Study on the Prosodic Patterns of “YÒU... YÒU...” in Modern Chinese

Ran Zhang
Sichuan University
Chengdu, China

Abstract—Prosodic syntax is a new subject based on prosody and established on the basis of Chinese, which has played a very positive role in the study of Chinese grammar. In modern Chinese, the use cases of "yòu... yòu..." combination in language communication are very extensive, and the elements that can be matched with words or phrases. The number of syllables shows certain regularity, that is, the number of syllables in the front component is not more than it in the latter components. And then the combination form is grammatically correct. It is thought that this law is played by prosody rules other than semantics and syntax. Specifically, the Nuclear Stress Rule of Chinese restricts their combination forms. This analysis provides a new perspective for the study of Chinese grammar, enriching the theory of Chinese research to a certain extent, and has certain theoretical value.

Keywords—prosody; foot; coordinating conjunction; theoretical significance

I. INTRODUCTION

Prosodic syntax is a new subject based on prosody and established on the basis of Chinese. The concept of "Syntax being constrained by prosody" has not been widely recognized in western linguistic theory. In modern Chinese, language phenomena that prosody restricts syntax can be found everywhere. For example, "yòu... yòu..." (X...X...) is frequently used in modern Chinese, which can connect two words or two phrases in a sentence. And the two connected components are coordinating. In the investigation of these two words, it is found that, the adjectives or adjectives used between "yòu... yòu..." show certain regularity in syllables. That is, after "not only", the number of syllables of adjectives or verbs needs to be consistent, forming prosodic combination patterns of [yòu 1 yòu 1], [yòu 2 yòu 2], [yòu 1 yòu 2], [yòu 1 yòu more]. At present, no scholar has discussed its usage law and internal mechanism from the perspective of prosody. 298 articles are randomly selected from BCC corpus. This paper investigates the example sentence and hopes to analyze its formation mechanism from the perspective of Chinese Nuclear Stress Rule.

II. INVESTIGATION OF THE USAGE OF "YÒU... YÒU..."

In modern Chinese, yòu...yòu... is often used to form sentences, in the view of native Chinese users; there is nothing special about their usage, because our language sense does not go wrong. And it is difficult for native speakers to say [yòu 2 yòu 1] combined sentences such as "*yòu piao liang yòu hao (*又漂亮又好 / not only beautiful but also kind)". However, in the process of learning Chinese, it is difficult for non-native speakers to feel this "language sense". And it is very easy to say sentences like "Sichuan de cai yòu hao chi yòu la (四川的菜又好吃又辣 / Sichuan food is not only delicious but also spicy)". However, if the adjectives "spicy" and "delicious" in this sentence are changed, and the sentence is changed into "Sichuan de cai yòu hao chi yòu la (四川的菜又好吃又辣 / Sichuan food is not only spicy but also delicious)"., it seems to be more literate. If you do not change the position of the two adjectives, but replace the first adjective "delicious" with the "goluptious", the sentence becomes "Sichuan de cai yìu xiang yòu la (四川的菜又香又辣 / Sichuan food is not goluptious but also spicy.)". It is also grammatically correct. Here it is asked: the same adjectives, the same syntactic structure (yòu+ adjective +yòu +adjective), why the legitimacy is opposite, when placed in different positions? Why do yòu change the first two-syllable adjective into a synonymous monosyllabic adjective, and the sentence is grammatically correct? Here, it is neither a matter of semantics nor a problem of syntax. It is believed that beyond the syntactic and semantic levels, the prosodic rules of Chinese control the matching patterns of this set of conjunctions with subsequent components.

The first 4000 corpus of newspapers in BCC corpus are investigated, from which a total of 298 pieces of usage yòu...yòu... are used. The corpus of the prosodic pattern is analyzed which shows certain regularity.

In the investigation, the 298 articles used yòu...yòu... with total five types of collocation patterns.

1 "Yòu" is understood as an adverb in all kinds of dictionaries in modern Chinese. But yòu...yòu... is often used together, not an independent word. Therefore, it will be called adverb combination temporarily.

2 There are also examples of verbs or verb phrases between them. But here we do not discuss, only the situation of adjectives.

3 The words "1" and "2" here denote the number of syllables, which are the same below.

The sentence comes from the composition of foreign student.

4 Because the author searches and extracts one by one manually, the missed example sentences are unavoidable, and the data may be slightly
The combination pattern [yò u 1 yò u 1] has the largest number of corpus, accounting for 60% of the total number of examples investigated, with 180 groups, such as:

Dai shang zhe ding cao mao, ta de lian xian de you shou you xiao. (1)

Wearing this straw hat, her face looks small and white. (1)

Dai shang zhe ding cao mao, ta de lian xian de you shou you xiao. (1)

Wearing this straw hat, her face looks small and white. (1)

Xia bei zi zan ye tuo sheng cheng chen li ren, ye zao ge you bai you nen de chen li ni ren zuo niao po. (2)

In the next life, we also should be born as city people and find a white and tender city woman to be our wife. (2)

Xia bei zi zan ye tuo sheng cheng chen li ren, ye zao ge you bai you nen de chen li ni ren zuo niao po. (2)

In the next life, we also should be born as city people and find a white and tender city woman to be our wife. (2)

Yue liang gang cong tian ye hou mian shang sheng, you yuan you liang. (3)

The moon has just risen from behind the field, round and bright. (3)

The number of combination patterns [yò u 2 yò u 2] in the corpus is only second to that pattern [yò u 1 yò u 1], accounting for 28% of all the sample sentences, with 83 groups, such as:

She got all this money, surprised and excited. (4)

She got all this money, surprised and excited. (4)

He was jealous and aggrieved, and his head was hot. (5)

He was jealous and aggrieved, and his head was hot. (5)

Ke shi zhe zhong ai hao que bao chi zhe, bao chi de xiao, ke yò u bai yò u nen de chen li nv ren zuo lao po. (2)

In the next life, we also should be born as city people and find a white and tender city woman to be our wife. (2)

Ke shi zhe zhong ai hao que bao chi zhe, bao chi de xiao, ke yò u bai yò u nen de chen li nv ren zuo lao po. (2)

In the next life, we also should be born as city people and find a white and tender city woman to be our wife. (2)

Xiao Shuner's mother is not unattractive with medium build, round face and two big and watery eyes. (9)

Xiao Shuner's mother is not unattractive with medium build, round face and two big and watery eyes. (9)

The combination pattern [yò u 1 yò u multisyllable] accounts for 2% of the total number of examples, and there are five groups as follows:

The combination pattern [yò u 1 yò u multisyllable] accounts for 2% of the total number of examples, and there are five groups as follows:

Ke yi lue zhi shi jian de quan mao, dan wen zhang you duan you bu xiang jin. (10)

The full picture of the event can be gleaned, but the article is short and not exhaustive. (10)

Ke yi lue zhi shi jian de quan mao, dan wen zhang you duan you bu xiang jin. (10)

The full picture of the event can be gleaned, but the article is short and not exhaustive. (10)

The patient felt hot and uncomfortable in the bedroom. (11)

The patient felt hot and uncomfortable in the bedroom. (11)

Quan ban he ying li ta de lian yò u xiao you bu zi ran. (12)

Her face is small and unnatural in the whole class photo. (12)

Quan ban he ying li ta de lian yò u xiao you bu zi ran. (12)

Her face is small and unnatural in the whole class photo. (12)

The sky is different clouds on different levels, some of which are thick and opaque. (13)

The sky is different clouds on different levels, some of which are thick and opaque. (13)

Sui shuo zhen yò u xiao you wu te se ke yan, dan bi jin shi wo de zhen. (14)

Although the town is small and featureless, it is my town after all. (14)

Sui shuo zhen yò u xiao you wu te se ke yan, dan bi jin shi wo de zhen. (14)

Although the town is small and featureless, it is my town after all. (14)

In all of the containing you...you... examples investigated, [yò u 2 yò u 1] combined pattern was the least, and only 2 in 298 cases, accounting for only 1% of the total, for example:

* Zan jia bang bian you bi zhe tao you pian yì you hao de. (15)

There is a cheaper and better house next to my family. (15)

* Zan jia bang bian you bi zhe tao you pian yì you hao de. (15)

There is a cheaper and better house next to my family. (15)

Ta zhi shi yò u nian qing you sha, gei ni mi zhu le. (16)

Ta zhi shi yò u nian qing you sha, gei ni mi zhu le. (16)

On the tablecloth lay the big and strange letter containing life or death. (8)

On the tablecloth lay the big and strange letter containing life or death. (8)

Xia shun er de ma zhang de bu nan kan, zhong deng shen cai, yuan lian, liang zhi you da you shui ling de yan jing. (9)

Xia shun er de ma zhang de bu nan kan, zhong deng shen cai, yuan lian, liang zhi you da you shui ling de yan jing. (9)

Zhu ju de shou dao zhen shi yò u xie yò u hou yò u bu tou ming. (13)

The patient felt hot and uncomfortable in the bedroom. (11)

Zhu ju de shou dao zhen shi yò u xie yò u hou yò u bu tou ming. (13)

The patient felt hot and uncomfortable in the bedroom. (11)

Her face is small and unnatural in the whole class photo. (12)

Her face is small and unnatural in the whole class photo. (12)

The sky is different clouds on different levels, some of which are thick and opaque. (13)

The sky is different clouds on different levels, some of which are thick and opaque. (13)

Sui shuo zhen yò u xiao you wu te se ke yan, dan bi jin shi wo de zhen. (14)

Although the town is small and featureless, it is my town after all. (14)

Sui shuo zhen yò u xiao you wu te se ke yan, dan bi jin shi wo de zhen. (14)

Although the town is small and featureless, it is my town after all. (14)

In all of the containing you...you... examples investigated, [yò u 2 yò u 1] combined pattern was the least, and only 2 in 298 cases, accounting for only 1% of the total, for example:

* Ta zhi shi yò u nian qing you sha, gei ni mi zhu le. (16)

There is a cheaper and better house next to my family. (15)

* Ta zhi shi yò u nian qing you sha, gei ni mi zhu le. (16)

There is a cheaper and better house next to my family. (15)
She was just young and stupid, and attracted by you. (16)

Although it exists in the corpus, the two example sentences here do not conform to the rules of Chinese rhyme. If the adjectives in the two sentences are changed into "yòu hào yòu pián yì (又好又便宜 / better and cheaper)" and "yòu sha yòu nián qìng (又傻又年轻 / stupid and young)" respectively, the two sentences will be even easier to say.

Therefore, the two examples here are exceptional, and their overall stock can also reflect this fact.

The above are 298 cases of investigation including yòu...yòu.... In order to reflect the linguistic facts more intuitively, the overall situation of conjunctions is listed as follows ("Table I"):

<table>
<thead>
<tr>
<th>Composite Mode</th>
<th>Number</th>
<th>Proportion</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>[yòu 1 yòu 1]</td>
<td>180</td>
<td>60%</td>
<td>Ta de bi zi yòu bian yòu ta. (他的鼻子又长又塌。) His nose is flat and collapsed.</td>
</tr>
<tr>
<td>[yòu 2 yòu 2]</td>
<td>83</td>
<td>28%</td>
<td>Ta gan dao yòu qì fèn yòu huáng táng. (他感到又气愤又荒唐。)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>He felt angry and absurd.</td>
</tr>
<tr>
<td>[yòu 1 yòu 2]</td>
<td>28</td>
<td>9%</td>
<td>Zhe xie shèng yín tīng qí lāi yòu xiàng yòu qì er. (这些声音听起来就又响又刺耳。)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>These voices sound loud and harsh.</td>
</tr>
<tr>
<td>[yòu 1 yòu more]</td>
<td>5</td>
<td>2%</td>
<td>Bin rén jìn de wò shì yòu ré yòu bù fáng biàn. (病人觉得卧室里又热又不方便。)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The patient felt hot and uncomfortable in the bedroom.</td>
</tr>
<tr>
<td>[yòu 2 yòu 1]</td>
<td>2</td>
<td>1%</td>
<td>1. Ta zhì shì yòu nián qìng yòu shā, gěi nǐ mì zhù le. (她只是又年轻又傻，给你迷住了。)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>She was just young and stupid, and attracted by you.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Zàn jiā pāng biàn yòu bì zhe tāo yòu pían yòu hào de. (咱家旁边有比这套又便宜又好的。)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>There is a cheaper and better house next to my family.</td>
</tr>
</tbody>
</table>

From the comparison of the data in the table above, it is also clear that:

First, [yòu 1 yòu 1] and [yòu 2 yòu 2] should be the typical usage of conjunctions. While [yòu 2 yòu 1] is the "illegal" pattern, which does not conform to the prosodic rules of Chinese.

Second, in all the "legal" patterns, the number of syllables in front is not less than the number of syllables in the latter. That is, the number of syllables before and after is the same, or the number of syllables in the front is less than it behind, such as "yòu yòu yuàn (又大又圆 / big and round)", "yòu qì fèn yòu huáng táng (又气愤又荒唐 / angry and absurd)", "yòu xiàng yòu qì er (又响又刺耳 / loud and harsh)", "yòu ré yòu bù fáng biàn (又热又不方便 / hot and inconvenient)"). All these "legal" patterns follow this rule.

Thirdly, according to the above conclusions, it is further ratiocinated that all illegal correct combination patterns should be that the number of preceding syllables is more than the number of syllables in the latter. In addition to the 2 cases [yòu 2 yòu 1] combination pattern sentences obtained from the corpus, the "illegal" patterns can also be made according to reasoning. For example:

* 可以略知事件的全貌，但文章又不详尽又短。 (17)

Ke yì lue zhi shi jian de quan mao, dan wen zhanging yòu bu xiang jin yòu duan. (17)

The full picture of the incident can be obtained, but the article is not detailed and short. (17)

* 病人觉得卧室里又不方便又热。 (18)

Bing ren jiu de wo shì li yòu bù fáng biàn yòu hào. (18)

The patient felt uncomfortable and hot in the bedroom. (18)

* 全班合影里她的脸又不自然又小。 (19)

Quan ban he yìng li ta de lian yòu bù zì zì zì yòu xiao. (19)

Her face is unnatural and small in the whole class photo. (19)

* 天空是不同层面的不同云朵，有些又不透明又厚。 (20)

Tian kong shì bu tong ceng mian de bu tong yun duo, you xie yòu bu tou ming yòu hou. (20)

The sky is different clouds on different levels, some of which are opaque and thick. (20)

* 虽然镇又无特色可言又小, 但毕竟是我的镇。 (21)

Zan jia pang bian yòu bi zhe tao yòu xiao. (20)

Although the town is featureless and small, it is my town after all. (21)

The above examples are sentences that do not conform to the Chinese prosody. It is the result of the exchange of the components of (10)-(14) before and after the yòu...yòu..., and the sentence becomes very awkward after exchanging. The "illegal correct" of these examples again proves the correctness of our reasoning.

So far, it is compulsively asked: why does the combination pattern of conjunction words show such a rule? Can the difference in the number of syllables really affect the legality of a combination? What causes the subsequent components to show such a strong correspondence in the number of syllables? In the following, we are trying to propose the solution.

III. A STUDY INTO THE MECHANISM OF THE CONJUNCTIONS USAGE OF YÒU...YÒU...

Before "why" is answered, a concept of prosodic syntax — Nuclear Stress is introduced. "The Nuclear Stress refers to the stress structure that a sentence is expressed in the absence
of a special context.” Nuclear Stress is non-focus stress, that is, the special emphasis on a certain component of the sentence to exclude the special situation after the stress form. Nuclear stress in Chinese obeys the following rules (“Fig. 1”):

![Fig. 1. The Nuclear Stress Rule of Chinese.](image)

The "X" and "Y" in the picture above are two components of the verb-centered VP. "X" is the last verb in the sentence; "Y" is the object of "X". VP is the last verb phrase in the sentence. The nuclear stress of the sentence falls on "Y". If "Y" or "X" are intransitive verbs in the sentence, the nuclear stress is borne by "X". 

It is known that the adjective and the verb can be used as the predicate in the modern Chinese. According to the traditional classification, the verb is divided into transitive verbs and intransitive verbs. Then, according to the Nuclear Stress Rule, the following conclusion is got:

If the predicate of a sentence is acted as an adjective, then the adjective carries the Nuclear Stress of the whole sentence, which is equivalent to the intransitive verb in the last VP.

Now, from the combination pattern above, the following can be got:

In the pattern [yòu 1 yòu 1], there are two situations in the corpus of the elements that match yòu…yòu…. First, the two act as predicate elements of the whole sentence together, in which case, "yòu A yòu A" naturally bear the nuclear stress of the whole sentence. However, within the whole predicate element, it is also needed to follow the principle of "post-emphasis", that is, the nuclear stress of a sentence should fall on the element after the adverb, such as:

- 街上卖的那些粉纸套又糙又厚，真不好看。 (22)
- Jie shang maì de fen zhi die yòu cao you hou. (22)
- The pink paper sold on the street, is rough and thick. (22)
- 她头戴绣满宝石的金冠，周身上下被一个又亮又大的黑色的斗篷裹着。 (25)
- Ta tou dai cuan man bao shi de jin guan,zhou shen shang xia bei yi ge yòu liang yòu hou de dou peng guo zhe. (25)
- He wore a gold crown full of precious stones and was wrapped around by a bright and large black cloak. (25)

Similarly, in the [yòu 2 yòu 2] mode, the front and rear are also disyllabic words. In terms of syllable weight, the latter disyllabic components are no lighter than the previous, so the stress can be carried smoothly. Thus, the [yòu 2 yòu 2] combination mode also conforms to the prosodic rules, it also exists grammatically correctly.

But for the pattern of [yòu 1 yòu 2], its grammatically correct existence can be explained more effectively. The front component is monosyllabic, the following component is disyllabic, in the syllable weight, and the front component is lighter than the following. Therefore, the following disyllabic component can be stressed, the whole combination also conforms to the Chinese prosodic rules. So it also becomes the grammatically correct form. And the legality of the prosody [yòu 1 yòu 2] can also be deduced, why the pattern [yòu 2 yòu 1] is illegal correct. Because the syllable of the latter component is monosyllabic, the syllable of the front component is disyllabic, according to the Nuclear Stress Rule; the stress should fall behind the component. However, due to the heavier weight of the syllables in the previous component, the stress is taken, and the following components can be excluded from the grammatically correct form by the prosodic rules without the stress, which is an important reason for such a combination pattern being such a small stock in the corpus.

As far as this is concerned, the legitimate reasons for the combination form [yòu 1 yòu more] are very clear. The Nuclear Stress Rule in Chinese requires "post-emphasis". And in all the grammatically correct patterns that conform to the prosodic rules investigated earlier, "yòu…yòu..." the number of syllables in the front component is not more than in the latter component, and the combination form [yòu 1...
yò u more] can fully meet its requirements. So its form is allowed by prosodic rules.

IV. CONCLUSION

The combining form of adverbs is governed by the rules of Chinese prosody. Specifically, the Nuclear Stress Rule of China dominates its specific forms, and its dominant role is independent of the semantic and syntactic influences. There are many syntactic forms in modern Chinese that are influenced by Chinese prosodic rules, and prosody will greatly restrict syntactic forms at some times. The collocation pattern yò u...yò u... investigated is also affected by the prosodic rules of Chinese. In this article, it is discussed only for the yò u...yò u... combined by adjectives and adjectives phrases; it has not discussed for various forms of their collocation with verbs for the time being limited to the length. And, in addition to yò u...yò u..., many related words in Chinese also show strong syllable correspondence in form, which are extremely obvious and urgent to explain language phenomena. And prosodic syntax theory undoubtedly provides with a new perspective, and it is expected to continue to use new tools to solve new problems in future research.

Prosodic syntax is a new theory, which is also developed on the basis of Chinese literature. Although it has not been widely accepted by the theory of the international mainstream linguistics, it has explained many linguistic phenomena that can not be explained by the traditional theory. With the continuous development of theory, more and more language phenomena will be explained, which is not only helpful to the further development of the subject, but also has practical significance and reference function on constructing the theory, as well as the development of Chinese linguistic theory.

REFERENCES