

Mandarin Locative Inversion and Relation-Changing Rules

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Abstract

This paper accounts for locative inversion and related constructions in Mandarin within the Lexical Mapping Theory. We propose that the inversion process be accounted for with a language-specific relation-changing morpholexical operation, rather than with intrinsic role classifications (Lin 1990, Chang 1990) or universal default syntactic specifications (Bresnan and Kanerva 1989, Bresnan 1989). We also propose two modifications to the theory: 1) allowing morpholexical operations to add features and 2) extending the Subject Condition to a more general Unmarkedness Condition.

0. Background

Mandarin locative inversion verbs, similar to their counterparts in English, typically alternate between an inverted form, as in 1a-b, and an uninverted canonical form, as in 2a-b.

1. a. Tai2-shang zuo4 zhe Zhang1san1.
stage-top sit ASP Zhangsan
On the stage was sitting Zhangsan.

b. Dong4-li tiao4chu1 le yi1 zhi1 lao3hu3.
cave-inside jump-out ASP a CLS tiger
Out of the cave jumped a tiger.

2. a. Zhang1san1 zuo4 zai4 tai2-shang.
Zhangsan sit at stage-top
Zhangsan is sitting on the stage.

b. Yi1 zhi1 lao3hu3 tiao4chu1 le dong4-li.
a CLS tiger jump-out ASP cave-inside
A tiger jumped out of the cave.

A locative inversion verb thus requires theme and locative; however, it seems locative inversion also forbids any other role in the argument structure and thus applies strictly to <th loc>. *Xie3* 'write', for example, allows no inversion with the a-structure <ag th loc> but when the agent role is suppressed inversion may obtain. Again, 3-4 show that English and Chinese are alike in this respect.

3. a. John wrote a Chinese character on the wall.
b. *On the wall was written a Chinese character (by) John.
c. On the wall was written a Chinese character.
4. a. Yue1han4 xie3 le yi1 ge zi4 zai4 qiang2-shang.
John write ASP a CLS character at wall-top
John wrote a Chinese character on the wall.
b. *Qiang2-shang xie3 le yi1 ge zi4 yue1han4.
*On the wall was written a Chinese character (by) John.
c. Qiang2-shang xie3 le yi1 ge zi4.
On the wall was written a Chinese character.

Unlike a movement framework where the alternation between the canonical construction and the derived construction are related by movements in phrase structure terms, an account within Lexical-Functional Grammar (LFG) treats the two surface forms as alternative realizations of grammatical relations of the same underlying argument structure. This paper explores the mapping from thematic roles to appropriate grammatical functions in Mandarin locative inversion and related constructions. The organization is as follows: section 1 gives a brief exposition of the set of mapping principles, known as the Lexical Mapping Theory (LMT), within LFG that constrains the correspondence between argument structure (or a-structure) and functional structure (or f-structure). Section 2 reviews several previous accounts of locative inversion in Mandarin and other languages, and section 4 contains a revised lexical mapping solution we propose. The implications of our account and the proposed modifications to LMT are discussed in section 4. Section 5 concludes the paper with a summary.

1. Lexical Mapping Theory

An essential theoretic assumption of LFG is that a-(r)gument) structure, f-(unctional) structure, and c-(onstituent) structure are formally independent of each other, and they are parallel planes of grammatical organization related by local structural correspondences, the same way a melody of a song is related to its words (Bresnan and Kanerva 1989, BK henceforth). The Lexical Mapping Theory (LMT) is a component of LFG concerned with the mapping relations between the thematic roles and the corresponding grammatical relations subcategorized for by a lexical form, or a predicate. BK first presented the details of LMT, which is composed of four components.

5. Components of LMT:

A) the universal thematic hierarchy:

ag > ben > go/exp > inst > th/pat > loc

B) classification of grammatical functions:

1. $\pm r$ (restricted thematically) and $\pm o$ (objective):

SUBJ [-r -o]	OBJ [-r +o]
OBL _θ [+r -o]	OBJ _θ [+r +o]
2. markedness hierarchy: SUBJ > OBJ/OBL_θ > OBJ_θ

C) lexical mapping principles:

1. intrinsic classifications (IC's):
 - th/pat → [-r]; ag → [-o]
2. morpholexical operations:
 - e.g., Passive: $\theta \rightarrow \phi$
3. default classifications (DC's):
 - $\theta \rightarrow [-r]$; all others → +r
4. *monotonicity* condition: feature assignment must be feature-preserving

D) well-formedness conditions (WF):

1. The Subject Condition: Every lexical form must have a subject.
2. Function-Argument Biuniqueness: Each expressed role must be mapped to a unique function, and conversely.

BK hypothesize a universal hierarchically ordered thematic role structure, which descends from agent, the most active or topical participant in events, as shown in 5A. BK further classify grammatical functions along two binary features: [r] (thematically restricted) and [o] (objective). SUBJ and OBJ are thematically unrestricted as they correspond to a wide range of thematic roles, whereas OBL_θ and OBJ_θ encode restricted thematic roles only.¹ In addition, OBJ and OBJ_θ are objective for they complement transitive predicates. This classification thus yields a set of natural classes of grammatical functions and also a markedness hierarchy, as shown in 5B.

Lexical mapping principles relate thematic roles to surface grammatical functions by classifying thematic roles along the same two binary features [r] and [o]. These mapping principles are in turn organized into three sub-components: intrinsic role classifications (IC's), morpholexical operations, and default role classifications (DC's). BK and Bresnan (1989) list two cross-linguistic generalizations of the unmarked grammatical encoding of theme/patient and agent. Morpholexical operations, if any, then apply and affect an a-structure by adding, suppressing, or binding thematic roles. An example is the English passive, which suppresses the highest role in an a-structure, as shown in 5C2. The a-structure having been morpholexically (re)constructed, the default classifications (DC's) apply to capture the generalization that the highest role's default function is the subject while lower roles default to non-subject functions. Default classifications, however, must preserve syntactic information; in other words, a conflicting value of an existing feature cannot

apply. This is known as the monotonicity condition. Finally lexical forms are subject to two well-formedness conditions: the Subject Condition and Bi-uniqueness Condition.

We now give a simple demonstration of the theory with English passive, as in 'the door was broken'.

6.		broken	<	ag	th	>	
	IC's:			[-o]	[-r]		
	Passive:			∅			
	DC's:						
	WF's:				S/O		
					SUBJ		

2. Previous Lexical Mapping Accounts

In this section, we will review BK's analysis of Chichewa, Bresnan's (1989) similar account of English, and two different applications of lexical mapping on Mandarin locative inversion, Lin (1990) and Chang (1990).

2.1 BK and Bresnan 1989

Within the lexical mapping theory outlined in section 1, BK and Bresnan (1989) propose a third cross-linguistic intrinsic classification for locative roles to account for locative inversion in Chichewa and English.

7. Intrinsic role classifications (IC's):

- 1) agent encoding: ag → [-o]
- 2) theme/patient encoding: th/pt → [-r]
- 3) locative encoding: loc → [-o]

Furthermore, they postulate an additional default role classification for a locative to be classified as [-r] if the associated theme is focused and thus bears the feature [f], and this locative default must precede other defaults, shown in 8. They further claim that the distribution of the focus feature is "a parameter of variation across languages" (Bresnan 1989:299, BK:37) and that for Chichewa and English only a theme or patient as the highest role can bear [f].

8. Default role classifications (DC's):

- 1) locative default: <[f] loc>, loc → [-r]
- 2) the highest role: θ → [-r]
- 3) all other roles: θ → [+r]

Examples in 9a-b demonstrate that this account works for locative inversions in

Chichewa and English in much the same way.

9. a. bewera < th loc > 'come'

IC's: [-r] [-o]

DC's: [+r]

WF's: O/S OBL_{loc}
 S OBL_{loc}

A-lendo-wo a-na-bwer-a ku-mu-dzi.
 2-visitor-2 those 2 SB-REC PST-come-IND 17-3-village
 Those visitors came to the village.

b. bewera < th loc > 'come'

IC's: [-r] [-o]

focus: [f]

DC's: [-r]

WF's: O/S S
 O S

Ku-mu-dzi ku-na-bewera a-lendo-wo
 17-3-village 17SB-REC PST-come-IND 2-visitor-2 those
 To the village came these visitors.

Though this account seems to be workable for Chichewa and English, its first problem is that it fails to account for the Mandarin locative phrase which not only alternates between oblique (10a) and subject (10b) function, but may also be realized as an unmarked object function (10c).

10. a. Hen3duo1 ren1 zhu4 zai4 tai2bei3. (OBL_{loc})

many person live at Taipei

Many people live in Taipei.

b. Tai2bei3 zhu4 le hen3duo1 ren1. (SUBJ)

Many people live in Taipei.

c. Hen3duo1 ren1 zhu4 tai2bei3. (OBJ)

Many people live in Taipei.

The additional cross-linguistic intrinsic classification, locative encoding: loc → [-o], which makes the incorrect prediction that all locatives alternate between subject and oblique only and thus prohibits the mapping of locative to object, is therefore questionable. Likewise, the postulation of a universal locative default also predicts

that all languages allow locative to be mapped to subject with a focused theme. However, we suspect that locative inversion may not exist in non-configurational languages with extensive case markings for grammatical relations, Korean and Japanese, for example. Let's look at a Japanese example.

11. a. Herikoputa ga yama no ue ni orimashita.
helicopter NOM mountain POSS top LOC land
A helicopter landed on top of the mountain.
- b. Yama no ue ni herikoputa ga orimashita.
mountain POSS top LOC helicopter NOM land
On top of the mountain landed a helicopter.
- c. *Yama no ue ga herikoputa o orimashita.
mountain POSS top NOM helicopter ACC land
On top of the mountain landed a helicopter.

As seen in 11a and 11b, the Japanese locative phrase may indeed exchange positions with the subject and thus the focus presented in 29a-b may be different; however, their grammatical functions must remain the same. BK's locative default overgenerates 29c and should therefore be revised.

Furthermore, as for the focus parameter, which assigns the focus feature [f] to theme, it is not clear to which of the four components in LMT it formally belongs. But since it applies after IC's and before DC's, one would have to assume that the focus parameter is a morpholexical operation. This is not entirely satisfactory however, for morpholexical operations are restricted to 'add, suppress, or bind roles' only (Bresnan 1989:296, BK:26). In section 4, we will propose a revised LMT that is free from all the difficulties found here.

2.2 Lin 1990

Lin (1990), while doing without the locative default of BK's, proposes two different intrinsic role classifications, one for theme, the other locative, both disjunctive.

!2. Intrinsic role classifications (IC's) (Lin 1990):

- 1) agent encoding: ag → [-o]
- 2) theme/patient encoding: th/pt → [-r]/[+o]
- 3) locative encoding: loc → [+o]/[-r]

13. a. tang3zai4 < th loc > 'lie at'
 IC's: [-r] [+o]
 DC's: [+r]
-
- WF's: O/S OBJ_{loc}
 S OBJ_{loc}
- Zhang1san1 tang3zai4 zhuo1zi-shang.
 Zhangsan lie at desk top
 Zhangsan lies on the desk. (Lin (35))

- b. tang3 < th[f] loc > 'lie'
 IC's: [+o] [-r]
 DC's: [-r]
-
- WF's: OBJ S/O
 OBJ SUBJ
- Zhuo1zi-shang tang3 zhe Zhang1san1.
 desk-top lie ASP Zhangsan
 On the desk laid Zhangsan. (Lin (36))

To have locative inversion entirely determined by intrinsic classifications, this account pays a heavy price by posing ad hoc stipulations on the selection of disjunctive intrinsic classifications for theme and locative. First of all, theme is classified [+o] when it has the feature [f], or focused, (see 13b), and [-r] elsewhere (see 13a). It is further stipulated that locative is intrinsically classified [-r] when the only other role in the a-structure is a focused theme (see 13b); otherwise, locative is classified [+o] (see 13a). This account therefore predicts that cross-linguistically 1) a focused theme, being [+o] intrinsically, never maps to subject, 2) a locative accompanied by a focused theme never maps to oblique, and 3) a locative and a focused theme always appear in a locative inversion construction as subject and oblique respectively. None of these can be substantiated of course. Earlier Japanese data, 11a-c, contradict prediction 3 that locative inversion is universal; likewise the following Mandarin sentences of 14a-b refute all three predictions.

14. a. Ta1 zai4 qiang2-shang xie3 le yi1 ge zi4.
 he at wall-top write ASP a CLS character
 He wrote a character on the wall.
- b. She2me ren2 zuo4 zai4 tai2-shang?
 what person sit at stage-top
 Who is sitting on the stage?

As is generally recognized, one of the focus devices in Mandarin is predication (e.g., Cheng 1983, Her 1991); in fact, Mandarin locative inversion employs precisely the discourse strategy of placing the element to be focused within the predicate. In 14a then, the double-underlined theme may indeed be focused; contrary to prediction 2 above, the double underlined locative is nonetheless mapped to an oblique function. Another common focus device is the question form (Cheng 1983). In 14b then, the double-underlined theme receives the focus; however, contrary to all the predictions above, theme is still mapped to subject and locative oblique, locative inversion does not obtain!

In this account, locative objects are not dealt with, though we can reasonably assume that *zhu4* in 10c has the same lexical mapping as *zhu4zai4* in 15.

15.	<i>zhu4</i>	<	th	loc	>	'lie'
	IC's:		[-r]	[+o]		
	<i>OC's</i>			(+r)		
			O/S	OBJ _{loc}		
	WF's:		S	OBJ _{loc}		

Zhang1san1 *zhu4* tai2bei3.
 Zhangsan live Taipei
 Zhangsan lives in Taipei.

This suggests that *zhu4* and *zhu4zai4* are free variations with identical a-structures and f-structures. The root of this problem is Lin's treatment of *zhu4zai4* as a compound, thus a lexically integrated word. Several tests indicate otherwise. First of all, unlike a typical verb in Mandarin (16a), it can never take an aspect marker (16b).

16 a. Zhang1san1 dan1xin1 zhe li3si4
 Zhangsan worry ASP Lisi
 Zhangsan is worried about Lisi.

b. *Zhang1san1 *zhu4zai4* zhe tai2bei3.
 Zhangsan live at Taipei
 Zhangsan is living in Taipei.

There are also indications that *zhu4* and *zai4* are a verb and a preposition independently. 17a shows that the *zai4* locative phrase can be preposed, while 17b shows that *zai4*, like other prepositions in Mandarin, cannot be stranded.

17.a. Zhang1san1 zai4 tai2bei3 zhu4 zhe.
 Zhangsan at Taipei live ASP
 Zhangsan is living in Taipei.

b. *Tai2bei3, Zhang1san1 zhu4 zai4.
 Taipei Zhangsan live at
 *Taipei, Zhangsan is living in.

2.3 Chang 1990

In order to redress BK's failure to account for Mandarin locative objects (see 28c), Chang (1990) also postulates a disjunctive intrinsic classification for the locative role, i.e., loc → [-o]/[+o]; other than this change, her lexical mapping account of Mandarin locative inversion follows that of BK and Bresnan (1989) and thus includes their locative default.

18. Intrinsic role classifications (IC's) (Chang 1990):

- 1) agent encoding: ag → [-o]
- 2) theme encoding: th → [-r]
- 3) dependent roles encoding: loc: [-o]/[+o]

19.a. tang3 < th loc > 'lie'

IC's: [-r] [+o]/[-o]

DC's: [+r]

WF's: O/S OBL_{loc}/OBJ_{loc}

S OBL_{loc}/OBJ_{loc}

Ta1 tang3 (zai4) chuang2-shang.

he lie at bed-top

He lies on the bed.

(Chang (81a))

b. tang3 < th[f] loc > 'lie'

IC's: [-r] [-o]

DC's: [-r]

WF's: S/O SUBJ

OBJ SUBJ

Chuang2-shang tang3 zhe yi1 ge ren2.

bed-top lie ASP a CLS person

On the bed lies a person.

(Chang (81b))

Chang's analysis has several problems. First, locative is deterministically

classified [-o] when the other expressed role is a focused theme, as seen in 19b, thus achieving locative inversion. Consequently, this account predicts that cross-linguistically a locative accompanied by a focused theme never maps to object. Sentences like 20, which allow a focused theme, double-underlined, and a locative object, underlined, indicate otherwise.

20. Shei2 yao4 shui4 di4-shang?
who want sleep ground-top
Who wants to sleep on the floor?

Chang argues that the disjunctive classification of locative ([+o]/[-o]) is well-motivated because locative is a dependent role whose classification is dependent on other expressed roles in the a-structure. The problem is not so much with the notion of dependent roles versus independent roles, but since an intrinsic role classification is universally determined by the inherent nature of the thematic role in question, it obviously weakens the theory considerably to claim that locative, dependent or not, is intrinsically [-o] or [+o] in Chinese but [-o] in English.

Moreover, this account establishes no criterion to determine whether locative is to be classified [-o], or [+o]. In 19a, for example, while the only other expressed role, theme, which the IC of locative is dependent upon, remains the same, locative nonetheless receives conflicting [-o]/[+o]. This disjunctive classification of locative is of course to achieve the dual realizations of an object and an oblique that Mandarin requires; however, this account is hardly desirable in that it completely misses the derivational relationship between the two classes of verbs and render them complete free variations.

3. A Revised Lexical Mapping Account

As demonstrated above, the fundamental problem shared by these previous analyses of locative inversion is account for language-specific mapping requirements with cross-linguistic generalizations and the consequence is over-generalization. To account for the lexical mapping of locative, we will employ the strategy of maximizing the universality of intrinsic and default classifications and keeping language-specific specifications to the morpholexical sub-component.

We maintain BK's two intrinsic role classifications for agent and theme/patient and postulate no additional IC's (repeated in 21 below). Thus, all other thematic roles, including locative, receive no intrinsic values.

21. Intrinsic role classifications:
1) agent → [-o]
2) theme/patient → [-r]

With regard to morpholexical operations, we propose that, in addition to adding, suppressing, and binding roles, they may also add role classification values (Her 1990, Zaenan 1987), under the monotonicity condition that a conflicting value of an existing classification cannot apply. To account for Mandarin locative inversion and related constructions, we postulate three morpholexical operations in Mandarin, locative inversion (LI), locative transitivization (LT), and locative detransitivization (LD).

22. Mandarin morpholexical operations:

- 1) Locative Inversion (LI):
 where <th loc>, th → [+o] loc → [-r]
- 2) Locative Transitivization (LT)
 where <th loc>, loc → [+o]
- 3) Locative Detransitivization (LD):
 where <ag th loc >, ag → φ

The only other revision we propose is to expand the somewhat ad hoc and controversial (e.g., BK:28) Subject Condition (that every lexical form must have a subject) to a much more general and motivated Unmarkedness Condition.

23. Unmarkedness Condition:

Every expressed thematic role must be mapped to the least marked grammatical function permissible.

The Unmarkedness Condition utilizes the markedness hierarchy of functions (SUBJ > OBJ/OBL_θ > OBJ_θ) stated in 6 of section 1. Other than these two extensions, we adopt all other lexical mapping components. Note, however, we do not accept the locative default of BK. 24a-c below demonstrate how our analysis accounts for Mandarin locative inversion.

24.a. tang3 < th loc > 'lie'

IC's: [-r]

DC's: [+r]

WF's: S/O OBL_{loc}/OBJ_{loc}

SUBJ OBL_{loc}

Ta1 tang3 zai4 chuang2-shang.

he lie at bed-top

He lies on the bed.

b. tang3 < th loc > 'lie'

IC's: [-r]

LT: [+o]

DC's: [+r]

WF's: S/O OBJ_{loc}

 SUBJ OBJ_{loc}

Ta1 tang3 chuang2-shang.

he lie bed-top

He lies on the bed.

c. tang3 < th loc > 'lie'

IC's: [-r]

LI: [+o] [-r]

DC's:

WF's: OBJ S/O

 OBJ SUBJ

Chuang2-shang tang3 zhe yil ge ren2.

bed-top lie ASP a CLS person

On the bed lies a person.

This revised LMT account applies to English and Chichewa locative inversion in much the same way, if the same locative inversion morpholexical operation (LI) (22.1) is postulated in both languages.

Recall that earlier we mentioned that verbs like *xie3* 'write' allow no inversion with the structure <ag th loc>; locative inversion obtains only when agent is unexpressed. Similarly, BK and Bresnan (1989) observe that in English and Chichewa locative inversion occurs with passivized transitive verbs. 25 and 26 below are English and Chinese examples. The locative detransitivization operation (LD), followed by locative inversion operation (LI), account for the Chinese data. The English data again can be accounted for similarly given BK (BK:27) and Bresnan's (1989:297) formulation of English passive operation, which suppresses the highest role.

25. a. John wrote a Chinese character on the wall.

b. *On the wall was written a Chinese character (by) John.

c. On the wall was written a Chinese character.

	write < ag	th	loc >
IC's:	[-o]	[-r]	
Passive:	φ		
LI:		[+o]	[-r]
DC's:			

		OBJ	O/S
WF's:		OBJ	SUBJ

26. a. Yue1han4xie3 le yi1 ge zi4 zai4 qiang2-shang.
 John write ASP a CLS character at wall-top
 John wrote a Chinese character on the wall.

- b. *Qiang2-shang xie3 le yi1 ge zi4 yue1han4.
 *On the wall was written a Chinese character (by) John.

- c. Qiang2-shang xie3 le yi1 ge zi4.
 On the wall was written a Chinese character.

	xie3 < ag	th	loc >	'write'
IC's:	[-o]	[-r]		
LD:	φ			
LI:		[+o]	[-r]	
DC's:				

		OBJ	O/S
WF's:		OBJ	SUBJ

4. Some Theoretical Implications

The account we have proposed attains several advantages over previous accounts. First of all, the discourse function of locative inversion is accounted for in BK and Bresnan (1989) by assigning the focus feature [f] to the theme role via a morphological operation, while in the accounts of Chang (1990) and Lin (1990) [f] is an inherent property of the theme role triggering locative inversion obligatorily. An observant reader probably has noticed that, quite unlike any of the previous accounts, we have left the discourse function of locative inversion totally unaccounted for in our lexical mapping account. Indeed, we believe that such pragmatic or discoursal features should have no place in the syntax proper, where the lexical mapping theory belongs. Such a mixing of information properly belonging to different autonomous planes in grammar is particularly uncharacteristic of LFG. Our account thus, quite fittingly we believe, allows the (over)generation of locative inversion sentences which may indeed be discoursally inappropriate.

As convincingly established by Birner (1994), the notion of 'presentational

focus' argued by BK and Bresnan (1989, 1994) can not account for the full distribution of locative inversion in discourse. Furthermore, Birner's study has made it clear that locative inversion is merely one of the several inversion constructions in English and the information-packaging function, that of presenting more familiar information in discourse before what is less familiar, is common to all inversion constructions. Therefore, it is unnecessary and unrevealing to single out locative inversion and account for its discourse function individually. In our account, the lexical mapping component merely generates the locative inversion construction and yet leaves the discourse function of the full distribution of inversion to be accounted for in the pragmatic module of the grammar.

Secondly, in all previous LMT accounts, locative inversion either is implied to be universal or has to be set as a parameter allowing different settings by different languages. The former is simply incorrect, and the latter complicates the universal grammar. By the same token, we refute Huang (1993)'s proposed language-specific hierarchy of thematic roles that places goal lower than theme for Chinese. By keeping locative inversion a language-specific morpholexical operation, which may indeed be shared by many languages, we are able to account for its non-occurrence in other languages, and maintain the universality of all intrinsic and default role classification. By allowing the language-specific module of morpholexical operations to interact with the modules of universal principles of intrinsic and default classifications, our account is able to reflect the insight that languages diverge and converge at the same time (Hsieh 1995). While the argument hierarchy is universal, different languages or different constructions may manifest varying degrees of transparency in the mapping between thematic roles and grammatical functions. The more iconic type displays a more direct correspondence between argument and function and undergoes few morpholexical operations, while a more abstract type utilizes more morpholexical schemes.

Furthermore, since in the theory intrinsic and default classifications already assign values, allowing morpholexical operations the same power does not compromise the formal power of the formalism, while making it more expressive. Another advantage of morpholexical rules is that they capture the derivational relations between different classes of verbs, for example locative inversion verbs and their canonical forms. The canonical form, undergoing no morpholexical operations, produces an unmarked structure, while locative inversion verbs, mediated by the morpholexical rule, derives a marked, non-canonical sentence construction². Detransitivized locative inversion verbs like *xie3* 'write' is thus even more marked in that two morpholexical operations must apply to yield its syntactic form.

Last but not least, the Unmarkedness Condition we proposed replaces the function-specific and somewhat controversial Subject Condition. The Unmarkedness Condition fully utilizes another part of the theory, the markedness hierarchy (which in turn is derived from the natural classes of functions), whose

consequence is otherwise unrealized, such is the case in previous accounts.

5. Conclusion

To summarize, we have examined the locative inversion and related constructions in Chinese and reviewed previous accounts of locative inversion within the lexical mapping theory in LFG. We have refuted previous analyses that account for locative inversion by language-specific intrinsic or default classifications and demonstrated that such accounts cannot be validated cross-linguistically. We propose that morpholexical operations be extended to allow language-specific classification assignments, and the Subject Condition be more generalized in accordance with the markedness hierarchy of functions. With the two revisions and three morpholexical operations, we are able to account for the relation-changing locative inversion and related constructions in Chinese.

More importantly, we demonstrated that the lexical mapping theory is applicable to typologically different languages such as English, Chichewa and Mandarin when it is properly constructed, with cross-linguistic intrinsic and default role classifications and language-specific morpholexical operations that allow feature-preserving value assignments.

NOTES

1. OBL_{θ} denotes multiple oblique functions such as OBL_{go} , OBL_{inst} , etc., and likewise OBJ_{θ} is an abbreviation of all secondary objects, OBJ_{th} , OBJ_{ben} , etc.
2. In a recent study of Mandarin corpus, Chang (1995) has found that the postverbal use of locative phrases is far more frequent than the preverbal use. This finding is consistent with our claim here.

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