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AGENT OBJECT REALIZATION IN CHINESE: AN LCS ACCOUNT

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1. INTRODUCTION

Since Fillmore (1968), it has long been a major challenge for both syntactic (cf. Baker 1988) and semantic theories of argument realization (cf. Bresnan and Kanerva 1989, Bresnan and Moshi 1990, Grimshaw 1990, Jackendoff 1972, Kiparsky 1985, *inter alia*) to explain how the participants of an event (or the arguments of a verb) are expressed in the surface grammatical structures. Notwithstanding many different analyses of argument realization, there has been a consensus about the linking of agent among various theories, as stated in (1)¹.

- (1) Agent is the most prominent argument in thematic hierarchy: therefore it is always realized as a subject.

(1) says that agent is always realized in subject position unless it is demoted by syntactic operations like passivization. This benchmark is shared by many current theories (e.g. Levin and Rappaport 2005).

Although this is a widely-held view, it is also true that agent can be realized in an object position in Chinese resultative verb compounds (hereafter, RVCs). In Li (1995, 1999), this agent-object realization problem in RVCs has been first analyzed: he argues that agent can be realized as an object because thematic hierarchy can be violated if causative hierarchy is satisfied (cf. Grimshaw 1990). However, this paper argues that Li's (1995, 1999) analysis suffers from both empirical and formal problems and claims that agent-object realization in RVCs should be rather accounted for by reference to lexical conceptual structure (LCS).

This paper is organized as follows. In section 2, I provide the data showing that agent is realized in an object position in RVCs and review previous studies. In section 3, I propose an alternative LCS account. In section 4, I discuss some supporting evidence and subsidiary data. Section 5 is a conclusion.

2. BASIC DATA AND PREVIOUS STUDIES

This section first shows that agent can be realized as an object in Chinese resultative verb compounds, and then discusses how they are analyzed in some previous studies.

2.1. Basic Data

The example in (2) illustrates that agent can be realized in the object position in RVCs, contrary to the common belief that agent always links to subject position.

- (2) *Taotao zhui-lei le Youyou.*
 Taotao chase-tired ASP Youyou
 (i) 'Taotao chased Youyou and as a result Youyou got tired.'
 (Taotao=chaser, Youyou=chasee/tiree)
 (ii) 'Taotao chased Youyou and as a result Taotao got tired.'
 (Taotao=chaser/tiree, Youyou=chasee)
 (iii)*'Youyou chased Taotao and as a result Taotao got tired.'
 (Taotao=chasee/tiree, Youyou=chaser)
 (iv) 'Youyou chased Taotao and as a result Youyou got tired.'
 (Taotao=chasee, Youyou=chaser/tiree)
- Li (1995: 265 (English translations are added by the author))

In the so-called resultative verb compounds in (2), the secondary predicate signals some result of the action conveyed by the first verb (cf. Li and Thompson 1981)². In the compound *zhui-lei* (chase-tired) shown in (2), for example, the first predicate *zhui* (chase) is V(erb), which takes agent and theme as its arguments and the second one *lei* (tired) is R(esult), which takes theme as its argument. The entire compound means that someone is tired because of the action of chasing. In the RVC in (2), three interpretations are possible as the English translations show: A first interpretation is that the subject *Taotao* chased the object *Youyou* and as a result *Youyou* became tired (2i). A second interpretation is that the subject *Taotao* chased the object *Youyou* and as a result *Taotao* became tired (2ii). The last interpretation is that the object *Youyou* chased the subject *Taotao* and as a result *Youyou* became tired (2iv). In the last reading, the *Taotao* in the subject position is the theme (chasee) and the *Youyou* in the object position is the agent (chaser). Note that this violates the well-accepted benchmark that the agent must be realized as subject. The linking relation where the agent is realized in an object position in (2iv) (the “agent-object” hereafter) is depicted in (3).

- (3) *Taotao zhui-lei le Youyou.*
 | |
 [theme (chasee)] [agent (chaser)/theme (tiree)]
 ‘Youyou chased Taotao and as a result Youyou got tired.’

Here the object *Youyou* is interpreted as an agent. This means that the agent can be realized in an object position in RVCs.

The subjecthood of a sentence like (3) is verified by reflexive binding. This is precisely because, as Huang et al. (2009) and Tan (1991) argue, only the subject can be the antecedent of the reflexive *ziji* (self), as the example (4) shows.

- (4) *Mary_i gaosu John_j Tom_k xihuan ziji_{i/*j/k}.*
*Mary_i tell John_j Tom_k like self_{i/*j/k}*
 'Mary_i told John_j that Tom_k likes self_{i/*j/k}.'
 Tan (1991: 26)

Example (4) shows that the matrix subject (Mary) and the embedded subject (Tom), but not the object (John), can be the antecedent of the reflexive *ziji* (self). Now consider the following RVC example.

- (5) *Taotao_i zai ziji_i* de yuanzi li zhui-lei le Youyou_j.*
 Taotao at self POSS garden in chase-tired ASP Youyou
 (i) 'Taotao chased Youyou and as a result Youyou got tired at Taotao's garden.'
 (ii) 'Taotao chased Youyou and as a result Taotao got tired at Taotao's garden.'
 (iii) 'Youyou chased Taotao and as a result Youyou got tired at Taotao's garden.'

In (5), it is *Taotao* but not *Youyou* that serves the antecedent of the reflexive pronoun *ziji* (self) in all possible interpretations. From this fact, we can say that *Youyou*, which is interpreted as "agent" under the interpretation (5iii), is not the subject of the sentence. Rather, *Zhangsan*, the theme of the verb *zhui* (chase), serves as the subject.

The objecthood of arguments can be assessed by BA constructions. As Huang et al. (2009) argue, a post-BA NP is considered as an object. In (6), for example, the NP *beizi* (glass) serves as an object because it occurs with BA.

- (6) *Wo ba beizi da-huai le.*
 I BA glass hit-broken ASP
 'I broke the glass.'

The RVCs of (2) can also appear in the BA construction as shown in (7).

- (7) *Taotao ba Youyou zhui-lei le.*
 Taotao BA Youyou chase-tired ASP
 (i) 'Taotao chased Youyou and as a result Youyou got tired.'
 (ii) 'Youyou chased Taotao and as a result Youyou got tired.'

The second reading shown in (7ii) is the same interpretation as the agent-object reading shown in (2iv). Since it is *Youyou* that appears with BA, this means that the agent *Youyou* counts as a full-blown object syntactically.

From the fact shown in (5) and (7), we conclude that the Chinese resultative compound constructions indeed allow the agent-object configuration [theme VR agent/theme]. In the next section, I briefly review previous studies and show their inadequacies.

2.2. Previous Studies

Li (1995, 1999) suggests that the agent-object realization in RVCs is explained at the argument structure level. He proposes a causative structure/hierarchy for cause and affectee roles (following Grimshaw's (1990) treatment upon English psych-verbs), and argues that the standard thematic role hierarchy can be violated³. Concretely, Li (1995, 1999) proposes the following rules of (8)-(10) for argument realization of RVCs (Note that "V_{caus-}" and "X_{res-}" corresponds to V and R in this paper, respectively).

- (8) C-roles (causative roles) are assigned according to the algorithms below.
 - a. the argument in the subject position receives the c-role Cause from a resultative compound if it receives a theta role only from V_{caus} .
 - b. the argument in the object position receives the c-role Affectee from a resultative compound if it receives a theta role at least from X_{res} .
- (9) Theta role assignment may violate the thematic hierarchy when the NP arguments involved also receive c-roles as specified in (8).
- (10) The mapping from the argument structure of a lexical item to syntax contains at least the following steps:
 - Step 1: Randomly assign theta roles to syntactic argument positions.
 - Step 2: Where possible, assign c-roles to these positions according to (8).
 - Step 3: Check the result of theta role assignment according to (9). Li (1999: 453)

With these assumptions, the possible interpretations of (2) are accounted for in terms of (11).

- (11) a. $\langle 1 \quad \langle 2-a \rangle \rangle$
 | |
 Taotao *Youyou*
 | |
 Cause Affectee
- b. $\langle 1-a \quad \langle 2 \rangle \rangle$
 | |
 Taotao *Youyou*
- c. $*\langle 1 \quad \langle 2-a \rangle \rangle$
 X
 Taotao *Youyou*
- d. $\langle 1-a \quad \langle 2 \rangle \rangle$
 X
 Taotao *Youyou*
 | |
 Cause Affectee
- Li (1995: 270)

In (11), the representation $\langle 1, 2 \rangle$ corresponds to $\langle \text{agent, theme} \rangle$ and $\langle a \rangle$ to $\langle \text{theme} \rangle$. In this notation, the argument structure of *zhui* (chase) is depicted as $\langle 1, 2 \rangle$ and that of *lei* (tired) as $\langle a \rangle$, respectively. In addition, the cause and affectee roles in (11a) and (11d) represent the causative roles.

In (11d), the subject *Taotao* receives the c-role “cause” because it receives a theta role only from V (*zhui*) and the object *Youyou* receives the c-role affectee because it receives a theta role at least from R (*lei*). This shows that both arguments in subject and object position in (11d) also receive a c-role; the thematic assignment may violate the thematic hierarchy according to (9), thus, the object *Youyou* can count as an agent. As for (11a), the inverted argument realization does not occur. While c-roles are also assigned to the NP arguments in (11a), the inverted linking form as shown in (11c) violates the rule (8) because both the subject and object arguments in (11c) do not receive c-roles. In (11c), *Taotao* receives a theta role not only from V_{caus} but also from X_{res} , which violates the c-roles assignment condition. Likewise, *Youyou* cannot receive a c-role either since it does not receive a theta role from X_{res} . Therefore, the inverted argument realization pattern of (11c) is not possible. As for (11b), c-roles are not assigned to each argument either by virtue of (8), so that the arguments are realized following the standard thematic hierarchy.

Li's (1995, 1999) analysis, however, faces a problem in accounting for (12). The RVC *dong-si* (freeze-dead) in (12) also consists of a transitive verb and R as *zhui-lei* (chase-tired). Nevertheless, it does not allow an agent-object reading.

- (12) *Zhangsan dong-si le Lisi.*
 Zhangsan freeze-dead ASP Lisi
 (i) 'Zhangsan froze Lisi and as a result Lisi died.
 (ii) *'Zhangsan froze Lisi and as a result Zhangsan died.
 (iii) *'Lisi froze Zhangsan and as a result Zhangsan died.
 (iv) *'Lisi froze Zhangsan and as a result Lisi died.

In (12), the RVC *dong-si* (freeze-dead) does not allow the object *Lisi* to be counted as an agent as the English translation (12iv) shows. In fact, this type of compound has one and only one interpretation (12i). Under Li's (1995, 1999) mechanisms, it is not clear how (12) could be explained. Even if the compound *dong-si* (freeze-dead) has the same argument structures as does *zhui-lei* (chase-tired), i.e. <1, 2>, <a> in Li's (1995, 1999) notation, (12) does not allow an agent-object reading. Moreover, Li's (1995, 1999) accounts also suffer from an empirical problem to account for the compounds consisting of intransitive verbs and R (V_{intr} -R) like *tiao-fan* (jump-bored).

- (13) *Zhangsan tiao-fan le Lisi.*
 Zhangsan jump-bored ASP Lisi
 Intended reading: 'Lisi jumped and got bored by Zhangsan.'

In (13), the object *Lisi* is interpreted as an agent. This means that an agent can also be realized as an object in V_{intr} -R compounds. Since Li's (1995, 1999) analysis is only dedicated to accounting for compounds consisting of transitive verbs and R (V_{tr} -R) like *zhui-lei* (chase-tired), it is again not clear how an example like (13) fits into his account.

To overcome these problems, I will suggest an alternative account, to the effect that compounds of *zhui-lei* (chase-tired) type, *dong-si* (freeze-dead) type, and *tiao-fan* (jump-bored) type are created with their LCSs in a different way, obeying one linking rule.

3. AN LCS ACCOUNT

In this section, I offer an alternative LCS account for agent-object realization in RVCs.

First, as we have shown in (2), *zhui-lei* (chase-tired) type can logically have four interpretations, one of which is not a possible interpretation. These are repeated here as (14).

- (14) *Taotao zhui-lei le Youyou.*
 Taotao chase-tired ASP Youyou
 (i) 'Taotao chased Youyou and as a result Youyou got tired.'
 (ii) 'Taotao chased Youyou and as a result Taotao got tired.'
 (iii) *'Youyou chased Taotao and as a result Taotao got tired.'
 (iv) 'Youyou chased Taotao and as a result Youyou got tired.'

I propose that the possible interpretations of (14=(2)) are accounted for by appealing to LCS's where the meanings of verbs are decomposed. To be concrete, the verb *zhui* (chase) has the LCS: [EVENT x DO ON y], which indicates an action and the R *lei* (tired) [EVENT y BECOME [STATE y BE TIRED]], which indicates a resultant state of being tired. The LCS of the entire RVC *zhui-lei* (chase-tired) must be something like (15), where the LCSs of *zhui* (chase) and *lei* (tired) are combined by CAUSE to form a causation relation between the action denoted by V and the result state denoted by R.

(15) *zhui-lei* (chase-tired):

[EVENT x DO ON y] CAUSE [EVENT y BECOME [STATE y BE TIRED]]

In (15), the variable "x" stands for the agent argument of V, "y" for the theme argument of V, and "y" for the theme argument of R, which indicates the participants of the event described by the LCS.

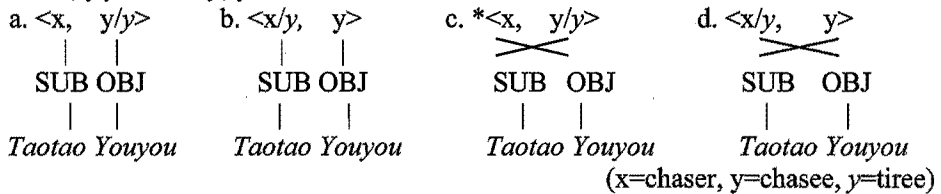
In LCS-based lexical semantics, the variables of LCS are realized as arguments via mapping to syntax through argument structure as shown in (16) (cf. Kageyama 1996)⁴.

(16) *zhui-lei* (chase-tired):

[EVENT x DO ON y] CAUSE [EVENT y BECOME [STATE y BE TIRED]]

→ AS: <x_i, y_j>, <y_i/y>

→ <x, y/y> or <x/y, y>



(16) shows the argument realization pattern of *zhui-lei* (chase-tired). In the argument structure, some arguments have to be identified as indicated by "i" to meet the requirement of theta criterion (Chomsky 1981). If all the arguments link to syntax separately, there must be three corresponding NPs. However, the RVC is a two-place predicate as (14) shows. The second arrow in (16) shows that two patterns of argument structure arise. Logically speaking, four patterns of argument realizations arise as shown from (16a) to (16d), and these correspond to the interpretations shown in (14).

I suggest that only one linking rule and an additional condition, as stated in the bracket of (17), are required to account for the distributions in (16a)-(16d).

(17) The linking rule: An argument α links to OBJ position only if the argument α is construed as a theme (The subject position must be filled).

The linking rule (17) is a necessity condition. In (17), what is excluded is a case where an argument that does not count as a theme links to an object position (the term "theme" here indicates either "y" or "y"). This, actually, represents the unavailable reading of (14iii) which (16c) signifies. In (14iii), the object *Lisi* is merely the agent of *zhui* (chase), hence it violates (17). In contrast, the other patterns designated in (16) obey the

linking rule. (16a) is a bona-fide case because the object NP is a theme. Similar remarks hold for (16b). The realization of agent-object in (16d) is also expected from the linking rule because the object contains *y* argument. In (16d) which (14iv) signifies, the object *Lisi* is the agent of *zhui* (chase) and the theme of *lei* (tired), hence, agent-object can appear according to (17).

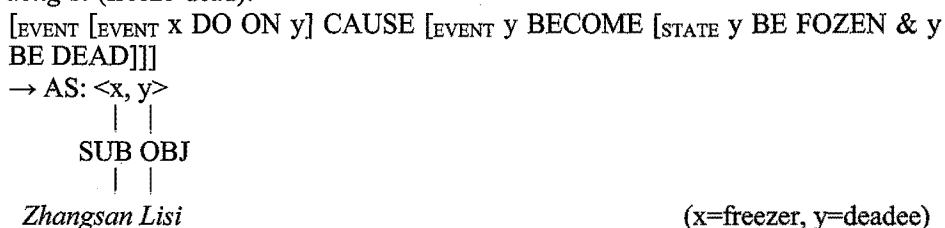
As it is shown, our account has the advantages over the previous studies in that it can simplify the linking rule and also that we do not need to assume an extra causative hierarchy as Li (1995, 1999) does (see also Her 2007) because a causation relation is represented by the standard LCS, containing a CAUSE predicate.

Given the foregoing discussion that the agent of V has to be identified as the theme of R for it to be realized as an object, we can explain why *dong-si* (freeze-dead) type in (12) cannot allow an agent-object realization. Example (12) is repeated here as (18).

- (18) *Zhangsan dong-si le Lisi.*
 Zhangsan freeze-dead ASP Lisi
 'Zhangsan froze Lisi and as a result Lisi died.'

In (18), the theme of R *si* (dead) can only be the theme of the change of state verb *dong* (freeze) as the English translation shows, which reflects the semantic relation of the compound, precisely. It is very easy to imagine that someone would be dead if the person is frozen. This means that the R (be dead) is just modifying the resultant state of V (be frozen) semantically. Given this fact, I propose the argument realization of *dong-si* (freeze-dead) type is governed by the following mechanism.

- (19) *dong-si* (freeze-dead):



In (19), the LCS [STATE *y* BE FROZEN & *y* BE DEAD] represents the semantic relation of the theme of V and the theme of R in (18), and the theme argument of V and R shares the same variable "*y*". Accordingly, a simple argument structure $\langle x, y \rangle$ arises for the compound *dong-si* (freeze-dead). Here the agent of V is not identified as the theme of R. Thus, the subject *Zhangsan* can only be the agent and the object *Lisi* can only be the theme in (18) under the linking rule (17) as expected.

In contrast, compounds consisting of verbs of creation, verbs of change of location, verbs of change of possession, and a few types of psych-verbs allow agent-object realization as (20) shows (see note 5 for more examples).

- (20) a. verbs of creation *wa* (dig) +R

Zhe ge dong wa-lei le Zhangsan.
 this CL hole dig-tired ASP Zhangsan

- ‘Zhangsan dug this hole and as a result he got tired.’
- b. verbs of change of location *tie* (paste) + R
Haibao tie-fan le Zhangsan.
 poster paste-bored ASP Zhangsan
 ‘Zhangsan pasted posters and as a result he got tired.’
- c. verbs of change of possession *mai* (sell) + R
Xigua mai-fan le Zhangsan.
 watermelon sell-bored ASP Zhangsan
 ‘Zhangsan sold watermelons and as a result he got bored.’
- d. psych-verbs *qi* (anger) + R
Zhangsan qi-feng le Lisi.
 Zhangsan anger-crazy ASP Lisi
 Intended reading: ‘Lisi was angered at Zhangsan and as a result Lisi got crazy.’

In all sentences (20a)–(20d), the agent of V is identified as the theme of R. In (20c), for example, *Zhangsan* is the agent of *mai* (sell) and the theme of *fan* (bored). Under the linking rule (17), we expect that the object NPs in (20) can have an agent interpretation. Indeed, that is what we get as the English translations show.

4. SUPPOTING EVIDENCE

4.1. LCS with *tiao-fan* Type

In this section, I discuss how the LCS analysis can account for $V_{\text{intr-R}}$ compounds like *tiao-fan* (jump-bored) and argue that it supports our analysis that agent of V has to be identified as the theme of R to be realized as an object. In *tiao-fan* (jump-bored) type, we can either produce an intransitive sentence as in (21a) or transitive sentences as in (21b) and (21c).

- (21) a. *Zhangsan tiao-fan le.*
 Zhangsan jump-bored ASP
 ‘Zhangsan jumped and as a result he got bored.’
- b. *Zhangsan tiao-fan le Lisi.*
 Zhangsan jump-bored ASP Lisi
 ‘Zhangsan jumped and as a result Lisi got bored.’
- c. *Zhangsan tiao-fan le Lisi.*
 Zhangsan jump-bored ASP Lisi
 ‘Lisi jumped and as a result he got bored by Zhangsan.’

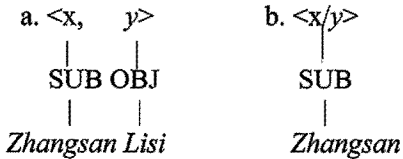
In (21a), the subject *Zhangsan* is both the agent of *tiao* (jump) and the theme of *fan* (bored), yielding an intransitive sentence. In (21b), the agent of *tiao* (jump) and the theme of *fan* (bored) are realized separately. The subject *Zhangsan* is the agent and the object *Lisi* is the theme. (21c) is another transitive sentence in which the object *Lisi* is interpreted as an agent (and a theme), which means that an agent can also be realized as an object in $V_{\text{intr-R}}$ compounds, where the subject *Zhangsan* is an externally-added causer.

The LCS composition of $V_{\text{intr}}\text{-R}$ compounds slightly differs from that of *zhui-lei* (chase-tired) type. I suggest that the argument realization of (21a) and (21b) is governed by the following mechanism.

- (22) [EVENT x DO] CAUSE [EVENT y BECOME [STATE y BE BORED]]

→ AS: $\langle x_{(i)} \rangle, \langle y_{(i)} \rangle$

→ $\langle x, y \rangle$ or $\langle x/y \rangle$



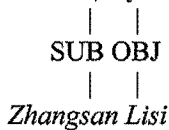
(x =jumper, y =boree)

Unlike *zhui-lei* (chase-tired) type, the identification in the argument structure in (22) is optional. When the identification occurs as designated in (22b), (21a) is formed. This shows that the subject *Zhangsan* in (21a) is identified as both the agent and the theme. Here the argument x/y is realized as the subject but not the object following the linking rule (17), which requires the subject position must be filled. When the identification does not occur, in contrast, the arguments are realized separately as (22a) represents. This shows that the subject *Zhangsan* is the agent of *tiao* (jump) and the object *Lisi* is the theme of *fan* (bored) in (21b).

When the agent is realized as an object as in (21c), I suggest that it is governed by the following mechanism.

- (23) z CAUSE[EVENT [EVENT x_i DO]CAUSE [EVENT y_i BECOME [STATE y_i BE BORED]]]

→ AS: $\langle z, x/y \rangle$



(z =causer, x =jumper, y =boree)

In the LCS of (23), the “ z ” variable represents an externally-added causer, which causes the event described by the compound. The sub-event following the external causer identifies the “jumper” and “boree” as the same person, indicated by the index “ i ”. Accordingly, the argument structure would be $\langle z, x/y \rangle$ as shown in (23i). Under the linking rule (17) again, z links to subject position and x/y to object position. As a result, the subject *Zhangsan* is identified as the causer, and the object *Lisi* the agent of *tiao* (jump) and the theme of *fan* (bored) in (21c).

The status of the external causer argument would be made clearer when an inanimate subject appears. In (24), the subject *Zhe shuang xie* (this shoes) is an inanimate NP, and it is an external causer since it is not either the argument of *pao* (run) or *lei* (tired).

- (24) *Zhe shuang xie pao-lei le Lisi.*
 this CL shoe run-tired ASP Lisi
 ‘Lisi ran and as a result he got tired by this shoes.’

This fact shows that agent-object realization in $V_{\text{intr}}\text{-R}$ compounds is possible if their subject NP represents an external causer and the agent of V is identified as the theme of R as schematically described in the LCS of (23). This is precisely because an agent-object argument does not appear if the agent of V and the theme of R are not identified, as (25) shows.

- (25) a. *Zhangsan ku-shi le shoupa.*
 Zhangsan cry-wet ASP handkerchief
 ‘Zhangsan cried and as a result the handkerchief got wet.’
 b. **Shoupa ku-shi le Zhangsan.*
 handkerchief cry-wet ASP Zhangsan
 Lit. ‘Zhangsan cried and as a result he got wet by the handkerchief.’
 c. **Zhangsan ku-shi le.*
 Zhangsan cry-wet ASP
 Lit. ‘Zhangsan cried and as a result he got wet.’

In (25b), the object *Zhangsan* cannot be interpreted as an agent. This is because, as (25c) illustrates, the agent *Zhangsan* cannot be the theme of *shi* (wet). This fact, therefore, supports our analysis that the agent has also to be the theme of R for it to be realized as an object.

4.2. Ditransitive Verbs

Having discussed $V_{\text{tr}}\text{-R}$ and $V_{\text{intr}}\text{-R}$ compounds, this subsection shows that RVCs consisting of ditransitive verbs and R ($V_{\text{ditr}}\text{-R}$) can be treated in the same manner as *zhui-lei* (chase-tired) type. Consider (26), which has a ditransitive verb *ji* (send) that takes a theme as its direct object and a goal as its indirect object.

- (26) *Zhangsan ji le dajia henianpian.*
 Zhangsan send ASP everybody a New Year’s card
 ‘Zhangsan sent everybody a New Year’s card.’

Interestingly, the ditransitive verb in (26) cannot be turned into a resultative verb compound. The example (27) with the $V_{\text{ditr}}\text{-R}$ compound *ji-ni* (send-bored) is ungrammatical⁶.

- (27) **Zhangsan ji-ni le dajia henianpian.*
 Zhangsan send-bored ASP everybody a New Year’s card
 Lit. ‘Zhangsan sent-bored everybody a New Year’s card.’

In contrast, the sentence is grammatical if the theme argument (direct object) *henianpian* (a New Year’s card), but not the goal argument (indirect object) *dajia* (everybody), is omitted as (28) shows.

- (28) a. *Zhangsan ji-ni le henianpian.*
 Zhangsan send-bored ASP a New Year’s card
 ‘Zhangsan sent New Year’s cards and as a result he got bored.’

- b. **Zhangsan ji-ni le dajia.*
 Zhangsan send-bored ASP everybody
 Lit. 'Zhangsan sent everybody and as a result he got bored'

(28b) is ungrammatical because the linking rule (17) requires an object to have a theme. Accordingly, the agent can be realized as an object only with (28a). This is shown in (29).

- (29) a. *Henianpian ji-ni le Zhangsan.*
 a New Year's card send-bored ASP Zhangsan
 'Zhangsan sent New Year's cards and as a result he got bored by sending it.'
 b. **Dajia ji-ni le Zhangsan.*
 everybody send-bored ASP Zhangsan
 Lit. 'Zhangsan sent everybody and as a result he got bored.'

In (29a), the object *Zhangsan* is interpreted as an agent but this is not possible in (29b). Here the important fact is that only the theme argument of *ji* (send) can be the subject NP in agent-object realization. In this sense, the realization pattern is akin to what is found in V_{tr} -R compounds such as *zhui-lei* (chase-tired), because its subject NP of agent-object realization is the theme argument of *zhui* (chase). Accordingly, the argument structure inventory of the verb of V_{dtr} -R compounds, which is relevant to agent-object realization, is <agent, theme>. This means that V_{dtr} -R compounds show the same distribution as V_{tr} -R compounds in respect to agent-object realization.

To sum up, we have accounted for the agent-object realization problem in Chinese resultative verb compounds based on an LCS approach within current lexical semantics. We have argued that agent can be realized as an object in *zhui-lei* (chase-tired) type and *tiao-fan* (jump-bored) type but not in *dong-si* (freeze-dead) type. Although their LCS compositions differ, they obey the same linking rule. Under Li's (1995, 1999) accounts, it is not clear how *tiao-fan* (jump-tired) and *dong-si* (freeze-dead) type are explained. Our account is preferred to Li's (1995, 1999) account in that it assumes only one linking rule but can nevertheless cover a wider range of data than Li's.

Although Li (1995, 1999) has shown that agent can be assigned as an object in Chinese, my analysis shows that the object NP in RVCs can have an agent interpretation. The important fact that Chinese shows is that agent is not always realized in subject position contrary to the standard belief.

5. CONCLUSION

In this paper, I have shown that agent can be realized in an object position in Chinese resultative verb compounds contrary to the standard claim that it must be always realized in subject position. While Li (1995, 1999) has accounted for this fact by assuming causative hierarchy and many linking rules, I have shown that this problem is rather explained within a lexical semantic structure approach. I have proposed that agent-object realization is governed by one linking rule. The proposed analysis can account for a wider range of agent-object realization cases in RVCs than the previous account.

NOTES

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1. The most blatant counterexample to this consensus might be formed the phenomenon of syntactic ergativity, observed in languages such as Dyirbal, Tagalog and so on. This paper will not examine these ergative languages. I believe it is too early to discover the typological or universal properties of agent-object realization. See Anderson (1976), Dixon (1972, 1979, 1994), Keenan (1976), and Keenan and Comrie (1977) for the discussion on agent-object and theme-subject realization of syntactic ergative languages.

2. This paper will not discuss the debate whether the R of the compounds has the status of verb or adjective. This debate is irrelevant to this paper.

3. Her (2007) revises Li's (1995, 1999) system in the lexical mapping theory of LFG and also argues that the agent-object is possible when causativity is assigned to the argument structure of the compound (for space reason, see Her (2007) for details).

4. Curiously, some RVCs does not allow [agent/patient VR theme] configuration to occur. Take *xi-lei* (wash-tired) for example. We cannot say **Mama xi-lei le yifu* (The mother washed clothes as a result she got tired). Shi (2002) claims that 'if the resultative is the underlying predicate of a subject (agent), the VR construction usually cannot have an object. ... the only linguistic form for this kind of expression is verb-coying,...'. This generalization seems to solve the problem of why **Mama xi-lei le yifu* is impossible in that *lei* (tired) can only be predicated of a subject. Unfortunately, this account does not go through, however. See the following example.

(i) *Dajia chi-ni le shengcai.*

everybody eat-bored ASP leftover food

'Everybody ate leftover food and as a result they got sick of it.'

Ren (2005: 61)

In the above example, *ni* (bored) is only predicated of the subject and yet it has the [agent/patient VR theme] configuration. Therefore, we can say that *xi-lei* types can have [agent/patient VR theme] configuration if the second predicate implies a resultative state that derives from repeated actions of the V. One can only be bored if he has experienced the same action many times. The next sentences exemplify this point.

(ii) a. **Mama xi-lei le yifu.*

mother wash-tired ASP clothes

'The mother washed the clothes and as a result she got tired.'

b. ?*Mama xi-ni le yifu le.*

mother wash-bored ASP clothes ASP

'The mother has washed clothes and as a result she is sick of doing it.'

c. *Mama xi-gou le yifu le.*

mother wash-fed up ASP clothes ASP

'The mother had been washing clothes and as a result she got fed up with it.'

The contrast between (iia) and (iib,c) shows that the sentences improve if we exchange the second predicate of "*xi-lei*" to "*ni*" (bored) or *gou* (fed up). Thus, the ill-formedness of [agent/patient VR theme] configuration is rather an idiosyncratic matter on the second predicate of the compound.

5. Here are other examples for each variety shown from (i) to (vi).

(i) Verbs of action + R compounds

zhui-lei (chase-tired), *chi-bao* (eat-full), *he-bao* (drink-full), *chi-ni* (eat-bored), *he-ni* (drink-bored), *chi-pang* (eat-fat), *xi-lei* (wash-tired), *he-zui* (drink-drunk), *jiang-lei* (lecture-tired), *xia-shu* (play-lost), etc.

(ii) Verbs of creation + R compounds

wa-lei (dig-tired), *ke-lei* (carve-tired), *xie-lei* (write-tired), *hua-ni* (draw-bored), *zuo-ni* (make-bored), etc.

(iii) Verbs of change of location + R compounds

tie-fan (paste-bored), *ban-lei* (carry-tired), *zhuang-lei* (load-tired), *bai-fan* (place-bored), etc.

(iv) Verbs of change of possession + R compounds

mai-fan (sell-bored), *mai-fan* (buy-bored), *jie-fan* (lend-bored), etc.

(v) Psych-verbs + R compounds

ma-feng (scold-crazy), *hen-si* (hate-dead), *qi-si* (angry at-dead), *xia-hun* (scare-dizzy), etc.

(vi) V_{intr} -R compounds

tiao-fan (jump-bored), *pao-lei* (run-tired), *zou-lei* (walk-tired), *pao-hun* (run-dizzy), *zuo-lei* (sit-tired), *ku-hong* (cry-red), etc.

6. To ameliorate the grammaticality, one should use verb-copying constructions.

- (i) *Zhangsan ji dajia henianpian ji-ni le.*
 Zhangsan send everybody a New Year's card send-bored ASP
 'Zhangsan sent everybody a New Year's card and as a result he got bored.'

Here, the compound *ji-ni* (send-bored) serves as the post-verb adjunct of the construction.

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