

## Appendix I. Item types and sample items.

### I The plural feature

**Table 1.** Item types and sample items for the two plural suffixes.

	-men	-xie
Grammatical	N-men (1a)	D-xie N (1c)
Ungrammatical	*D-men N (1b)	*N-xie (1d)

- (1) a. Plural marking of *-men* on a noun (grammatical)  
 Haizi-**men** hen tiaopi.  
 Child-PL very naughty  
 ‘The children are very naughty.’
- b. Plural marking of *-men* on a demonstrative (ungrammatical)  
 \*Na-**men** haizi hen tiaopi.  
 That-PL child very naughty  
 ‘Those children are very naughty.’
- c. Plural marking of *-xie* on a demonstrative (grammatical)  
 Na-**xie** haizi hen tiaopi.  
 That-PL child very naughty  
 ‘Those children are very naughty.’
- d. Plural marking of *-xie* on a noun (ungrammatical)  
 \*Haizi-**xie** hen tiaopi.  
 Child-PL very naughty  
 ‘The children are very naughty.’

**Table 2.** Item types and sample items for different contexts of plural marking.

	Control: Singular in L1 & L2	*Obligatory plural marking on nouns in L1	Obligatory plural marking on demonstratives in L2	Optional plural marking on nouns in L2	Filler
Gr	D N (2a)	-----	D-xie N (2c) ((1c) in Table 1)	D-xie N-men (2d)	-----
Un	-----	*D N-men (2b)	-----	-----	*D-men N-men (2e)

- (2) a. Control: singular (grammatical)  
 Na haizi hen tiaopi.  
 That child very naughty  
 ‘That child is very naughty.’
- b. Lack of plural marking on a demonstrative (ungrammatical)  
 \*Na haizi-**men** hen tiaopi.  
 That child-PL very naughty  
 ‘Those children are very naughty.’
- c. Obligatory plural marking on a demonstrative (grammatical)  
 Na-**xie** haizi hen tiaopi.  
 That-PL child very naughty  
 ‘Those children are very naughty.’

d. Optional plural marking on a noun (grammatical)

Na-**xie** haizi-**men** hen tiaopi.

That-PL child-PL very naughty

‘Those children are very naughty.’

e. Filler (ungrammatical)

\* Na-**men** haizi-**men** hen tiaopi.

That-PL child-PL very naughty

‘Those children are very naughty.’

## 2 The human feature

**Table 3.** Item types and sample items for different classifiers co-occurring with human nouns.

Numeral CI N <sub>[+human]</sub> (numeral = 1)				
Gr	Cl <sub>[+human]</sub> (3a)	General CI (3b)	-----	-----
Un	-----	-----	*Cl <sub>[+animate]</sub> (3c)	*Cl <sub>[-animate]</sub> (3d)

(3) a. A human noun with a human classifier (grammatical)

Yi **ming** jingcha zai gongzuo.

One CL policeman be work

‘A policeman is working.’

b. A human noun with the general classifier (grammatical)

Yi **ge** jingcha zai gongzuo.

One CL policeman be work

‘A policeman is working.’

c. A human noun with an animate classifier (ungrammatical)

\* Yi **zhi** jingcha zai gongzuo.

One CL policeman be work

‘A policeman is working.’

d. A human noun with an inanimate classifier (ungrammatical)

\* Yi **ben** jingcha zai gongzuo.

One CL policeman be work

‘A policeman is working.’

**Table 4.** Item types and sample items for plural marking of *-men* on different nouns.

N-men			Filler: N	
Gr	N <sub>[+human]</sub> (4a) ((1a) in Table 1)	-----	N <sub>[+animate]</sub> (4d)	N <sub>[-animate]</sub> (4e)
Un	-----	*N <sub>[+animate]</sub> (4b)	*N <sub>[-animate]</sub> (4c)	-----

(4) a. A human noun suffixed with *-men* (grammatical)

Haizi-**men** hen tiaopi.

Child-PL very naughty

‘The children are very naughty.’

b. An animate noun suffixed with *-men* (ungrammatical)

\* Ying-**men** zai feixiang.

Eagle-PL be fly

‘The eagles are flying.’

- c. An inanimate noun suffixed with *-men* (ungrammatical)  
 \* Lou-**men** hen gao.  
 Building-PL very tall  
 ‘The buildings are very tall.’
- d. Filler: an animate noun (grammatical)  
 Ying zai feixiang.  
 Eagle be fly  
 ‘The eagle/an eagle is flying//eagles are flying.’
- e. Filler: an inanimate noun (grammatical)  
 Lou hen gao.  
 Building very tall  
 ‘The building/a building is very tall//buildings are very tall.’

**Table 5.** Item types and sample items for the co-occurrence restriction of classifiers and *-men*.

Numeral CI N <sub>[+human]</sub> (numeral > 1)		*Numeral CI N <sub>[+human]</sub> - <i>men</i> (numeral > 1)	
Gr	Cl <sub>[+human]</sub> (5a)	General CI (5b)	-----
Un	-----	-----	*Cl <sub>[+human]</sub> (5c)      *General CI (5d)

- (5) a. A human noun with a human classifier (grammatical)  
 Si **ming** yudongyuan zai benpao.  
 Four CL athlete be run  
 ‘Four athletes are running.’
- b. A human noun with the general classifier (grammatical)  
 Qi **ge** yisheng zai zuo shoushu.  
 Seven CL doctor be do surgery  
 ‘Seven doctors are doing a surgery.’
- c. A *-men* marked human noun with a human classifier (ungrammatical)  
 \* San **ming** yudongyuan-**men** zai benpao.  
 Three CL policem-PL be run  
 ‘Three athletes are running.’
- d. A *-men* marked human noun with the general classifier (ungrammatical)  
 \* Wu **ge** yisheng-**men** zai zuo shoushu.  
 Five CL doctor-PL be do surgery  
 ‘Five doctors are doing a surgery.’

**Table 6.** Item types and sample items for the co-occurrence restriction of classifiers and *-xie*.

D Numeral CI N (numeral > 1)					*D-xie Numeral CI N (numeral > 1)			
Gr	Cl <sub>[+human]</sub> (6a)	General CI (6b)	Cl <sub>[+animate]</sub> (6c)	Cl <sub>[-animate]</sub> (6d)	-----	-----	-----	-----
Un	-----	-----	-----	-----	*Cl <sub>[+human]</sub> (6e)	*General CI (6f)	*Cl <sub>[+animate]</sub> (6g)	*Cl <sub>[-animate]</sub> (6h)

- (6) a. A demonstrative with a human classifier (grammatical)  
 Na jiu **ming** sheyingshi zai paizhao.  
 That nine CL photographer be take-photo  
 ‘Those nine photographers are taking photos.’
- b. A demonstrative with the general classifier (grammatical)

- Zhe ba **ge** kexuejia zai zuo shiyan.  
This eight CL scientist be do experiment  
'These eight scientists are doing an experiment.'
- c. A demonstrative with an animate classifier (grammatical)  
Zhe san **zhi** ying zai feixiang.  
This three CL eagle be fly  
'These three eagles are flying.'
- d. A demonstrative with an inanimate classifier (grammatical)  
Na wu **ke** zhenzhu hen piaoliang.  
That five CL pearl very beautiful  
'Those five pearls are very beautiful.'
- e. A *-xie* marked demonstrative with a human classifier (ungrammatical)  
\* Na-**xie** ba **ming** sheyingshi zai paizhao.  
That-PL eight CL photographer be take-photo  
'Those eight photographers are taking photos.'
- f. A *-xie* marked demonstrative with the general classifier (ungrammatical)  
\* Zhe-**xie** jiu **ge** kexuejia zai zuo shiyan.  
This-PL nine CL scientists be do experiment  
'These nine scientists are doing an experiment.'
- g. A *-xie* marked demonstrative with an animate classifier (ungrammatical)  
\* Zhe-**xie** wu **zhi** ying zai feixiang.  
This-PL five CL eagle be fly  
'These five eagles are flying.'
- h. A *-xie* marked demonstrative with an inanimate classifier (ungrammatical)  
\* Na-**xie** liu **ke** zhenzhu hen piaoliang.  
That-PL six CL pearl very beautiful  
'Those six pearls are very beautiful.'

## Appendix 2.

**Table 7.** Values of means and standard deviations in Figure 1-6.

Item type		Beginner		Intermediate		Advanced		Native	
		M	SD	M	SD	M	SD	M	SD
N-men	(Figure 1)	95.2	21.6	96.2	19.2	100	0	100	0
*D-men N	(Figure 1)	35.4	48.1	14.1	35.0	5.41	22.8	5.22	22.3
D-xie N	(Figure 1)	85.2	35.8	89.7	30.5	67.6	47.1	89.4	31.0
*N-xie	(Figure 1)	31.3	46.6	13.0	33.8	1.39	11.8	1.74	13.1
D N	(Figure 2)	90.2	29.9	79.8	40.5	60.0	49.3	78.1	41.6
*D N-men	(Figure 2)	72.3	45.0	78.4	41.5	43.2	49.9	9.57	29.5
D-xie N	(Figure 2)	85.2	35.8	89.7	30.5	67.6	47.1	89.4	31.0
D-xie N-men	(Figure 2)	81.3	39.3	71.8	45.3	78.7	41.2	66.1	47.6
CL.human N.human	(Figure 3)	80.3	40.1	98.7	11.3	100	0	100	0
CL.general N.human	(Figure 3)	89.9	30.4	85.7	35.2	90.7	29.3	78.3	41.4
*CL.animate N.human	(Figure 3)	35.9	48.3	12.2	32.9	1.37	11.7	0.87	9.33
*CL.inanimate N.human	(Figure 3)	37.2	48.6	6.85	25.4	0	0	0.87	9.33
N.human-men	(Figure 4)	95.2	21.6	96.2	19.2	100	0	100	0
*N.animate-men	(Figure 4)	57.9	49.7	49.3	50.3	26.0	44.2	43.8	49.8
*N.inanimate-men	(Figure 4)	29.8	46.0	12.2	32.9	1.35	11.6	5.26	22.4

CL.human N.human	(Figure 5)	91.4	28.3	97.4	16.1	100	0	100	0
CL.general N.human	(Figure 5)	87.7	33.1	88.3	32.3	89.3	31.1	78.4	41.4
*CL.human N.human-men	(Figure 5)	72.5	44.9	68.4	46.8	44.6	50.1	10.5	30.8
*CL.general N.human-men	(Figure 5)	61.7	48.9	59.2	49.5	29.7	46.0	7.89	27.1
D CL.human	(Figure 6)	87.2	33.7	93.4	25.0	96.0	19.7	96.5	18.4
D CL.general	(Figure 6)	89.7	30.5	91.9	27.8	90.7	29.3	93.0	25.7
D CL.animate	(Figure 6)	85.9	35.0	96.0	19.7	90.5	29.5	93.9	24.0
D CL.inanimate	(Figure 6)	84.3	36.6	97.3	16.3	97.3	16.3	99.1	9.33
*D-xie CL.human	(Figure 6)	70.5	45.9	62.2	48.8	27.8	45.1	2.61	16.0
*D-xie CL.general	(Figure 6)	68.8	46.6	49.3	50.3	25.4	43.8	0	0
*D-xie CL.animate	(Figure 6)	68.4	46.8	54.3	50.2	21.9	41.7	0	0
*D-xie CL.inanimate	(Figure 6)	71.1	45.6	54.1	50.2	18.3	39.0	0.87	9.32