

AN INVESTIGATION ON SYNTACTIC DISAMBIGUATION IN
MANDARIN SPEECH PERCEPTION AND THE PHONOLOGICAL
STATUS OF THE DISYLLABIC FOOT

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ABSTRACT

In light of the high frequency of disyllabic words in modern Chinese and the “default” phonological status held by the disyllabic prosodic foot in speech production, we conducted a series of psycholinguistic experiments to determine whether the quantitative property of prosodic feet has a significant influence when parsing syntactically ambiguous utterances in speech perception. More specifically, without contextual or acoustic cues, would native Mandarin speakers be biased towards disyllabic structures when listening to six-syllable utterances that can be parsed into syntactically similar structures composed entirely of disyllabic or trisyllabic feet? Results indicate that, Mandarin speakers tend to parse ambiguous utterances initially into one of the two possible syntactic structures rather than simply recognizing them as ambiguous. Nonetheless, they do not favour disyllabic structures when lexical information regarding word meaning, syntactic function, usage

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frequency, etc. is available. However, when parsing sequences of six random digits where lexical and syntactic information is irrelevant, our results point to a clear preferential tendency towards disyllabic grouping. In other words, the quantitative property of prosodic feet plays a significant role in Mandarin speech parsing only when lexical and syntactic information is irrelevant or unavailable.

KEYWORDS

Modern Chinese Syntactic disambiguation Disyllabic Foot
Speech perception Parsing

1. INTRODUCTION

In modern Chinese, the majority of words are composed of two syllables. According to Wu & Zhu's (2001, 107) study of the quantitative configuration of Chinese words, 73.6% of words are disyllabic; an additional 12% of monosyllabic words can be readily converted into disyllabic words without changing their meaning, as seen in (1).

(1)	“chē”	车	→	“qì chē”	汽车	<i>car, motor vehicle</i>
	“mù”	木	→	“mù tóu”	木头	<i>wood</i>
	“jiā”	家	→	“jiā tíng”	家庭	<i>family</i>

We stipulate two explanations, among others, behind the overwhelming preponderance of disyllabic compounds and set phrases in Chinese. First, monosyllables are often insufficient in conveying the specific meaning of words. For example, although most contemporary city dwellers would take “chē” 车 to mean “car” or “motor vehicle”, the monosyllable can also combine with other syllables to make additional words such as “mǎ chē” 马车 “horse-drawn carriage” or “hǒ chē” 火车 “train”, which in turn distinguishes themselves from “qì chē” 汽车 “car, motor vehicle”. Secondly, the addition of extra syllables to other monosyllabic words serves to disambiguate homophones. For example, both 部 “part” and 步 “step” are pronounced as /bù/, which makes the phrase “xià yī bù” 下一步/部 ambiguous — it could be taken to mean

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普通话双音节韵律脚对听解含糊句子结构时的重要性

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提要

现代汉语大多数的词语都是由两个音节组成。而且双音节的韵律脚在音位学和发音的角度看来都是最典型的韵律脚。如果换一个角度，从心理语言学来看，在听解结构含糊的句子时，说普通话的人是否会纯粹

因为音节的数目而偏袒由双音节组成的结构？换句话说，要听解一句可以同时分成两个三音节或三个双音节的韵律脚但意思不同的句子，在没有上文下理或语音提示的情况下，韵律脚的音节数目是否理解句子的要素？实验结果显示，说普通话的人在听解这些句子时不会把句子当作结构含糊而同时辩解两个意思，而是从听到句子时就拣选其中一个结构。然而，他们会根据每个字的词义，句语结构上的用途和常用性等资料来理解句子，而没有纯粹因为音节的数目而偏袒某种句子。但在辩解只由六个数目字组成的语句时，说普通话的人会偏袒由双音节组成的语句。换句话说，当词义，句语结构和常用性等资料不适用时，音节的数目在普通话词句理解上就发挥了明显的作用。

关键词

现代汉语 辨识句子结构 双音节韵律脚 语句理解 句子辩解