

**A case study of the relation
between rhythm and syntax in Chinese**

Bingfu Lu
Fudan University
University of Connecticut

San Duanmu
Fudan University
M.I.T

1. INTRODUCTION

It has been proposed that in Chinese the trisyllabic VO (verb-object) structure strongly prefers 1-2 (e.g. 读-报纸 du baozhi 'read newspapers') rhythm over 2-1 (e.g. 阅读-报 yuedu bao 'read newspapers'), while the trisyllabic MN (modifier-noun) structure strongly prefers 2-1 (贵-药 guizhong yao 'expensive medicine') over 1-2 (贵-药品 gui yaopin 'expensive medicine') (S.-X., Lyu, 1962), as the following examples show.

(1)

VO

a. du baozhi 读-报纸
read newspaper

b. * yudu bao 阅读-报
read newspaper

yan xiju 演-戏剧
perform play

* biaoyan xi 表演-戏
perform play

'act in a play'

zhong shumu 种-树木
plant tree

* zhongzhi shu 种植-树
plant tree

(2)

MN

a. * gui yaopin 贵-药品
expensive medicine

b. guizhong yao 贵重-药
expensive medicine

* cai zhaopian 彩-照片
color photo

caise zhao 彩色-照
color photo

* e zhongliu 恶-肿瘤
malignant tumour

exing liu 恶性-癌
malignant tumour

This tendency is shown more clearly in the following (more examples are shown in Appendix 3.), where the ambiguous four-syllable structure is abbreviated to 1-2 as being a verbal but to 2-1 as being a nominal (W.-S., Wu, 1986).

(3)

VO or MN

VO

MN

复印-文件
fuyin-wenjian
duplicate-document

印-文件
yin-wenjian
'to duplicate
documents

复印-件
fuyin-jian
'the duplicated
documents'

However, in spite of these tendencies, there are also lot of 2-1 / VO (e.g. 喜欢-书, 研究-人) and 1-2 MN forms (e.g. 女-工人, 金-屋顶). One would question what are the rules which determine various trisyllabic forms.

2. DESCRIPTIONS

2.1. Trisyllabic VO structures

In order to find some basic rules, it is reasonable to focus our attention to some confined data and simplify the issue. The comparison of (3) instantiates a way toward 'everything else being equal' condition, since both the 1-2/VO and 2-1/MN forms are all abbreviated from the same 2-2 forms. As the further step to 'everything else being equal', let us limit our data to

those four-syllable VO forms which can be abbreviated to bisyllabic ones, that means both components of the VO structure have a monosyllabic alternative. This requirement excludes the instances such as 喜欢-书, 研究-人 since they do not have the corresponding bisyllabic forms. And the remaining data where the four-syllabic forms have the bisyllabic abbreviations, except few instances such as 参加-军队/参-军 (canjia-jundui / can-jun 'join army 'to join the army'), which does not have the 1-2 form, all can be abbreviated to 1-2 forms. So, we could get the following rule (4):

(4) an implicational rule of VO abbreviation

If a four-syllable VO structure has a bisyllabic abbreviation,
then, it may or may not have 1-2 forms, but 2-1 forms are never allowed.
Or in other words:
For 2-2/VO, 1-1 implies 1-2, but the reverse is not hold.

Furthermore, though 2-1/VO is allowed, they are rarely occurred in actual spoken language. This is partly because the main verb in sentences usually takes some clitics or suffixes of tenses or aspects, and partly because the object usually takes some modifiers (including determiners and quantifiers). In some cases, if a 2-1 VO structure has to be used, it is preferred to put it in a primed position, as shown in (5).

- (5) a. 2-2 2-1
相信迷信 相信鬼
believe superstition believe ghost
'to believe in superstition and believe in ghosts'
- b. 2-1 2-2
? 相信鬼 相信迷信
believe ghost believe superstition
'to believe in superstition and believe in ghosts'

2.2. trisyllabic MN structures

First, let us confine our data to those quartsyllabic MN which can be abbreviated to 1-1 form. There are three types according to their trisyllabic forms, as shown in (6), (7) and (8) (more examples seen in Appendix 6, 7 and 8).

- (6)
- | | | | | | |
|------|------------------|---------|-------------|------------|-------|
| | 2-2 | 1-1 | (1-2) | 2-1 | |
| | 外国-语言 | 外-语 | * 外-语言 | 外国-语 | |
| | waiguo yuyan | wai yu | waiguo yu | wai yuyan | |
| | foreign language | | | | |
| hair | 骆驼-绒毛 | 驼-毛 | * 驼-绒毛 | 骆驼-毛 | camel |
| | luotuo rongmao | tuo mao | tuo rongmao | luotuo mao | |
- (7)
- | | | | | | |
|--------|-----------------|----------|-------------|--------------|-------|
| | 2-2 | 1-1 | 1-2 | (2-1) | |
| | 女性-工人 | 女-工 | 女-工人 | *女性-工 | |
| | nyuxing gongren | nyu gong | nyu gongren | nyuxing gong | |
| | female worker | | | | |
| wuding | 金色-屋顶 | 金-顶 | 金-屋顶 | *金色-顶 | jinse |
| | golden dome | jin ding | jin wuding | jinse ding | |
- (8)
- | | | | | | |
|--|-----------------|----------|-------------|--------------|--|
| | 2-2 | 1-1 | 1-2 | 2-1 | |
| | 大型-轮船 | 大-船 | 大-轮船 | 大型-船 | |
| | daxing lunchuan | da chuan | da lunchuan | daxing chuan | |
| | big ship | | | | |
| | 重大-事情 | 大-事 | 大-事情 | 重大-事 | |
| | zhongda shiqing | da shi | da shiqing | zhongda she | |
| | great business | | | | |

It could be noticed that the majority of the data is belong to (6) type, which indicates the preference for 2-1 abbreviation of quartsyllabic MN structures. Looking closely to the data, we

could find further that 2-1 combinations are all words but 1-2 combinations are mostly word groups (or phrases). More concretely, the righthand monosyllabic components in 2-1 forms are frequently bound forms (e.g. 语 in 外国-语, 仪 in 测量-仪), while the both components in 1-2 forms are always free forms (大 and 房间 in 大房间, 金 and 屋顶 in 金屋顶). The lefthand monosyllabic morphemes in 1-2 MN forms usually belong to adjectives (the above 大 and 小、高、好、新、旧...) or so-called "non-predicate adjectives" (the above 金 and 银、男、女、正、副...), a minor word category whose members are not large in number. In general, the lefthand monosyllabic morphemes are rather limited in sources and number.

The simplest criterion to distinguish between bound and free forms is to see whether 'X的' is permitted or not. For example,

Therefore, we might propose that in Chinese, 2-1/MN forms are all words, while the 1-2/MN forms are mostly word groups. (Exceptional word-level 1-2/MN seen in Appendix 10).

This conclusion is confirmed by the following data about the localizers or postpositions.

(9) NPos.

<p>2-2 a. 身体-上面 shenti shangmian body in 'in the body'</p> <p>房间-里头 fangjian litou room in 'in the room'</p>	<p>1-1 身-上 shen shang</p> <p>房-里 fang li</p>	<p>(1-2) *身-上面 shen shangmian</p> <p>*房-里头 fang litou</p>	<p>2-1 身体-上 shenti shang</p> <p>房间-里 fangjian li</p>
<p>b.</p>		<p>手-上面 shou shangmian hand in 'in the hand'</p> <p>洞-里头 dong litou hole in 'in the hole'</p>	

In the combinations of N and Pos, the N and Pos are all may be monosyllabic or bisyllabic, resulting in 4 combinations, among which only the 1-2 are disallowed if the N is not free form. This indicate that the 1-2/NPos must initiate with a free form. Now, in Chinese grammar, Postpositions are generally regarded as one subtype of nouns, so NPos may be taken as a subtype of MN structure.

This observation confirms some previous observations such as Li Shengshao 1987. Li divides modern Chinese lexical morphemes into seven classes according to their boundness. The morphemes of class 7 (the most bound morphemes) occur only in N position in MN structure (e.g. 蒂 in 烟蒂, 瓜蒂. Some other examples are 饵、杆、糠、桔、具、姆、柏、圃、涕、湾、屑、芯、址 and so on). The morphemes of class 6 (the second most bound morphemes) only occur both in M and N positions in MN structure (e.g. 胞 in 胞弟, 同胞). This means that the N component may be more bound than the M component is in MN structure. Our analysis about trisyllabic MN structure is consistent with it.

3. SOME RELATED PHENOMENA

Why the trisyllabic VO structure strongly prefers 1-2 rhythm over 2-1, while the trisyllabic MN structure strongly prefers 2-1 over 1-2? This seems not to exist in isolation.

3.1 NHS rule

to be written by Duanmu.....

3.2. The adherence of postpositive monosyllabic morpheme

Why 2-1/MN are words but 1-2/MN are word groups?

As Wu (W.-S. Wu 1987) points out that in Chinese, postpositive monosyllabic morphemes are very adherent to their prepositive morphemes. One of the of the instantiations is that 1-2 structures are usually 'looser' than 2-1 structures in Chinese (B.-F. Lu 1989). This is not only clearly seen from the difference between 1-2/MN structures and 2-1/MN structures, but also

clearly seen from the difference between 1-2/MN structures and 2-1/MN structures, but also shown in the following facts:

3.2.1. (give an appropriate subtitle)

Lyu (1965) notices that 很不 *hen bu* 'very not' usually followed by the monosyllabic adjectives of 'negative meaning' (e.g., 小 *xiao* 'small', 少 *shao* 'few, less', 短 *duan* 'short') but by bisyllabic adjectives of 'positive meaning' (e.g., 清楚 *qingchu* 'clear', 坚强 *jianqiang* 'strong', 安全 *anquan* 'safe'). We also notice further that 不很 *bu hen* 'not very' is usually followed by monosyllabic adjectives of positive meaning, but by bisyllabic adjectives of positive meaning. These differences between monosyllabic and bisyllabic adjectives are shown in ().

() a.	(很不 pos. A)	很不 neg. A	不很 pos. A	(不很 neg. A)
	? 很不多	很不少	不很多	? 不很少
	? 很不大	很不小	不很大	? 不很小
	? 很不长	很不短	不很长	? 不很短
	? 很不厚	很不薄	不很厚	? 不很薄
b.	很不 pos. A	(很不 neg. A)	不很 pos. A	(不很 neg. AB)
	很不清楚	? 很不模糊	不很清楚	? 不很模糊
	很不坚强	? 很不软弱	不很坚强	? 不很软弱
	很不安全	? 很不危险	不很安全	? 不很危险
	很不老实	? 很不狡猾	不很老实	? 不很狡猾
	很不虚心	? 很不骄傲	不很虚心	? 不很骄傲
	很不文明	? 很不野蛮	不很文明	? 不很野蛮

Why monosyllabic and bisyllabic adjectives behave so differently in this aspect? The answer may lie in the rhythmic structure. It is widely known that words with positive meaning are unmarked and so more frequently used. For example, we use 长度 *changdu* 'long measure', 高度 *gaodu* 'height measure', 多长 *duo chang* 'how long', 多高 *duo gao* 'how high' but not 短度 *duandu* 'short measure', 矮度 *aidu* 'low measure', 多短 *duo duan* 'how short', 多矮 *duo ai* 'how low' to express the length and height. Further, we know that human cognitive mechanism is more sensitive to the degrees of positive phenomena than to the negative ones. For example, we may use various terms to describe different degrees of 'beautiffulness' but the terms to describing degrees of 'ugliness' are usually much fewer. Now, suppose 很不 or 不很 plus monosyllabic adjective A forms a 1-2 rhythm but not 2-1, due to the adherence of A to its previous morpheme, the dominant structure is 1-2, i.e., '很 | 不 A' or '不 | 很 A', then, if 很, as degree terms, preferred to modify positive measures rather than negative measures, the A following '很 | 不' or '不 | 很' should be followed dominantly by negative or positive respectively. On the other hand, bisyllabic adjectives AB are much more independent in rhythmic structure, therefore, either 很 not or 不很 plus AB is 2-2 rhythm, so they are the same in selecting the following AB, and therefore both are dominantly followed by positive adjectives.

3.2.2

Other other examples about the adherence of postpositive monosyllabic form is shown by a well-known fact that in Chinese many bisyllabic words must followed by a polysyllabic forms, but not monosyllabic forms (Lyu 1961). Just give few examples in ()

()	互相—爱慕	× 互相—爱	共同—使用	× 共同—用
	伟大—人物	× 伟大—人	珍贵—树木	× 珍贵—树

It seems, a 2-1 form would result in two consequences: one is disallowed, the other is to cohere into a compound.

References

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Appendix

(3) 2-2

测量—仪器
筹备—经费
复印—文件
绘画—图纸
手提—皮包
油煎—面饼
运输—箱子

1-1

复—件
绘—图
提—包
煎—饼

1-2, V0

量—仪器
筹—经费
印—文件
画—图纸
提—皮包
煎—面饼
运—箱子

2-1, MN

测量—仪
筹备—费
复印—件
绘画—纸
手提—包
油煎—饼
运输—箱

(4) Y0 2-2

保卫—国家
编写—戏剧
捕捉—害虫
缝制—衣服
练习—跳舞
清理—仓库
饲养—鸭子
收割—麦子
修建—马路
阅读—报纸
运输—粮食
增加—薪水

1-1

卫—国
编—戏
捕—虫
缝—衣
练—舞
清—仓
养—鸭
收—麦
修—路
读—报
运—粮
加—薪

1-2

保—国家
编—戏剧
捉—害虫
缝—衣服
练—跳舞
清—仓库
养—鸭子
收—麦子
修—马路
修—马路
读—报纸
运—粮食
加—薪水

(6) MN 2-2

彩色—照片
防风—眼镜
技术—工人
骆驼—绒毛
蒙古—语言
手提—皮包
睡觉—时间
睡觉—时候
松树—幼苗

1-1

彩—照
风—镜
技—工
驼—绒
蒙—语
提—包
睡—时
睡—时
松—苗

2-1

彩色—照
防风—镜
技术—工
骆驼—绒
蒙古—语
手提—包
睡觉—时
睡觉—时
松树—苗

外国—语言
洗脸—盆子
桌子—上面

外—语
洗—盆
桌—上

外国—语
洗脸—盆
桌子—上

优秀—学生

优—生

优秀—生

要紧—事情
中国—语文

要—事
中—文

要紧—事
中国—语

(7) MN 2-2

大号—衣服
金色—屋顶
困难—问题
女性—工人
奇怪—现象

1-1

金—顶
难—题
女—工
怪—象

1-2

大—衣服
金—屋顶
难—问题
女—工人
怪—现象

新鲜—问题
园型—屋顶

园—顶

新—问题
园—屋顶

(8) MN 2-2

大型—轮船
书本—里面
头顶—上面
西藏—民族
西藏—语言
新鲜—牛奶
重大—事情

1-1

大—船
书—里
头—上
藏—族
藏—语
鲜—奶
大—事

1-2

大—轮船
书—里面
头—上面
藏—民族
藏—语言
鲜—牛奶
大—事情

大型—船
书本—里
头顶—上
西藏—族
西藏—语
新鲜—奶
重大—事

(9) MN 2-2

彩色—影片
高射—机炮
贵重—药品
良性—肿瘤
恶性—肿瘤

1-1

1-2

2-1
彩色—片
高射—炮
贵重—药
良性—瘤
恶性—瘤