The argument realization of Mandarin inverted resultative constructions and its motivation

Meili Liu

Abstract: This paper illustrates the argument realization of Mandarin inverted resultative constructions (henceforth MIRCs) and its motivation within the framework of cognitive construction grammar and draws implications both for principles of cognitive construction grammar, and for the relationship between the agent and the causer. Close examinations of data show that the argument realization of MIRCs results from the interplay of language-internal factors (the interaction of verbal semantics and constructional meaning) and language-external factors (language users' construal). Specifically, the results show that (1) the thematic roles specified by verbs interact and fuse with the argument roles of the construction, which results in different ways of realizing the causer and the causee owing to the motivation of cognition (metonymy, reference point relationships and encyclopaedic knowledge); (2) the argument realization of MIRCs is also constrained by the language users' construal as different construals of an event can result in different argument realizations, (3) language users' construal of situations plays the first and foremost role in the argument realization of constructions, and (4) the agent argument can also be omitted when it is construed to be de-emphasized.

Key words: construction grammar; Mandarin inverted resultative constructions; argument realization; coercion; motivation

1. Introduction

MIRCs refer to resultative constructions in which the thematic role assignment of the causing verb is inverted, i.e., the patient of it is projected as the subject of the construction, while the agent of it is the object¹, as in (1). In MIRCs, there is a causing verb, which expresses action and is usually transitive; and a result verb (sometimes it can also be an adjective), which denotes the result and is usually intransitive. For instance, in (1), the causing verb is “he” (drink), the agent of which is Laowang that is realized as the object of the sentence, while the patient of it—“na-ping jiu” (that bottle of liquor) is realized as the subject. The result verb is “dao” (fall down), which is intransitive.

(1) Nà-píng jiǔ hē-dǎo-le Lǎowáng.

¹ MIRCs form a category and the definition given here specifies prototypical MIRCs, but there are also non-prototypical ones, as in examples (6)-(10) discussed in section 3.1.

29 That-CL² liquor drink-fall-PERF Laowang.

30 'Laowang drank that bottle of liquor and then fell down as a result.'

31 The typical syntactic structure of MIRCs is "subject (NP1) + causing predicate (V1) +
32 result predicate (V2/A) + object (NP2)", which specifies a composite causative event that is
33 composed of a causing event designated by the causing predicate and a result event
34 expressed by the result predicate. The event structure is "causer + means of action + result of
35 action + causee/others".

36 MIRCs have triggered widespread concern and have been extensively studied from the
37 syntactic, semantic (and pragmatic), and cognitive perspectives. Specifically, some studies
38 have devoted analysis to the syntax of MIRCs (Gu, 1992; Zou, 1994; Sybesma, 1999; Xiong
39 and Liu, 2006; Cai and Zhang, 2017), which postulate different underlying syntactic structures
40 for MIRCs with various thematic relations; others focus on the semantics (and pragmatics) of
41 this construction, by examining its causative hierarchy (Li, 1995), the conditions that its
42 morpho-syntax has to meet for a causative reading (Li, 2009), the realization of the complex
43 thematic relations (Li, 2013), the necessity and motivation for the existence of the inverted
44 thematic structure (Xiong and Wei, 2014), and the pragmatic motivations (Shen, 2017). In
45 addition, there are still studies from the cognitive perspective (Zhang, 2009, 2013; Zhang and
46 Ma, 2016), which chiefly discuss the cognitive motivation for its constituents and the composite
47 construction. Among all these previous studies, the accounts of Li (2013), Zhang and Ma
48 (2016) and Zhang (2013) can be said to be the most representative and relevant to the present
49 study.

2 Abbreviations: CL, classifier; PERF, perfective aspect; V, verb; A, adjective; NP, nominal phrase.

Li (2013: 109-110) contends that the argument realization of MIRC's results from the interaction between the individual thematic relation expressed by the verbs and the composite thematic relation designated by the construction that has two arguments, i.e., the causer and the causee, and that the causing verb contributes a role to the causer and the result verb contributes one to the causee. However, the causing verb of MIRC's usually has two thematic roles, but only one is needed by the causer. Then, why is one role chosen over the other? In addition, where does the other one go? These questions are not explicated in Li (2013). In view of this inadequacy, Zhang and Ma (2016) argue that the semantic roles of the causing verb are selectively projected onto the syntactic positions, compacted and highlighted. Nevertheless, how are they selected and compacted? It is still unknown. That is where this study intends to come in.

Moreover, with regard to the motivation for the argument realization of MIRC's, Zhang (2013) expounds it from the perspective of action chains. He assumes that the energy is transferred from the subject (NP1), which is characterized as the energy source, to the object (NP2), which is specified as the energy sink, and the causing predicate encodes the manner of the transfer and the result predicate expresses the result of the energy transfer. However, such an analysis cannot account for the ambiguity of sentences such as (2). Sentence (2) has three readings, i.e., (2a)-(2c). Zhang's analysis can only account for (2a), but cannot account for the other two readings.

(2) Zhāngsān zhuī-lèi-le Lǐsì.

Zhangsan chase-tired-PERF Lisi.

a. 'Zhangsan chased Lisi, and as a result, Lisi got tired.'

b. 'Zhangsan chased Lisi, and as a result, Zhangsan got tired.'

c. 'Lisi chased Zhangsan and Zhangsan got Lisi tired.'

In view of these inadequacies of previous studies, this study illustrates the argument realization of MIRC's and its motivation within the framework of cognitive construction grammar and draws implications both for principles of cognitive construction grammar and for the relation between the agent and the causer. The main theses of the present study are the following: (1) the thematic roles of verbs interact and fuse with the argument roles of the construction according to the Semantic Coherence Principle and the Correspondence Principle (Goldberg, 1995: 50); (2) human cognition is the underlying motivation for the argument assignment; and (3) language users' construal of events plays a primary role in the argument realization of MIRC's, and different construals may lead to different ways of realizing the argument roles of the construction.

The remainder of this article is structured as follows. Section 2 gives an overview of the theoretical framework employed, viz., cognitive construction grammar. Section 3 illustrates the argument realization of MIRC's. Its motivation is expounded in section 4. Section 5 summarizes the findings and discusses the implications of this study.

2. The theoretical framework: construction coercion in cognitive construction grammar

Given the criticism of verb centralism, cognitive construction grammar proposes a solution to solve the conflict between the semantics of the verb and the construction, i.e., construction coercion. Based on the analysis of the interaction of the verb and the construction, construction coercion can provide a better explanation for the argument realization of MIRC's

to make up for the shortcomings of previous studies.

Cognitive construction grammar maintains that the argument structure of constructions is realized via the interaction and integration of the verb and the construction and the integration is constrained by the Semantic Coherence Principle and the Correspondence Principle (Goldberg, 1995: 50). The Semantic Coherence Principle states that fusion can only be achieved when the meaning of verbs is compatible with that of the construction. If a thematic role of verbs can be construed as an instance of an argument of the construction, then they are semantically coherent and can be fused. The Correspondence Principle requires that the profiled thematic roles of verbs should be fused with the profiled argument roles of the construction; that is, the profiled thematic roles enter profiled syntactic slots. When both the Semantic Coherence Principle and the Correspondence Principle are satisfied, the profiled thematic roles of the verbs are fused with the profiled arguments of the construction and thereby the verbal semantics instantiate the constructional meaning.

Nevertheless, there are still situations in which the verbal semantics are incompatible with the meaning of the construction. That is, the thematic structure of the verb cannot completely match the argument structure of the construction. Specifically, the verb does not have all the thematic roles needed by the construction, or its meaning is incompatible, mismatched, or contradictory with the meaning of the construction. This is where construction coercion comes in. Construction coercion (Goldberg, 1995: 159) refers to the process whereby the construction imposes extra roles on the verb or coerces the thematic roles of the latter, making them hidden (being shadowed, cut, merged or null complements) (Goldberg, 1995: 56-58), and thereby changing the usage and meaning of the verb.

3. The argument realization of MIRCs

This section offers a constructionist account for the argument realization of MIRCs as an attempt to provide a finer-grained account, compared with previous studies, by demonstrating where all the thematic roles of the causing verb and the result verb go. While illustrating the fusion of two roles, we examine how they are consistent with the Semantic Coherence Principle and the Correspondence Principle (Goldberg 1995: 50). The result predicate of MIRCs is usually an intransitive verb or an adjective and has only one thematic role, whereas the causing verb can be either transitive or intransitive and the assignment of its thematic roles is relatively complicated. Therefore, in what follows, we will classify MIRCs into two types according to the transitivity of the causing verb, to discuss the argument realization of MIRCs.

3.1 The argument realization of MIRCs of transitive causing verbs

For this category of MIRCs, we first focus on the argument realization of the agent of V1 and the experiencer³ of V2/A. The reason why these two roles are discussed here together is that they are co-referential, viz., they refer to one and the same referent, as in (1). Notwithstanding this, only the experiencer of V2/A is realized in the surface syntactic structure, which is ascribed to the following three reasons. First, V2/A has only one thematic role—the experiencer and hence it has to be expressed in the syntactic structure since the verb and the construction must share at least one role (Goldberg, 1995: 65). Second, resultative constructions profile the result of the action and so the experiencer of the result has to appear in the overt syntax. Third, Talmy (2000: 328) puts forward the “Cause-result Principle”, which

3 The term “experiencer” used in this paper refers to the semantic role that experiences the state or the change of state designated by the verb.

states that for a causal relation between two events, the causing event is prone to be coded as a ground while the result event tends to be expressed as a figure, as in the following sentences.

(3) Lǎowáng hē-dǎo-le.

Laowang drink-fall-PERF.

‘Laowang drank (liquor) and then fell down as a result.’

(4) *Tā sī-pò-le.

Ta tear-broken-PERF.

*‘He has torn.’

(5) Zhǐ sī-pò-le.

Paper tear-broken-PERF.

‘The paper was torn.’

Sentences (3) and (5) are acceptable, but sentence (4) is unacceptable. The reason is that the subjects of both (3) and (5) are the experiencers of the result predicates, i.e., the result event is profiled, whereas the subject of (4) is the agent of the causing predicate and the experiencer of the result event does not show up. That is, the cause is profiled, whereas the result is not mentioned, which does not conform to the aforementioned cognitive principle. Therefore, the experiencer of the result event has to be realized in the syntactic structure, but the agent of the causing predicate can be shaded, as in (5).

The experiencer can be construed as an instance of the causee (Li, 2013: 110), which means they are consistent with the Semantic Coherence Principle (Goldberg, 1995 : 50). Moreover, as the experiencer is the profiled role of the result event and the causee is also the

profiled role of the composite causative event, the two roles mesh with each other and so they fuse and are projected as the object of the sentence in prototypical MIRCs, and thus the agent of V1 is coerced and not expressed.

Xiong (2004: 472) holds that there are two kinds of causes in Mandarin resultative constructions: the participants of the event as a cause and the event itself as a cause. The participants of the event as a cause are actually referring to the event itself via metonymy (Xiong, 2004: 472; Xiong and Wei, 2014: 502; Cai and Zhang, 2017: 308). This is the case in the prototype of MIRCs. To be specific, since the patient of V1 is a participant of the causing event and hence it can serve as the cause of MIRCs by referring to the event metonymically. Moreover, both it and the causer of MIRCs are profiled roles, i.e., they correspond with each other. Consequently, they fuse with each other and are projected as the subject of the construction. For instance, in (1), the subject “Na-ping jiu (that bottle of liquor)” is the patient of the causing verb “he (drink)”, which refers to the event “Laowang drank that bottle of liquor” by virtue of metonymy. Therefore, it is an instance of causing events and thereby it fuses with the causer role of the construction and is projected to the subject position. Such an assignment of the thematic roles of verbs is the prototypical way. There are also atypical ways, as in (6)-(10)⁴.

(6) Wèntí yuèbǐng chī-huài dùzi.

Spoiled mooncake eat-ache stomach.

‘(Someone) ate the spoiled mooncake and his stomach ached as a result.’

(7) Yī-shǒu gē chàng-hóng-le yī-bùdiànyǐng.

One-CL song sing-popular-PERF one-CL film.

⁴ Both example (6) and (10) are newspaper headlines originally appearing in the Chinese newspapers *Xiandai Jinbao* and *Jinghua Shibao*, respectively. Both (7) and (9) are headlines of news on websites. Example (8) is adapted from Xiong and Wei (2014).

‘(Someone) sang a song of the film, which made the film become popular.’

(8) a. Shí-lǐ shānlù zǒu-làn-le sān-shuāng xié.

Ten miles mountain road walk-broken-PERF three pairs of shoes

‘(Someone) walked ten miles of mountain road, and as a result, three pairs of his/her shoes got broken.’

(9) a. Zhè-shǒu gē chàng-hóng-le quánguó.

This-CL song sing-popular-PERF the whole country.

‘Someone had sung this song, and as a result, it got popular throughout the country.’

(10) a. Gōngsī jùhuì zǔzhī pīn-jiǔ hē-sǐ xīn yuángōng.

Company get-together organize compete-wine drink-die new employee.

‘The employees of the company got together and were organized to compete in drinking wine. As a result, a new employee died of drinking.’

In these sentences, not all of the thematic roles of the verbs are in line with the argument roles of MIRCs. In (6)-(9), the patient of V1 is fused with the causer of the construction and realized as the subject, just as in prototypical MIRCs, whereas the agent of V1 is coerced by the construction and is not realized in the overt syntax, which does not seem to be in accord with the Uniformity Theta Assignment Hypothesis (Baker 1988). Actually, such a way of thematic role assignment rests on the following two arguments. First, in the thematic hierarchy adopted by Goldberg (1995: 57), both the causer and the agent are in the highest hierarchy and can be linked to the subject position of sentences. However, since the causer is the thematic role of the composite construction while the agent is only the thematic role of the verb, according to cognitive construction grammar, the construction has priority and can coerce the thematic roles of verbs if the latter cannot mesh with it. Hence, compared with the agent role, the causer is prioritized to be linked to the subject position. Second, there are also scholars who hold that the causer role is higher than any other thematic roles in the thematic hierarchy and so it is prioritized to take the subject position (Shi, 2008: 270; Li, 2013: 117, 119; Zhang, 2014: 82). For instance, in (7), “yì-shǒu gē (a song)” is the patient of the verb “chàng (sing)”, but it refers to the event “sing a song” through metonymy and hence is an instance of the causer. Thereby it shows semantic coherence with the latter and, moreover, both of them are profiled roles, which means they conform to the Correspondence Principle (Goldberg, 1995 :

50). Therefore, “yi-shou ge (a song)” is projected to the subject position while the agent of the verb “chang (sing)” is cut (Goldberg, 1995: 57).

The objects of sentences (6)-(8) are only the experiencers of the result predicates. That is, they are not semantically directly related to the causing predicate (V1) as in the prototype discussed above, but they are related to V1 indirectly. To be specific, in (6), the experiencer of the result predicate—“duzi (the stomach)”, is possessed by the agent of V1, i.e., there exists a possessive relationship between them. In (7), a whole-part relationship is observable between the experiencer of the result predicate and the patient of V1. In (8), the experiencer of the result predicate “san-shuang xie (three pairs of shoes)” is the tool of the causing event. As noted above, the experiencer of the result predicate has to be realized in the surface structure and it can be construed as an instance of the causee of the causative event. Accordingly, it is fused with the causee role of the construction and realized as the object. The specific way of the argument assignment is illustrated in (8b).

Compared with the previous three examples, sentence (9) is more marginal since NP2 “quanguo” is neither the agent of V1 nor the experiencer of V2/A, but is the oblique of V2/A, i.e., the place where the result event takes place. Furthermore, the experiencer of V2/A and the patient of V1 have the same referent and these two roles are identified. The identified role fuses with the causee of the causative event and is realized as the subject. The causer is implicit, which is hinted at by the causing predicate and its relationship with the subject. Here, the construction not only coerces the agent of V1 and cuts it, but it also coerces V2/A by adding the oblique role to it to profile the place where the result event takes place.

The atypicality of sentence (10) does not lie in NP2, but rather in NP1, which is a clause

“gongsi juhui zuzhi pinjiu (the employees of a company get together and are organized to compete in drinking wine)” expressing an event. Thereby, it is the event that serves as the cause (Xiong, 2004: 472). The cause and the result are juxtaposed here in one sentence, which reflects the principle of syntactic iconicity (Haiman, 1985). We know from our encyclopaedic knowledge that the cause of an event is prior to its result. The causing event “gongsi juhui zuzhi pinjiu (the employees of a company get together and are organized to compete in drinking wine)” leads to the happening of the result event “xin yuangong hesi (a new employee dies of drinking too much wine)”. NP2 in this sentence is not only the agent of V1 but also the experiencer of V2/A, i.e., these two roles have identified. The patient of the causing predicate is omitted since it is recoverable from the context, which is what Goldberg (1995: 58) called “the definite null complement”.

In summation, the argument realization of the MIRCs of transitive verbs results from the interaction of the lexical semantics of the verbs and their constructional meaning, in which the construction takes priority. The subject (NP1) is realized either by the patient of V1 or by a clause that expresses the causing event. The object/adverbial, viz., NP2, is restricted to the profiled semantic roles of the result verb, ranging from the experiencer to the oblique, which form a category with members of varying degrees of prototypicality. The various ways of argument realization can be summarized as in Table 1.

Table 1

The argument realization of MIRCs of transitive verbs.

Syntactic constituents Types of MIRCs	Subject (NP1)	Object (NP2)		Adverbial	Illustrating examples
Prototypical MIRCs	the patient of V1	the experiencer of V2/A and is also the agent of V1		---	(1)
Non-prototypical MIRCs	a clause	the experiencer of V2/A and is also the agent of V1		---	(10)
	the patient of V1	the experiencer of V2/A	There exists a possessive relationship between NP2 and the agent of V1.	---	(6)
			There exists a whole-part relationship between NP2 and NP1.	---	(7)
			the tool of the causing event	---	(8)
	the patient of V1 and is also the experiencer of V2/A	---		the place where the result event takes place	(9)

3.2 The argument realization of the MIRCs of intransitive causing verbs

The MIRCs of intransitive causing verbs can also be classified into two types: type I, as in (11); and type II, as in (12).

(11) a. Dà jīhuāng è-sǐ-le hěn-duō rén.

Grievous famine starve-die-PERF many people.

‘The grievous famine starved many people to death.’

(12) Nà-gè yōumò gùshì xiào-wān-le tā-de yāo.

That-CL humour story laugh-bend-PERF her waist.

‘That humorous story caused her waist to bend as a result of her laughing.’

In the first type, NP2 is the experiencer of both V1 and V2/A, i.e., the two roles are identified. As illustrated above, the experiencer can be construed as an instance of the causee and both of them are profiled roles, which means they are semantically coherent and conform to the Principle of Correspondence. Hence, the identified role is fused with the causee of the construction and realized as the object. In the case of example (11), “hen-duo ren (many people)” are the experiencers of both the causing predicate “e (starve)” and the result predicate “si (die)”. Obviously, people are instances of the causee and both the experiencer and the causee are profiled roles. Consequently, the two fuse with each other and are realized as the object. By contrast, NP1 is neither the thematic role of V1 nor that of V2/A, but rather is the cause of V1 (Xiong and Wei, 2014: 504), i.e., the cause of the causing event. Therefore, it can fuse with the causer of the construction and is realized as the subject. This is evident in (11), in which NP1 “da jihuang (a grievous famine)” is the cause of the causing event “hen-duo ren ai’e (many people get starved)”. It is added here by virtue of construction coercion. On the one hand, the MIRC needs two argument roles: the causer and the causee, but on the other hand, both the causing predicate and the result predicate can only provide one semantic role, and moreover, these two roles are identified and fused with the causee of the construction.

This means that the verbs cannot provide all the argument roles needed by the construction. According to cognitive construction grammar (Goldberg, 1995), under such circumstances, the construction will coerce the verb and add thematic roles to it. Thereby, the cause of the causing event is added and projected as the causer of the construction. The reason why the construction can add thematic roles to the verbs is that it takes advantage of the off-stage information of the verbs (Boas, 2003: 171-173; Dong, 2014: 609). The argument structure of the verb “e (starve)” involves not only the experiencer but also the implicit cause argument, which is off-stage information.

In type II, as in (12), the object is only the experiencer of the result predicate and the agent of the causing predicate “xiao (laugh)” is coerced and cut. However, there exists a possessive relationship between the experiencer and the agent. As noted above, the experiencer can be construed as an instance of the causee and so it fuses with the causee role of the construction and is realized as the object. The argument realization of the subject of this type of MIRC is the same as that of type I, and thereby it will not be expounded here again.

In conclusion, the subject of the MIRC of intransitive causing verbs, i.e., NP1, is provided by the composite construction, which is the product of the construction’s coercion of the verbs; it is not directly related to either V1 or V2/A, but is the cause of V1. The argument realization of the object (NP2) is different in the aforementioned two types. In type I, NP2 is not only the experiencer of V1 but also that of V2/A, and the two roles are identified. By contrast, in type II, NP2 is only the experiencer of V2/A, but there exists a possessive relationship between it and the agent of V1. The argument assignments can be summarized as in Table 2.

Table 2

The argument realization of MIRCs of intransitive causing verbs.

Syntactic constituents Types of MIRCs	Subject (NP1)	Object (NP2)
Type I	the cause of V1	the experiencer of both V1 and V2/A
Type II	the cause of V1	the experiencer of V2/A, but there exists a possessive relationship between the agent of V1 and the experiencer of V2/A

4. The motivation for the argument realization of MIRCs

In this section, we will elucidate the underlying cognitive motivations for the argument realization of MIRCs. That is, why is a certain role of the verbs assigned to a certain syntactic slot whereas some other roles are coerced? What is the underlying motivation?

According to construction grammar, the meaning and function of the construction determine which thematic roles of verbs can be expressed in the overt syntax. In the atypical MIRC of transitive causing verbs, as explicated above, the construction coerces the agent of V1 but profiles the experiencer of V2/A, which is determined by the meaning and function of MIRC. As noted in section 1, the MIRC specifies a composite causative event with two profiled roles: causer and causee. The causer is linked to the subject position (NP1) and the causee is linked to the object (NP2). Therefore, NP2 should be the causee of the causative event, i.e., the experiencer of the result event. In the atypical MIRC of transitive verbs, as in (6)-(9) (repeated here as 13 to 16), the referent of the experiencer of the result event is different from that of the agent of V1, i.e., they are not co-referential as in the prototypes. Therefore, the agent of V1 is coerced by the construction and the experiencer of V2/A is profiled.

(13) Wèntí yùebǐng chī-huài dùzi.

363 Spoiled mooncake eat-ache stomach

364 '(Someone) ate the spoiled mooncake and his stomach ached as a result.'

365 (14) Yī-shǒu gē chàng-hóng-le yī-bù diànyǐng.

366 One-CL song sing-popular-PERF one-CL film.

367 '(Someone) sang a song of the film, which made the film become popular.'

368 (15) Shí-lǐ shānlù zǒu-làn-le sān-shuāng xié.

369 Ten miles mountain road walk-broken-PERF three pairs of shoes

370 '(Someone) walked ten miles of mountain road, and as a result, three pairs of his shoes

371 got broken.'

372 (16) Zhè-shǒu gē chàng-hóng-le quánguó.

373 This-CL song sing-popular-PERF the whole country.

374 'Someone had sung this song, and as a result, it got popular throughout the country.'

375 However, from (13) to (16), the prototypicality is reducing. In (13), there exists a

376 possessive relationship between NP2 "duzi (the stomach)" and the agent of V1, that is, the

377 stomach implicitly refers to the agent's stomach, which can be inferred from our encyclopaedic

378 knowledge. This is the reason why the agent of V1 is coerced and shaded, which meets the

379 economy principle in language. In (14), NP2 is not directly related to the agent of V1, but a

380 whole-part relationship stands between them. This relationship can be inferred from cognitive

381 processing. As noted in section 1, the MIRC expresses a composite causative event, which

382 involves the causing event designated by the causing predicate and the result event denoted

383 by the result predicate. In syntax, these two events are juxtaposed. We can infer the relevance

384 of NP2 with NP1 from the cause-result relationship of the two events. Furthermore, Goldberg

(2006:190) also notes that the referents of the nominal phrases that are expressed in the surface structure should be interpreted to be relevant to the information that is being conveyed. Accordingly, in (14), NP2 “yi-bu dianying (a film)” should be interpreted as related to NP1 “yi-shou ge (a song)”. After the confirmation of the correlation of the two, our encyclopaedic knowledge – there are usually theme songs in films – will be activated and so we know that the song must be a song sung in the film. Xiong (2017: 154) also notes that the encyclopaedic knowledge plays a vital role in the interpretation of resultative constructions.

In much the same way, the argument realization of example (15) is motivated. What can be added here is Talmy’s (2000: 486) observation that for a causal relationship to hold between two events, the causing event must share the figure-functioning element of the result event and this shared element must function within the causing event as the ground. Therefore, in (15), the causing event “zou shi-li shanlu (walk ten miles of mountain road)” must share the figure-functioning element – “san-shuang xie (three pairs of shoes)” – of the result event. This line of reasoning, together with our encyclopaedic knowledge, can bring us to the inference that “san-shuang xie (three pairs of shoes)” is the tool of the causing event.

The NP2 in (16) is neither the agent of V1 nor the experiencer of V2/A, but rather is the oblique of V2/A, i.e., the place where the result event takes place. Hence, this MIRC is peripheral. Such an assignment of thematic roles is determined by the construal of language users and pragmatic factors. Let us compare sentence (16) (repeated here as 19) with (17) and (18).

(17) Zhè-shǒu gē cháng-hóng-le tā.

This-CL song sing-popular-PERF her.

407 'She has sung this song, and as a result, she has become popular.'

408 (18) Zhè-shǒu gē chàng-hóng-le nà-bù diànyǐng.

409 This-CL song sing-popular-PERF that-CL film.

410 'Someone has sung a song (in the film), and as a result, the film has become popular.'

411 (19) Zhè-shǒu gē chàng-hóng-le quánguó.

412 This-CL song sing-popular-PERF the whole country.

413 'Someone has sung this song, and as a result, it has got popular throughout the country.'

414 The comparison of the above three examples makes it clear that the difference among them
415 lies in the fact that the post-verbal slot of the three sentences are occupied by different
416 semantic roles of the predicates. This indicates that the semantic roles that can be linked to
417 the post-verbal position of MIRCs are not totally determined by the construction, but enjoy
418 freedom to some extent. This relative freedom results from the construal of the language user
419 and pragmatic factors. In the real world, any event involves multiple factors. When different
420 people or the same person at different time construe the same event, they tend to adopt
421 different perspectives and different specificities, and they select different focuses to profile the
422 different elements of the event. That is, they employ different ways of construal (Langacker,
423 2008 : 55; Wang, 2009: 8; Author et al., 2016: 50). The events designated by (17)-(19) can be
424 regarded as one and the same event, but the three sentences profile different factors of the
425 event owing to different construals. To be specific, (17) and (18) profile the impact of the
426 causing event on the agent of the causing predicate and on the background of the causing
427 event, respectively, and (19) profiles the place where the result event takes place. This
428 suggests that the argument realization of MIRCs is determined not only by language-internal

factors (constructional meaning and verb meaning) but also by language-external factors (construal and pragmatic factors), and language users' construal of situations plays the first and foremost role in it.

In what follows, we will turn to the motivation for the argument realization of MIRC's of intransitive causing verbs. In type II of this category, there usually exists a possessive relationship between the experiencer/agent of the causing predicate and that of the result predicate. For instance, in (12) (repeated here as 20), the agent of the causing predicate "xiao (laugh)" is the possessor of "yao (waist)"—the experiencer of the result predicate.

(20) Nà-gè yōumò gùshì xiào-wān-le tā-de yāo.

That-CL humour story laugh-bend-PERF her waist.

'That humorous story caused her waist to bend as a result of her laughing.'

Possessive relationships reflect the cognitive principle of human beings: people tend to get to know the world through reference point relationships (Langacker, 2008: 505). The experiencer of the result predicate, i.e., the possessed, provides the cognitive reference point for the recognition of the experiencer/agent of the causing predicate (the possessor). This means that the language user can, from the possessed, arrive at the possessor via the reference point relationship. This is the cognitive motivation for the construction to coerce the experiencer/agent of the causing predicate, which conforms to the economy principle in language. Goldberg (1995: 59) also notes that if a thematic role of a verb is recoverable from the context with certainty, this role can be omitted and not expressed in the surface structure.

In conclusion, there are underlying motivations for MIRC's' violation of the conventional principle of thematic role assignment: first, the meaning and function of the construction

determine its syntactic features; and, second, its argument realization is also constrained by cognition and pragmatic factors.

5. Conclusion and implications

To sum up, this study has shown that the argument realization of MIRC is determined not only by the interaction between the construction and the verbs but also by language users' construal, and the latter plays the first and foremost role. The underlying motivations for the interaction and fusion of the construction and the verbs include metonymy, cognitive reference point relationships and encyclopaedic knowledge. Compared with previous accounts, the present account pays much more attention to the expression of the individual thematic roles of the two predicates, and thus offers a finer-grained analysis of the interaction between the thematic roles of the two verbs and the argument roles of the construction, and its motivation.

This constructionist account has at least the following three theoretical implications. First, this study shows that the agent and the causer are distinct roles, though they can both be linked to the subject position in syntax, which echoes Li's (2013) view.

Second, the present study indicates that the underlying motivation for the interaction between verbs and constructions is human cognition. The analysis of atypical MIRC, such as examples (6)-(10), demonstrates that both the construction's imposition of arguments on the verbs and its coercion of the verbs' thematic roles are motivated by cognitive factors. That is, although the construction has priority in the interaction between it and the verbs, its selection of thematic roles linked to syntactic slots has to conform to cognitive factors. Goldberg (2006: 194) notes that "argument omission is conditioned by relevance and recoverability". What can

be added is that argument omission is motivated by cognitive factors.

Finally, the analysis of examples (17)-(19) suggests that language users' construal of situations plays the first and foremost role in the argument realization of constructions, which is the precondition of the interaction between verbs and constructions. Only after a certain construal of situations is set do verbs interact and integrate with the construction to convey the situation from a certain perspective. Cognitive construction grammar (CCxG) does not pay due attention to this. Although Goldberg (2006: 196) puts forward the "Principle of Omission under Low Discourse Prominence" to account for argument omissions, she does not specify the primacy of construal in argument expression. Furthermore, this principle only stipulates the discourse condition for the omission of the patient argument. However, the present study indicates that the agent argument can also be omitted when it is construed to be de-emphasized, as in examples (6)-(9). In this sense, we can say that this study contributes to CCxG's account of argument expression. To some extent, we can say that the primacy of construal in argument expression reflects the tenets of usage-based linguistics (Langacker, 2000; Bybee, 2006, 2010; among others). That is, grammar comes from language use. Thereby, to account for grammar, we need to pay enough attention to pragmatics.

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