



# Why Plurality of the Possessor Matters in Mandarin Chinese Inalienable Possession

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## Abstract

In this paper, I first introduce what inalienable possession structure (IPS) is cross-linguistically as well as how to form an IPS in Mandarin Chinese, i.e., pronoun + body part or kinship term, etc. With the help of postverbal IPS, I relate the lack of plural pronominal possessor in IPS, which is never discussed in the literature, to the prohibition of distributivity over distributivity, i.e., the semantic anomaly of distributive plural possessor over the stubborn distributivity inherent to Chinese IPS nouns. I also argue that the requirement of a plural pronominal possessor seen in the IPS of public places, spatial directions, and professional titles is a result of stubborn collectivity shared by these nouns. In the end, I discuss the association between the distinction of inalienable and alienable nouns and that of active and stative verbs.

## Keywords

Mandarin Chinese, inalienable possession, distributivity

## 1 Introduction

This research attempts to account for why in Mandarin Chinese<sup>1</sup> inalienable possession structures (IPS), only singular pronouns are allowed, a phenomenon overlooked in previous studies. I argue that the stubborn distributivity, as identified by Schwarzschild (2011), of Chinese IPS is at odds with plural possessors, because of the ill-formedness of distributivity over distributivity they generate. I also explain the peculiar cases of the obligatory plural pronouns in IPS of public places, spatial directions, and professional titles, which I attribute to the stubborn collectivity of such IPS.

## 2 An introduction to inalienable possession

### 2.1 Inalienable vs. alienable

In this section, I give a general cross-linguistic introduction to the rich typology of IPS. I demonstrate how languages frequently resort to iconicity or zero-marking for IPS formation, e.g., Kampan, English, and Chinese, and how languages vary in terms of what a typical IPS possessee is and how it is constructed by means of morphology, case-marking, e.g., Korean and German, or demonstrative alternation, e.g., French and English.

Barker (1995) proposes that IPS consists of two nominals: first, the possessee, typically, a body part or a kinship term cross-linguistically and then the possessor of the body part or the kin (Guéron 1985). Unlike alienable possession, IPS construes the intrinsic part-whole relation between the possessee and the possessor (Cheng and Ritter 1988). According to Diem (1986), whether a lexical item is IPS or not is not a feature of the noun per se but rather the particular physical or psychological relation between the possessor and the possessee. For example, the possessor of *his arm* can either refer to a patient pointing at his own wounded limb, i.e., with an IPS interpretation, or a medical doctor attempting to distinguish his own surgery assignment from a colleague's, i.e., with an alienable interpretation, in which the arm is not a body part of either of the doctors' but of a certain patient. Thus, the supposedly quintessential candidate for IPS, an arm, a body part, can render different interpretations, depending on the relation between the possessor and the possessee involved.

What constitutes IPS varies from language to language (Chappell and McGregor 1996) with respect to lexico-semantic categorization, syntactic structure, case-marking morphology, and word-formation. For example, culturally basic possessed items that are essential for survival and livelihood (e.g., clothing [most likely being worn at the time of speaking], home, weapons, domestic animals, etc.) (Nichols 1992), spatial relations, name, voice, smell, shadow, footprint, physical and mental states (e.g., strength and fear), etc. (Lévy-Bruhl 1914;

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1 *Chinese* in this article refers to Mandarin, unless otherwise specified.

Lichtenberk 1985; Tsunoda 1996; Heine 1997, among many others) have also been classified as IPS. Consequently, it is almost impossible to draw an implicational hierarchy for the lexicon typology of IPS, following the Greenbergian deductive derivation for linguistic universals (Greenberg 1963). I will allude to the idea that nominals that are used in IPS are treated as IPS nouns, even if they are not typical IPS nouns.

## 2.2 Iconicity in IPS marking

While it is difficult to come up with an exhaustive list of what lexical items are IPS across languages, the morphosyntactic construal of IPS demonstrates a large variety as well. Chappell and McGregor (1989) and Nichols (1988) argue that the fuzzy contrast between IPS and alienable possession is more structural than semantic. According to Haiman, if a language distinguishes alienability and IPS with adnominal morphology, and if one kind is zero coded, it is always the IPS, a phenomenon motivated by iconicity that provides the inseparable possession with a “closer conceptual link” (1983: 783). Aikhenvald (2013) further generalizes that, segmentally, the marking of alienable possession is longer than that for IPS, as illustrated in Kampan of the Arawak family (Michael 2013), where the alienable possession of *my bow* requires an extra suffix *-ne* that the IPS of *my head* lacks:<sup>2</sup>

- |     |            |               |
|-----|------------|---------------|
| (1) | a. No-gito | b. No-biha-ne |
|     | 1sg-head   | 1sg-bow-Gen   |
|     | ‘my head’  | ‘my bow’      |

Likewise, although English does not categorically treat kinship terms as IPS (Nevins and Myler 2014), only the inalienable parental kinship terms like *mom*, *grandma*, *grandfather*, and *father* can exist without a determiner or possessive pronoun, as shown in (2):<sup>3</sup>

- (2) a. (My) mom said ok.  
 b. ?\*(The/my) sister said ok.  
 c. \*(The/my) officer said ok.

Similarly, in Chinese, only the IPS *shou* ‘hand’, but not the alienable *biaoqian* ‘tag’, can drop *de* ‘-s’<sup>4</sup> from the possessive pronoun (Teng 1974; Zhu 1981),

2 Some abbreviations used in this article: 1: first person, 3: third person, Acc: accusative, Dat: dative, def: definite, f: feminine, Gen: genitive, Ind: indicative, m: masculine, Nom: nominative, Pass: passive, Perf: perfective, pl: plural, Pre: present, Pst: past, and sg: singular.

3 In addition to (2), another occurrence of IPS in English is in the *-ed* synthetic compounds (Nevins and Myler 2014), for which only the involvement of IPS body parts or clothing etc. is allowed, for example, *blue-eyed*, *top-hatted*, *\*white-housed*, *\*big-cared*.

4 *De* is more than a genitive suffix for possession; instead, it marks more general adnominal modifications (Zhu 1962; Li and Thompson 1989). I will use *-de* for its own glossing in this paper.

resulting in a shorter version of the possessor in the form of a personal pronoun only.<sup>5</sup>

- (3) Ta(-de) shou hen da.<sup>6</sup>  
 3sg(-de) hand very big  
 'His hand(s) is(are) big.'  
 Or 'Speaking of him, his hand(s) is(are) big.'
- (4) Shu\*(-de) biaoqian bu qingchu.<sup>7</sup>  
 tree(-de) tag not clear  
 'The tree's tag is not clear.'  
 OK if 'Speaking of the tree, its tag is not clear.'

### 2.3 Case-marking in IPS

Furthermore, the distinction between IPS and alienables in Korean and German can be reflected in case-marking. For example, as shown by the contrast in (5), in the Korean lexical passive, although the Nom-Acc pattern can be used for both alienables and IPS, the Nom-Nom pattern is strictly limited to IPS (Maling and Kim 1992; Kim 1990):

- (5) a. Mary-ka Cheli-eykey kwaca-lul/\*ka (alienable: Mary's cookies)  
 Mary-Nom Cheli-Dat cookies-Acc/\*Nom  
 ttamek-hi-ess-ta.  
 eat-Pass-Pst-Ind  
 'Mary had her cookies eaten by Cheli.'
- b. Ku namu-ka kaci-ka/lul cal-li-ess-ta (IPS: tree's branches)  
 that tree-Nom branch-Nom/Acc cut-Pass-Pst-Ind  
 'That tree was trimmed.'  
 Literally: 'That tree had its branches trimmed.'

As shown in (6), the possessor of the German body-part IPS *my hands* is promoted to the rank of dative object from a nominal genitive modifier for the alienable

5 I have encountered the following examples from an online search, which seem to illustrate that not all IPS are body parts or kinship terms in Chinese:

(i) Wo sile/shuaile/toukan ta yingyushu/diannao/duanxin.  
 1sg tore/broke/peeped 3sg English-book/computer/text-message  
 'I tore/broke/peeped his English book/computer/text-message.'

It is true that these nouns do not typically denote body parts or kinship, but what these sentences share in common is that the verbs are aggressive, violent, and intrusive in nature. The strong sense of deprivation and self-protection generated by these verbs makes the possessors more likely interpreted as IPS, ending up with *de*-omission, consistent with Diem's (1986) proposal that IPS is more than a trait of the noun, but more of the relation between the possessor and the possessee. Nevertheless, we will see that these examples do not allow plural possessors in Section 3.4, an idiosyncrasy shared by IPS. I will elaborate more on the relation between IPS and their predicates in Section 6.

6 The gender of the third-person pronoun *ta* in Chinese is only distinguished in writing. In this article, I will only use the masculine *he* in the English glossing.

7 I will discuss in Section 3 why only a topic-comment reading of (4) is grammatical.

*my car*, i.e., the so-called possession-ascension (Heine 1997). In (7), whether the clothing is in close contact to the body or not determines whether it has the IPS case-marking or normal case-marking.

- (6) a. Ich wasche mein Auto. (alienable: car)  
 I wash 1sgGen car  
 'I wash my car.'  
 b. Ich wasche mir die Hände. (IPS: hands)  
 I wash 1sgDat the hands  
 'I wash my hands.'
- (7) a. Ich zerriß meine Hose. (alienable: I wasn't wearing them  
 I tore 1sgGen pants when the tearing happened.)  
 'I tore my pants.'  
 b. Ich zerriß mir die Hose. (IPS: I was wearing them  
 I tore 1sgDat the pants when the tearing happened.)  
 'I tore my pants.'

## 2.4 Demonstrative in IPS

Although not resorting to case-marking as German and Korean do, French also separates IPS from alienables by manipulating the prenominal demonstratives (Guéron 2006). For example, as shown in (8), only the verb *lèver* 'to raise' allows IPS, signaled by the use of the definite article *la* in *la main* 'the hand'; nevertheless, the reflexive verb *laver* 'to wash' does not allow IPS, allowing only a possessive pronoun *sa* as in *sa main* 'his hand', which is ambiguous, in that it can be 'Jean's own hand' or 'someone else's hand':

- (8) IPS:  
 a. Jean lève la main.  
 Jean raise.3.Pre f.sg.def hand  
 'Jean raises his own hand.'  
 b. \*Jean lave la main.  
 Jean wash.3.Pre f.sg.def hand  
 ambiguous between IPS and alienable:  
 c. Jean lave sa main.  
 Jean wash.3.Pre 3.sg.Gen hand  
 'Jean washes his hand.'

Similar alternation between a determiner and a possessive pronoun before IPS and alienables can be found in English as well. For example, in (9), the definite article *the* can replace the possessive pronoun before an IPS like *throat* without changing its referential property in the locative of certain action verbs; this is not the case, however, for an alienable possession of *book*.

- (9) I grabbed him by the throat. = ?I grabbed him by his throat.  
 I grabbed the book. ≠ I grabbed his book.

### 3 IPS in Mandarin Chinese

In this section, I first use the double-subject structure to show how Chinese uses pronoun + possessee, with the genitive particle *-de* omitted, to realize IPS (Teng 1974; Chappell and McGregor 1996), as verified from prosodic segmentation. I then test the pronoun + possessee IPS diagnosis at the postverbal position to avoid the complication of prosody. Furthermore, using the pronoun + possessee test, I argue that the pronoun can only be singular in IPS, a phenomenon not yet discussed in the literature.

Unlike the nominative vs. accusative case assignments in Korean (5), the genitive vs. dative case assignments in German (6) and (7), or the definite article vs. possessive pronoun in French (8) and English (9), which are all morphosyntactic renderings of IPS, Chinese does not have case or  $\Phi$  features (i.e., person, gender, and number) (Dikken 2011) encoded in its nouns, which are crucial in identifying IPS from alienables in the afore-mentioned languages.

Nevertheless, linguists have noticed the connection between the omission of the nominalizer or genitive marker *-de* from the pronominal possessor and the marking of Chinese IPS, as already shown in (3) and (4).

#### 3.1 Topics in Chinese

The most revealing examples for Chinese IPS are from the double-subject or nominative structures (Dragunov 1961; Teng 1974; Modini 1981; Zhu 1981; Li and Thompson 1989; Chappell and McGregor 1996). Being a topic prominent language, Chinese abounds with the so-called topic-comment or double-subject structures (Li and Thompson 1989), in which an aboutness topic or a topicalized object occupies the topic position in the left periphery. In (10a), for example, the aboutness topic *zhege wenti* ‘this problem’ shows up at the sentence-initial topic position, right before the subject *laoshimen* ‘the teachers’. (10b), on the other hand, has a non-topic sentential adjunct in *guanyu zhege wenti* ‘regarding this problem’. In (11a), the fronted object *zhege ren* ‘this person’ appears in the sentence-initial topic position, also right before the subject *Zhangsan*, in contrast to the regular Subject-Verb-Object (SVO) word order in (11b):

- (10) a. *Zhege wenti, laoshimen mei you yijian.* (aboutness topic)  
       this problem teachers not have suggestion  
       ‘As far as this problem is concerned, the teachers do not have any suggestions.’  
       b. *Guanyu zhege wenti, laoshimen mei you yijian.* (sentential adjunct)  
       regarding this problem teachers not have suggestion  
       ‘The teachers do not have any suggestions regarding this problem.’
- (11) a. *Zhege ren, Zhangsan renshi.* (object topicalization)  
       this person Zhangsan know  
       ‘This person, Zhangsan knows.’



This is not the case, however, for a potentially inalienable body-part possessee with a nominal possessor like *nage nühaizi gezi* ‘that girl’s build’ in (15),<sup>9</sup> an alienable possessum *xuexi* ‘learning’ with a nominal possessor like *na haizi xuexi* ‘that child’s learning’ in (16), or a pronominal possessor like *ta xuexi* ‘his learning’ in (17). In all, (15), (16), and (17) are topic-comment structures, but IPS like (13) and (14) are not:

(15) nominal possessor

(Zhege nühaizi // gezi bijiao xiao,) nage nühaizi // gezi bijiao da.  
 this girl build rather small that girl build rather big  
 ‘(This girl, she is quite small in build.) That girl, she is quite big in build.’  
 Or ‘(This girl’s build is quite small.) That girl’s build is quite big.’

(16) nominal possessor

Na haizi // xuexi te bang.  
 that child learning extremely good  
 ‘That child is extremely good at his learning.’  
 Or ‘That child’s learning is extremely good.’

(17) pronominal possessor + alienable possessee

Ta // xuexi te bang.  
 3sg learning extremely good  
 ‘Speaking of him, his learning is extremely good.’  
 Or ‘His learning is extremely good.’

Now, despite the lack of case-marking and determiners in Chinese, we definitely can take advantage of the possibility of pronoun + N as a morphosyntactical diagnostic tool for Chinese IPS. Such a structure is different from a double-subject construction in that the possessor and the possessee form one prosodic and syntactic unit. For example, in (18a), without *-de*, the *mama* ‘mom’ can only be my own mom, i.e., the IPS one, not any other mother or mothers I am responsible for, for example, who are accompanying their babies in a child speech laboratory, as is possible in the ambiguous (18b) that does not drop *-de*:

(18) a. Wo mama zai zher.

1sg mom at here  
 ‘My (real) mom is here.’

\*‘The mom(s) (I am responsible for) is/are here.’

b. Wo de mama zai zher.

1sg de mom at here  
 ‘My (real) mom is here.’

‘The mom(s) (I am responsible for) is/are here.’

9 The reading of (15), an example from Chappell and McGregor (1996), in which *nage nühaizi* // ‘that girl//’ and *gezi* ‘build’ are separated can be better achieved in a contrastive context.



### 3.3 Pronoun + possessee IPS in postverbal position

However, all the examples in the literature involve only the double-subject/nominative scenario in the left periphery, for which we must rely on the prosodic constituency to tease apart IPS and alienables. For example, (13) and (14) can also be segmented as (19) and (20), which do not comprise IPS. By the same token, (3), repeated in the following as (21), can either be translated with an IPS or an aboutness topic, depending on the segmentation of *ta-shou* ‘he-hand’ as *ta//shou* or *ta shou//*:

- (19) Ta// tou      you      teng      le.                      cf.              Ta tou//you teng le.  
       3sg head    again    ache      Perf.  
       ‘Speaking of him, his head is aching again.’
- (20) Ta// fuqin    zai      riben      zuoshi.                      cf.      Ta fuqin//zai riben zuoshi.  
       3sg father    in      Japan      work  
       ‘Speaking of him, his father works in Japan.’
- (21) a. Ta // shou    hen    da.  
       3sg hand    very    big  
       ‘Speaking of him, his hand(s) is(are) big.’  
       b. Ta    shou // hen    da.  
       3sg hand    very    big  
       ‘His hand(s) is(are) big.’

That said, a more impartial test would target IPS in the postverbal object position, where there is no ambiguity between IPS and the double-subject or topic-comment construction. The contrast in (22) between the body-part *shou* ‘hand’ and the alienable *men* ‘door’ is consistent with what we have discovered regarding IPS in the double-subject/nominative structure: only IPS can occur in the pronoun + N form, with the particle *de* omitted:

- (22) a. Ni    ca    ta-de    shou. = Ni    ca    ta    shou. (IPS: hand, body part)  
       2sg wipe 3sg-de hand      2sg wipe 3sg hand  
       ‘You wipe his hand.’            ‘You wipe his hand.’  
       b. Ni    ca    ta-de    men. vs. \*Ni    ca    ta    men. (alienable: door)  
       2sg wipe 3sg-de door      2sg wipe 3sg door  
       ‘You wipe his door.’

The advantage of studying IPS in the postverbal object position is that we can spare ourselves the difficulty of singling out IPS from structurally identical topic-comment alienables. As we have seen in (19) and (20), such a distinction is based on prosodic segmentation, a task that has not proved to be easy in Chinese, a tonal language (Duanmu 2000).

### 3.4 Singular pronoun + possessee in IPS

Equipped with such a *de*-omission test, we are now able to expand the category of IPS in Chinese from body parts and kinship terms to home or house and clothing

accessories that allow the same *de*-less personal pronoun + IPS in certain contexts. In other words, as long as a noun is directly preceded by a personal pronoun for possession, it has an IPS reading. For example, *jia* ‘home, house’ in (23), which is corroborated by Lévy-Bruhl’s (1914) and Nichols’ (1992) reports of home-IPS in Melanesian and other languages. Furthermore, *maozi* ‘hat’ in (24) is similar to the German pants-IPS in (7), i.e., clothing accessories. An alienable *shu* ‘book’, on the other hand, does not allow *de*-drop, be it in the preverbal subject position or the postverbal object position in (25):<sup>10</sup>

(23) Huanying lai wo(-de) jia. (IPS: home)  
welcome come 1sg(-de) home  
‘Welcome to my home.’

(24) Ta meitian dou qiang wo(-de) maozi. (IPS: clothing accessory)  
3sg everyday all snatch 1sg(-de) hat  
‘He snatches my hat every single day.’

(25) a. Ni\*(-de) shu hen xin. (alienable possession)  
2sg(-de) book very new  
‘Your book is very new.’  
b. Wo kan ni\*(-de) shu.  
1sg read 2sg(-de) book  
‘I read your book.’

Extending the study of IPS into the postverbal object position reveals a systematic overlook of the prohibition of a plural pronominal possessor in Chinese IPS. As shown in (26a) and (26b), a plural pronominal possessor like *tamen* ‘they’ cannot drop *-de* either in preverbal or postverbal IPS (e.g., *yanjing* ‘eye’) or in an alienable possession (e.g., *zhuozi* ‘table’), as shown in (26c) and (26d).<sup>11</sup>

10 For (24), imagine the situation in which a tearful pupil is complaining to the teacher about a class bully snatching his hat on a daily basis (*qiang wo maozi* ‘snatch my hat’). More examples returned from Google:

(i) Baogao, youren qiang wo maozi, zenmoban?  
report someone snatch 1sg hat what.should.I.do  
‘I need to report that someone snatched my hat; what should I do?’  
(ii) Jie meng: chaxun mengjian bieren qiang wo maozi daibiao shenmo?  
decode dream check dream others snatch 1sg hat stand.for what  
‘Dream analysis: check what that means if I dream of someone snatching my hat.’  
(iii) Buyao qiang wo maozi.  
don’t snatch 1sg hat  
‘Don’t snatch my hat.’

11 A reviewer provides the following two sentences to show that before non-IPS nouns, *de* can be dropped too.

(i) Wo jingchang qiang ta (de) shu kan.  
1sg often snatch 3sg de book read  
‘I often snatch his books to read.’

- (26) a. Tamen\*(-de)    yanjing    hen    da.  
          3pl(-de)       eye       very    big  
          ‘Their eyes are big.’  
          OK if with an aboutness topic:  
          ‘Speaking of them, their eyes are big.’
- b. Wo    kan        tamen\*(-de)    yanjing.  
    1sg   look.at   3pl(-de)       eye  
    ‘I look at their eyes.’
- c. Tamen\*(-de)    zhuzi    hen    da.  
          3pl(-de)       table    very    big  
          ‘Their table table(s) is(are) big.’  
          Ok if with aboutness topic:  
          ‘Speaking of them, their table(s) is(are) big.’
- d. Wo    xihuan    tamen\*(-de)    zhuzi.  
    1sg   like       3pl(-de)       table  
    ‘I like their table(s).’

Overall, the recognition of IPS can be based on typical lexical semantics of nouns denoting body parts and kinship, for example, *nainai* ‘grandma’, *guma* ‘aunt’, and *bizi* ‘nose’. It can be marked with special case-marking as we have seen in Korean (5) and in German (6) and (7). It can also rely on the determiner choice as in French (8). For the sake of consistency, this article accepts the IPS status of a nominal structure as long as it appears in the singular pronoun + N structure. What follows is that when some atypical inalienable nouns appear in this structure, they are interpreted as IPS. For example, in (27) and (28), examples returned from Google, *fan* ‘food’, *qian* ‘money’, and *duanxin* ‘text message’ are not typical IPS, but they still occur in the singular pronoun + N construction, with the particle *de* omitted. I treat such constructions as IPS. From the contexts of the two examples, we can see a strong sense of violation or deprivation of the most personal and private belongings of the possessor, i.e., my food and money, the most indispensable of one’s possessions as well as *her text message*, the most private information. The application of the singular pronoun + N structure helps convert alienables into IPS in certain contexts.

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- (ii) Wo        zuo            tamen (de)    che            huijia.  
      1sg       sit            3pl de       car            go.home  
      ‘I go home by their car.’

First, as mentioned in Footnote 5 and below, I propose that instead of dogmatically determining what nouns are IPS and what are not, we can accept any noun as an IPS if it is preceded by a singular pronoun for possession. Such an inalienable possession can be verified by verbs like *qiang* ‘snatch’ that emphasizes the strong sense of deprivation of the most personal items, as also shown in (27) and (28). Second, I consulted with 50 native speakers of Mandarin and 45 of them prefer (ii) with *de* present, for a similar reason that I will explain in Section 5.2.

- (27) Ni chi wo fan, yong wo qian hai zhemo bu tinghua.  
 2sg eat 1sg food use 1sg money still so not obedient  
 'You eat my food, and use my money, but you are still so disobedient.'
- (28) Jibian ta shi ni laopo, ni ye bu yinggai toukan ta duanxin.  
 even 3sg be 2sg wife 2sg still not should peep 3sg text.message  
 'Even if she is your wife, you still should not read her text messages without her permission.'

#### 4 Type-denoting Chinese bare nouns

Before discussing the differences between singular and plural possessive pronouns in Chinese, I will study some of the general properties of Chinese nominals, which might shed light on the issue we are concerned with; i.e., why only a singular possessive pronoun is allowed in Chinese IPS.

In this section, I first discuss Chinese nouns are syntactically type-denoting mass nouns that can be used as bare nouns without number morphology or determiners (Chierchia 1998, Chierchia 2015; Liu 2014). I then illustrate how expletive determiners can be used before mass nouns and IPS.

##### 4.1 Bare nouns in Chinese as type-denoting mass nouns

As shown in (29), one major difference between the usages of Chinese and English nominals is that bare nouns are by far more robustly used in Chinese, which are not marked for  $\Phi$  features such as gender, person, number, and case or definiteness (Huang et al. 2009). The definiteness and number of bare nouns in Chinese are interpreted through the context, as shown in (29a–c), or word order, as shown in (29d–e) (Li and Thompson 1989); for example, preverbal nominals tend to be definite and postverbal nominals tend to be indefinite, which is consistent with the existential closure in Diesing 1992.

##### (29) bare nouns in Chinese: interpreted from context

- a. Wo xihuan che.  
 1sg like car  
 'I like cars.'
  - b. Wo xia che.  
 1sg exit car  
 'I (need to) get off the car.'
  - c. Wo mai che le.  
 1sg buy car Perf.  
 'I have bought a car.'
- interpreted from word order
- d. Che lai le.  
 car come Perf.  
 'The car has come.'
  - e. Lai che le.  
 Come car Perf.  
 'A car has come.'

By contrast, bare nouns are mostly mass or uncountable nouns like *water* in English, as shown in (30) (Schwarzschild 2011; Chierchia 1998, Chierchia 2015), and they can only be modified by a definite article:

- (30) a. I bought water.  
           \*I bought waters.  
           I bought the water.  
           \*I bought a water.  
       b. \*I bought chair.  
           I bought chairs.  
           I bought the chair.  
           I bought a chair.

Chierchia (1998, 2015) and Krifka (1995) argue that Chinese nouns are ultimately mass nouns, with a *type* or *kind* interpretation, i.e., that of an NP, different from the *token* interpretation denoted by a DP (Vergnaud and Zubizarreta 1992; Longobardi 1993; Liao and Wang 2015). Cheng and Sybesma (1999) propose that the mass/count distinction of Chinese nominals is visible only at the classifier level but not at the noun level. They identify that Chinese count nouns are ultimately count mass nouns like English *furniture*, which I will discuss in greater detail in Section 5.1.

#### 4.2 Expletive determiner for mass nouns and IPS

However, cross-linguistically, not all definite articles before a mass noun mark definiteness as English does in (30). As shown by the contrast between English and French in (31), French definite determiners can be expletive before a mass noun like *beauté* ‘beauty’ and *charité* ‘charity’, where they have a syntactic form but are semantically void (Vergnaud and Zubizarreta 1992).

- (31) expletive determiner in French  
       Jean admire        la        beauté, la        charité et la        bonté.  
       Jean admire.3.Pre f.sg.def beauty f.sg.def charity and f.sg.def kindness  
       ‘Jean admires (\*the) beauty, (\*the) charity, and (\*the) kindness.’

Interestingly, we see such expletive determiners also before IPS body parts like *yeux* ‘eye’ in (32):

- (32) Marie        a        les        yeux        bleus.  
       Marie have.3.Pre pl.def eye.pl blue  
       ‘Marie has blue eyes.’  
       \*‘Marie has the blue eyes.’

By the same token, as we have seen in (8), repeated below as (33), when used with the verb *lever* ‘to raise’, the expletive definite article *la* in French IPS *la main* ‘the hand’ is actually type-denoting, not token-denoting like its English counterpart, and therefore makes the IPS possessee, *main* ‘hand’, a mass noun with a type reading, the same as Chinese bare nouns (Vergnaud and Zubizarreta 1992; Cheng and Sybesma 1999):

- (33) a. Jean lève la main.  
           Jean raise.3.Pre f.sg.def hand  
           ‘Jean raises his own hand.’  
       b. \*Jean lave la main.  
           Jean wash.3.Pre f.sg.def hand  
       c. Jean lave sa main.  
           Jean wash.3.Pre 3.sg.Gen hand  
           ‘Jean washes his hand.’

(34) further supports the fact that in French IPS, the possessee is type-denoting, since it cannot take a non-restrictive adjective like *belle* ‘beautiful’ but only a restrictive one like *droite* ‘right’ (Guéron 2006):

- (34) a. Je lui ai pris la main.  
           1sg to.3sg.f have.1.Pre taken f.def hand  
           ‘I took her hand.’  
       b. \*Je lui ai pris la belle main.  
           1sg to.3.sg.f have.1.Pre taken f.def beautiful hand  
           ‘I took her beautiful hand.’  
       c. Je lui ai pris la main droite.  
           1sg to.3.sg.f have.1.Pre taken f.def hand right  
           ‘I took her right hand.’

## 5 Why no plural pronoun + IPS in Mandarin Chinese

In this section, I first discuss the potential distributive reading of type-denoting mass nouns and IPS (Vergnaud and Zubizarreta 1992; Schwarzschild 2011). I then argue that in Chinese, IPS mass nouns obligatorily trigger stubborn distributivity. The stubborn distributivity in IPS makes it impossible to have plural possessors for fear of distributivity over distributivity. I then discuss the special case of the IPS of public places, spatial directions, and professional titles that require a plural possessor, which I argue is caused by the stubborn collectivity of this kind of IPS.

### 5.1 Stubborn distributivity in Chinese IPS

Vergnaud and Zubizarreta (1992) further attribute the distributive reading of a singular IPS noun with a plural possessor in French to the *type* interpretation of the IPS possessee and the corresponding ungrammaticality in English to the *token* interpretation of the IPS possessee:

- (35) type-denoting IPS in French:  
       Le médecin a examiné l'estomac aux enfants.  
       s.m.def doctor have.3.Pre examined the-stomach of.pl.def children  
       ‘The doctor examined the children’s stomachs.’  
       \*‘The doctor examined the children’s stomach.’

However, Schwarzschild (2011) argues that not all mass nouns trigger distributivity. He distinguishes typical mass nouns in English like *water* and *traffic* as multiple-participant, which apply to ‘aggregates’, from those as solo-participant, for example, *luggage* and *furniture*. Multiple-participant nouns apply only to multiple-participant events and hence cannot be combined at all with a stubbornly distributive predicate like *round* and *large*, as demonstrated in (36):

- (36) a. The furniture<sub>(solo-participant)</sub> is round. (only distributively, each piece of furniture is round, but not collectively)  
 b. ?\*The water<sub>(multiple-participant)</sub> is large.

How to single out mass nouns that trigger stubborn distributivity in each language is beyond the scope of this paper. I argue that the grammaticality of French (35), however, seems to hint for a possible subtype diagnostic tool for identifying mass nouns that require stubborn distributivity: if IPS nouns are treated as mass nouns in a language, they are the mass nouns that consist of solo-participants and therefore trigger distributivity. As for languages like Chinese, where all nouns are mass nouns inherently (Chierchia 1998, Chierchia 2015; Krifka 1995), I argue that all nouns can potentially condition distributivity, but only IPS nouns mandate stubborn distributivity, which is not optional anymore but obligatory.<sup>12</sup>

## 5.2 The anomaly of distributivity over distributivity

Furthermore, being the sum or a group of individuals, a plural form of the possessor produces distributivity reading as well (Joh 2008). As shown in (37), now that both the plural possessor *tamen* ‘they’ and the IPS mass noun possessee *yanjing* ‘eye’ trigger distributivity, we end up with the semantically malformed distributivity over distributivity.

- (37) a. Tamen\*(-de)    yanjing    hen    da.  
          3pl(-de)    eye    very    big  
          ‘Their eyes are big.’  
 b. Wo    kan    tamen\*(-de)    yanjing.  
          1sg   look   3pl(-de)    eye  
          ‘I look at their eyes.’

A reviewer provides (38), (39), and (40) from a corpus search to demonstrate that a plural pronominal possessor can directly be used before a body-part IPS, without *-de*:

- (38) Ta    mo    women    datui.  
          3sg   touch   1pl    thigh  
          ‘He is touching our thighs.’  
          ‘He is groping us.’

<sup>12</sup> I will discuss plural possessors for public places, spatial relations, and professional titles in Section 5.4.

- (39) Wo jiu da nimen lian, nimen neng yao wo?  
1sg just hit 2pl face 2pl can bite 1sg  
‘I insist on hitting your faces/slapping you guys. Can you bite me?’
- (40) Yisheng bu kan tamen yanjing ye zhidao shili you wenti.  
doctor not look.at/check 3pl eye still know vision have problem  
‘The doctor knows their vision has a problem without looking at their eyes.’

Upon closer scrutiny, these seeming counterexamples do not undermine my analyses. First, as can be seen from the glossing, they are not simply verb-object structures, but all happen to have idiomatic interpretations: *mo datui* ‘touch thigh’ has the connotation of *to fondle* or *grope*, *da lian* ‘hit face’ *to slap* or *bring shame to*, and *kan yanjing* ‘look at eye’ *to check up one’s vision*. The special properties they have might be attributed to their unique lexical formations. Second, the results of an online search favor plural pronominal possessor followed by *-de*. As shown in Table 1, I searched *mo women de datui* (*mwdd*) and *mo women datui* (*mwd*) ‘touch our thighs/legs’, *da nimen de lian* (*dndl*) and *da nimen lian* (*dnl*) ‘hit your faces’, and *kan tamen de yanjing* (*ktmdy*) and *kan tamen yanjing* (*ktmy*) ‘look at their eyes’ on both Google and Baidu. There are no search results for either *mwdd* or *mwd* on either site. Out of the first 20 results for *dndl*, 55% and 70% on Google and Baidu return *dndl*, respectively, i.e., the other 45% and 30% are *dnl*. For *dnl*, 85% return *dnl* on Google, but one result is repeated three times, and 50% return *dnl* on Baidu, i.e., the other 15% and 50% are for *dndl*. Both Google and Baidu return only *ktmdy*, regardless of whether the entry is *ktymdy* or *ktmy*. In summary, the text search results prefer plural pronoun *de* + body part, even when the search input does not have *-de*.

**Table 1** Google and Baidu search results for plural pronoun (*de*) + body part

	<i>mwdd</i>	<i>mwd</i>	<i>dndl</i>	<i>dnl</i>	<i>ktmdy</i>	<i>ktmy</i>
Google	0	0	55%	85% (but 3 are the same sentence)	100%	0%
Baidu	0	0	70%	50%	100%	0%

Regarding the reliability of grammaticality judgments from corpus-based studies, Schlüter (2006) argues that whether the application of modern software guarantees the quality of the research results is still quite difficult to answer, for example, the size of the machine-readable, mostly written, language database, the overall frequency of the data, and the temporal specification of the corpora affect the value of the software employed (see also Fillmore 1992; Biber et al. 1998; Hoffmann et al. 2008). Regarding the inconsistency in grammaticality judgments between linguists and naïve speakers, Achimova et al. (2015) discuss the potential effects of scale adjustment and unconscious accommodation via lexical substitution. I relate the omission of *de* in (38)–(40) to the spoken form reduction, similar to the more colloquium form of *yi ren* ‘one person’ instead of the grammatical *yi ge ren* ‘one classifier person’ in Chinese, maybe for some phonological constrains as suggested by a reviewer.



(41) illustrates how the distributor in Chinese *dou* ‘all, both’ can distribute over either the subject or the object, but not both arguments, for fear of giving rise to the semantic anomaly of distributivity overlapping as shown in (41d) (Cheng 1995; Beghelli and Stowell 1997; Liu 2002).

- (41) a. Z    he    L    jiehun    le.  
           Z    and   L    marry    Perf.  
           ‘Z and L are married.’  
       b. Z    he    L    dou        jiehun    le.  
           Z    and   L    all        marry    Perf.  
           ‘Z and L are both married.’  
       no distributivity over distributivity:  
       c. Tamen-de    mama    dou    zai    zher.  
           3pl-de    mom    all    at    here  
           ‘Their mothers are all here.’  
       d. Tamen-de<sub>i</sub>    mama    women<sub>i</sub>    dou<sub>i</sub>    renshi.  
           3pl-de    mom    we    all    know  
           ‘We know all of their mothers.’  
           ‘We all know their mother.’  
           \*‘We all know all of their mothers.’

### 5.3 Pronouns as expletive demonstratives in Chinese IPS

The possessor is obligatory in IPS, but why must Chinese IPS choose a pronominal possessor instead of a nominal possessor? I contend that pronouns are closer in function to determiners that are responsible for the *type* or *token* identity of the noun, which is more obvious in the case of French IPS, where *le*, *la*, and *les* are both personal pronouns (direct object) and determiners, as demonstrated in (42).

- (42) a. Je le    connais.  
           I    him    know.1.sg  
           ‘I know him.’  
       b. Je la    connais.  
           I    her    know.1.sg  
           ‘I know her.’  
       c. Je les    connais.  
           I    them    know.1.sg  
           ‘I know them.’

Another natural question to ask is why, with the particle *-de* present, plural pronoun-*de* + plural alienable possession that is endowed with distributivity (Joh 2008) is grammatical, which should also be ruled out for distributivity over distributivity resulting from plurality as shown in (43).<sup>13</sup>

13 The suffix *-men* can only be attached to humans of desirable affiliation, more like a group marker (Iljic 1994) than an across-the-board grammatical plural marker. In (43), *men* is optional.

- (43) women de haizi(-men)  
 1pl de children  
 ‘our children’

I argue that a plural-pronoun-*de* is a bona fide determiner, i.e., a nonexpletive possessive pronoun, and the plural possessee will now be token-denoting, no longer a stubbornly distributivity-generating type-denoting IPS. That said, probably, the purpose of eliminating the particle *-de* from the singular pronoun in IPS is to make the possessor less like a real determiner, but more like an expletive determiner, allowing the IPS possessee to be type-denoting, similar to what French does.

#### 5.4 Plural pronoun + place name/spatial relation/professional rank title

I have shown in (23), repeated in the following as (44), that *jia* ‘home’ can occur in IPS (Lévy-Bruhl 1914; Nichols 1992), where the possessor can be reduced to a personal pronoun like *wo* ‘I’:

- (44) Huanying lai wo(-de) jia. (IPS: home)  
 welcome come 1sg(-de) home  
 ‘Welcome to my home.’

Nevertheless, *jia* ‘home’ can also allow plural *de*-less pronominal possessor, a violation of our discussion in Section 3.4 that only singular pronouns can occur in IPS:

- (45) Dajia dou qu tamen(-de) jia.  
 everybody all go.to 3pl(-de) home  
 ‘Everybody goes to their home.’

Furthermore, public places and spatial relations such as *xuexiao* ‘school’, *gongchang* ‘factory’, *guojia* ‘country’, *cun* ‘village’, *dongbian* ‘eastside’, and *ban* ‘class’ allow *de*-less pronominal possessors, a good first step toward IPS, but they allow only a plural pronominal possessor, not a singular pronominal possessor, as shown by the contrast between (46) and (47):<sup>14</sup>

- (46) Ni qu women (-de) xuexiao/gongchang/guojia/cun/dongbian/ban.  
 2sg go.to 1pl (-de) school/factory/country/village/eastside/class  
 ‘You go to our school/factory/country/village/east/class.’

14 A reviewer also gives *wo pangbian* ‘I side: my side or next to me’, which follows the rule of having an IPS with a singular possessor. The only unique thing about this structure is that the possessee is a noun indicating spatial relation *pangbian* ‘side’, lexically, not a typical body part or kinship IPS in Chinese. I have shown in Section 1, however, that spatial relation is a potential IPS in other languages. The reviewer also gives *shui wo chuang shang* ‘sleep I bed on: sleep on my bed’. I argue that such a speaker treats *chuangshang* ‘bed top’ as a very personal IPS space. But interestingly, only an alienable *shui wo\*(-de) chuang* ‘sleep I-de bed: sleep/use my bed’ is grammatical, if we remove *shang* ‘on top of’. I wonder if *chuangshang* ‘on bed’ being a prepositional phrase has something to do with this contrast.

- (47) Ni qu wo\*(-de) xuexiao/gongchang/guojia/cun/dongbian/ban.  
 2sg go.to 1sg (-de) school/factory/country/village/eastside/class  
 ‘You go to my school/factory/country/village/east/class.’

The dilemma we are faced with, then, is whether plural pronominal possessor + public place/spatial relation/*jia* ‘home’ is IPS or not. They are certainly familiar IPS candidates in many languages (Lévy-Bruhl 1914; Nichols 1992; Chappell and McGregor 1996; Heine 1997), and *de*-omission from a pronominal possessor makes this structure on a par with an IPS like *wo nainai* ‘I grandma: my grandma’ and *ta yanjing* ‘he eye: his eye’. Yet, the obligatory plural pronominal possessor makes them exempt from our generalization in Section 3.4, i.e., only a singular pronominal possessor is allowed in IPS.

I suggest that these public place names, spatial directions, and *jia* ‘home’ are indeed IPS, but they are different from other IPS in that they usually refer to a specific locus collectively owned and shared by the possessor or possessors, i.e., they are more like proper names, which does not allow distributivity. Such a stubborn collectivity dismisses the oddity caused by distributivity over distributivity we discussed in Section 5.2. In other words, Mandarin IPS structure is simply personal pronoun + inalienable possessee. The number restriction on the pronominal possessor depends on the distributivity nature of the possessee: if they are by nature stubbornly distributive, only a singular pronominal possessor is allowed, like *wo mama* ‘I mother: my mother’; if they are inherently collective, only plural pronominal possessor is allowed, like *women xuexiao* ‘we school: our school’.<sup>15</sup>

Another particular set of examples that require *de*-less plural pronominal possessors are professional ranks and titles such as *laoshi* ‘teacher’, *xiaozhang* ‘headmaster’, *tongshi* ‘colleague’, *lingdao* ‘leader’, *xiangzhang* ‘village leader’, *banzhuren* ‘class teacher’, and *banzhang* ‘class monitor’.<sup>16</sup>

- (48) a. Ta renshi women(-de) laoshi.  
 3sg know 1pl(-de) teacher  
 ‘He/she knows our teacher.’

15 A reviewer also draws my attention to the contrast between *wo(\*men) xiao* ‘I(\*we) school: our school’ and *wo(\*men) xuexiao* ‘we school: our school’. We can treat the public place *xuexiao* or its abbreviated form *xiao* ‘school’ as a collectively owned IPS, as seen from the *de*-omission and the obligatory translation of *our school* instead of *\*my school*. The alternation might be a result of phonological constraints between the syllable count of the possessor *wo* or *women* and that of the possessee *xiao* or *xuexiao*. See also Duanmu 2000, 2012.

16 Two reviewers give examples of *wo laoshi/laoban/daoshi* ‘I teacher/boss/advisor’. I checked with 50 native speakers, and the majority (36) of them prefer *wode-* or *women-*. I attribute the variations to the speakers’ personal closeness with their teachers and bosses as well as to dialectal differences. There is, however, a higher acceptance rate for *wo daoshi* ‘I advisor: my advisor’, which might be a result of the usually one-on-one relationship between a student and his/her advisor.

- b. Ta      renshi      wo\*(-de)      laoshi.  
      3sg    know      1sg(-de)    teacher  
      'He/she knows my teacher.'

These titles, I propose, are different from kinship terms in that they are by default collectively sharable, guaranteed not to have a single possessor. In addition, these titles tend to be able to be modified by the group marker *-men*, which Iljic (1994) suggests as a group marker to mark the aggregates with a desirable affiliation, for example, *laoshi-men* 'teacher-men: the teachers', but not *\*diren-men* 'enemy-men: the enemies'. Such intimacy makes them IPS, which allows *de*-drop, but the collective ownership makes them behave more like public place names that require a plural possessor, as we have discussed earlier.

## 6 Accessories in Chinese IPS

Another puzzle regarding IPS in Chinese is when it comes to accessory possessee, the type of the predicate matters, as shown in (24), repeated in the following as (49a), similar to the constraint on the lexical choice in French IPS in (8), repeated in the following as (50). Only activity verbs, preferably with aggression, violence, or intrusion connotations like *qiang* 'snatch' in (49a) and accomplishment verbs like *qiang-zou* in (49b) 'snatch away' are allowed in clothing accessory IPS, but not stative verbs like *xihuan* 'like' (49c):

- (49) a. Ta      meitian      dou      qiang      wo(-de)      maozi.  
      3sg    everyday    all    snatch    1sg(-de)    hat  
      'He snatches my hat everyday.'  
      b.<sup>17</sup> Ta      ba      wo(-de)      maozi      qiang-zou      le.  
      3sg    BA    1sg(-de)    hat      snatch-away    Perf.  
      'He snatched away my hat.'  
      c. Ta      xihuan      wo\*(-de)      maozi.  
      3sg    like      1sg\*(-de)    hat  
      'He likes my hat.'

(50) IPS:

- a. Jean      lève                      la      main.  
      Jean    raise.3.Pre    the    hand  
      Jean raises his own hand.'  
      b. \*Jean    lave                      la      main.  
      Jean    wash.3.Pre    the    hand  
      alienable:  
      c. Jean    lave                      sa                      main.  
      Jean    wash.3.Pre    3sgGen    hand  
      Jean washes his hand.'

<sup>17</sup> The disposal *ba*-structure employs an SOV word order in Chinese that signifies strong affectedness of the dynamic verb on the specific noun following *ba* (Li and Thompson 1989).

First, such a limitation makes clothing accessories more marginal on the list of IPS, reflected also from the markedness of accessories used in IPS cross-linguistically (Nichols 1992), cf. the German examples in (6) and (7) and the English example in Footnote 3. Second, the unavailability of a stative verb like *xihuan* ‘like’ in IPS in (49c) may be related to what Hatcher and Marc (1944) and Kayne (1975) call an action requirement of an IPS, not a state, potentially another juncture where stage-level predicates (action) and individual-level (state) predicates diverge (Kratzer 1995). Klimov (1977, 1983) also finds that the stative-active distinction is associated with inalienable-alienable distinction. More research is in demand on this issue. Once again, as I have mentioned in Section 3.4 and Footnote 5, instead of enumerating what a typical IPS noun is, we can claim that any noun that can be used in the IPS is intended as an IPS noun by the speaker.

## 7 Conclusion

In this paper, I first study the typology of IPS from the perspectives of its cross-linguistic categorization and the grammatical variations in its formation, e.g., affixation, case-marking, and demonstrative alternation. Then, I identify the ingrained stubborn distributivity in Chinese IPS in the form of singular personal pronoun + inalienable possessee. I relate the grammaticality of possessive pronominal alone without the possessive particle *-de* ‘-de’ in IPS to the closeness of pronouns to expletive determiners in French that are found at pronominal positions. I then argue that the ban against plural possessor in Chinese IPS is a result of the semantic anomaly of distributivity over distributivity, namely, the distributive nature of the plural possessor over the natural stubborn distributivity in the IPS possessee. Furthermore, I relate the plural pronominal possessor in the IPS of place names, spatial directions, *jia* ‘home’, and professional titles to the stubborn collectivity shared by these proper-noun-like IPS that disallow distributivity. Lastly, I demonstrate the constraint on the predicate type in clothing accessory IPS, i.e., a preference for active verbs over stative verbs.

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## 為什麼中文親屬所有結構的所有者的單複數很重要

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### 提要

本文首先通過考察跨語言類型，介紹甚麼是親屬所有結構（IPS），並著重指出中文的親屬所有結構以代詞 + 人體器官或親屬關係名詞為主。通過考察動詞之後的 IPS，文章指出以前語言學家沒有注意過的一個現象，即，親屬所有結構的所有代詞只能是單數。本文認為分配性重合是這一限制的原因，也就是具有分配性的複數所有者和中文 IPS 本身具有的頑固分配性之間的矛盾。文章進一步指出中文一些表示公共場所、空間方向和職業頭銜的 IPS 必須的複數代詞所有者和這些 IPS 的頑固性集體性有關。最後，文章討論親屬所有結構和普通所有結構之間的差別如何對應靜止動詞和動態動詞之間的差別。

### 關鍵詞

中文，親屬所有結構，分配性