INVESTIGATING THE BRANCHING OF CHINESE CLASSIFIER PHRASES: EVIDENCE FROM SPEECH PERCEPTION AND PRODUCTION

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ABSTRACT

The formal structure of the construction formed by a numeral (Num), a sortal classifier (C) or mensural classifier (M), and a noun (N), is controversial, as both left-branching [[Num C/M] N] and right-branching [Num [C/M N]] structures have been argued for in the literature. In this paper we report two psycholinguistic experiments on speech production and perception in Mandarin to investigate this branching issue. First, we applied the syntax-phonology interface of tone 3 (T3) sandhi and performed a phonological analysis of native speakers' tone sandhi patterns of [Num C/M N] phrases composed of T3 monosyllabic words. Second, we conducted a click-detection experiment to see how native speakers would

perceive a click inserted in a C/M phrase composed of monosyllabic words, as compared to when it is inserted in other syntactic structures with attested left or right-branching. Results from both experiments supported the left-branching structure of classifier phrases.

KEYWORDS
Classifier phrase   **L**eft-branching   **R**ight-branching   **S**peech production **S**peech perception

1. INTRODUCTION

        Mandarin Chinese is a typical numeral classifier language, where a numeral classifier, either a sortal classifier (C) or mensural classifier (M)[1], is essential when a noun (N) is quantified by a numeral (Num). While sortal classifiers and mensural classifiers form a single grammatical category of numeral classifiers, abbreviated as C/M, sortal classifiers categorize nouns by picking out an inherent property associated with that class of nouns, whereas mensural classifiers denote the quantity or amount of the noun (e.g., Her and Hsieh 2010). For instance, the sortal classifier *tiao* in (1a–b) highlights the long shape of the noun, while the mensural classifiers in (2a–b) solely denote the amount of the nouns.[2]

(1) Examples of sortal classifiers in Mandarin Chinese

a.	一	条	鱼	b.	一	条	虫
	yi4	*tiao2*	*yu2*		*yi4*	*tiao2*	*chong2*
	one	C_{long}	fish		One	C_{long}	worm
	'a fish'				'a worm'		

(2) Examples of mensural classifiers in Mandarin Chinese

a.	三	箱	书	b.	三	瓶	水
	san1	*xiang1*	*shu1*		*san1*	*ping2*	*shui3*
	three	M_{box}	book		three	M_{bottle}	water
	'three boxes of books'				'three bottles of water'		

        This paper deals with the controversy over the constituency of the classifier construction [Num C/M N] in Chinese, i.e., do Num and C/M

汉语量词词组的分支：
语言产生和语言感知的证据

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摘要

汉语中数词、量词与名词所组成的词组在句法结构上备受争议，在文献中不论是左分支或是右分支的结构都各有支持者。本文透过语言产生和语言感知的两种实验探究这个议题。第一项实验应用汉语在句法音韵界面的三声变调，从母语者在单音节词构成的［数量名］词组中的三声变调产出，推断词组的分支方向；第二项实验则观察母语者在句中对于插入音响的感知侦测，并将结果与其他已证实分支方向的句法结构之感知情况做比较。两项实验的结果皆支持量词词组的左分支结构。

关键字

量词词组　　**左**分支　　**右**分支　　**语**言产生　　**语**言感知