

SYNTACTIC AND SEMANTIC ANALYSIS OF “多+VP”

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ABSTRACT

Many words or phrases in Chinese can serve as adverbials before verbs or adjectives, or as complements after verbs or adjectives. In most cases, the same words used as adverbials and complements have different meanings (Li Jinxi 1924, Wang Li 1943, Shuxiang Lü, Zhu Dexi 1952, Zhang Jing 1980, Li Zhu 1988, Ma Zhen 1997). We take “duo” as an example to examine the semantic difference between the two phrase forms of “duo“多+V” and “V+多” in modern Chinese Mandarin (Liu Yuehua 1982, Shuxiang Lü1982, Xin Yongfen 2006). Shuxiang Lü (1984) gave a detailed classification and explanation of the usage of “Duo” in “Xiàndài hànyǔ bābǎi cì”. He believes that the adjective “duo” can be used as an adverbial before the verb or as a complement after the verb when it means “an increase in number than the original; the number exceeds.” Scholars such as Huang Xiaohong (2001) and Xin Yongfen (2006) believe that “duo” as an adverbial and result complement have different semantics. Specifically, the adverbial “duo” reaches a certain amount, and the complement “duo” means more than a certain amount.

Keywords: duo + V; duo₁; duo₂; english more; additive reading.

The tests and results of the existing research on the structural characteristics of “duo+VP” are summarized in Table 1. Please see the table below: 1

Related research	Category 1	Category 2
Lu Shu xiang (1984)	Large quantities	Increased from the original number, exceeded the number
Huang Xiaohong (2001)	Reach a certain amount	More than a certain amount
Xin Yongfen (2006)	Unexpected, anticipatory	Already, unexpected
Luosu (2008)	Reach a certain amount	More than a certain amount

1. INTRODUCTION

This chapter mainly studies the situation when the adverbial “duo” in Chinese modifies verb phrases, that is, the structure of “duo+VP”, for example, “Zhang San duo paole 20 fen Zhong (bu)”. We believe that “duo” before verbs can express two different semantics, namely “comparative” interpretation and “additive” interpretation. The following mainly analyzes the semantic and syntactic characteristics of the adverb “duo” from the interpretation of “additive”. The thesis further analyzes the interpretation of the meaning of “duo+VP” meaning “addition”.

Although some researches in Chinese are devoted to solving the above problems, the related problems have not been solved completely. In general, there are mainly the following shortcomings. The academic circles pointed out that the Chinese “duo+VP” has semantic ambiguity, but the semantic ambiguity has not been fully discussed. Although the academic circles pointed out the semantic ambiguity of

the “duo+VP” structure, they did not explain the semantics and syntactic structure of the structure in detail. In theory, if “duo+VP” is ambiguous, it should also correspond to different syntactic structures. The basic grammatical structure of the Chinese adverb “duo+VP” is “duo+VP”. It seems more reasonable. We will further verify this inference in the analysis in the next section. In addition, Huang Xiaohong (2001) and Xin Yongfen (2006) proposed two semantic and syntactic structures of “pair” before verbs. Based on them, we propose two reasons to prove the different semantics of the “duo+ VP” structure.

(2) The analysis of the semantic phenomena of “duo+ VP”, “reaching a certain number” and “exceeding a certain number” cannot effectively explain the relevant language facts.

This article will continue to focus on the controversial Chinese “duo+VP” issue, and discuss the corresponding issues with “duo+ VP” as an ambiguity. Specifically, the special type of “additive” in Chinese “duo” will be studied, and the syntactic structure and existing structure of the adverb “duo” will be analyzed. The discussion and research on the above content can promote whether there is an additive explanation for the Chinese “duo” and at the same time promote the further development of the research on the Chinese adverb “duo”. Additive structure.

1.1The analysis of “duo+VP” as “additive” interpretation

Chinese “duo+VP” shows that different semantics in different syntactic structures. This part mainly explains the semantic difference between “duo₁” and

“duo₂”. And try to answer the question of the semantic ambiguity of the “duo +VP” structure.

1.1.1 Concept introduction

The argument of the case is different, this sentence is not true. This is because adding Mary and Sara’s sleeping events together will only get a plural (plural) event, that is, as Link (1983) said, the sum of two different events, $e_1 + e_2 = e_3$ should produce “plural” From any reasonable point of view, this cannot be considered a further development (more).

Finally, although there are two different arguments, (29c) can still be interpreted as additive interpretation. This can again consider the development of the event. Suppose, we can imagine such a situation, in the competition, the running events of Mary and Sara are added and compared with the running time of the other group, Mary and Sara's group wins. On the contrary, if Mary and Sara do not know each other and run in an environment where they do not know each other, their combined running event cannot be called development (more).

Also in example (1), Greenberg (2009) further pointed out that although the predicate in the assertion and the presupposition is the same for the same sentence above, their additive interpretation is not obvious: as follows:

(1) a. I have many friends who are busy writing papers. John has written 5 papers. Mary has written more (papers) (comparative / # additive)

b. I baked 3 cakes for my son's birthday party. A woman I know in New York baked more (cakes) for her son's birthday party (comparative / # additive) (Greenberg 2009)

The interpretation of “more” and “comparison” in Example (1) is established. In order to obtain the “additive” interpretation of “more”, an additional constraint must be met. With “more_{add}”, the asserted and presupposed events should be summed together so that they constitute a singular event. Cakes baked for the same holiday can be considered singular events intuitively. Example (1a) two different people and writing papers in two different places will naturally not be regarded as singular. In this regard, we further explain with another example. As shown in example (2a).

In example (2a), only “more” has a comparative interpretation. This is because the children of the prime minister, and my children cannot be summed up as a singular set. The sum of events e_3 of “more” in English is actually not a plural number, but a true singular number. If there are two different arguments between e_1 and e_2 , then we can also use Landman’s theory (1996, 2000) to add them together, and then combine them to form a collective action. As shown in example (3):

(3) a. This morning Danny interviewed 3 students in his office. At the same time, Susan interviewed more students in the library. (comparative / additive)

We sum up the presupposed and asserted events, resulting in a singular event of interviewing a group of 5 students. This is done by Danny and Susan together, that is, Danny and Susan interview students as a collective action. Susan interviewed 2

students besides the students interviewed by Danny. Example (1b) says that the cakes he baked in New York and the cakes I baked for the holiday cannot form a group, nor can they participate in an event together (they don't have any common decisions, share responsibility for things, etc.). Therefore, the above example sentence (2b) has no additive interpretation. Also in (2a), the children of the Prime Minister and my children cannot be a group.

Greenberg (2010b) believes that in some cases, the concepts of “singular” and “plural” cannot distinguish the additive and comparative semantics of “more”. To obtain a purely additive interpretation of “more”, one cannot rely solely on “singular” and “plural” concepts to distinguish. This is because there are some cases where “more” sounds appropriate, that is to say, “more” will hold its additive meaning even though there is no real collective interpretation, as shown in the example (4)

(4) a. (What happened to the cookies you baked?) Well, my nephews were here and ate most of them. Later I had a meeting with my student, and she ate some more. b. The hurricane killed 4 people in this village. A week later two more people were killed by robbers. (Greenberg 2010b)

In example (4a), it is difficult to form a group of “my nephew” and “my student” (they may not know each other). Therefore, the cookies I baked were naturally not eaten by the collective action of my nephew and students. Example

(4b) 4 people were killed in the village, and 2 people died in the hurricane a week later. The additive interpretation of “more” can be established. Then it can be seen

from the above content that you can get a “more” additive interpretation without being a collective.

The author has examined the “additive” interpretation of English “more” from a cross-lingual perspective. The ambiguity of English “more” is very inspiring to us. Greenberg (2010b) and Thomas (2011) made a more detailed analysis of the ambiguity of “more”. We can use the semantic expressions they pointed out to further interpret the “additive” of “multiple” and express the semantic expressions.

We agree with Thomas that the structure of “duo₂” with “additive” interpretation is like English, expressing the development of an event constituted by an original sub-event and a changed event. In other words, the change sub-event in the event expressed by “duo₂” has an “additive” interpretation, and one sub-event expressed does not have a second change sub-event. This difference determines the internal events of the entire “duo+VP”.

Below we explain the different understandings of the semantics of “duo+VP”. From the above conclusions, several semantics of “duo” in modern Chinese are all expressed with “duo”. We first explain the “additive” interpretation of “duo+VP” from the perspective of events. Although the semantics of “duo+VP” has aroused heated discussions among Chinese scholars, it has not yet reached a unified understanding.

This shows that there are ambiguities in the semantics of the Chinese adverb “duo+VP”, and the performance of “duo+VP” is more complex and diverse.

1. Analysis of the Synonymous “duo+VP”

The core meaning of “duo” is (additive). The predecessors have different definitions of “additive”. Lu Xiaoyu (2017) quoted Lichtenberk (1991) and distinguished between “repetition marker” and “additive marker”. “Repetition” mainly refers to the time sequence of two similar or related events. Occurs one after the other, requiring the same action to be issued by the same action; “addition” requires different actions and the same or similar event type, that is, different actions.

When “duo” modifies VP, its core meaning “additive” can be subdivided into two specific semantics: “additive” and “comparative”. The two semantic “duo+VP” have differences in semantic features. Next, we will discuss the distinction between the two. Through the above semantic phenomenon of English “more” and “duo”, we have a relatively deep understanding. Since “duo+VP” has been discussed from the word level in the previous article, in order to ensure the equivalence of the contrast plane when comparing the language in this section with English, this section will focus on the comparison of the corresponding words in English with “duo”. In Chinese, the adverb “duo” can also express different meanings like English “more”¹, the difference between the semantics of “additive” and “comparative” represented by “duo+VP” is not very obvious.

When analyzing the different semantics of the additive operator again (English) and “wieder” (German), the predecessors had two different

¹English “more” can be interpreted in two ways, one is additive reading, and the other is comparative interpretation (comparative reading). The two interpretations have different semantic expressions.

viewpoints: Reductionism and Polysemous Account. Scholars who hold the simplification theory believe that the different semantics of “again/wieder” can be reduced to a basic meaning, and the difference lies in the different syntactic jurisdiction or information structure (von Stechow 1996, Klein 2001, Beck 2006) . There are many words in Chinese besides “duo” before verbs that can be interpreted as “additive”. The adverb “you” can also mean additive interpretation. The semantics of “additive” of “duo” before verbs in Chinese is the same as that of English "again" in Chinese. Although the “additive” semantics of the Chinese adverb “you” and the adverb “duo+VP” are not completely parallel, the “additive” semantics of “you” undoubtedly give us a lot of inspiration. Dowty (1979) Mc Cawley and Morgan successively discovered the semantics of “again” and did a more detailed analysis. Point out that there are two interpretation methods for the following example sentences. When dealing with the different semantics of “duo+VP”, we also adopted a simplified view.

(5) a. John opened the door again.

(Klein 2010)

b. Rise \leftrightarrow again $\begin{bmatrix} RISE \\ ADD \\ CON \end{bmatrix} \leftrightarrow again^2$

They explained that one way of reading is external reading. Namely: John has done the action of opening the door at least once before, and this time is a repetition

²One feature, call it RISE, is common to all operators. A second feature, ADD, is common to additivity and continuation. A third feature, CON, is restricted to continuation:

of the last time or the previous few times; the other is the internal interpretation method (additive interpretation), that is: Zhang San opens the door again. The door has been opened before, but the person who opened the door before is not necessarily John. This phenomenon can also be found in Chinese. Take the corpus expressing “addition” in Ma Zhen (2000) as an example. Ma Zhen believes that “again” is used to state past facts, which can mean repetition or addition. Examples of expressions of addition include:

(6) a. Gāngcái wǒ mǎile yī zhī bǐ, yòu mǎile yīgè běn er.

b. Tā jīntiān sǎole de, yòu cǎile zhuōzi.

c. Xiàbān hòu tā bùjīn qù kànwàngle zhāng lǎoshī, érqǐè yòu dào chāojí shìchǎng mǎile xiē chī de.

(Mǎ zhēn 2000)

Please see the Situation below:3

a. Comparison: $\begin{bmatrix} \text{RISE} \end{bmatrix}$

b. Additivity: $\begin{bmatrix} \text{RISE} \\ \text{ADD} \end{bmatrix}$

c. Continuation: $\begin{bmatrix} \text{RISE} \\ \text{ADD} \\ \text{CON} \end{bmatrix}$

From the perspective of determining the meaning of the grammar of the predicate, it is not difficult to find that the two different VPs in the first example sentence also imply “I bought something”, while the two VPs before and after the latter two example sentences imply “what did he do” The same meaning obviously constitutes repetition. Therefore, we have reason to say that in the sentence

expressing “additive”, “you” essentially still means a kind of “additive repetition”. At a certain level.

Similarly, Zhang Yisheng (2000) believes that the basic function of “you” at this time is to act as a high-level predicate for subjective comments. Therefore, we have reason to think that its scope is the entire sentence, so it means the "repetitiveness" of the scope of “you” Such as:

(7)

a. Tā shàngwǔ chīle yīgè píngguǒ, gāngcái yòu chīle liǎng gè (Zhang Yisheng 2000)

English “more” can be interpreted in two ways, one is additive reading, and the other is comparative reading. The two interpretations have different semantic expressions. One feature, call it RISE, is common to all operators. A second feature, ADD, is common to additivity and continuation. A third feature, CON, is restricted to continuation:

If “again” modifies the verb “eat two apples”, it must imply that you have eaten two apples before, which is obviously wrong. At this time, “you” only means the repetition of verbs, so “you” “again”. is first combined with “eat(吃)” to form “又吃” eat again, and then combined with the object. Therefore, the scope of "you" here is a verb rather than a verb phrase.

Thomas (2011) pointed out that in different languages, the three semantics of comparison, additivity and continuity are expressed in different words. Through

cross-language research, it is found that there is no ambiguity about “more” in some languages. His strategy in the paper is to decompose each operator into different features, and determine one feature as the basis of three ambiguities. Team leader, he used the vocabulary to form the CAC (comparison; additivity; continuity) operator Shown³

(8)

a. Comparison : $[RISE]$ b. Additivity: $\begin{bmatrix} RISE \\ ADD \end{bmatrix}$ c. Continuation: $\begin{bmatrix} RISE \\ ADD \\ CON \end{bmatrix}$

The first characteristic Thomas pointed out is RISE, that is, RISE is the common base of three operators. The second characteristic is the common base of ADD additive and continuity. The third feature CON is limited to continuity. Thomas (2011) analyzed the three ambiguities of “more” in the paper. He pointed out that the correspondence between CAC operators in English is as follows.

(9)

a. $\begin{bmatrix} RISE \\ END \end{bmatrix} \leftrightarrow \text{more}$ b. $\begin{bmatrix} RISE \\ END \\ START \\ ADD \\ CON \end{bmatrix} \leftrightarrow \text{still}$ c. $[START] \leftrightarrow \text{than}$

He conducted a comprehensive analysis of the comparison, additive and continuity in the semantics of the phonetic phase, and tested the homomorphic patterns in several languages. In the thesis, the most important advantage of phonetic

³Thomas, Guillaume. 2010b. Increment “more”. In Proceedings of the 20th Semantic and Linguistic Theory Conference edited by Nan Li and David Lutz, pages 233-250.

semantics is that it can express a rigorous decomposition analysis of comparison, additivity and continuity, thereby showing homomorphic patterns that are incomprehensible in form.

Thomas (2011) obtained the three semantics of CAC model from a cross-language perspective for classification. Although the distinction between “additive” and “comparative” in German is obvious, the meaning of “additive” is still ambiguous. In German, “noch” can mean two semantic “addition” and “continuity” at the same time, such as:

(10)

$$a. \text{RISE} \leftrightarrow \text{mehr} \quad b. \begin{bmatrix} \text{RISE} \\ \text{ADD} \end{bmatrix} \leftrightarrow \text{noch} \quad c. \begin{bmatrix} \text{RISE} \\ \text{END} \\ \text{START} \\ \text{ADD} \\ \text{uPOS} \end{bmatrix} \leftrightarrow \text{noch}$$

“duo” in Chinese can mean “addition” and “comparison”, but this semantic is not very obvious. Such as:

(11)

$$a. \begin{bmatrix} \text{RISE} \\ \text{END} \end{bmatrix} \leftrightarrow \text{duo} \quad b. \begin{bmatrix} \text{RISE} \\ \text{END} \\ \text{AND} \\ \text{START} \\ \text{ADD} \end{bmatrix} \leftrightarrow \text{duo} \quad c. \begin{bmatrix} \text{RISE} \\ \text{END} \\ \text{AND} \\ \text{START} \\ \text{ADD} \\ \text{CON} \end{bmatrix} \leftrightarrow \text{duo}$$

Vietnamese is the only language without this phenomenon. In Vietnamese, CAC is represented by different words. as follows:

(12)

$$a. RISE \leftrightarrow \text{hon} \quad b. \begin{bmatrix} RISE \\ ADD \end{bmatrix} \leftrightarrow \text{nũ'a} \quad c. \begin{bmatrix} RISE \\ ADD \\ CON \end{bmatrix} \leftrightarrow \text{van}$$

Thomas (2011) showed through the study of multiple languages that the interpretation of “addition” and “comparison” in these languages are all expressed in one word, and only Vietnamese uses different words to mean “addition” and “comparison”. Explanation. As shown in Table 2.3 Please see the table below: 2.3

Language	comparative	Addition	Continuity
Romanian	A	A	A
English, Chinese, French, Spanish, Brazilian Portuguese	A	A	A
German, Siberian, Hungarian, Italian, Russian	A	B	B
Vietnamese	A	B	C

This section adopts Thomas (2011)⁴ Greenberg (2010)⁵ and others to analyze the “more” in English with event structure, and believe that the Chinese “duo+VP” structure also contains additive interpretation. Danny wrote more add. “papers” sentence into an event e_1 expressed by the active word wrote, and a change event e_2 expressed by the active word, two The addition of atomic events constitutes the development of events expressed in the entire sentence. ($e_3 > \text{developed } e_2$) As shown in (13) .

⁴Thomas, Guillaume. 2010b. Incremental ‘more’. In Nan Li & David Lutz (eds.), Proceedings of the 20th Semantics and Linguistic Theory Conference, 233–250.

⁵Greenberg (2010:161-162) analyzed the event structure of the English “Sara wrote papers.”

(13) Sara wrote papers. Danny wrote more_{add}. Papers
 $[e_1, t, x, y, e_2, e_3, t': t < n, \text{write}(e_1), \text{Ag}(e_1) = d, \text{Th}(e_1) = x, * \text{paper}(x), \tau(e) \subset t, \text{write}(e_2),$
 $\text{Ag}(e_2) = s, \text{Th}(e_2) = y, t' \leq t, * \text{paper}(y), \tau(e_2) \subset t', \text{write}(e_3), e_3 = S(e_1 + e_2), \text{Ag}(e_3) = \uparrow$
 $d + s, \text{Th}(e_3) = \uparrow x + y]$ ⁶Assertion: There is a writing eventuality e_1 whose agent is
 Danny, whose theme is some plurality of papers, and whose time is included in a past
 time t . b.

Presupposition: There is a writing eventuality e_2 whose agent is Sara and whose
 theme is some paper(s), such that

- i. The time of this eventuality e_2 is included in t' , which is the same or prior to t
- ii. There is a singular writing eventuality e_3 , resulting from the S-summing of e_1 and e_2 .
- iii. The agent of e_3 is the group of Danny and Sara (the agents of e_1 and e_2), and its theme is the group of papers x and y (the themes of e_1 and e_2).

2. Features of “duo+VP” Addition

The above mainly examines the “additive” interpretation of English “more” from a cross-lingual perspective. The ambiguity of English “more” is very enlightening to us. Foreign linguist Greenberg (2010b) Thomas (2011) discovered the ambiguity of “more” in a more detailed analysis. We can use the semantic expressions they pointed out to further interpret the “additive” of “duo” and express the semantic expressions. Such as (14)

⁶ Greenberg, Yael. 2010b. Aspectual and pragmatic constraints on the verbal additive particle *more*.

(14) a. Zhāng sān duō pǎole 20 fēnzhōng (bù)

Situation a: Zhang San has run on the treadmill for an hour; but he thinks that the intensity is not enough; he did not choose to stop; he performed the behavior (15a).

(15) a. Zhang San has ran for an hour to reach today's goal, but he felt that it was not enough, so he ran for 20 minutes.

Situation b: Zhang San completed the weight loss exercise (not running) in the gym; he believed that the weight loss intensity was not enough; Zhang San performed the behavior (15a).

b. Zhang San completed all the daily weight loss projects, but he felt very energetic today, so he came to the treadmill and ran for 20 minutes.

Situation c: Zhang San and his weight loss teammates ran together to lose weight; his teammates stopped taking a break after one hour of completion; Zhang San did not choose to stop; he performed the behavior (15a).

c. The teammates all paused the treadmill to rest. Only Zhang San still felt full of energy, so he ran on the treadmill for an additional 20 minutes.

The semantics of all the above-mentioned “duo” are above a certain level. But the three are different in semantics. According to the analysis of Thomas (2011), we can think that “多 (more)” in (15a) is an extension of a single event e_1 , namely $[+start][-end][+add][+end] \rightarrow [result][Continuation\ mark]$. The semantics of “duo” in (15b) is $e_1 + e_2 = e_3$, the sub-event e_1 is the daily weight loss project, and the sub-event

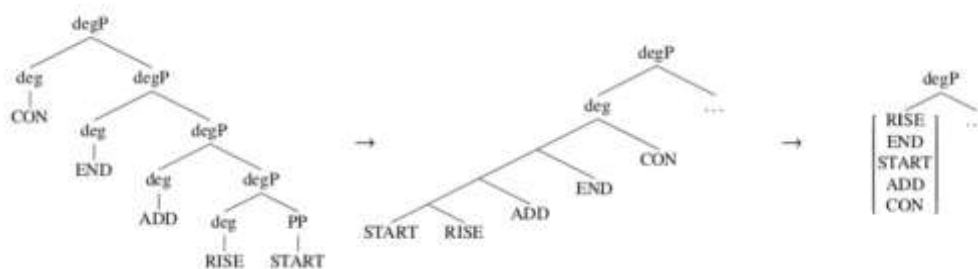
e_2 is a 20-minute running. After the merger, it becomes the sub-event e_3 (that is, all of Zhang San's weight loss exercise today), which is [+start][+end][result][+start][+add][+end] → [result][Additivity tag]. Most of (15c) is different from the above two categories. We can think of it as $e_2 - e_1 = e_3$, where the sub-event e_1 is the weight-loss exercise of teammates, the sub-event e_2 is the weight-loss exercise of Zhang San, and the sub-event e_3 is Zhang San. The difference between sports and teammates' sports, namely [+start1][+end1]/[+start2][+end2] → [difference][Comparison mark].

Before we discuss the syntactic performance of this structure, we first analyze the semantic differences in this structure. We follow the analysis of Thomas (2011) , the following example (16) can be interpreted differently in different contexts.

Through the observation of different event types “duo+VP”, it is found that the semantics of “duo+VP” can be divided into three types. On the basis of the above event structure theory, we make a similar analysis of the events expressed in the Chinese “duo+VP” structure. From the perspective of additive semantics, the meaning of Chinese “duo₂” expresses the situation: After an action occurs, it is emphasized by “duo₂” to happen again. Such as:

- (16) a. Zhāng sān duō pǎole 20 fēnzhōng (bù).
 b. Zhāng sān bǎ jīdàn duō zhǔle 5 fēnzhōng.

Situation (16a) Zhang San has run on the treadmill for an hour; but he thinks that the intensity is not enough; he did not choose to stop; he performed the behavior of (16a). In example (16a), Zhang San has already ran for an hour to reach today's goal, but he felt that it was not enough, so he ran for 20 minutes. Situation (b) Zhang San boiled eggs in the kitchen; but he thought that they could not be cooked well, so he performed the behavior (16b). Example (16b) Zhang San cooked eggs in the kitchen, but he felt that they were not cooked enough, so he cooked them for 5 more minutes. “duo” in the example sentence (16ab) is an extension of a single event e_1 , namely [+start][-end][+add][+end] →[result]. His semantic expression is: Please see the situation below:1

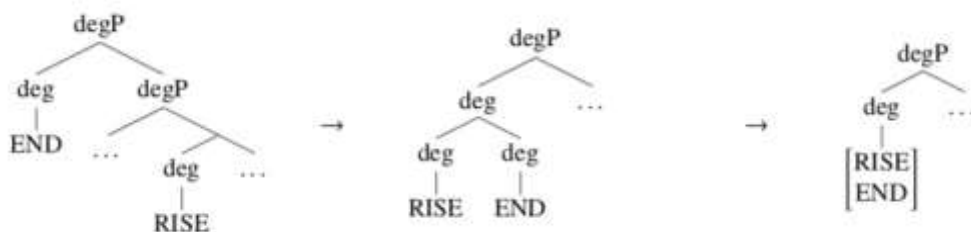


(17) a. Zhāng sān duō pǎole 20 fēnzhōng (bù).

b. Zhāng sān duō cǎifǎng 2 míng wàiguó xuéshēng.

Situation (17a) Zhang San completed the weight loss exercise (non-running) in the gym; he believed that the intensity of weight loss was not enough; Zhang San performed the behavior (17a). In the example (17a), Zhang San completed all the

daily weight loss programs, but he felt very energetic today, so he came to the treadmill and ran for 20 minutes. Situation (b) Zhang San completed the job of interviewing the principal in the classroom; he thought it would be just right to interview a few students; Zhang San performed the behavior (17b). In example (17b), Zhang San completed the project of interviewing the principal, but he felt that it was just right to interview a few students, so he went to the library to interview two more foreign students. The semantics of “duo” in the example (17b) is $e_1 + e_2 = e_3$, the sub-event e_1 is the daily weight loss item, and the sub-event e_2 is a 20-minute run. After the merger, it becomes the sub-event e_3 (that is, Zhang San’s total weight loss today Movement), which is $[+start][+end][result][+start][+add][+end] \rightarrow [result]$. His semantic expression is: 18(Situation:2) Please see the table below: 2



In other words, (17) and (18) are all sums, and the difference is that there is no stop in between, that is, whether it is a single event or a compound event. (19) It cannot be counted as a simple addition, because Zhang San did not run 20 minutes more on the basis of his teammates, but added 20 minutes on the basis of his one-hour step. The same example can also be explained using Thomas' example sentences.

(19) Mary wrote papers. John wrote more papers.

If Mary and John are involved in the same project, John has increased the number of papers on the basis of Mary, that is, sum . If Mary and John are doing individual projects separately, then $\text{more} = \text{QUANTITY}_{\text{John}} - \text{QUANTITY}_{\text{Mary}}$.

CONCLUSION

	additive	comparative
e_1	+	-
$e_1 + e_2 = e_3$	+	-
$e_2 - e_1 = e_3$	-	+

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