

A Study of the Acquisition of Chinese Resultative Verb Complements and Corresponding Teaching Strategies*

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Abstract

The structure of Chinese resultative verb complements¹ is composed of two verbs in which the first verb indicates the causal activity and the second one indicates the result of the action, and is formed productively and used extensively in Chinese. Since the semantic relations of the verbs in the structure with the subject and object in sentences are various and complex, it is always difficult for students who study Chinese as a second language to acquire this structure. This study discusses the types of Chinese RVC that appear in the first-year Chinese textbook *Integrated Chinese* and the linguistic features of each type of RVC, and has found that there are varying degrees of difficulty in producing Chinese sentences containing different types of RVC through surveys administered to both students who have finished their first-year of Chinese study and some native Chinese speakers. A form of RVC containing less marked linguistic features is relatively easy to learn, and the percentage of producing it is higher; while a form of RVC containing more marked linguistic features is difficult, and the percentage of producing it is lower. By knowing the different features of each type of RVC, various and appropriate teaching strategies can be designed for the different patterns of Chinese RVC.

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¹ Resultative verb complement is shortened as RVC in this paper.

Key Words: resultative verb complement, markedness, teaching strategy,
language acquisition

1. Purpose of this study

The structure of Chinese resultative verb complements (RVC) is composed of two verbs (V-V) in which the first verb indicates the causal activity, written as V_{caus} , and the second one indicates the result, written as V_{res} . An example can be found in the following sentence:

- (1) 張三打破了玻璃。
Zhangsan da-po-le boli.
Zhangsan hit-break-ASP² glass
'Zhangsan broke the glass.'

In the above sentence, the first verb *da* 打 (hit) indicates a cause and the second verb *po* 破 (break) indicates a result.

The structure of RVC is formed productively and used extensively in Chinese. Taking the above sentence as an example, if keeping the first verb *da* 打 (hit) as the causal activity and different verbs as the result, various combinations with different meanings can be expressed. For examples, *da-wan* (*dianhua*) 打完 (電話) (finished the call); *da-cuo* (*dianhua*) 打錯 (電話) (dialed wrong numbers); *da-huai* (*dianhua*) 打壞 (電話) (broke the phone). If keeping the second verb *po* (破 broken) as the result with different verbs as the causal activity, various combinations with different meanings such as *yong-po* 用破 (broken by use); *si-po* 撕破 (tore up); *chuan-po* 穿破 (become impaired/torn up by wearing) can be expressed. The semantic meanings of the verbs in the structure of RVC with the subject and object in sentences are various and complex; in addition, there are often few corresponding structures in other languages such as English, so it is often difficult for

² ASP stands for the aspect marker *le* which indicates the completion of the action in Chinese in this paper.

students who study Chinese as a second language (L2) to acquire this structure. It is a quite challenging issue to find out how L2 learners acquire Chinese RVC and whether there is a hierarchy of acquiring the different forms of RVC. If the difficulty of acquisition of Chinese RVC can be pinpointed, it will benefit those designing appropriate textbooks and pedagogical instruction. However, it is too ambitious to establish a general hierarchy of Chinese RVC acquisition just by an empirical study since there are various types of RVC in Chinese; moreover, the semantic meanings between the two verbs in the structure of an RVC and the semantic relations of the two verbs with their co-occurring nouns are complex and intricate. Thus this study is merely an attempt to inquire whether there is a hierarchy of acquiring Chinese RVC and what the most appropriate teaching strategies are for L2 learners through surveys on Chinese RVC and theoretical analysis. In other words, the purpose of this article is not to set a common principle but rather provide a base for further discussion about the acquisition of Chinese RVC. To reach this goal, I will describe my motivation for doing this research and the types of semantic relations and its grammatical functions of the RVC in section 2; then I will report the procedure and the result of the surveys in section 3; I will discuss a hypothesis about the hierarchy of acquiring Chinese RVC through the notion of markedness in section 4 and teaching strategies for Chinese RVC in section 5. Section 6 is the conclusion.

2. Motivation of the study and the types of Chinese RVC

The thought of conducting this research was triggered by a question from a first-year Chinese student about seven years ago stemming from a sentence in the textbook *Integrated Chinese* (IC, Level I):

(2) 你是吃壞肚子了。(IC, L16)

Ni shi chi-huai duzi le.

you be eat-bad stomach LE³

‘You ate spoiled food.’

³ LE is a sentence-final morpheme indicating a new situation or a state change.

After studying the lesson, a student asked me: “why did the person eat the bad stomach?” When the student left, two questions came to mind: why did the student misinterpret the sentence? Is this sentence typically very difficult for students? With the questions in my mind, I started to look for sentences with the structure of RVC in IC (Level one) and found that the textbook covers all basic types of Chinese RVC based on the semantic relationships of the V_{caus} and V_{res} with the subject and objects as below.

Type A: The semantic orientation of V_{res} refers to the subject:

- (3) A1. 張三聽懂了(老師的話)。⁴ (IC, L12)⁵
Zhangsan ting-dong-le (laoshi de hua).
Zhangsan listen-understand-ASP (teacher PART word)
‘Zhangsan understood what the teacher said (by listening).’
- (4) A2. 樹上開滿了花。(IC, L22)
Shu-shang kai-mai-le hua.
tree-top bloom-full-ASP flowe.
‘The trees are full of blossoms.’

In the above sentences, the V_{res} *dong* 懂 (understand) indicates the subject Zhangsan’s activity in (3) and the V_{res} *man* 滿 (full) describes the subject *shushang* 樹上 (tree-top) in (4).

Type B: The semantic orientation of V_{res} refers to the V_{caus} to describe, explain and make comment to the V_{caus} :

- (5) 張三做完了功課。(IC, L12)
Zhangsan zuo-wan-le gongke.

⁴ There are different opinions about whether the form of *ting-dong* 聽懂 (understand by listening) is an RVC or a coordinate construction. Since the textbook explains it as an RVC and also some grammar books list it as an RVC (see Liu *et al.*, 2001: 537), I treat it as an RVC in this paper.

⁵ The sentences whose subject is Zhangsan in (3), (5) and (6) are not the original sentences in IC but the types of RVC appear in the lessons in IC. There are 15 sentences containing RVC in lesson texts and 76 cases of RVC in the sections of Grammar (notes) and Pattern Drills from Lesson 12 to Lesson 23, which is the last lesson of IC (level 1).

Zhangsan do-finish-ASP homework
'Zhangsan finished the homework.'

In (5) above, the V_{res} *wan* 完 (finish) relates neither the subject Zhangsan nor the object *gongke* 功課 (homework), rather indicates the completion of the action *zuo* 做 (do).⁶

Type C: The semantic orientation of V_{res} refers to the object:

- (6) 張三寫錯了字。 (IC, L12)
Zhangsan xie-cuo-le zi.
Zhangsan write-wrong-ASP character
'Zhangsan wrote the character wrong.'
- (7) 你是吃壞肚子了。 (IC, L16)
Ni shi chi-huai duzi le.
you be eat-bad stomach LE
'You ate spoiled food.'

The V_{res} *cuo* 錯 (wrong) indicates that the object *zi* 字 (character) wrong in (6) while the V_{res} *huai* 壞 (bad) in (7) actually has a causative meaning which causes its following object *duzi* 肚子 (stomach) bad.

I must admit here that the division of the above types of Chinese RVC is very generous and vague. The semantic relations of V_{caus} and V_{res} and its

⁶ The semantic orientation of *wan* 完 as a V_{res} can also refer to the object when it means "run out" or "use up" as in the following sentence:

(5') *Zhangsan hua-wan le qian* 張三花完了錢 (Zhangsan used up his money).

In the above sentence, the semantic meaning of V_{res} *wan* 完 (use up) refers to the object *qian* 錢 (money); that is, the money is used up. The two sentences of (5) and (5') look similar, but the semantic orientation of *wan* 完 refers to the V_{caus} as the meaning of "finish" in the sentence (5) and to the object as the meaning of "use up" in the sentence (5'), the latter belongs to the type C. The following test further supports this point. If *guang* 光, a synonymic word of *wan* 完 in the meaning of "use up" replaces *wan* 完 in the sentence (5'), the meaning of the sentence has no change, e.g., *Zhangsan hua-guang le qian* 張三花光了錢 (Zhangsan used up his money); but if *guang* 光 replaces *wan* 完 in (5), the sentence becomes unacceptable. This test further indicates that the meanings and semantic orientations of *wan* 完 in (5) and in (5') are different.

mapping to the grammatical functions of subject and object in Chinese are more complex and subtle than that of the above types.⁷ Nevertheless, this division of the above types of Chinese RVC is sufficient for the purpose of investigating the difficulty of acquiring Chinese RVC for students who have learned the above RVC in their first-year Chinese course. In other words, the above division can help to determine whether students are comfortable using certain types of RVC or face difficulty using other types of RVC when they speak Chinese.

3. The procedure and result of the surveys

To check whether students who have learned the Chinese RVC can produce the sentences with the structure of RVC, I have designed and conducted the surveys as follows:

3.1. The methods of the survey: two ways of testing students.

3.1.1. **Picture description.**

I selected a total of 12 groups of pictures which can be described using the types of RVC above. Students were required to describe each group of pictures in Chinese by using as many sentences as they knew. I wrote down and recorded the students' responses. After the students finished their description on one group of pictures, I turned to another slide of the pictures. Some slides may contain only one picture. For example, one slide displays a tree with many flowers on it. Students may describe the picture by using sentences like *shu hen gao* 樹很高 (the tree is tall), *shushang you hen duo hua* 樹上有很多花 (there are many flowers on the tree), and/or the target sentence *shushang kai-man le hua* 樹上開滿了花 (the trees are full of blossoms). Most slides contain two pictures in series where I intentionally show the first picture indicating the causal activity and the second one indicating the result. For instance, there are two pictures on one slide showing that one person (Wang Peng, the main character in IC) is doing homework in picture 1 and

⁷ Shi and Li have divided RVC to the three types discussed in this paper (2001: 58), and Liu *et al* discuss four types, of which the first three are the same with the types in this paper (2001: 536-539), though their examples of RVC are different.

playing ball in picture 2; then there is a question on the top of the slide such as “has Wang Peng finished his homework?” The target sentence should be “*ta zuo-wan-le gongke*” 他做完了功課 (he finished his homework) or “*ta mei zuo-wan gongke*” 他沒做完功課 (he has not finished his homework) which contains an RVC structure, i.e., the first verb *zuo* 做 (do) is the causal activity and the second verb *wan* 完 (finish) is the result. If a student did not say the target sentence when he/she had finished his/her description, it by no means proved that the student did not know or had not acquired the corresponding RVC structure (even though this possibility is very high); rather, it indicates that the student is not comfortable or does not know how to use the sentence with RVC to describe the pictures. In other words, the possibility of students’ acquiring this RVC is low.

3.1.2. Translation from English into Chinese.

Students are required to translate eight English sentences which are designed to be translated into the corresponding Chinese sentences with each of the types of structures of RVC mentioned above. If the translated Chinese sentences contain none of the corresponding types of RVC, it indicates that the types of RVC are difficult to acquire and the possibility of the students’ acquiring the types of Chinese RVC is quite low.

3.2. The subjects of the surveys:

The survey was administered to three groups.

Group 1 (target group) is composed of 26 students tested with the picture description activity and 34 students tested with the translation activity from the 2nd-year, 3rd-year and 4th-year Chinese Flagship Program at the University of Mississippi (UM). They had all finished learning IC (level one). They participated in both surveys of picture description and translation conducted in October-November, 2008.

Group 2 (control group 1) is composed of a total of 50 students from the 2nd-year and 3rd-year Chinese at Columbia University (CU), who only participated in the translation exercise. They used different textbook other than IC. The purpose of testing this group of students is to see what kinds of

types of the RVC can be translated into Chinese from English for the students who have not used IC. It is assumed that they have learned all of the types of RVC because it is supposed that all types of the structure of RVC mentioned above should be covered in first-year Chinese. This survey was conducted in the spring semester of 2009.

Group 3 (control group 2) is composed of 12 Chinese graduate students (CG) whose majors are teaching Chinese as a second language and have some teaching experience, but none of whom has used IC. They only participated in the survey of picture description, which was conducted in July, 2009 in Beijing. The purpose of surveying this group is to see whether native Chinese speakers comfortably use the sentence with the structure of RVC when they describe the pictures.⁸

Below are the results of surveys of different groups.

⁸ Thanks to a reviewer for pointing out that if a native speaker does not speak a sentence containing a certain RVC, it by no means indicates that the RVC is more difficult; rather, the native speaker has more repertoires. I agree. However, if the most native speakers don't use a certain RVC in the description, the form is most likely a marked structure since a marked form is used less frequently.

Table 1: The Result of Picture Description⁹

Type of RVC	Example	C211 (9)	C311 (8)	C411 (9)	CG (12)
The semantic meaning of V _{res} relates to the subject	他聽懂了老師的話 Ta ting-dong-le laoshi de hua. 'He understood what the teacher said by listening.'	8	7	7	2
	樹上開滿了花 Shushang kai-man-le hua. 'The trees are full of blossoms.'	2	1	1	3
The semantic meaning of V _{res} relates to the V _{caus}	他做完了功課 Ta zuo-wan-le gongke. 'He finished writing his homework.'	7	8	8	12
	他打完了電話 Ta da-wan-le dianhua. 'He finished the call.'	5	7	5	12
The semantic meaning of V _{res} relates to the object	他找錯了錢 Ta zhao-cuo-le qian. 'He gave the wrong change.'	2	2	6	5
	你吃壞肚子了 Ta chi-huai duzi le. 'You ate spoiled food.'	0	1	0	0

According to the results of the survey of the picture descriptions, most students in group 1 can produce the sentences with RVC *zuo-wan* 做完 (finish doing) and *ting-dong* 聽懂 (understand by listening),¹⁰ but only one student can produce *chi-huai* 吃壞 (eat (something) and cause the stomach discomfort). The order of producing each pattern of RVC is found below (the first number after word indicates the total numbers of students in group 1 (totally 26) and the second number indicates the control group 2 (total of 12 CG)

⁹ C211/C2 in the forms stands for the 2nd-year Chinese, C311/C3 is the 3rd-year and C411 is the 4th-year Chinese. The numbers in the parentheses in the forms mean the numbers of participants.

¹⁰ About half of the students used the potential complement structure *ting-de-dong* 聽得懂 (can understand by listening) instead of the VRC *ting-dong* 聽懂 (understand by listening) in the picture description and translation. Since the structure *ting-de-dong* 聽得懂 (can understand by listening) also expresses a meaning of cause and result, the students may be confused with these two structures. Based on this consideration, I assume that the students who have used the structure *ting-de-dong* 聽得懂 (can understand by listening) in the surveys also know the RVC *ting-dong* 聽懂 (understand by listening).

who can describe the pictures with sentences containing the corresponding structure of Chinese RVC):

zuo-wan 做完 (finish doing) (23; 12) > *ting-tong* 聽懂 (understand by listening) (22; 2) > *da-wan* 打完 (finish the call) (17; 12) > *zhao-cuo* 找錯 (give-wrong) (10; 5) > *kai-man* 開滿 (bloom-full) (4; 3) > *chi-huai* 吃壞 (eat-bad) (1; 0)

The result of the control group is in accordance with the above order except for the form *ting-dong* 聽懂 (understand by listening) (there are only 2 CG using the word in the survey but 10 of them using another word *mingbai* 明白 (understand). I will discuss it in the next section).

The result of translation (Table 2 next page) also supports the above order.

The result of the translation exercise is comparable to that of the picture description. The order can be found below (the first number after word indicates the total numbers of students in group 1 (totally 34) and the second number indicates the control group 1 (totally 50) who can translate English into corresponding sentences with the structure of Chinese RVC):

zuo-wan 做完 (finish doing) (31; 46) > *ting-tong* 聽懂 (understand by listening) (32; 40) > *xie-cuo* 寫錯 (write-wrong) (18; 36) > *kai-man* 開滿 (bloom-full) (15; 4) > *chi-huai* 吃壞 (eat-bad) (6; 0).

The only exceptional case is *ting-dong* 聽懂 (understand by listening) which is 32 to *zuo-wan* 做完 (finish-doing) which is 31 in group 1 (these cases will be discussed further in section 5).

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Table 2: The Result of Translation

Type of RVC	Example	C211 (15)	C311 (10)	C411 (9)	CU C2 (18)	CU C3 (32)
The semantic meaning of V _{res} relates to the subject	我聽懂了老師的話 Wo ting-dong-le laoshi de hua. 'I understood what the teacher said by listening.'	15	8	9	15	25
	樹上開滿了花 Shushang kai-man-le hua. The trees are full of blossoms.	4	6	5	0	4
The semantic meaning of V _{res} relates to the V _{caus}	他做完了功課 Ta zuo-wan-le gongke. 'He has finished writing his homework.'	14	9	8	14	32
The semantic meaning of V _{res} relates to the object	你寫錯了一個字 Ni xie-cuo-le yi ge zi. 'You wrote one character wrong.'	9	5	4	8	28
	我吃壞肚子了 Wo chi-huai duzi le. '[I ate spoiled food and] my stomach is uncomfortable.' ¹¹	5	1	0	0	0

Combining the results of both the picture description and translation, the average percentages of participants producing sentences with the structure of RVC in all three groups are shown in Table 3.

¹¹ This English sentence is in the survey of translation and different from the example in (2), (7) and the picture description which is based on the textbook of IC, since the survey of translation is designed also for some participants who have not used the textbook.

Table 3: The Average Percentage of Producing RVC among Three Groups

Example		Group 1 (UM)	Group 2 (CU)	Group 3 (CG)
我聽懂了老師的話 Wo ting-dong-le laoshi de hua. 'I understood what the teacher said by listening.'	picture	84.6		16.66
	translation	94.1	80	
他做完了功課 Ta zuo-wan-le gongke. 'He finished writing his homework.'	picture	88.46		100
	translation	91.17	92	
他打完了電話 Ta da-wan-le dianhua. ¹² 'He finished his call.'	picture	65.38		100
	translation			
他找錯了錢 Ta zhao-cuo-le qian. 'He gave the wrong change.'	picture	38.46		41.66
	translation			
你寫錯了一個字 Ni xie-cuo-le yi ge zi. 'You wrote one character wrong.'	translation	52.94	72	
	picture			
樹上開滿了花 Shushang kai-man-le hua. 'The trees are full of blossoms.'	picture	15.38		25
	translation	44.1	8	
你吃壞肚子了 Ni chi-huai duzi le. 'You ate spoiled food.'	picture	3.84		0
	translation	17.64	0	

According to the above statistics of the results of the picture description and translation exercises, the order from the easiest to most difficult for producing Chinese RVC in group 1 is as below (the former number indicates the percentage of picture description and the latter indicates the percentage of translation except special note):

¹² Since the structures of RVC compounds *da-wan* 打完 (finish calling) is the same as *zuo-wan* 做完 (finish doing); and *zhao-cuo* 找錯 (give-wrong) is the same as *xie-cuo* 寫錯 (write-wrong), the three compounds *da-wan*, *zhao-cuo* and *xie-xuo* have only been surveyed either in the picture description or translation.

(8) The order of producing (speaking out/translating) Chinese RVC:

聽懂(84.6; 94.1)	做完 (88.46; 91.17) / 打完 (65.38 on the description) >
<i>ting-dong</i>	<i>zuo-wan</i> <i>da-wan</i>
listen-understand	do-finish hit-finish

找錯 (38.46 on the description) / 寫錯 (52.94 on the translation) >

<i>zhao-cuo</i>	<i>xie-cuo</i>
give-wrong	write-wrong

開滿 (15.38; 44.1) > 吃壞 (3.84; 17.64)

<i>kai-man</i>	<i>chi-huai</i>
bloom-full	eat-bad

Taking group 1 as an example, the average percentage of producing *ting-dong* 聽懂 (understand by listening) and *zuo-wan* 做完 (finish-doing) are about the same as the highest percentage (but *da-wan dianhua* 打完電話 (finish the call) is little bit lower with 65.38% on the picture description); the average percentage of producing *zhao-cuo* 找錯 (give-wrong) and *xie-cuo* 寫錯 (write wrong) are in the middle range; the percentage of *kai-man* 開滿 (bloom-full) is quite low and *chi-huai* 吃壞 (eat-bad) is the lowest percentage with 3.84% on the picture description and 17.64% on the translation. The results of two control groups support this order except that of *ting-dong* 聽懂 (understand by listening) and *zuo-wan* 做完 (finish-doing) in which the latter is higher than the former (16.66:100 in the picture description and 80:92 in the translation; these exceptions will be discussed later).

Can we say that *ting-dong* 聽懂 (understand by listening) and *zuo-wan* 做完 (finish-doing)/*da-wan* 打完 (finish the call) are the easiest form, *zhao-cuo* 找錯 (give-wrong)/*xie-cuo* 寫錯 (write-wrong) is in the middle while *kai-man* 開滿 (bloom-full) is difficult and *chi-huai* 吃壞 (eat-bad) is the most difficult form? This seems to be the case based on the above surveys, but it is not good enough to answer the above question. More evidence and other studies are needed to support the results of the surveys. It is the mission of the next section.

4. Discussion of the hierarchy of the difficulty of acquiring Chinese RVC

To discuss whether there are different degrees of difficulty in Chinese RVC, and whether there is a hierarchy of acquiring Chinese RVC like the order mentioned in the previous section for L2 learners, it is essential to know whether the linguistic features of each type of Chinese RVC are different; in other words, whether the linguistic features in one type of Chinese RVC are more difficult than that of another type of RVC for L2 learners. Once the difficulty of the linguistic features of each type of RVC is identified, a rational hierarchy of the acquisition of Chinese RVC can be established. Based on this consideration, I will attempt to explain the linguistic features and the order of difficulty of Chinese RVC in (8) in the previous section by referring to the subject selection hierarchy pertaining to the notion of markedness proposed by Van Valin and Lapolla and the principle of economy.

According to the semantic role of the argument of the verb in sentence, linguists Van Valin and Lapolla have demonstrated that there is a subject selection hierarchy which corresponds to the degree of markedness. Their concept can be summarized in the following chart.

(9) Subject selection hierarchy/Privileged syntactic argument selection hierarchy

ACTOR

UNDERGOER

-----→

←-----

Arg. of DO > 1st arg. of **do'** > 1st arg. of **pred'** (x, y) > 2nd arg. of **pred'** (x, y) > arg. of state **pred'** (x)

OBLIGATORILY ANIMATE > VERY LIKELY ANIMATE > NEED NOT BE ANIMATE

[---→ indicates increasing markedness of realization of argument as macrorole]

(Van Valin and Lapolla 1997:146, 175, 305)

This hierarchy is to say that if the subject of a sentence is an agent argument and the object is a patient argument, the sentence is unmarked; otherwise, it is marked. From the perspective of markedness, “AGENT-like arguments are normally animate or human” (Van Valin and Lapolla, 1997:305), and it “is the default choice for subject” (1997:175), thus AGENT-like argument as the subject is an unmarked structure. If a PATIENT-like argument becomes the subject of a sentence, the sentence has a marked structure. The hierarchy above can be illustrated in the following three sentences,

- (10) a. Fred broke the window (with a rock).
 b. A rock broke the window.
 c. The window broke.
 (see Van Valin and Lapolla, 1997: 87, 105, 127).

According to the subject selection hierarchy in (9), sentence (10a) is an unmarked form since the first argument *Fred* of the verb *break* is the subject syntactically and is an agent, a doer of action *break* semantically; while the sentence (10b) is a marked form because the subject *rock* is not an AGENT-like argument. The sentence (10c) is the most marked form among the three sentences because the subject *window* is the PATIENT-like argument.

Since Chinese RVC contains two verbs, the semantic and syntactic relations of the two verbs with their arguments play an important role in determining the markedness of the patterns of RVC. Although Van Valin and Lapolla have not discussed the relationship between the first argument with the second verb, if there are multiple verbs in a sentence, it can be inferred from the account that the first argument should be the subject syntactically and agent semantically in an unmarked sentence. Given that there are two verbs in an RVC, the markedness of the structure of Chinese RVC can be tentatively stated as below:

(11) The markedness of Chinese RVC

If the first argument of both V_{caus} and V_{res} in the RVC is the subject syntactically and also an agent semantically, the form is unmarked; otherwise, the form is marked.

Following this proposition and referring to the hierarchy in (9) above, we can examine which types of Chinese RVC are unmarked or marked by reviewing the order of Chinese RVC in (8).

The semantic roles of the arguments and syntactic relations of two verbs with their arguments in the discussed Chinese RVC are written below. The deep structure of each sentence, which indicates the semantic and syntactic relations of verbs, especially the V_{res} with their arguments, is at the right of the arrow.

Type A1: Both semantic orientations of V_{caus} and V_{res} refer to the subject/agent

- (12) A1. 張三聽懂了 → 張三聽, 張三懂
Zhangsan ting-dong-le → Zhangsan ting, Zhangsan dong
Zhangsan listen-understand-ASP → Zhangsan listens, Zhangsan understands
‘Zhangsan understood by listening.’

Type B: The semantic orientation of V_{res} refers to the V_{caus} whose meaning refers to the subject/agent:

- (13) 張三做完了功課 → 張三做, 做功課完
Zhangsan zuo-wan-le gongke. → Zhangsan zuo, zuogongke wan
Zhangsan do-finish-ASP homework → Zhangsan does, the event of doing homework finishes
‘Zhangsan finished his homework.’

Type C: The semantic orientation of V_{res} refers to the object but that of V_{caus} refers to the subject/agent:

- (14) 張三寫錯了字 → 張三寫字, 字錯
Zhangsan xie-cuo-le zi. → Zhangsan xie zi, zi cuo
Zhangsan write-wrong-ASP character → Zhangsan writes the character, the character is wrong
‘Zhangsan wrote the character wrong.’
- (15) 你吃壞肚子了。 → 你吃, 你肚子壞
Ni chi-huai duzi le. → ni chi, ni duizi huai
you eat-bad stomach LE → you eat (something), your stomach is bad
‘You ate spoiled food.’

Type A2: The semantic orientation of V_{res} refers to the subject which is not the agent but that of the V_{caus} refers to the object which is the agent (animate-like):

- (16) 樹上開滿了花 → 花開, 樹上滿
Shushang kai-man-le hua. → hua kai, shushang man
tree-top bloom-full-ASP flower → flowers bloom, full on the tree
‘The trees are full of blossoms.’

From the internal analyses of the deep structures of the RVC above, we can see that the order in (8) can be supported by the account of subject selection hierarchy in (9) and the markedness of Chinese RVC in (11). More specifically, both the arguments *Zhangsan* of V_{caus} *ting* 聽 (listen) and V_{res} *dong* 懂 (understand) in the deep structure of (12) are the subject and agent, which are compressed into one argument *Zhangsan* in the sentence (12) since the two arguments are identical. In (13), the argument *Zhangsan* of V_{caus} *zuo* 做 (do) is the subject and agent, but the V_{res} *wan* 完 (finish) only indicates the completion of the event “doing homework.” According to the hierarchy in (9) and markedness in (11), the form in (12) is unmarked and the form is

in (13) is less marked.¹³ Therefore, these two forms had the highest percentage of being successfully produced in the survey, where *ting-dong* 聽懂 (understand by listening) was said 84.6% during the picture description survey and 94.1% for the translation, while *zuo-wan* 做完 (finish-doing) was said 88.46% during the picture description (which is slightly higher than that of *ting-dong* 聽懂 (understand from listening)); 91.17% on the translation.

In sentences (14) and (15), the argument *Zhangsan* of *Vcaus xie* 寫 (write) in (14), and the argument *ni* 你 (you) of *Vcaus chi* 吃 (eat) in (15) are the subjects and agents, but the argument *zi* 字 (character) in (14) and the argument *duzi* 肚子 (stomach) in (15) are the states and the subjects (no-agent) of verbs of *cuo* 錯 (wrong) in (14) and *huai* 壞 (bad) in (15) in the deep structure. As analyzed earlier, when the meaning of a verb indicates a state and the argument of the verb is a subject but not an agent as in (10c), it is the most marked form. Thus the sentences (14) and (15) are the more marked form. This account is in accordance with the order in (8) where the percentage of respondents producing *zhao-cuo* 找錯 (give-wrong) is 38.46% on the picture description, *xie-cuo* 寫錯 (write-wrong) is 52.94% on the translation;¹⁴ while the percentage of respondents producing *chi-huai* 吃壞 (eat-bad)

¹³ When considering the relationship between the first verb and its first argument, sentences (12) – (15) are all unmarked according to the subject selection hierarchy in (9) since the first arguments (subjects) are all the agents semantically. When looking at the relationship between the second verb and the first argument, sentences (13) – (15) are all marked since the second verbs have no any semantic relation with the first arguments (subjects).

¹⁴ I am grateful to a reviewer for pointing out that there are corresponding sentences to (13) and (14) as (13') *Zhangsan de gongge zuo-wan le* 張三的功課做完了 (Zhangsan has finished his homework) and (14') *Ni zhe ge zi xie-cuo le* 你這個字寫錯了 (you wrote this character wrong). Although I have not investigated these kinds of sentences, I can predict that these two sentences are more marked than their corresponding sentences (13) and (14) based on the subject selection hierarchy in (9) since the subject *ta de gongke* (his homework) in the sentence (13') and the subject *zhe ge zi* (this character; if *ni* (you) can be considered as the topic of the sentence) in (14') are the patient semantically. In addition, the two sentences (13') and (14') involve an NP-movement, which increases the degree of the markedness. The question of whether the RVCs in sentences of (13') and (14') are more marked than that of (15) and (16) needs further investigation.

is the lowest which is 3.84% on the picture description, and 17.64% on the translation.

The sentence (16) is a more marked form based on the hierarchy in (9) and markedness in (11) because the subject *shushang* 樹上 (tree top) is not an agent for both V_{caus} *kai* 開 (bloom) and V_{res} *man* 滿 (full); while the agent-like argument *hua* 花 (flower) is in the object position. This is the reason that the percentage of respondents producing the form is low with the rates of 15.38% on the picture description and 44.1% on the translation.

It seems that the hierarchy in (9) and markedness in (11) explain the result of the surveys, but they cannot answer why the percentage of producing the RVC *chi-huai* 吃壞 (eat-bad) in the sentence (15) is lower than *kai-man* 開滿 (bloom-full) in the sentence (16). This question may be explainable from the numbers of arguments of the verbs in the sentences (15) and (16). We can see that there are two arguments *shushang* 樹上 (tree top) and *hua* 花 (flower) as in (16), but three arguments (*x*, *y*, *z*) in the deep structure of the sentence (15) rewritten as (17) below:

(17) 你 (*x*) 吃 (飯 *y*) 壞肚子(*z*)了。

Ni chi (fan) huai duzi le.

you eat (food) bad stomach LE

‘You ate spoiled food.’

The V_{caus} *chi* 吃 (eat) in the above sentence is a transitive verb which takes two arguments *ni* 你 (you, *x*) and *fan* 飯 (food, *y*), but the second argument does not appear in the surface sentence because it is often the default argument of verb *chi* 吃 (eat); e.g., when we hear a question “*ni chi-le meiyou*” (have you eaten), both speaker and listener understand that the object of verb *chi* 吃 (eat) is *fan* 飯 (food). Since the object *fan* 飯 (food) of the verb *chi* 吃 (eat) is so obvious, it is often omitted in the surface sentence.¹⁵ Because of

¹⁵ According to Li (1990), there are four possible arguments to be assigned with four theta-roles logically in a form of RVC. But “[b]y the Case theory, these four theta-roles can be assigned only to two arguments” (Li, 1990: 184). This account may also explain the omission of one argument in the surface structure in (15).

According to Roberts and Roussou (2003), people tend to choose unmarked or less marked forms over marked forms when two readings of one sentence are syntactically possible. Hopper and Traugott (2003: 1, 73) explain this through the case of the grammaticalization of English *be going to*. After *be going to* is grammaticalized as the future tense marker, it is further reduced economically to *be gonna* as in (19) below:

(19) Bill's gonna go to college after all.

From the point of view of economy, we can understand why the word “cell phone” has replaced the earlier words “cellular phone.” Similarly, “cell phone” in Chinese, *shouji* 手機 (literally, ‘hand machine’) has replaced the earlier word *dageda* 大哥大 (literally ‘older brother big’). Not only are the words “cell phone” and *shouji* 手機 shorter, and the shorter forms save both the speaker and the hearer’s time in delivering and processing the information, but the shorter forms also have a more expressive effect if they do not cause any ambiguity. Following this account, the reason that the percentage of respondents producing sentence (7)/(15) with the RVC *chi-huai* 吃壞 (eat-bad), which contains three arguments in the deep structure and can cause ambiguity because of the omission of the second argument in the surface structure, is the lowest in the survey becomes clear. Since the number of arguments of the sentence (7)/(15) in the deep structure is greater than that of the sentence (4)/(16) and also the former sentence can cause ambiguity because of the omission, the sentence (7)/(15) is more marked than the sentence (4)/(16).

Based on the analysis on the types of Chinese RVC above, the markedness of the RVC in (11) can be elaborated as (20) below:

- (20) The hypothesis of the hierarchy of Chinese RVC pertaining to markedness
- a. If the first argument of both V_{caus} and V_{res} in the RVC is the subject syntactically and also the agent semantically, the form is unmarked (example is *ting-dong* 聽懂 (understand by listening) in the survey).
 - b. If the first argument of the V_{caus} is the subject and also an agent, but that of the V_{res} is neither the subject nor the object (its semantic meaning is a kind of description, comment and illustration to the V_{caus}) in the RVC, the form is less marked (example is *zuo-wan* 做完 (finish-doing) in the survey).
 - c. If the first argument of the V_{caus} is the subject and also an agent but its second argument is the object and patient which is the subject of V_{res} in the deep structure in the RVC, the form is more marked (example is *zhao-cuo* 找錯 (give-wrong) in the survey).
 - d. If the argument of the V_{caus} is the object which is an agent-like while the argument of the V_{res} is the subject which is not an agent in the RVC, the form is the more marked plus (example is *kai-man* 開滿 (bloom-full) in the survey).
 - e. If a form is in a situation like *c* in the above but it has more arguments than others, it is the most marked form (example is *chi-huai* 吃壞 (eat-bad) in the survey).¹⁶

¹⁶ The result of the picture description from Control Group 2 (CG) supports this hierarchy except the case of *ting-dong* 聽懂 (understand by listening) which I have explained in (18) above. The result of Control Group 2 also shows that the form *kai-man* 開滿 (bloom-full) is more marked plus form and the form *chi-huai* 吃壞 (eat-bad) is the most marked since only 25% participants in Control Group 2 used the form *kai-man* 開滿 (bloom-full) to describe the picture and none used the form *chi-huai* 吃壞 (eat-bad). From the perspective of markedness, an unmarked form is a form with fewer linguistic features, a more neutral and general meaning, and used more frequently; while a marked form is a form with more linguistic features, a more specific meaning, and used less frequently. The fact that those native Chinese speakers avoided using the forms of *kai-man* 開滿 (bloom-full) and *chi-huai* 吃壞 (eat-bad) in the picture description demonstrates that the two forms are the more marked forms.

In the field of L2 acquisition, linguists have found that the more marked the form is, the more difficult the form is to learn (see Eckman 1977 and 1996). From this point of view, the order of acquiring Chinese RVC in the survey from the most difficult to the easiest can be listed as below using the above hierarchy:

(21) A hypothesis of the hierarchy of the difficulty in learning Chinese RVC

- Most difficult: 你吃壞肚子了。 Ni chi-huai duzi le.
you eat-bad stomach LE
'You ate (something) and caused your stomach discomfort.'
- More difficult: 樹上開滿了花。 Shushang kai-man-le hua.
tree-top loom-full-ASP flower
'The trees are full of blossoms.'
- Mildly difficult: 你找錯了錢。 Ni zhao-cuo-le qian.
you give-wrong-ASP money
'You give the wrong change.'
- Less difficult: 他做完了功課。 Ta zuo-wan-le gongke.
he do-finish-ASP homework
'He finished his homework.'
- Less difficult: 他聽懂了。 Ta ting-dong-le.
he listen-understand-ASP
'He understood by listening.'

The theoretical analysis in this section supports the order of difficulty of producing Chinese RVC in the survey in (8). Based on the result of the survey and the analysis, we may be able to say that there is a hierarchy of difficulty of learning Chinese RVC for L2 learner; and the hierarchy of acquiring Chinese RVC is arranged from the unmarked to the less marked and then to the more marked linguistic features of the RVC. However, the two hierarchies in (20) and (21) are heavily tentative and hypothetical. More quantitative empirical and theoretical studies are needed to

establish a more accountable hierarchy of Chinese RVC acquisition in the future.

5. Strategies of Teaching Chinese RVC

Once we know the hierarchy of the difficulty of learning Chinese RVC and specific features of each type of RVC, we can explain each type of RVC more clearly and design corresponding teaching strategies for the RVC to students. The most important strategy is to sort the Chinese RVC according to the different patterns based on their markedness and then apply different pedagogical strategies to teach the different types of the RVC. From Chinese people's perception, the cause and the result are in an integrated unit, thus the two verbs ($V_{\text{caus}}-V_{\text{res}}$) are placed next to each other in Chinese RVC. When teaching Chinese RVC, instructors should teach it as one unit with different teaching strategies based on the linguistic features of each types of the RVC.

In comparison with English, the word order of Chinese RVC is always the causal activity first and then the result; while some corresponding expressions in English are the result first and then the causal activity, such examples like *ting-dong* 聽懂 (understand by listening) and *zuo-wan* 做完 (finish-doing); while in some expressions in English, the causal activity and the result are separated by a noun phrase such as *xie-cuo zi* 寫錯字 (write the character wrong) and *chi-huai duzi* 吃壞肚子 (eat (something and cause) the stomach to feel bad). For the latter in which the semantic meaning of V_{res} refers to the object, teachers can explain this type of the RVC to students that the second verb in Chinese RVC is a result but it causes the following noun having the result. For the all types of RVC, Chinese instructors can apply the principle of temporal sequence to teach the structure.

According to James Tai, Chinese word order follows the principle of temporal sequence described below:

The relative word order between two syntactic units is determined by the temporal order of the states which they represent in the conceptual world (Tai, 1985:50).

The statement above argues that Chinese word order mirrors the objective temporal sequences of events. In other words, the event happens first in the objective world and is placed first in a sentence in Chinese. For example,

- (22) 張三在圖書館看書。
Zhangsan zai tushuguan kan-shu.
Zhangsan in/at library read book
'Zhangsan studies in the library.'

Following the principle of temporal sequence, one must physically place himself in the library and then one can study. When this perception is reflected into the Chinese sentence, the word order becomes the above sentence which is different from English. The reason that the V_{caus} precedes the V_{res} in Chinese RVC is that the causal activity always occurs earlier than the result in the objective world. This explanation can help students realize the different arrangements of word order between Chinese and English and thus they can understand the structure of Chinese RVC and acquire it more easily.

When teaching the type of RVC in the sentence of *shushang kai-man-le hua* 樹上開滿了花 (the trees are full of blossoms), instructors should first explain that it is a common existential sentence in Chinese in which a location (place word) is in the subject position and the agent-like argument is often in the object position, such examples like *shuili tang-zhe yi tou niu* 水裏躺著一頭牛 (there is a cow lying in the water) and *jiaoshili zuo-man le xuesheng* 教室裏坐滿了學生 (there are many students sitting in the classroom). Once students understand these structures, they will learn not only the RVC but also the existential sentences.

However, knowing the structure of Chinese RVC is one thing, producing it is another; the latter is more important. To make students acquire the

structure of RVC, the most important strategy is to practice. From the result of survey in (8), we have found that the percentage of students speaking *zuo-wan gongke* 做完功課 (finish doing homework) is higher than *da-wan dianhua* 打完電話 (finish calling) although these two are the same pattern of the RVC (88.46% : 65.38% on the picture description); and it is even higher than *ting-dong* 聽懂 (understand by listening) as mentioned earlier; and the percentage of producing *xie-cuo zi* 寫錯字 (write the character wrong) is higher than *zhao-cuo qian* 找錯錢 (give the change wrong) although the two are also the same pattern (52:94% on the translation for the former and 38.46% on the picture description for the latter). We can imagine that *zuo-wan gongke* 做完功課 (finish doing homework) and *xie-cuo zi* 寫錯字 (write the character wrong) are used much often than that of *da-wan dianhua* 打完電話 (finish calling) and *zhao-cuo qian* 找錯錢 (give the change wrong) in the classroom. The result of the survey has demonstrated that the more the form is practiced, the easier the form can be acquired. This is a reason that L2 experts advocate that language teaching must be a flood input which should be well designed and controlled to students in the classroom. To maximize students' learning in the classroom, the most efficient way is to reduce the teacher's speaking time and increase the student's practicing chance under a student-centered and teacher-controlled model (for the details about the teaching strategies of the model, please see Zhu, 2007, 2008 and 2010).

6. Conclusion

This study has discussed the types of Chinese RVC appeared in the first-year Chinese textbook *Integrated Chinese* and also the linguistic features of each type of RVC. Through the surveys administered to students who have finished their first-year of Chinese study with/without the textbook of IC and to 12 native Chinese speakers, this study has found the differences in producing (speaking and translating) Chinese sentences contained different types of RVC. After analyzing the results of the surveys by applying the notion of markedness, this study has demonstrated that there is a hierarchy in

Chinese RVC and the hierarchy relates to the markedness of the linguistic features of each type of RVC. A form of RVC containing less marked linguistic features is easy to learn, while a form of RVC containing more marked linguistic features is difficult. Knowing the different features of each type of RVC, various teaching strategies can be designed for the different patterns of Chinese RVC.

Although this study has demonstrated some common principles and hypothesized a hierarchy of Chinese RVC acquisition, this hierarchy may relate to other factors which may have not mentioned in this paper. In addition, this study has primarily focused on examples of RVC which appear in a first-year Chinese textbook (IC), and has not addressed many other and different subtypes of RVC; therefore, further study on this topic is needed. I hope that the tentative hypothesis of the hierarchy of Chinese RVC acquisition established in this article will inspire more linguists to explore this topic and construct a more general principle of Chinese RVC acquisition.

Appendix Translation Exercise

Translation Practice

Name:

Class:

Please translate the following sentences into Chinese (characters or pinyin if you don't know how to write the characters). **Note:** Some sentences may have different translations, you can write more than one Chinese sentence for the corresponding English sentence. You don't need to translate the parts in the parenthesis.

1. I have learned how to write Chinese characters.
2. I understood what the teacher said by listening.
3. [In springtime,] the trees are full of blossoms.
4. He has finished writing his homework.
5. You came early. You are exhausted (very tired).
6. You wrote one character wrong.
7. [All those people are on top of one another.] Won't the people underneath be crushed to pieces?
8. [I ate spoiled food and] my stomach is uncomfortable.

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漢語結果補語習得研究以及相應的教學方法

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摘要

漢語結果補語結構由兩個動詞組成，其一表原因，另一表結果。此結構內動詞搭配靈活，語義表達豐富，因而使用頗為廣泛。但由於結構中的動詞語義與句中的主語和賓語複雜多樣，以漢語為第二語言的學生在習得這種結構時深感困難。本文分析討論一年級漢語教材《中文聽說讀寫》中出現的結果補語結構和每種結果補語結構不同的語言特色，並通過調查發現已完成中文一年級學習的學生和一些中國人在輸出含有此結構的中文句子時存在一個梯度層級；即包含語言特色較少的補語結構較易習得，輸出率較高；而包含語言特色較多的補語結構較難，輸出率偏低。知曉了不同結果補語的語言特色后，針對不同的動詞補語結構特點從而設計多樣且適宜的教學方法時便會有的放矢，教學時可收事半功倍之效。

關鍵詞：結果補語 標記 教學技巧 語言習得