believe that a reduplicating word is an inheritance of doublet, all of which stem from this.

2.3. Type III: Homographs of Doublets and the Characters Used in Disyllabic-Words

The note in Section 1 specifically stresses that disyllabic-words in this article refer only to proclitics, enclitics and couplets. Some characters used by doublets appear in these words, that is, these single-characters do not appear independently, a total of 21, accounting for 5.94%. The Chinese characters corresponding to doublets and disyllabic-words are listed below.

Proclitics: 鸬鸬 qiāngqiāng--有鸬 yǒuqiāng; 忡忡 chōngchōng--有忡 yǒuchōng; 荡荡 dàngdàng--有荡 yǒudàng; 霏霏 fēifēi--其霏 qífēi; 洸洸 guāngguāng--有洸 yǒuguāng; 喑喑 jiējiē--其喑 qíjiē; 瀾瀾 mǐmǐ--有瀾 yǒumǐ; 芄芄 péngpéng--有芄 yǒupéng; 翩翩 piānpiān--有翩 yǒupiān; 琤琤 qiāngqiāng--有琤 yǒuqiāng; 颞颞 yúyú--有颞 yǒuyú.

Couplets and enclitics: 崔崔 cuīcuī--崔嵬 cuīwéi; 涣涣 huànhuàn--判涣 pànhuàn; 坎坎 kǎnkǎn--坎其 kǎnqí; 涟涟 liánlián--涟猗 liányī; 绵绵 miánmián--绵蛮 miánmán; 漉漉 pìpì--漉彼 pìbǐ; 翩翩 piānpiān--有翩 yǒupiān; 翩翩 piānpiān--翩彼 piānbǐ; 委委 wēiwēi--委蛇 wēiyí; 摇摇 yáoyáo--漂摇 piāoyáo; 嚶嚶 yīngyīng--嚶其 yīngqí.

Firstly, these words all have the characteristics of onomatopoeias or mimetics, which is the most important way to create doublets (Jiang 2021) [21]. Secondly, the characters of doublets corresponding to disyllabic-words can be divided into two groups: proclitics and couplets. Only the single-characters in proclitics are assigned a meaning, The single-characters in couplets (and enclitics) take no meaning. This reason must be related to the statement by Wang (1987) [20] that “doublets are equivalent to yǒuzhishi (有字式)”, and must also be the basis of *MaoZhuān*'s exegesis. Try to observe the table below.

From the cases in Table 4, it is obvious that the exegesis method of *MaoZhuān* is to explain the root of proclitics without considering the initial characters. For example, “琤 qiāng is voice of jade (héng)”, which explains the “琤 qiāng” in the proclitic. This example comes from “有琤葱珩 yǒuqiāng cōnghéng, And gem of pendant ring”. Again, “喑 jiē is fast state”, which explains “喑 jiē” in the clause “北风其喑, 雨雪其霏, běifēng qíjiē, yǔxuě qífēi, The sharp north wind does blow, And heavy falls the snow”. *MaoZhuān* says for the same doublet that “喑喑 jiējiē is harmony heard far away”, which means sound. Later, Zhu (1958) [22] in *Collection of Annotations for the Poetry* said that “喑 jiē is the sound of fast-speed”. To expand, “喑喑 jiējiē” in the Book of Poetry describes a variety of sounds, such as the sound of yellow birds, cocks, drums and bells, and the sound of eight-bell cars.

Table 4. Examples of the homographic characters both in doublets and proclitics.

Doublets	Types	Proclitics	Mao's Notes on Doublets	Mao's Notes on Characters
鸬鸬	摹声	有鸬	八鸾鸬鸬, 言文德之有声也.	(隳革有鸬)言有法度也. [诗集传]有鸬, 声和也.
忡忡	拟态	有忡	忡忡, 犹冲冲也.	(忧心有忡)忧心忡忡然.
荡荡	拟态	有荡	[笺]荡荡, 法度废坏之貌. [诗集传]荡荡, 广大貌.	(鲁道有荡)荡, 平易也.
霏霏	拟态	其霏	霏霏, 甚貌.	(雨雪其霏)霏, 盛貌.
洸洸	拟态	有洸	洸洸, 武貌.	(有洸有漉)洸洸, 武也.
喑喑	摹声	其喑	喑喑, 和声之远闻也.	(北风其喑)喑, 疾貌. (声)
弥弥	拟态	有弥	(河水弥弥)弥弥, 盛貌.	(有弥济盈)弥, 深水也.
芄芄	拟态	有芄	麦芄芄然方盛长. 芄芄, 木盛貌. 芄芄, 美貌.	(有芄者狐)芄, 小兽貌.
翩翩	拟态	有翩	翩翩, 往来貌.	(旃旒有翩)翩翩, 在路不息也.
琤琤	摹声	有琤	琤琤, 声也.	(有琤葱珩)琤, 珩声也.
奕奕	拟态	有奕	奕奕, 大貌.	(万舞有奕)奕奕然闲也. 马瑞辰《通释》: 万为大舞, 故奕为大貌, 闲亦大也.
颞颞	拟态	有颞	颞颞, 温貌.	(其大有颞)颞, 大貌.

It should also be mentioned that “有荡 yǒudàng”, *MaoZhuān* says that “dàng is easy” (鲁道有荡, 齐子由归. Lǔdào yǒudàng, qízi yóuguī. The way to Lu is plain; Your sister with her train), but does not explain “荡荡 dàngdàng”. From the above examples, we can see that when explaining the single-characters in proclitics in *MaoZhuān*, the meanings of doublets follow, only consider the specific context to make the expression more concrete. For example, “有琤 yǒuqiāng”, which is equivalent to “琤琤 qiāngqiāng”, is embodied in a specific sound, that is, the collision of jade. If the expression of the proclitic is not much different from that of the doublet, the proclitic is directly explained by the doublet. For example,

忡忡 chōngchōng, which in *MaoZhuān* is explained as worry (忡忡, 犹冲冲也), and comes from “未见君子, 忧心忡忡. Wèijiàn junzǐ, yōuxīn chōngchōng. When my lord is not seen, I feel a sorrow keen”. (The grasshoppers)

有忡 yǒuchōng, which in *MaoZhuān* is explained worried (忧心忡忡然), and is in “不我以归, 忧心有忡. Búwǒ yǐguī, yōuxīn yǒuchōng. I cannot homeward go; My heart is full of woe”. (complaint of a soldier)

It is interesting to note that *MaoZhuān* does not give explanations for most of the characters used in the couplets corresponding to the doublets, or there are explanations but they are not related. For example, “陟彼崔嵬, zhìbǐ cuīwéi. The hill I climbing up”, *MaoZhuān* explains “cuīwéi describes mud mountains with stone”. There is also “习习谷风, 维山崔嵬. xíxí gǔfēng, wéishān cuīwéi. Strong winds blow high, But mountain stand”, *MaoZhuān* explains “cuīwéi refers to mountain top”. For another example, “继犹判涣 jìyóu pànhuàn. To learn on what I should decide”, the character is interpreted by *MaoZhuān* as “判 pàn means seperating; 涣 huàn means scattering”, which is not a couplet in *MaoZhuān* and has nothing to do with the doublet “huànhuàn 涣涣 (overflowing)”. About “绵蛮黄鸟 miánmán huángniǎo. O hear the oriole’s song”, *MaoZhuān* explains “绵蛮 miánmán is appearance of a little bird”, which has nothing to do with “绵绵 miánmián (continuous)”. There is only one example in which “坎坎 kǎnkǎn” is directly used to explain: “坎其击鼓 kǎnqí jīgǔ. She beats the drum”, and in *MaoZhuān* “坎坎 kǎnkǎn is the sound of beating a drum”, which seems to be related to the meaning of “坎其 kǎnqí”.¹⁰ In general, this means that it is difficult for a single-character in couplets to represent the holistic meaning of couplets independently. There are two exceptions, “滢彼 pìbǐ” for example, in *MaoZhuān* it is explained as going by boat only for the single-character “滢 pì”. At present we can not find it in the early or contemporaneous literature. For “涟漪 liányī”, *MaoZhuān* only explains “涟 lián”, saying that “Ripples are formed by the wind blowing on the surface of the water”. Xiang (2014) [16] clearly pointed out that “涟 lián” and “漪 yī” are not a couplet, nor are they at the same grammatical level. Since the period of the Six Dynasties in China, the vocabulary of “涟漪 liányī” has become a disyllabic-word. One more example, “翩翩 piānpiān” should be mentioned, which not only corresponds to the proclitic “有翩 yǒupian” in form, but also corresponds to the couplet or enclitic “翩翩 piānbǐ, and 翩其 piānqí”, but it should only be related to the proclitic in semantics. Please read the words in Table 5.

Table 5. Examples of the homographic characters both in doublets and couplets.

Doublets	Ideophones	Couplets	Types	Mao’s Notes on Doublets	Correspondence to
崔崔	拟态	崔嵬	联绵	崔崔, 高大也。	×
涣涣	摹声	判涣	联绵	涣涣, 春水盛也。	×
坎坎	摹声	坎其	衬音	坎坎, 伐檀声。	×
绵绵	拟态	绵蛮	联绵	绵绵, 不绝貌。绵绵, 靓也,	×
委委	拟态	委佗	联绵	委委者, 行可委曲踪迹也。	×
摇摇	拟态	漂摇	联绵	摇摇, 忧无所愆。	×
嚶嚶	摹声	嚶其	衬音	嚶嚶, 惊惧也。	×
翩翩	拟态	/翩彼	联绵	翩翩, 往来貌。	(翩彼飞鸢) 翩, 飞貌。
		/翩其	联绵		(翩其反矣) 翩, 反貌。
滢滢	拟态	滢彼	衬音	滢滢, 众也。滢滢, 动也。	(滢彼泾舟) 滢, 舟行貌。
涟涟	拟态	涟漪	特殊	[集疏]《韩》说曰: 涟涟, 泪下貌	(河水清且涟漪) 风行水成文曰涟。

It is not a new idea that a doublet is related to the meaning of a proclitic word. In the late Qing Dynasty, Wang XQ (1987) [20] put forward the view that “yǒuzishi (a type of proclitics) is equivalent to a doublet”. Wang X (1959) [23] pointed out that some “其霏 qífēi” in the three schools of poetry were written as “霏霏 fēifēi”. He said “If qífēi is not equivalent to fēifēi, this phenomenon is difficult to explain”. Therefore, he very much agreed with Wang XQ’s (1987) [20] viewpoint, and even put forward the viewpoint that qízishi (another type of proclitics) is also equivalent to a doublet.

In brief, using a doublet to explain homographs in a proclitic seems to be related to each other in meaning, but the real reason remains to be investigated. However, there seems to be no connection between the doublets and the homographs in the couplets or the enclitics. This phenomenon does not support the view that the couplets originated from the doublets [2]. The reasons need to be further investigated.¹¹

From a statistical point of view, in all 353 doublets, the number is:

- Type I: 140 words, accounting for 39.66%;
- Type II: 192, accounting for 54.39%
- Type IIa: 148 words, accounting for 41.92%;
- Type IIb: 44 words, accounting for 12.46%;
- Type III: 21 words, accounting for 5.94%

What is the value of the character classifications used by above doublets? Type I makes us know that the existence of the character-making procedures completely denies the possibility that the doublets come from the reduplication of single-characters; Type IIa makes us understand that even if the Chinese characters used in the doublets are the same as the single-characters, the objective data that the meaning of a doublet has nothing to do with the meaning of a single-character completely denies the assumption that the doublet comes from the reduplication of single-characters. The same forms of the two are only caused by the borrowing of characters. As for type IIb, it is obviously caused by the fact that exegetes subjectively assign meanings to single-characters with doublets. Type III can determine that the meaning of proclitics is derived from corresponding doublets. So far, we have basically proved the relationship between doublets and the corresponding Chinese single-characters and other disyllabic word, and revealed the true source of doublets.

3. Ideophones and Expressive Morphology as Motivators

3.1. Depictive Classification of Doublets

The analysis of the use of characters from doublets in the Book of Poetry totally negates the view that doublets come from the reduplication of single-characters, and there is no grammatical reduplicating methods or morphological forms.¹² The cause and mechanism of the emergence of doublets in the Book of Poetry are closely related to the occurrence and development of human language. From the perspective of language ontology, any language begins with the emergence and enrichment of vocabulary. There must be some more direct way to create words before the traditional morphological methods of word formation, such as reduplication, are mature.

Observing the meaning of doublets in the Book of Poetry, it is easy to notice that the later annotations of doublets are usually depictive in a pattern like the example in *MaoZhuan*: “叟叟 sǒusǒu, (It is a) sound”; “赳赳 jiūjiū, (It is) martial appearance”. This is actually the concept of onomatopoeic words and mimetic words, which shows that the production of a doublet is related to the speaker’s expression of coinage, and it is a subjective speech behavior with the help of real world sounds and scenes.

From the etymological point of view, onomatopoeia and mimetics are the methods of creating words on the spot when people lack the vocabulary of the object they express, which is different from extracting existing words from the mental lexicon. Onomatopoeia is to imitate the sound of the objective world and refer to the thing or state represented by the sound, while mimetics is to simulate the thing or state representing the sound image in psychology, so as to create phonosemantic words, commonly known as ideophones. An ideophone is a very special vocabulary, which is often named by specific codes under the paradigm of modern linguistics, such as Chinese AB, xA, ABB, A 里 AB, ABA’B, etc. A doublet can be called AA-form. It is clear that a Chinese doublet has an ancient origin.¹³ The common ground between onomatopoeia and mimetic is the depiction of things, which draws a dynamic picture in psychology, which is an important feature of expressive morphological coinage. The following is an observation of the annotations and categories presented in *MaoZhuan*:

- (1) onomatopoeia:

邻邻 línlín is the sound of carriages moving	令令 línglíng is a ring sound
捏捏 zhìzhì is the sound of cutting rice	哓哓 xiāoxiāo means fear
- (2) mimetics:

蚩蚩 chīchī shows an honest appearance	猗猗 yīyī shows a beautiful appearance
皓皓 hàohào is white colour	营营 yíngyíng expresses flying back and forth (of insects)
- (3) onomatopoeia and mimetics:

燁燁 yèyè expresses the state of thunder and lightning. This example depicts the appearance of thunder and lightning, two actions of onomatopoeia and mimetic coexist.

谑谑 xuèxuè means joking and joy. In the Origin of Chinese Characters the note for the verse is 善戏谑兮 shànxì xuèxī, it means “at jesting he is good, but he is never rude”, which outlines the picture of the play with words, accompanied by words, laughter.
- (4) onomatopoeia or mimetics:

雝雝 yōngyōng takes two meanings, one is the sound of wild geese, and another is happy appearance.

冲冲 chōngchōng is the voice of cutting ice, or the state of decorative pendant.

Among the four types of doublet ideophones, “邻邻 línlín” seems to make people hear the sound of wheels rolling on the road, the squeaking sound of wheels rotating and rubbing, and the crisp sound of the collision of pendants on the frame, bringing together a picture of driving and moving activities. “蚩蚩 chīchī” outlines the honest and his honest face and a restrained look of the person described by the speaker, which makes people feel pity, and the silent scene at this time seems to be a kind of voice that can be described. “燁燁 yèyè” evokes a frightening picture of thunder and lightning. “谑谑 xuèxuè” outlines the scene of laughter. The doublets such as “雝雝 yōngyōng” and “冲冲 chōngchōng” appear more than twice in the Book of Poetry, sometimes used as onomatopoeia, sometimes used as mimetics, which further proves that mimetics presents the appearance of onomatopoeic sounds in psychology. According to our statistics, there are 292 cases of mimetic doublets, 50 cases of onomatopoeic doublets, and 11 cases of onomatopoeia and/or mimetics in all the doublets in the Book of Poetry. Onomatopoeia and mimetics are both subjective expressions of things or states, a kind of sound depiction that arouses imagination according to the characteristics or states of objects.

The recognition of the function of doublets in depicting pictures did not come into being in modern times. About 1500 years ago, Liu [24], a scholar of the Southern Liang Dynasty, vividly described the phenomenon of doublets in the Book of Poetry: “灼灼 zhuózhuó” emphasizes the freshness of peach blossoms. “依依 yíyí” is the appearance of willows, “杲杲 gǎogǎo” is the state of sunrise, “潇潇 biāobiāo” simulates the shape of rain and snow, “啾啾 jiūjiū” imitates the sound of orioles, and “嘒嘒 yāoyāo” learns the rhyme of grasshoppers. The use of the characters “鲜 xiān (fresh), 貌 mào (appearance/state), 容 róng (looks), 状 zhuàng (shape), 声 shēng (sound), and 韵 yùn (rhyme)”, all vividly depicts the vivid scenes of the doublets: the flame-like red light of “灼灼 zhuózhuó”, the graceful scene of “依依 yíyí”, and the weak sound of “啾啾 jiūjiū” imitating a cute bird begging for food. These are the effects of scenes that are difficult to describe in other ordinary words.

Why is a doublet so uniquely valuable? This needs to be examined in terms of ideophones and their theoretical basis. First of all, it should be pointed out that the Book of Poetry is one of the earliest recorded oral texts in ancient China (Xiang, 1987 [14]),

which inherits a large number of mature vocabularies since Shang and Zhou Dynasties, especially the depictive vocabulary which is difficult to record in the oracle bone inscriptions and bronze inscriptions.¹⁴ Secondly, with the development of narrative and poetic literature, the expression of feelings and meanings (different from oracular inscriptions) can not be avoided, prompting people to create a large number of Chinese characters to record them. Therefore, the depictive words such as doublets and couplets, which are polysyllables in spoken language, emerge explosively in written documents. The Book of Poetry is in such an era of character-making, word-making, and culture-making, which intentionally or unintentionally reveals a very important phenomenon in the history of the language, that is, ideophones are recorded by using the theory of expressive morphology.

3.2. Ideophones and the Theory of Expressive Morphology

It has been mentioned that doublets can be classified as ideophones, but what is an ideophone? According to the research of Kilian-Hatz (2006) [25], before the 1970s, the study on ideophones was basically limited to African languages, and few scholars paid attention to it. Until the 1980s, especially since the 21st century, people have gradually realized that ideophones may be a universal feature of human language (Dixon 2010 [26]). The term ideophone was coined by the linguist Clement Doke (1935) [27] when he studied the African Bantu languages and defined it as “A vivid representation of an idea in sound. A word, often onomatopoeic, which describes a predicate, qualificative or adverb in respect to manner, color, sound, smell, action, state or intensity”. Since then, people have also given various definitions when studying ideophones in languages around the world. For example, Dingemans (2011) [28] put forward the definition, “Ideophones are marked words that depict sensory imagery”. K. Akita and P. Pardeshi (2019) [29] summarize the definition of multiple people by saying that “They imitate a broad range of sensory experiences that involve auditory, visual, tactile, or other types of perception”. Dingemans has made many statements about the unique characteristics of ideophones from a cross-linguistic and typological perspective. The five general characteristics can not only reveal the function of ideophones, but also be used as the criteria for judging ideophones.

- (1) ideophones are marked, i.e., they have structural properties that make them stand out from other words
- (2) they are words, i.e., conventionalized lexical items that can be listed and defined
- (3) they depict, i.e., they represent scenes by means of structural resemblances between aspects of form and meaning
- (4) their meanings lie in the broad domain of sensory imagery, which covers perceptions of the external world as well as inner sensations and feelings
- (5) ideophones form an open lexical class, i.e., a set of lexical items open to new additions

Dingemans (2019) [30] amended the definition at 5, “a member of an open lexical class of marked words that depict sensory imagery”. The added element of “openness” in this new definition is very much in line with the reality of East Asian languages. For example, the Chinese doublet dictionary compiled by Wang (1999) [31] takes more than 6700 entries, and the Chinese couplet dictionary compiled by Xie (2011) [32] has more than 6400 entries of doublets and couplets.

In China, most of the studies on ideophones are classified under various terms, including Zhuangci 状词 [33,34], Maoci 貌词 (Ye, 1988) [35], Zhuangmaoci 状貌词 (He, 1989) [36], Siyinge 四音格 (Tian, 1986) [37], Dieyin/Diezi 叠音/叠字 (Zhu, 1936) [38], state adjectives 状态形容词 (Zhu, 1956) [39], vivid adjectives 形容词生动式 (Lü, 1980) [40], and various code names, such as AA, AB, ABB, AABB, A里AB, etc. In ancient documentary, since the Northern Song Dynasty, various proper names have gradually appeared, for example, Zhang Y. (1985) [41] put forward “couplets 联绵字”, Fang (1990) [42] put forward “lianyu 谚语” (a kind of couplets) in the late Ming Dynasty.

Expressive morphology is a concept proposed by Zwicky and Pullum (1987) [43] when discussing game expressions (secret words, riddles, puns, etc.) and ideophones. According to this theory, when people express the objective world, they will naturally form a picture of things and make a sound matching the picture to describe them. At this time, the sound exhaled may be an ideophone: a phonetic word with strong subjective imagination but matching the imaginary picture. Therefore, Zwicky and Pullum (1987) [43] argue that the words created by expressive morphology are produced by extra-grammatical rules and should “separate from garden-variety morphology, since they involve special phonetics, phonology, syntax, semantics, and pragmatics as well as exhibiting discontinuities with the morphology of the rest of the vocabulary”. On the basis of this understanding, Zwicky and Pullum (1987) [43] saw that the morphology of ideophones is very different from that of ordinary words, and that the rules of expressive morphology are not subject to the same conditions as those of ordinary morphology. So they say: “Expressive morphology is associated with an expressive, playful, poetic, or simply ostentatious effect of some kind”. Dingemans (2017) [44] added: “Expressive morphology refers to the additive, playful, orderly processes of expressive reduplication and lengthening that we often find applied to ideophonic words in actual instances of use”. Perhaps this is why ideophones are characterized by phonological, structural, and semantic salience. However, such a narrative obviously pushes expressive morphology into the situation of subjective coinage of individual psychology and irregular dependence. Why is this so?

In the Book of Poetry, there is a poem describing the scene of a date between a man and a woman:

东门之杨，其叶泝泝。昏以为期，明星煌煌。

dōng mén zhī yáng, qí yè zāng zāng, hūn yǐ wéi qī, míng xīng huáng huáng.

On poplars by east gate, the leaves are rustling light.

At dusk we have a date; The evening star shines bright.

This scene depicts the scene that comes to mind when a lover comes to the East Gate at dusk: beside the city wall, there are big poplars with huge and luxuriant leaves, and the wind rustles. In the poetic realm, the lover looks up and the leaves flutter and shout. The poet could not find a ready-made word to describe such a ringing picture, so he borrowed the character “zāng” to be reduplicated and express it with the rhyme of “yáng”, which was a typical on-the-spot word creation. As time goes into the night, the starry sky shines brightly, and the poet reconstructs a character and a doublet “huánghuáng” to depict the natural scenery and the feelings in his heart.

From the point of view of the nature of ideophones, this description is true and reasonable. Language begins with making words. When people feel the world, they will have the need to express things and emotions. They need to refer to things, state actions, describe states and express emotions. The objects involved should have names or codes, and be created and remembered. All of these are carried out under the conditions of sound use and sound restriction. The sound or silent things, actions and states in the objective world are gradually fixed by imaginary pictures that they think are like sounds, which is a spontaneous and natural complex process and a social pragmatic process. This process may be repeated over and over again, so that vocabulary increases and language matures.

4. Conclusions

The expression of the Book of Poetry is so unique that it represents the true face of early Chinese. The doublets, the couplets, the proclitics, the enclitics, and the polysyllabic names of people, places, and clans or tribes may be the witnesses of the early language of the Book of Poetry. This paper explores the question of which is the source and which is the flow of a doublet and a single-character word, aiming to lead to a great proposition: language begins with making words, a method of coinage beyond the rules of contemporary word formation.

Contemporary grammar, regardless of its schools, is based on the system established by European languages. However, when we deal with the origins of the archaic doublets in Chinese, none of the inflectional, derivational, clitic, reduplicative, and compound lexical or morphological approaches seem to give a satisfactory answer. On the one hand, this is related to the lack of ideophones in European languages and the lack of relevant theories, on the other hand, it is related to the ancient generation stage of doublets, when Chinese was probably in the early stage of language development and had not yet developed morphological word-formation methods. However, the growth of language depends on coinage or word formation, which is the coinage value of “expressive morphology theory” to doublets described in this paper.

Half a century ago, Wang (1980) [45] wisely reminded the academic community that “Chinese is not a monosyllabic language from the beginning; there were already a large number of disyllabic words in the pre-Qin era. Chinese disyllabic words have a special way of word formation; most of them are composed of disyllabic rhymes. The ancients called pure disyllabic words (words that can no longer be analyzed into two morphemes) *lianmian* words (couplets).” Although Wang only mentioned couplets here, we have no doubt that they can also include doublets, proclitics and so on discussed in this paper.

The doublets are not only old words or structures, but also a grand imprint for later generations to explore the long history of Chinese evolution. We hope that the explorers of the Book of Poetry will not stop at the text of the Book of Poetry, nor will they stop at the 3000-year time limit delineated by the oracle bone inscriptions. They are more likely to trace back to the 5000-year ancient history of Chinese language, or even to see through the course of human language in East Asia for more than 10,000 years (Jiang Di, etc. 2014) [46].

When we enter the Book of Poetry and look up at the doublets in awe and veneration, it is as if we are standing in the wilderness of the old world, where the scene of onomatopoeia and mimetics of the doublets and its primitive appearance make us puzzled about the ancient word expressions and leads to a strong desire to explore their origin. No wonder G. Kennedy exclaims that the doublet is the “original form” of archaic Chinese. In other words, it is the origin of Chinese vocabulary, one of the starting points of early Chinese vocabulary, and it records the beginning of Chinese civilization.

Footnotes

¹ The terms herein are agreed as follows: A doublet refers to two-homographic characters, which is “重言 *chóngyán*” in Chinese and transliteration. A couplet refers to two-alliterated characters, which is “*联绵 liánmián*”. A proclitic refers to a character with an initial-sound, “*词头词 cítóuci*”, including “*有字式 yǒuzìshì* (characters with initial-sound ‘yǒu’); “*其字式 qízìshì* (characters with initial-sound ‘qí’); “*斯字式 sīzìshì* (characters with initial-sound ‘sī’); etc. An enclitic refers to the structure with a post-auxiliary character, “*后附衬字结构 chènzi*” in Chinese and transliteration. A single character refers to a monosyllabic state adjectives, which is a morpheme or a word. A disyllabic-word (“*复音词*”) includes couplets, proclitics, enclitics, and compound words.

² Shi (2009) [47] explained that a doublet is produced by lengthening monosyllabic state words. This view has its roots. Wang Xian [23] said: “this paper basically agrees with Wang Yinzhi’s view that ‘有 you, 其 qí, 斯 sī and 思 sī’ are function words. Their grammatical meaning is that after they are combined with adjectives, they play a role in strengthening adjectives and make the whole structure equivalent to a doublet.” Xiang Xi (1987) [14] also holds this view: a doublet has basically the same meaning as a monosyllabic word, However, a doublet has a stronger descriptive value.

- ³ This paper builds a database of the doublets and words related to doublets of the Book of Poetry, and calibrates the words with Xiang Xi's Dictionary of the Poetry (2014) [16]. According to Xiang Xi's, the homomorphic words of the Poetry include a small number of nouns and verbs, but they have been controversial and excluded in this paper, including "zizi (子子), sunsun (孙孙), chuchu (处处), yanyan (燕燕), yuyu (语语), susu (宿宿), xinxin (信信)". According to Yang (1979) [4], the monosyllabic adjectives in the Poetry are divided into two categories: property and state ones. The property adjectives can form reduplicated adjectives, such as "gao 高 (high)" and "gaogao 高高", and state adjectives can form the doublets. However, this view is controversial, for example, Zhu (1985) [13] believes that "gao 高" is really another character "gao 皋". Considering that reduplicating property adjectives are extremely rare, this paper tentatively classifies monosyllabic adjectives as doublets. The total number of doublets is 353.
- ⁴ In the era of Book of Poetry, the distinction of lexical categories was still chaotic, and the monosyllabic adjective was a general term that actually included not only state adjectives, but also state adverbs, state verbs, as well as cross-category words of adjective-noun, adjective-verb, and adjective-adverb, etc. In this paper, the single words in the Poetry that could serve as modifiers or predicates are included and counted as objects. For example, "Chang 昌" can be used as a verb, adjective and noun, but as a noun, it is not taken or counted, such as "zǐ zhī chāng xī, sì wǒ hū táng xī; 子之昌兮, 俟我乎堂兮" (国风·郑风), You looked strong and tall, And waited for me in the hall. "chāng" here is not counted as a noun.
- ⁵ In this paper, disyllabic words (复音词) includes couplets, proclitics, enclitics, but not doublets. See Section 4 for details.
- ⁶ The couplets in this paper only refer to the adjective couplets.
- ⁷ Kennedy (1964) [10] counted 139, but did not list these doublets in his paper.
- ⁸ The database (by Academia Sinica) address is: <https://inscription.asdc.sinica.edu.tw/> (accessed on 7 December 2018).
- ⁹ When counting single characters, a characters that appears in a compound is considered a single-character. For example, "jī 緝" does not appear separately, but only in the couplet "緝熙 jīxī", and the doublet "緝緝 jījī", and the compound "jīyù 緝御".
- ¹⁰ The "其" attached to Table 4 is a proclitic word, and the "其" attached to Table 5 is an enclitic word, which is temporarily classified as couplets in Section 2.3. See Zhou Fagao (1973) [34] (pp. 296–299).
- ¹¹ A very interesting phenomenon is proposed in a study by Gao (2013, 2014) [48,49], who argues that the syllabic framework of primitive Chinese is C1VC2v, with a single-character when C2 is 0 and bisyllabic-characters when C2 is non-0. The lowercase letter "v" is a rhyming-ending that is extremely easy to fall off. This phenomenon of single-character words in 燕国 yānguó and 齐国 qíguó dialects of the pre-Qin era is presented as a bisyllabic form in the contemporary Shenyang dialect. For example, the word "磕 kē, stammer" is pronounced as "磕巴 kēba" in Shenyang dialect. Therefore, Gao believes that early Chinese single-characters may actually contain two syllables. This point seems to be slightly similar to the enclitics in this paper.
- ¹² G. Kennedy points out that "忧 yōu worry" appears 82 times but does not reduplicate, indicating that there is no reduplicating production process. Quoted from Zhou Fagao (1973) [34] (p. 103).
- ¹³ There must have been a large number of doublets in the era of the Book of Poetry and before the Book of Poetry, some of which even lasted for 3000 years. However, this does not exclude that later generations continue to create ideophones, but because of the abundance of other word-formation methods, the number of ideophones is gradually decreasing.
- ¹⁴ It refers to the technical difficulties in recording language with characters before the emergence of writing materials and tools such as bamboo slips and silk, and may also include the limited writing space of oracle bone inscriptions and bronze inscriptions.

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Declaration of Competing Interest

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