LINKING APPARENT AGENT OBJECTS IN CHINESE

何萬順[*]
One-Soon Her
National Chengchi University

1. Introduction: The Linking Problem

This paper deals with a construction in Chinese which allows agent to be linked to object and patient linked to subject, a linking pattern that has often been considered to be ill-formed cross-linguistically.

(1) a. 他們四個人吃一斤肉。
    b. 一斤肉吃他們四個人。

The rest of the paper is organized into three sections. Section 2 discusses the core problem to be dealt with in the paper: the apparently inversed linking of <*agent*-OBJ, *theme*-SUBJ> in (1b). Section 3 first reviews an account of a similar problem in Chinese resultative compound verbs, then accounts for the apparent agent object in (1b). Section 4 concludes the paper.

2. Apparent Agent Objects

The problem of an apparent subject-object inversion is observed in consumption verbs, e.g., *chi* 'eat', *he* 'drink', and *chou* 'smoke', and accommodation verbs, e.g., *zhu* 'live', *zuo* 'sit', and *shui* 'sleep', in Chinese.

The verb *chi* 'eat', as an example of consumption verbs, has a canonical transitive construction (2a), and the inverted (2b) is ill-formed, as expected. This is true when the theme object is a quantifier phrase (QP) denoting measure or extent of the eating, as in (3).

(2)　a. 李四吃肉。
　　　b.*肉吃李四
(3)　a. 李四吃(這)一鍋肉。
　　　b.*(這)一鍋肉吃李四。

However, if the agent is a QP, subject-object inversion can occur, as in (4). Note also that this inversion is irrespective of the theme being a QP or NP.

(4)　a. 兩個人吃(這)一鍋肉。
　　　b. (這)一鍋肉吃兩個人。

It is thus clear that the agent role in (4) must allow an additional meaning of 'measure' or 'extent'. This is precisely the possible role of 'extent' Dowty (1991: 554) refers to:

(5)　a. I walked a mile.
　　　b. I slept twelve hours.
　　　c. This weighs five pounds.
　　　d. The book cost $5.

In Chinese, subject-object inversion occurs only when the agent takes on an additional extent role. (6b) is ill-formed because the agent denoted by the pronoun or the full NP cannot afford a measure or extent reading. With the addition of a QP *liang ge ren* 'two people' in (7), the extent reading is available and subject-object inversion is allowed.

(6) a. 他們/張三和李四吃這鍋肉。
    b. *這鍋肉吃他們/張三和李四。
(7) a. 他們/張三和李四兩個人吃這鍋肉。
    b. 這鍋肉吃他們/張三和李四兩個人。

Note that the object in the inversed (7b) still denotes the actor of the action *chi*, despite the addition of the extent reading. This inversion applies to accommodation verbs, which denote the provision of space or time needed for a certain activity, for example sleeping, sitting, or standing. Like consumption verbs, a QP is required for the extent reading to induce inversion, see (8c).

(8) a. 四個人睡這間屋子。
    b. 這間屋子睡四個人。
    c. *這間屋子睡張三和李四。

However, note that *shui* 'sleep' is also a locative inversion verb, as in (9), which should not be confused with the subject-object inversion in (8). Unlike the subject-object inversion verb, the locative inversion verb does not require the inverted subject to be a measure or extent. Thus, the well-formed inversion in (10b), where the inverted subject does not have the extent reading, is due to locative inversion, not subject-object inversion.

(9) a. 四個人睡在這間屋子裡。
    b. 這間屋子裡睡著四個人。
(10) a. 張三和李四睡在這間屋子裡。
    b. 這間屋子裡睡著張三和李四。

What this demonstrates is that, while the locative inversion verb requires an a-structure of precisely *<th loc>* (e.g., Bresnan 1994, Her 2006), the accommodation verb in subject-object inversion, like consumption verbs, requires an a-structure of *<ag th>*. However, the problem is not all *<ag th>* verbs undergo inversion. Verbs allowed this construction are far more restricted.

Ren (2005) discusses various non-patient objects, and for the subject-object inversion in question, she suggests an underlying bi-clausal structure, where a silent counterpart of *gei* 'give' heads the matrix clause, as in (11), thus a light verb construction similar to that of (12a). However, a *vp*-stacking movement analysis requires evidence such as the multiple adverbial positions shown in (12b-c).

(11) a. 這張桌子　*e*　他們四個人坐.

(12) a. John –*ed*　*e*　the ball roll down the hill.

    b. John *gently* rolled the ball down the hill.
    c. John rolled the ball *gently* down the hill.

A syntactically derived construction thus must exhibit some robustness in syntactic behavior. Unlike (12), this is not the case for inversion verbs in Chinese.

(13) a. 這張桌子給他們四個人明天坐.
　　 b.*這張桌子坐他們四個人明天.

The verbs allowed in the inversion construction, though unified under a-structure *<ag th>*, are highly unproductive. First of all, inversion verbs seem to be monosyllabic. Phonological constraints are characteristic of morphological operations, not syntactic derivations. Also, a precise semantic characterization of the inversion verbs seems elusive.

Ren (2005: 16) observes that they must denote an action at the completion of which the theme is to be occupied or possessed. This nicely unifies verbs of accommodation and verbs of consumption but is still an *over*generalization.When you buy something, you end up possessing it, but *mai* 'buy' is not allowed, nor is any of the following: *shou* 'receive', *jie* 'borrow', *na* 'take', *qu* 'take', *tou* 'steal', *qiang* 'rob', *de* 'obtain', *you* 'have', *bao* 'hug, embrace', and *zhan* 'occupy'. The two verbs *chi* 'eat' and *tun* 'swallow' are fairly close in meaning, and something swallowed is certainly occupied, but *tun* allows no inversion between the swallower and the swallowee, nor do *yan* 'swallow', *yao* 'bite', *chang* 'taste', *tian* 'lick', and *jiao* 'chew'.

All these idiosyncrasies in syntactic behavior and arbitrary gaps in lexical generalization all point to a morpholexical solution, not a syntactic one. A morpholexical operation is proposed in (14) to account for the additional extent role bound with the existing agent role.

(14) Extent-addition morpholexical operation:
　　 V_a<x y>*, x = ag & y = th, → V_a <x-z　 y>, z = ext
　　 *V_a denotes an action at the completion of which x is to be possessed or occupied by y.

The verb class of V_a in (14) is understood to have many gaps and allow certain exceptions. In terms of linking, both *<ag-ext-SUBJ th-OBJ>* or *<ag-ext-OBJ th-SUBJ>* are well-formed.

4. An Informal Account

The first issue that has to be resolved in linking the inversion verbs is how to incorporate the extent role into the thematic hierarchy. Huang (1993) proposes that extent ('domain' in his term) be one of the least prominent roles in the thematic hierarchy.

(15) Revised Thematic Hierarchy:
　　 ag > ben > go/exp > inst > pt/th > loc/ext

The extent role indeed shares none of the characteristics of the agent, and, like the locative, it is predicated of the theme and also entails the terminus point of the action. The problem can now be summarized as below.

(16) a. 兩個人吃這鍋肉。
　　　 <x-z　　 y >　 (x = *ag*, y = *th*, z = *ext*)
　　　　 ↓　　 ↓
　　　　 S　　 O
　　 b. 這鍋肉吃兩個人。
　　　 <x-z　　 y >　 (x = *ag*, y = *th*, z = *ext*)
　　　 S　　　 O

The issue with the a-structure *<ag-ext th>* is two-fold. First, how exactly is a composite role, formed by two composing roles, linked to a single syntactic function? Second, why does inversion occur? We will demonstrate that once the first question is satisfactorily answered, the answer to the second question simply falls out.

Now, think of the θ-Criterion. An explanation is needed as to technically why it is well-formed to link a composite role, formed by two distinct thematic roles, such as *ag-ext*, to a single syntactic argument. It is of course preferred if strict one-to-one linking is maintained. Her (2004) contends that the enforcement of strict one-to-one linking simply entails the suppression of one of the composing roles in the composite role. Logically then, the suppression of a composing role in linking a composite role is motivated as well as constrained by the one-to-one linking required by the θ-Criterion. The suppression, or absorption as it is called within GB, of the highest role, or the logical subject, in the passivization operation is universally accepted. Suppression is also required in constructions such as middle and tough. As a universally independently motivated notion, suppression as part of linking composite roles thus in no way complicates the grammar.

Before dealing with the subject-object inversion in question, let's see another example of composite role first. A resultative compound exhibits an intriguing pattern of linking. As first comprehensively documented by Li (1995), a verb such as *zui-lei* 'chase-tired' allows up to three readings and two of the readings are clearly causative.

(17) 張三追累了李四。
  a. 'John chased Lee and made Lee tired.' (causative)
  b.*'Lee chased John and John got tired.' (ill-formed)
  c. 'John chased Lee and (John) got tired.' (non-causative)
  d. 'Lee chased John and was made tired.' (causative)

Her (2004, 2007), dissatisfied with the violation of the θ-Criterion by Li's (1995, 1999) account, offers an alternative where strict one-to-one linking and suppression in fact predict that resultative compounding should generate potentially four well-formed a-structures. Following Li (1995), V_{caus} refers to the causing verb and V_{res} the result verb. The resultative compounding process that merges a transitive V_{caus} and an intransitive V_{res} is summarized in (18).

(18) Resultative Compounding
  $V_{caus}\langle x\ y\rangle + V_{res}\langle z\rangle \rightarrow$
  $V_{caus}V_{res}\langle\alpha\ \beta\rangle$*, where $\langle\alpha\ \beta\rangle = $ (i) $\langle x\ y\text{-}\cancel{z}\rangle$
  (ii) $\langle x[caus]\ \cancel{y}\text{-}z[af]\rangle$
  (iii) $\langle x\text{-}\cancel{z}\ y\rangle$
  (iv) $\langle\cancel{x}\text{-}z[af]\ y[caus]\rangle$
  (*The role containing an unsuppressed θ_z receives [af], and the other role [af])

With suppression taken into account, linking is straightforward. As shown in (19a), the causative reading is due to (18ii). However, it is also predicted that a non-causative reading of (19a'), due to (18i), is available. However, causativity in (19a) naturally overrides the absence of causativity in (19a'). The reading in (19b) is impossible as neither of the two compatible a-structures, (18i) and (18ii), produces it. The reading of (19c) is due to the non-causative (18iii). The causativity and apparent inverted linking in (19d), due to (18iv), is also predictable due to a well-established principle: the causer is more prominent than the affectee (Dowty 1991). Note that suppression is indicated by a single cross-out.

(19) 張三追累了李四。
  a. 'John chased Lee and made Lee tired.'   (causative)
    $\langle x[caus]\quad \cancel{y}\text{-}z[af]\rangle$ ($x = ag, y = th, z = th$)
      S   O
  a' 'John chased Lee and Lee got tired.'   (non-causative)
    $\langle x\qquad y\text{-}\cancel{z}\rangle$ ($x = ag, y = th, z = th$)
      S   O

b.*'Lee chased John and John got tired.'   (ill-formed)
    $< x$ $y\text{-}z >$ $(x = ag, y = th, z = th)$
    $< x[\text{caus}]$ $y\text{-}z[\text{af}]>$
       *O   *S

c. 'John chased Lee and (John) got tired.'   (non-causative)
    $< x\text{-}z$ $y >$ $(x = ag, y = th, z = th)$
      S   O

d. 'Lee chased John and was made tired.'   (causative)
    $< x\text{-}z[\text{af}]$ $y[\text{caus}]>$ $(x = ag, y = th, z = th)$
         O   S

We now move on to examine the linking in the subject-object inversion verbs under the same assumptions of one-to-one linking and suppression. Linking of the canonical form and the inversion are illustrated below.

(20) a. 兩個人吃這鍋肉。
    $<x\text{-}z$ $y >$ $(x = ag, y = th, z = ext)$
      ↓   ↓
      S   O

  b. 這鍋肉吃兩個人。
    $<x\text{-}z$ $y >$ $(x = ag, y = th, z = ext)$
          ✕
     S   O

Again, the linking of *<ag-ext-SUBJ th-OBJ>* in the reading of (20a) is mundane; the real issue is why inversion occurs in (20b). The answer virtually falls out under the assumption of strict one-to-one linking. Within the composite role *ag-ext*, when the agent role is suppressed, the composite role is then syntactically assigned solely based on the extent role. Given that a theme role is more prominent than an extent role, theme is linked to subject and an apparent inversion thus occurs. This inversion is only apparent because, technically, the agent role is not syntactically assigned to the object at all; it is suppressed from syntactic assignment all together. Note that, crucially, given agent's overt linking in (20a) but its suppression in (20b), only the former can be modified by a 'subject-oriented' adverb, as shown in (21) and (22).

(21) a. 他們兩個人故意吃這鍋肉。
    b.*這鍋肉故意吃他們兩個人。
(22) a. 他們兩個人高高興興地吃這鍋肉。
    b.*這鍋肉高高興興地吃他們兩個人。

5. Conclusion

Unlike the genuine agentive objects reported in certain languages, e.g., Navajo (Hale 1973), Balinese (Arka 2004), and Tagalog (Kroeger 1993), the inversion discussed in this paper involves an *agent-extent* composite role, rather than a straightforward agent role. Under the simplest and also the strictest interpretation of the *θ*-criterion, a composite role, formed by two composing roles, receives syntactic assignment via one composing role only; the second composing role is thus suppressed. Inversion occurs only when the extent role wins out in linking and thus forces the suppression of the agent role. Thus, this subject-object inversion is only apparent, as technically the agent role is not syntactically realized at all. This account also facilitates a natural explanation of markedness among the competing syntactic structures. The inverted structure is marked because the most prominent agent role not only loses its independence in syntactic realization, it is suppressed to allow linking by a less prominent role.

References

Arka, Wayan. 2004. *Balinese Morphosyntax: A Lexical-Functional Approach*. Pacific Linguistics 547. Canberra: Pacific Linguistics.

Dowty, David. 1991. Thematic Proto-roles and Argument Selection. *Language* 67.3: 547-619.

Hale, Kenneth. 1973. A Note on Subject-Object Inversion in Navajo. In *Issues in linguistics: Papers in honor of Henry and Renée Kahane* (Vol. IL). ed. by B. Kachru. Urbana: University of Illinois Press. Pp. 300-09.

Her, One-Soon. 2004. Argument-function Linking in Resultatives. *Concentric: Studies in Linguistics* 30.2: 1-34.

Her, One-Soon. 2006. Optimality-Theoretic Lexical Mapping Theory: A case study of locative inversion. *International Journal of Technology and Human Interaction* (*Special Issue: Human Language Technology in Multilingual Perspectives*) 2.1: 67-94.

Her, One-Soon. 2007. Argument-function mismatches in Mandarin Chinese: A lexical mapping account. *Lingua* 117.1, 221-246.

Huang, Chu-ren. 1993. Mandarin Chinese and the Lexical Mapping Theory: A Study of the Interaction of Morphology and Argument Changing. *Bulletin of the Institute of History and Philology* 62.2: 337-88.

Huang, Hui-ting and One-Soon Her. 1998. Mandarin Locative Inversion and Relation-changing Rules, in *Selected Papers from the Second International Symposium on Languages in Taiwan*, ed. by Shuan-fan Huang. Taipei: Crane Publishing. Pp.287-304.

Kroeger, Paul. 1993. *Phrase structure and grammatical relations in Tagalog.* Stanford, Dissertations in Linguistics, CA: CSLI Publications.

Li, Yafei. 1995. The Thematic Hierarchy and Causativity. *Natural Language and Linguistic Theory* 13: 255-82.

Perlmutter, David. 1978. Impersonal Passives and the Unaccusative Hypothesis. *BLS* 4: 157-89.

Ren, Ying. 2005. *Xiandai Hanyu Feishoushi Binyu yanjiu 'On Non-patient Objects in Modern Mandarin'* (in Chinese). Shehui Kexue Wenxian Chubanshe.