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Mandarin Chinese *-men* is plural, not associative: An empirical study

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Table of Contents

Introduction

Some basic facts about *-men*

The associative reading of *-men*

Experiment

Discussion

References



Introduction

Some basic facts about *-men*

The associative reading of *-men*

Experiment

Discussion

References



Introduction

Different types of plurals (Daniel & Moravcsik 2005):

- ▶ Additive plural: referentially homogeneous

(1) boys

- ▶ Associative plural: referential heterogeneity and reference to groups

(2) Tanaka-**tachi** [Japanese]

Tanaka-AS.PL

'Tanaka and his associates.'

- ▶ Further plurals: similitive plurals like *we* and collective plurals like Russian *listva* 'a mass of leaves'

This study empirically engages in the discussion of the marker *-men*, demonstrating that the associative reading of *-men* in modern Mandarin Chinese is difficult to access.



Introduction

Some basic facts about *-men*

The associative reading of *-men*

Experiment

Discussion

References



Some basic facts about *-men*

Chinese bare nouns: semantically not specified for number.

An uncontroversial additive plural meaning (3b) when marked by the morpheme, more precisely, the affix (Haspelmath 2021: 18), *-men*;

- (3) a. xuesheng zai tiaowu
student PROG dance
'The student is dancing.' or 'The students are dancing.'
- b. xuesheng-men zai tiaowu
student-MEN PROG dance
'The students are dancing.'



Basic facts – common and proper nouns

-men is productive for both common (4a) and proper nouns (4b).

- (4) a. zhong wai kexuejia-men zhengzai relie taolun
Chinese foreign scientists-MEN PROG lively discuss
'The Chinese and foreign scientists are having a lively discussion.'

[*People's Daily* Overseas Edition, June 1, 2016]

- b. danyuan neng rang meiguo de CNN-men [...]
hope can make US DE CNN-MEN
'Hopefully it will make the news media like CNN in the US [...].'

[*People's Daily* Overseas Edition, Nov. 29, 2013]



Basic facts – animacy

-men is sensitive to animacy.

Inanimate nouns marked by *-men* are often anthropomorphized

- (5) xue-shan-men yi-nian-siji ding-zhe baise de maozi
snowy-mountain-MEN all-year-round top-PROG white DE hat

‘The snow-capped mountains wear white hats all year round.’

[*People’s Daily* Overseas Edition, Dec. 2, 2014]

But, it’s not a strict rule:

- (6) ruhe anzhi wo xinai de shu-men
how place 1SG precious DE book-MEN

‘How do I place my precious books?’

[*People’s Daily* Overseas Edition, Dec. 17, 2003]



Introduction

Some basic facts about *-men*

The associative reading of *-men*

Experiment

Discussion

References



The associative reading of *-men*

- (7) Xiaoqiang-men shenme-shihou lai
Xiaoqiang-MEN when come

Additive: 'When are the people with the same characteristics as Xiaoqiang coming?'

Associative: 'When are Xiaoqiang and the others coming?' (Iljic 1994: 95)

The associative reading of *-men*

Whether or not *-men* is a canonical plural marker as in English remains controversial.

- 1 *-men* is both an additive plural marker and an associative marker.

According to Chao (1968) and Norman (1988), -men is a plural morpheme when it is attached to pronouns but a collective marker when it is attached to common nouns. Cheung (2003) and Hsieh (2008), on other hand, hold the view that -men is a collective marker when using with pronouns and proper names but a plural marker when using with common nouns. (Jiang 2017: 2)

- 2 *-men* is an associative plural marker (Iljic 1994).
- 3 *-men* is an additive plural marker (Li 1999; Yang 2015; Jiang 2017).
 - ▶ To note that they do not deny the associative reading when *-men* is attached to proper names.

The associative reading of *-men*

More importantly, the most influential syntactic analysis on *-men* is based on the associative reading, see (8) and (9):

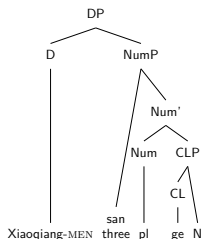
(8) XiaoQiang/Rector-men san-ge (ren) (Li 1999:80)

XiaoQiang/Rector-MEN three-CL person

i. 'XiaoQiang/Principal and two others (in the group)'

ii. '*3 principals/3 people all named/all with the characteristics of XiaoQiang.'

(9)



The associative reading of *-men*

However, as native speakers of Mandarin Chinese with a linguistic background, we cannot access this associative reading of *-men*, either after proper nouns or after common nouns.

- ▶ Note that we do not deny the associative reading of *-men* after pronouns.

(10) Pronouns in Mandarin Chinese

	1st person	2nd person	3rd person
SG	wo	ni	ta
PL	wo-men	ni-men	ta-men

- ▶ To obtain the so-called “associative reading” after proper nouns and common nouns, we would use 3.PL instead of *-men*:

(11) XiaoQiang/xiaozhang-tamen
 XiaoQiang/Principal-3.PL
 ‘XiaoQiang/Principal and the other people related to him’



The associative reading of *-men*

- ▶ better context needed?

A corpus study: under the retrieval command of N+*men*, all 1315 examples in the sub-corpus *People's Daily Overseas Edition* (2000-2018) of BCC Corprs (Xun et al. 2016) fail to provide an associative reading (accessed on September 7, 2022).

- ▶ more native speakers needed?

Interviews with 10 native speakers from ten different provinces in mainland China (3M, 7F, 4 of them have linguistic backgrounds, average age: 32.4). Each person was required to express his or her understanding of the noun phrase in (12).

(12) xiaozhang-men dao-le Beijing
principal-MEN arrive-PERF Beijing
'The principals arrived in Beijing.'

- ▶ None of them could accept the associative reading.



The associative reading of *-men*

- ▶ Is the associative reading of *-men* in modern Mandarin Chinese really available?
- ▶ Differences between Taiwanese Chinese and Mainland (here Mandarin) Chinese?

The goal of this study: to systematically testify *-men*'s associative reading through an empirical method.



Experiment

Introduction

Discussion

Some basic facts about *-men*

References

The associative reading of *-men*

Experiment – Study design: Participants

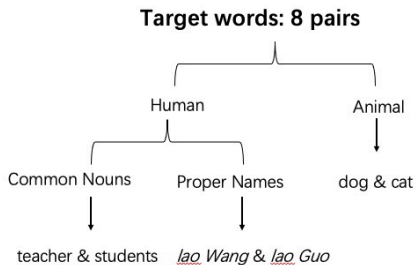


50 Mandarin Chinese speakers

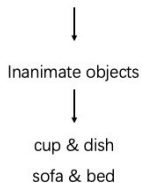


50 Taiwanese Chinese speakers

Experiment – Materials



Filler words: 8 pairs



Experiment – Materials

红色小人：老师 red: teacher



(Plural)

红色小人：老师 red : teacher
黄色小人：学生 yellow: student



(Associative)

Samples of target display

Experiment – Procedure

- ▶ Test-presentation: forced-choice selection
- ▶ Response to the display:
 - ▶ Correct vs. Incorrect
- ▶ Design: 2 × 2
 - ▶ Structure: with *-men* vs. without *-men*
 - ▶ Interpretation: plural vs. associative



		Structure	
		With <i>-men</i>	Without <i>-men</i>
Interpretation	Plural	N+ <i>men</i> +V	N+V
	Associative	N+ <i>men</i> +V	N+V

Experiment – Procedure

红色小人：老师



老师们在游泳

a. N + men + V (PL)

红色小人：老师



老师在游泳

b. N + V (PL)

Experiment – Procedure

红色小人：老师



老师们在游泳

a. N + men + V (PL)

红色小人：老师



老师在游泳

b. N + V (PL)

红色小人：老师
黄色小人：学生



老师们在游泳

c. N + men + V (AS)

红色小人：老师
黄色小人：学生



老师在游泳

d. N + V (AS)

Experiment – Procedure

红色小人：老师



老师们在游泳

a. N + men + V (PL)



红色小人：老师



老师在游泳

b. N + V (PL)

红色小人：老师
黄色小人：学生



老师们在游泳

c. N + men + V (AS)



红色小人：老师
黄色小人：学生



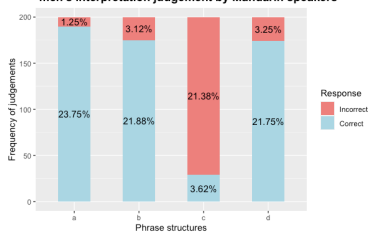
老师在游泳

d. N + V (AS)

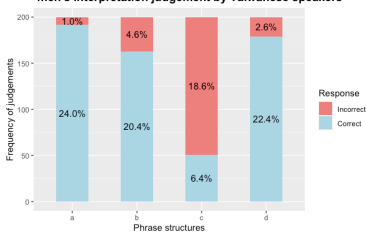


Experiment – Results

-men's interpretation judgement by Mandarin speakers



-men's interpretation judgement by Taiwanese speakers



	Mandarin				Taiwanese			
	Estimate	SD	z	p	Estimate	SD	z	p
Intercept	2.16	0.22	9.88	<0.001***	2.74	0.27	10.30	<0.001***
b	0.31	0.26	1.36	0.17	-0.42	0.24	-1.76	0.08
c	-4.20	0.25	-16.99	<0.001***	-4.35	0.26	-16.83	<0.001***
d	0.28	0.22	1.24	0.21	-0.12	0.25	-0.49	0.62

Table 1: Effects of Correct responses from Mandarin and Taiwanese speakers



Introduction

Some basic facts about *-men*

The associative reading of *-men*

Experiment

Discussion

References



Discussion

- ▶ Results in line with predictions
- ▶ N+*men*+V showed a significant high acceptability under the plural reading condition
- ▶ Taiwanese Chinese speakers performed a relative higher acceptability for associative reading of *-men*

Thanks!

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