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行政院國家科學委員會補助專題研究計畫  成果報告  
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## 漢語動結結構的詞彙映照分析

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# A UNIFIED ACCOUNT OF MANDARIN VR CONSTRUCTIONS: A LEXICAL MAPPING APPROACH

In this concise report, we will outline the essence of the unified, comprehensive account of Mandarin resultative compounds. The account consists of three parts: causativity assignment, headness, and argumentation. Though ultimately formulated in the theoretical framework of Lexical-Functional Grammar, the account is independently motivated and assumes the function-argument biuniqueness, or more commonly known as the Theta-Criterion in the mainstream derivational theory, between semantic argument roles such as agent and theme and syntactic argument functions such as subject and object.

## 1. THE LINKING PROBLEM

Despite the view of autonomous syntax which characterizes syntactic theories within the tradition of generative grammar (Newmeyer 1991), various mechanisms and principles have been proposed by generative grammarians to account for the general correspondences between semantic roles and syntactic arguments, for example agents to subjects and patients to objects.<sup>1</sup> Such correspondences are known as ‘linking’, ‘mapping’, and also ‘argument realization’. Unsatisfied with the earlier rule-based stipulations<sup>2</sup>, more principled constraints were proposed to account for the linking between lexical semantics and syntax. Among such universal constraints, the following three stand out and have had the greatest influences: Chomsky’s (1981)  $\theta$ -criterion, Perlmutter and Postal’s (1984) Universal Alignment Hypothesis (UAH), and Baker’s (1988) Uniformity of Theta Assignment Hypothesis (UTAH).

- (1)  $\theta$ -Criterion (Chomsky 1981: 36)  
Each argument bears one and only one  $\theta$ -role, and each  $\theta$ -role is assigned to one and only one argument.
- (2) Universal Alignment Hypothesis (UAH) (Perlmutter and Postal 1984: 97)  
There exist principles of UG which predict the initial relation borne by each nominal in a given clause from the meaning of the clause.
- (3) Uniformity of Theta Assignment Hypothesis (Baker 1988: 46)  
Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

The  $\theta$ -Criterion, originally proposed within the Government and Binding framework, states that the mapping between theta roles and syntactic arguments is strictly one-to-one, bidirectionally. The UAH, first formulated in the framework of Relational Grammar (RG), predicts that the connection between lexical semantics and the initial syntactic representation is constant and constrained by general principles (but leaves these principles unspecified) and thus implies that semantic roles represent equivalence classes of predicate arguments which the mapping process refers to. The UTAH maintains that the mapping between theta roles and structural relationships is consistent in that syntactic arguments fulfilling a particular role of a given predicate must all be generated in the same initial underlying syntactic position.

All three hypotheses function as constraints over the syntax-semantics interface and assume a fundamental connection between the event structure and some level of syntactic representation. However, their applicability on linking depends on the particular syntactic framework one

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<sup>1</sup> This may or may not apply to all languages, esp. ergative languages, which is an issue of great debate but will not be discussed here.

<sup>2</sup> In LFG, for example Bresnan (1982a), prior to the lexical mapping theory, linking of thematic roles to grammatical functions was largely stipulated.

assumes. Within the mainstream structuralist tradition, this linking relationship holds between a theta role and the initial pre-movement argument position in the structural configuration of a constituent structure.<sup>3</sup> Within this framework, grammatical functions such as subject and object are secondary notions defined purely in structural terms. However, within alternative frameworks which recognize grammatical relations, also known as grammatical functions, as primary notions, linking holds between the theta structure and the relational structure of syntactic functions. RG and LFG, or Lexical-Functional Grammar, are two prime examples.

UTAH is thus only relevant to a structure-based, transformational framework, not function-based frameworks like RG and LFG. The UAH, though function-based, also presumes a transformational multistratal framework; as such, it does not apply to LFG, a monostratal non-transformational framework. The  $\theta$ -Criterion, however, applies universally, as it simply states that theta roles must map to syntactic arguments and such linking, besides being mandatory, must also be monogamous.

However, none of the hypotheses mentioned thus far accounts for the central mechanism by which the theta structure and the syntactic structure are linked; for example, specifically how agents are assigned to the syntactic subject and patients to object in typical transitive verbs. One of the most significant hypotheses put forward to avoid the traditional stipulations on linking individual semantic roles<sup>4</sup> is the notion of thematic hierarchy (TH), which maintains that semantic roles are ranked hierarchically and universally according to prominence and that more prominent roles are mapped to more prominent syntactic arguments, and vice versa. This consequence of the TH with regard to argument realization is formally stated in Larson (1988) as the Relativized UTAH.

(4) Relativized UTAH (Larson 1988: 382)

If a verb  $\alpha$  determines theta roles  $\theta_1, \theta_2, \dots, \theta_n$ , then the lowest role on the Thematic Hierarchy is assigned to the lowest argument in constituent structure, the next lowest role to the next lowest argument, and so on.

The TH can thus be viewed as a concrete example of the kind of universal principle that the UAH refers to, and one that supplements the UTAH. In the derivational framework, the syntactic prominence that aligns with the semantic prominence in the TH is defined by a command relation. Between two syntactic argument positions, the one c-commanding the other is more prominent. Thus, given that agent outranks theme/patient in prominence and that the subject position c-commands, and thus outranks, the object position in a clause, the linking of agent to subject and patient to object is obtained. However, within non-derivational frameworks such as RG and LFG the prominence of syntactic arguments is not determined structurally; rather, a syntactic prominence scale is considered among syntactic relations such as subject and object, which are deemed primary notions independent of constituent structures. While the subject is universally viewed as the most prominent grammatical function, there is a lack of agreement as to the precise prominence scale across the relation-based frameworks. Likewise, attractive the notion of TH may be, there is surprisingly little agreement as to the precise inventory of such roles or the exact ranking of such roles, except that agent is the most prominent (Newmeyer 2002: 65)<sup>5</sup>.

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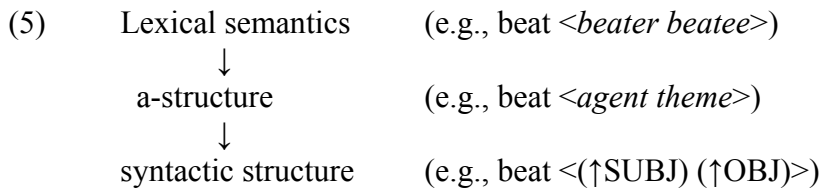
<sup>3</sup> In the Government and Binding framework it is the D(eep)-structure, and in the Minimalist framework, it is where the item initially merges with its head.

<sup>4</sup> An example of such stipulations is found in Fillmore (1968: 33), where it is stated that if an Agent is present, it is the subject; otherwise, if an Instrument is present, it is the subject; otherwise, the Objective (= Theme or Patient) is the subject.

<sup>5</sup> Newmeyer (2002) is in fact critical of the TH and even doubts its very existence; however, see Levin (2005) for what I consider a much more balanced and insightful view on this issue.

## 1. THEORETICAL FRAMEWORK

In this section, we introduce LFG's linking module, the lexical mapping theory. As a non-derivational generative framework, LFG takes seriously the insight that some generalizations regarding the mapping between the predicate argument structure and the syntactic structure must be stated at an independent level of predicate valence (Levin 1987, Rosen 1989, Bresnan and Kanerva 1989, Bresnan and Zaenen 1990, Grimshaw 1990, Jackendoff 1990, Alsina 1993, 1996, Mohanan 1994, Neeleman 1994, Butt 1995, Butt and King 2000, among others), and thus poses an argument structure (a-structure), which links the lexical semantic structure and the syntactic structure of a predicator (e.g., Bresnan and Kanerva 1989, Bresnan and Zaenen 1990). The particular conception of the a-structure assumed here is based on Baker (1983) and Bresnan (1996, 2001).



Furthermore, to capture the RG concept of grammatical relations, LFG posits two parallel planes of syntactic representation: constituent structure (c-structure) and functional structure (f-structure) (Kaplan and Bresnan 1982). The c-structure encodes the categorical hierarchies, usually represented as tree configurations. The f-structure, formally a feature structure, is the central locus of grammatical information, such as grammatical functions (e.g., SUBJ and OBJ), tense, aspect, polarity, case, person, number, gender, etc. These parallel structures are linked by correspondence principles and together provide the complete syntactic description. The lexical mapping theory (LMT) is the UG component that constrains the linking between a-structure roles and f-structure functions.

LMT also assumes a universal hierarchical organization of a-structure arguments, thus a thematic hierarchy, as shown in (58) (Bresnan and Kanerva 1989, 1992), which might also be derived from Dowtyan proto-role properties (Dowty 1991, Bresnan 2001: 321fn). And, by convention, roles in the a-structure are listed in a descending order accordingly, for example <*ag th*>. The most prominent role in the a-structure, or the logical subject, is known as  $\hat{\theta}$ , pronounced 'theta-hat'.

- (6) Thematic Hierarchy:  
 $ag > ben > go/exp > inst > pt/th > loc$

Grammatical functions (GFs) that are subcategorized for, also known as argument functions (AFs), including SUBJ, OBJ,  $OBL_{\theta}$  (oblique functions), and  $OBJ_{\theta}$ , (secondary objects), are likewise ranked for syntactic prominence. This syntactic hierarchy is formally due to a classification of AFs with two binary features:  $[\pm r]$  (whether an AF is restricted to having a thematic role) and  $[\pm o]$  (whether an AF is objective, and thus a complement of a transitive predicate). SUBJ has minus, and thus unmarked, values on both and  $OBJ_{\theta}$  has plus values. SUBJ is thus the least marked with two minus values, while  $OBJ_{\theta}$  is at the opposite end of the scale. OBJ and  $OBL_{\theta}$  are equal in prominence.

- (7) Markedness Hierarchy of Argument Functions:  
 $SUBJ(-r -o) > OBJ(-r +o)/OBL_{\theta}(+r -o) > OBJ_{\theta}(+r +o)$

Recall that in the derivational framework a theta role of a predicate is consistently assigned to an argument's initial syntactic position, i.e., before any movement takes place, as

stated in UTAH. However, LFG maintains the spirit of UTAH by posing a universal scheme of morphosyntactic classification of a-structure roles, as in (8) and (9) (Bresnan and Kanerva 1989) and a unified mapping principle (UMP), as in (10) (Her 1999, 2003, 2007, to appear).

- (8) Intrinsic Morphosyntactic Classification of Argument Roles (IC):

$\theta$ , iff  $\theta = pt/th$   
 [-r]

- (9) Default Morphosyntactic Classification of Argument Roles (DC):

$\theta$ , iff  $\theta \neq \hat{\theta}$   
 [+r]

- (10) Unified Mapping Principle (UMP):

Map each role to the highest compatible\* AF available<sup>+</sup>.

\*An AF is compatible iff it contains no conflicting features.

<sup>+</sup> An AF is available iff it is not fully specified by a role and not linked to a higher role.

The generalization in (8) can be viewed as an implementation of the unaccusative hypothesis, initially proposed by Perlmutter (1978), that cross-linguistically *pt/th* is encoded as an unrestricted function, i.e., SUBJ or OBJ (Bresnan and Kanerva 1989, Bresnan and Zaenen 1990, Zaenen 1993). The elsewhere condition in (9) captures the generalization that a non-logical subject, non-patientlike role is typically assigned a thematically restricted oblique function. The UMP in (10) reflects two generalizations. First, a more prominent role favors a more prominent AF; second, each role *consistently* favors the most prominent AF possible. Finally, note that the UMP also incorporates the  $\theta$ -Criterion in that a one-to-one linking is strictly required.

Lexical mapping of three different types of verbs is illustrated below: the unaccusative verb *melt* in (11), the unergative verb *bark* in (12), and the transitive verb *break* in (13).

- (11) The ice melted.

$melt < x > \quad (x = pt/th)$   
 IC: [-r]  
 DC:  
 -----  
 S/O  
 UMP: S

- (12) The dog barked.

$bark < x > \quad (x = ag)$   
 IC:  
 DC:  
 -----  
 S/O/...  
 UMP: S

- (13) The girl broke the window.

$break < x \quad y > \quad (x = ag, y = pt/th)$   
 IC: [-r]  
 DC:  
 -----  
 S/O/... S/O  
 UMP: S O

The mapping in (11) and (12) is straightforward. In (13), the role  $x$ , being an agent role, receives no IC, and being the logical subject, receives no DC. It is thus compatible with all four AFs in (8), while the role  $y$ , a patient/theme role, receives IC [-r] and thus no DC. It is compatible with SUBJ and OBJ. The UMP requires the mapping of the more prominent  $x$  onto the most prominent AF available, and thus SUBJ; hence, the less prominent  $y$  must be mapped to the only function that remains available to it, OBJ.

While the mapping above is accounted for by the universal component of LMT, there are language-specific morphological operations that may affect the a-structure and/or linking. While all morphological operations may affect the predicate, only morpholexical operations may alter the ‘lexical stock’ of the a-structure by adding, suppressing, or binding argument roles (e.g., Bresnan 2001: 310, Markantonatou 1995, Ackerman and Moore 2001). The morpholexical operation of passivization, which suppresses, or ‘absorbs’ as it is known in the derivational framework, the logical subject, is an example; see (66-67).

(14) Passivization:  $\langle \theta \dots \rangle$   
 $\downarrow$   
 $\emptyset$

(15) The window was broken.  
 $\text{broken} \langle x \quad y \rangle$  ( $x = \text{ag}, y = \text{pt/th}$ )  
 IC:  $[-r]$   
 DC:  
 -----  
 UMP: S/O  
           S

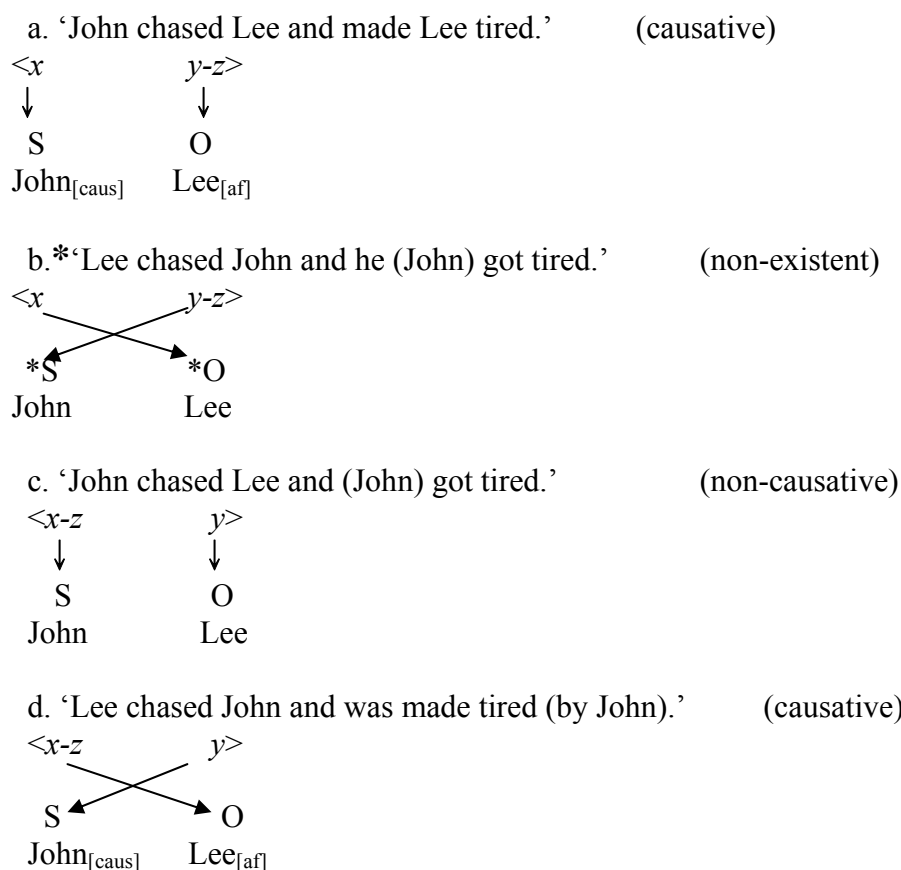
## 2. THE SUPPRESSION APPROACH (HER 2003, 2007)

In this section we will demonstrate a partial lexical mapping account on causativity and theta assignment, as proposed in Her (1997, 1999, 2003, 2004, 2007), in a limited range of VR constructions. The crucial feature in this account is the one-to-one-linking-induced suppression of a theta-role in a composite role. This logical and natural interpretation of the *Theta-Criterion* not only maintains the strict one-to-one linking, but also provides a well-motivated and well-constrained account for the VR data covered.

We will use a three-way ambiguous sentence with the VR compound 追累 *zhui-lei* ‘chase-tired’ to illustrate this account. As shown in (16), the single theta-role for *lei* may form a composite role with either of the two roles from *zhui*. But, most interestingly, out of the two possibilities, three grammatical readings are obtained. Note further that two of the three readings are also causative.

(16) *zhui* ‘chase  $\langle x \ y \rangle$ ’ + *lei* ‘tired  $\langle z \rangle$ ’ → (i)  $\langle x \quad y-z \rangle$   
 (ii)  $\langle x-z \quad y \rangle$

(17) 張三            追累了            李四  
 Zhangsan zhui-lei-le            Lisi.  
 John      chase-tired-ASP      Lee  
 $\downarrow$      $\downarrow$   
 SUBJ    OBJ



The most important and innovative feature in this account is that, under the strict one-to-one linking required by the *Theta-Criterion*, a composite role, e.g.,  $x-z$ , cannot be linked *unless one of the composing roles is suppressed*. Note that Randall’s (2010: 182) Bound Argument Condition (*Given two bound CS arguments, only the higher one is eligible to link to an AS position*) follows the same spirit; however, we shall demonstrate that Randall’s formulation is too restrictive as either composing role in a bound, or composite, role can receive syntactic assignment. Therefore,  $x-z$  can either be linked as  $x-z$  (with  $z$  suppressed) or as  $x-z$  (with  $x$  suppressed). This *Theta-Criterion*-induced suppression thus in fact *predicts* the two possibilities in (18) are in fact four.

- (18) *zhui* ‘chase  $\langle x y \rangle$ ’ + *lei* ‘tired  $\langle z \rangle$ ’  $\rightarrow$
- (i)  $\langle x y-z \rangle$
  - (ii)  $\langle x y-z \rangle$
  - (iii)  $\langle x-z y \rangle$
  - (iv)  $\langle x-z y \rangle$

We will first see how causativity is accounted for before demonstrating that these four possible a-structures in fact produce the three, not four, grammatical readings.

(19) Causativity Assignment in Resultative Compounding:

An unsuppressed role from  $V_{\text{res}}$  receives [af] iff an unsuppressed role from  $V_{\text{caus}}$  exists to receive [caus].

Within a causative resultative compound the most natural place for [af], or Affectee, is indeed the only role required by  $V_{\text{res}}$ , and the natural place for Cause is a role from  $V_{\text{caus}}$ . The restriction that a suppressed role does not receive causative roles is also reasonable. This account of causative follows naturally from the event structure of  $[V_{\text{caus}}+V_{\text{res}}]$ . causativity assignment is thus *always* part of VR compounding as long as the event structure fits and the respective roles



receiving Cause and Affectee are expressed and thus receive syntactic assignment. According to (19), the four a-structures in (18) now be specified with causativity.

- (20) *zhui* ‘chase  $\langle x y \rangle$ ’ + *lei* ‘tired  $\langle z \rangle$ ’  $\rightarrow$
- (i)  $\langle x y-z \rangle$
  - (ii)  $\langle x_{[caus]} y-z_{[af]} \rangle$
  - (iii)  $\langle x-z y \rangle$
  - (iv)  $\langle x-z_{[af]} y_{[caus]} \rangle$

Now we will demonstrate that (20i) and (20ii) in fact overlap and thus produce one single syntactic construction only, where the non-causative (20ii) is neutralized by the causative (20i). The logic is simple: zero plus one is always one, never zero.

- (21) Zhangsan *zhui-lei-le* Lisi.  
 a. ‘John chased Lee to the extent of making him (Lee) tired.’

IC	$\langle x$	$y-z \rangle$ <b>(20i)</b>	$(x = ag, y = pt/th)$
		[ <i>-r</i> ]	
-----			
GF	S/O/...	S/O	
UMP	S	O	
	John	Lee	

IC	$\langle x_{[caus]}$	$y-z_{[af]} \rangle$ <b>(20ii)</b>	$(x = ag, z = pt/th)$
		[ <i>-r</i> ]	
-----			
GF	S/O/...	S/O	
UMP	S	O	
	John	Lee	

- b. \*‘Lee chased John and he (John) got tired.’ (non-existent)

.	$\langle x$	$y-z \rangle$ <b>(20i)</b>	
	$\langle x$	$y-z \rangle$ <b>(20ii)</b>	
	*O	*S	
	Lee	John	

Reading (a) is thus accounted for, together with causativity. Note that the account also predicts correctly that the reading of (b) is non-existent. Now we demonstrate that (20iii) predicts the (c) reading and (20iv), the (d) reading.

- (22) Zhangsan *zhui-lei-le* Lisi.  
 c. ‘John chased Lee and (John) got tired.’

SC	$\langle x-z$	$y \rangle$ <b>(20iii)</b>	$(x = ag, y = pt/th)$
		[ <i>-r</i> ]	
-----			
GF	S/O/...	S/O	
UMP	S	O	
	John	Lee	

d. 'Lee chased John and was made tired (by John).'

SC	$\langle \cancel{x}-z_{[af]} \quad y_{[caus]} \rangle$ (20iv) ( $y = pt/th, z = pt/th$ )		
	<table style="border-collapse: collapse;"> <tr> <td style="padding-right: 20px;"><math>[-r]</math></td> <td style="padding-right: 20px;"><math>[-r]</math></td> </tr> </table>	$[-r]$	$[-r]$
$[-r]$	$[-r]$		
-----			
GF	S/O    S/O		
UMP	O        S		
	Lee      John		

Note that the account of causativity is crucial in accounting for the inversed (d) reading. Between  $\cancel{x}-z_{[af]}$  and  $y_{[caus]}$ , both  $z$  and  $y$  are patient/theme type of roles. Causativity thus provides the deciding factor in assigning  $y_{[caus]}$  to subject and  $\cancel{x}-z_{[af]}$  to object, either in the Dowtyan sense or in terms of Grimshaw's aspectual dimension. Consequently, one other great advantage of this account is that the thematic hierarchy is never violated, unlike Li's (1995, 1999) account, for here the more prominent agent-like role  $x$  is in fact suppressed and thus not part of syntactic assignment at all. The inversion effect is therefore only apparent, not real.

This account offers a natural explanation of causativity and grammaticality found in the VR compounds covered in Her (2007) and also abides by both the *Theta-Criterion* (or the UMP) and the thematic hierarchy. It is thus potentially the best account among the ones examined. In this project, we intend to have it as our base and expand it to all types of VR compounds.

### 3. A COMPREHENSIVE ACCOUNT

In this project, we will adopt this suppressionist approach to account for the comprehensive range of VR compounds. In (23), a more clearly formulated principle of causativity assignment in VR compounding is given. In (24), the four possible combinations are listed and the grammatical lexical options listed. For the purpose of illustration, we also list the ungrammatical combinations, which are due to the violation of the thematic hierarchy.

#### (23) Causativity Assignment in Resultative Compounding:

Given  $\theta_a$  from  $V_{caus}$  and  $\theta_b$  from  $V_{res}$ ,  $\theta_a$  and  $\theta_b$  receive [caus] and [af] respectively *iff* both are syntactically expressed.

#### (24) Resultative Compounding:

##### [Intran V + Intran V]

$V_{caus} \langle x \rangle + V_{res} \langle I \rangle \rightarrow$

$V_{caus} V_{res} \langle \alpha \beta \rangle$ , where  $\langle \alpha \beta \rangle =$  (i)  $\langle x-t \rangle$   
(ii)  $\langle \cancel{x}-I \rangle$   
(iii)  $\langle x[caus] I[af] \rangle$

(iv)  $* \langle I x \rangle, x > 1$

##### [Tran + Intran]

$V_{caus} \langle x y \rangle + V_{res} \langle I \rangle \rightarrow$

$V_{caus} V_{res} \langle \alpha \beta \rangle$ , where  $\langle \alpha \beta \rangle =$  (i)  $\langle x y-t \rangle$   
(ii)  $\langle x[caus] \cancel{y}-I[af] \rangle$   
(iii)  $\langle x-t y \rangle$   
(iv)  $\langle \cancel{x}-I[af] y[caus] \rangle$

##### [Tran + Tran]

$V_{caus} \langle x y \rangle + V_{res} \langle I 2 \rangle \rightarrow$

$V_{caus} V_{res} \langle \alpha \beta \rangle$ , where  $\langle \alpha \beta \rangle =$  (i)  $\langle x-t y-2 \rangle$   
(ii)  $\langle x-t[caus] \cancel{y}-2[af] \rangle$   
(iii)  $\langle \cancel{x}-I \cancel{y}-2 \rangle$   
(iv)  $\langle \cancel{x}-I[af] y-2[caus] \rangle$

- (v) \* $\langle x-2 y-1 \rangle$ ,  $1 > 2$
- (vi) \* $\langle y-1 x-2 \rangle$ ,  $x > y$

**[Intran + Tran]**

$$V_{\text{caus}} \langle x \rangle + V_{\text{res}} \langle 1 \ 2 \rangle \rightarrow$$

$$V_{\text{caus}} V_{\text{res}} \langle \alpha \ \beta \rangle, \text{ where } \langle \alpha \ \beta \rangle =$$

- (i)  $\langle x-1[\text{caus}] \ 2[\text{af}] \rangle$
- (ii)  $\langle \cancel{x}-1 \ 2 \rangle$
- (iii) \* $\langle 1 \ x-2 \rangle$ ,  $x > 1$

Next, we shall account for the argument realization in the grammatical compounds listed in (24). Here, we likewise employ the Lexical Mapping Theory; however, we shall not give the detailed linking for each ctype of compound and will only list the outcomes. For an illustration, refer to (21) and (22) above. Note that in (25) below we have indicated apparent subject-object inversions with boldface.

**(25) Argument Realization in Resultative Compounds:**

**[Intran + Intran]**

$$V_{\text{caus}} \langle x \rangle + V_{\text{res}} \langle 1 \rangle \rightarrow$$

$$V_{\text{caus}} V_{\text{res}} \langle \alpha \ (\beta) \rangle, \text{ where } \langle \alpha \ (\beta) \rangle =$$

- (i)  $\langle x-1 \rangle$   
S
- (ii)  $\langle \cancel{x}-1 \rangle$   
S
- (iii)  $\langle x[\text{caus}] \ 1[\text{af}] \rangle$   
S      O

**[Tran + Intran]**

$$V_{\text{caus}} \langle x \ y \rangle + V_{\text{res}} \langle 1 \rangle \rightarrow$$

$$V_{\text{caus}} V_{\text{res}} \langle \alpha \ \beta \rangle, \text{ where } \langle \alpha \ \beta \rangle =$$

- (i)  $\langle x \ y-1 \rangle$   
S O
- (ii)  $\langle x[\text{caus}] \ \cancel{y}-1[\text{af}] \rangle$   
S      O
- (iii)  $\langle x-1 \ y \rangle$   
S      O
- (iv)  $\langle \cancel{x}-1[\text{af}] \ y[\text{caus}] \rangle$   
O      S

**[Tran + Tran]**

$$V_{\text{caus}} \langle x \ y \rangle + V_{\text{res}} \langle 1 \ 2 \rangle \rightarrow$$

$$V_{\text{caus}} V_{\text{res}} \langle \alpha \ \beta \rangle, \text{ where } \langle \alpha \ \beta \rangle =$$

- (i)  $\langle x-1 \ y-2 \rangle$   
S      O
- (ii)  $\langle x-1[\text{caus}] \ \cancel{y}-2[\text{af}] \rangle$   
S      O
- (iii)  $\langle \cancel{x}-1 \ \cancel{y}-2 \rangle$   
S      O
- (iv)  $\langle \cancel{x}-1[\text{af}] \ \cancel{y}-2[\text{caus}] \rangle$   
O      S

**[Intran + Tran]**

$$V_{\text{caus}} \langle x \rangle + V_{\text{res}} \langle I \ 2 \rangle \rightarrow$$

$$V_{\text{caus}} V_{\text{res}} \langle \alpha \ \beta \rangle, \text{ where } \langle \alpha \ \beta \rangle = \begin{array}{l} \text{(i) } \langle x \text{-} I[\text{caus}] \ 2[\text{af}] \rangle \\ \text{S} \quad \text{O} \end{array}$$

$$\begin{array}{l} \text{(ii) } \langle \cancel{x} \text{-} I \ 2 \rangle \\ \text{S} \quad \text{O} \end{array}$$

The final issue we shall account for is headness in VR compounds. For a critical review of all previous positions, i.e., V1-headed, V2-headed, and double-headed, refer to Li (2008, 2009), where he has thus reached the conclusion that VR compounds are headless. We shall assume, following Li (2008, 2009) and many others, the *head feature percolation condition*.

**(26) Head Feature Percolation Condition (Li 2009:43)**

The way that the arguments of the head of a compound are realized in the syntax should be maintained on the compound level.

In (27) below, we illustrate that nearly all previous positions are both right and wrong at the same time, if the principle in (26) is to be upheld.

**(27) Headness in Resultative Compounds:****[Intran + Intran]**

$$V_{\text{caus}} \langle x \rangle + V_{\text{res}} \langle I \rangle \rightarrow$$

$$V_{\text{caus}} V_{\text{res}} \langle \alpha \ (\beta) \rangle, \text{ where } \langle \alpha \ (\beta) \rangle = \begin{array}{l} \text{(i) } \langle x \text{-} I \rangle \\ \text{S} \\ \text{V1 is head} \end{array}$$

$$\begin{array}{l} \text{(ii) } \langle \cancel{x} \text{-} I \rangle \\ \text{S} \\ \text{V2 is head} \end{array}$$

$$\begin{array}{l} \text{(iii) } \langle x[\text{caus}] \ I[\text{af}] \rangle \\ \text{S} \quad \text{O} \\ \text{V1 is head} \end{array}$$

**[Tran + Intran]**

$$V_{\text{caus}} \langle x \ y \rangle + V_{\text{res}} \langle I \rangle \rightarrow$$

$$V_{\text{caus}} V_{\text{res}} \langle \alpha \ \beta \rangle, \text{ where } \langle \alpha \ \beta \rangle = \begin{array}{l} \text{(i) } \langle x \ y \text{-} I \rangle \\ \text{S} \quad \text{O} \\ \text{V1 is head} \end{array}$$

$$\begin{array}{l} \text{(ii) } \langle x[\text{caus}] \ \cancel{y} \text{-} I[\text{af}] \rangle \\ \text{S} \quad \text{O} \\ \text{No head} \end{array}$$

$$\begin{array}{l} \text{(iii) } \langle x \text{-} I \ y \rangle \\ \text{S} \quad \text{O} \\ \text{V1 is head} \end{array}$$

$$\begin{array}{l} \text{(iv) } \langle \cancel{x} \text{-} I[\text{af}] \ y[\text{caus}] \rangle \\ \text{O} \quad \text{S} \\ \text{No head} \end{array}$$

**[Tran + Tran]**

$$V_{\text{caus}} \langle x \ y \rangle + V_{\text{res}} \langle 1 \ 2 \rangle \rightarrow$$

$$V_{\text{caus}} V_{\text{res}} \langle \alpha \ \beta \rangle, \text{ where } \langle \alpha \ \beta \rangle = \begin{matrix} \text{(i) } \langle x-1 \ y-2 \rangle \\ \text{S} \quad \text{O} \end{matrix}$$

**V1 is head**

$$\text{(ii) } \langle x-1[\text{caus}] \ y-2[\text{af}] \rangle \\ \text{S} \quad \quad \text{O}$$

**No head**

$$\text{(iii) } \langle x-1 \ y-2 \rangle \\ \text{S} \quad \text{O}$$

**V2 is head**

$$\text{(iv) } \langle x-1[\text{af}] \ y-2[\text{caus}] \rangle \\ \text{O} \quad \text{S}$$

**No head****[Intran + Tran]**

$$V_{\text{caus}} \langle x \rangle + V_{\text{res}} \langle 1 \ 2 \rangle \rightarrow$$

$$V_{\text{caus}} V_{\text{res}} \langle \alpha \ \beta \rangle, \text{ where } \langle \alpha \ \beta \rangle = \begin{matrix} \text{(i) } \langle x-1[\text{caus}] \ 2[\text{af}] \rangle \\ \text{S} \quad \quad \text{O} \end{matrix}$$

**V1 is head**

$$\text{(ii) } \langle x-1 \ 2 \rangle \\ \text{S} \quad \text{O}$$

**V2 is head**

As shown in (27) below, a VR compound is never double-headed; however, all other possibilities are obtained, i.e., V1-headed, V2-headed, and headless. There is clearly not a uniform head in all VR compounds, which explains the long-lasting controversy in previous studies.

**4. CONCLUSION**

The strict one-to-one linking between theta roles and syntactic arguments is the simplest interpretation of the biuniqueness requirement and, as we have demonstrated, it motivates, as well as constrains, the suppression of a composing role in a composite role. The relaxation of this biuniqueness restriction not only complicates the grammar. The suppression of a thematic role is not a novel idea; rather it is a well-established morpholexical operation. For example, passivization is widely assumed to involve the suppression of the external role. The account offered in this study, though formulated in LFG, is in fact theory-neutral, assuming only a strict one-to-one linking, which entails the suppression of one of the composing roles in the syntactic assignment of a composite role, formed by two composing roles. The function-argument mismatches in question are simply consequences of such suppressions. This comprehensive account also explains the causativity assignment and headness in VR compounds.

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## 出席國際會議心得報告

計畫主持人：何萬順

計畫執行單位：國立政治大學語言學研究所

計畫名稱：漢語動結結構的詞彙映照分析

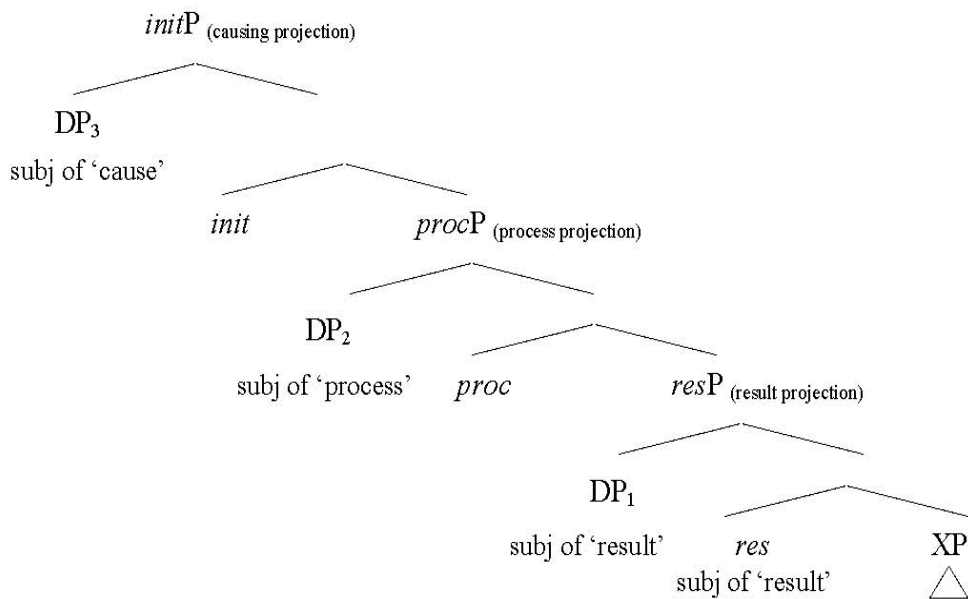
計畫類別：個別型計畫

計畫編號：NSC96-2411-H-004-037

執行期間：96年08月01日至98年07月31日

計畫主持人於2008年12月5日至8日期間，應澳門大學中文系系主任徐傑邀請前往研究訪問，共同研究有關漢語動結結構的句法及語意機制。徐教授從衍生語法的架構，以變化律的普及運用以及簡約的要求，傾向用變化律來解析動結結構；動結結構的V1和V2被視為兩個獨立的動詞，所以在句法上各自投射其動詞詞組。變化律則是用來把兩者拉近合併，以顯示動結形式所呈現的辭彙特徵。本人則從詞彙學派出發，認為動結結構乃由動詞複合所造成，動結複合詞是動詞並列複合結構。兩人就此兩種理論基礎及實證分析交換看法。

此外並且討論了第三種可能：Ramchand (2005, 2008)所提出的 First Phase Syntax 理論，及其應用於分析漢語動結結構的可行性。Ramchand 將所有事件的語法結構分為三個層次的投射：致使事件 causing subevent、過程事件 process subevent 及結果事件 result subevent。其結構如下圖所示：



討論結果認為該理論應可應用於漢語各種動詞的描述，但是如何從描述進而能解釋語言中合法與不合法的「語意-句法」連結則仍須深入的探究。

此行並且應邀參加了「首屆兩岸四地語言學論壇」，澳門語言學學會主辦，於12月6日至7日為期兩天，會議地點為澳門理工學院。共有超過50篇論文於會議中發表，是今年的語言學盛會，因此吸引兩岸許多學者與會，其中也包括來自台灣的學者與研究生。本人發表的場次為12月6日上午第一場，對全體與會學者發表論文。論文發表後多為與會學者表示看法，對此研究表示肯定。本次會議也獲得當地媒體重視，「澳門日報」隔日以大篇幅報導，本人的報告也於報導中提及，甚感榮幸。

本人為「台灣語言學期刊」*Taiwan Journal of Linguistics* 主編，因此此行之另一收穫是與「澳門語言學學報」*Macao Journal of Linguistics* 主編周薦會面，交換經驗與看法並商討雙方合作的可能。



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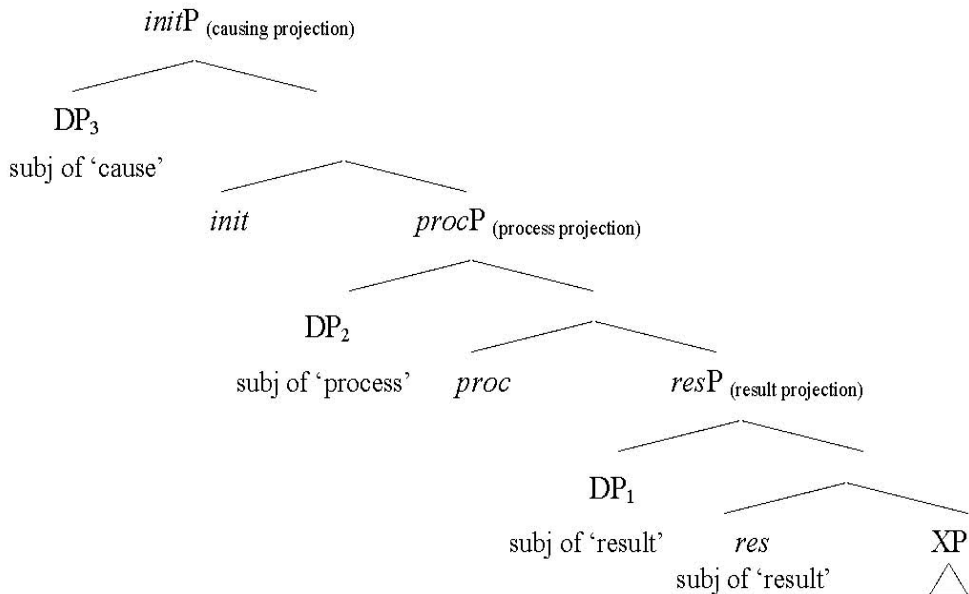
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