

On Proportional Correlative Constructions in Chinese and Mongolian

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This paper aims to investigate the semantics and syntax of Mandarin ‘yuè...yuè...’ construction and Mongolian ‘xedii...tödii...’ construction. It is argued that the first yuè and xedii always occur in a topic while the second yuè and tödii appear in the comment part of a sentence. Semantically, both the ‘yuè...yuè...’ and the ‘xedii...tödii...’ constructions, the degree/quantity of y changes accordingly. The ‘xedii...tödii...’ construction, however, might also has a constant reading, expressing an equivalence between two fixed values on two scales. It is argued that the constant relation is a special case of the proportional correlative relation. McCawley (1988) found that the proportional constructions exhibit some syntactic properties of comparative constructions and conditional constructions. We argue that it is not a coincidence but a natural consequence. Since the degree/quantity of y depends on that of x, the construction is basically conditional. Besides, to describe the change of the degree/quantity, one must compare the degree/quantity with a standard, usually the degree/quantity at a certain point. Thus, it involves ‘comparison’ inherently.

Key words: correlative, Chinese, Mongolian, yue, xedii, tödii

1. Introduction

This paper aims to investigate proportional correlative constructions in Chinese and Mongolian. The constructions at issue are used to show that two things change together, as exemplified in (1), (2) and (3).

English:

- (1) The more he eats, the fatter he gets.

Mandarin Chinese:

朋友 越多 越好 朋友 越多 越好
friend more many more good
‘The more friends one has, the better.’

Khalkha Mongolian:

- (3) Xedii ix bol tödii sain.
 how-much big/many if that-much good
 'The more the better.'

2. 'Yuè...yuè...' in Mandarin Chinese

McCawley (1988) investigated 'the more...the more...' constructions in English, German, and Mandarin Chinese. He found that the constructions exhibit some properties of comparative constructions and conditional constructions and called them 'comparative conditional constructions'. According to him, the 'yuè...yuè...' construction, a construction in Mandarin Chinese corresponding 'the more...the more' construction in English, has three properties shared with the comparative and conditional constructions.

First of all, *jiù* 'then' is used as in ordinary conditional constructions.

nǐ nǐ sū mǐ hǎi kǎn wǒ dǎn fǎ nǐ wǒ fǎn wǒ dǎn fǎ
 nǐ nǐ nd okn
 you if not well-behaved I then not give you candy eat
 'If you are not well-behaved, I will not give you candy to eat.'

wǒ sū mǐ nǐ wǒ dǎn fǎ nǐ wǒ fǎ mǐ nǐ wǒ dǎn fǎ
 nǐ nǐ nd okn
 you more not well-behaved I then more not give you candy eat
 'The less well-behaved you are, the less likely I will give you candy to eat.'

Second, 'yuè phrase' and 'wǒ phrase', if not embedded in a complex NP, never appears at the initial of a sentence.

nǐ nǐ θknd jn [wǒ njn] dnhn
 Zhangsan compare Lisi tall
 'Zhangsan is taller than Lisi.'

wǒ njn njn θknd jn dnhn
 compare Lisi Zhangsan tall

nǐ nǐ sū [mǐ] mǐ nǐ nǐ [mǐ] wǒ
 dnhimdn
 you more scold (s)he (s)he more not happy
 'The more you scold him/her, the more unhappy (s)he is.'

wǒ njn njn mǐ nǐ nǐ [mǐ] wǒ

ᠳᠠᠬᠢᠮᠠᠳᠤ

more you scold (s)he (s)he more not happy

ᠣᠨ ᠨᠢᠵᠢᠨ ᠮᠨ ᠨᠢ ᠨᠮ ᠨᠢ [ᠮᠢᠨ] ᠤᠨ

ᠳᠠᠬᠢᠮᠠᠳᠤ

more scold (s)he you (s)he more not happy

nn̩n̩ [[:n̩ n̩j̩n̩ d̩h̩] p̩b w̩n̩] u̩n̩ p̩.m̩
 compare Lisi tall RC person not many
 ‘There are few people taller than Lisi.’

nn̩n̩ [[ʒ̩.n̩ ʼf̩.n̩] p̩b l̩n̩dd̩.n̩] m̩.n̩ k̩nh̩ok̩n̩
 more sweet RC apple more delicious
 ‘The sweeter an apple is, the more delicious it is.’

Third, the compared element must be the topmost predicate of its clause, and the ‘yuè phrase’ is under the same constraint. In (9)a and (10)a, *p̩.m̩* ‘many’ is embedded in an NP.¹

nn̩n̩n̩ e̩n̩ u̩n̩ n̩n̩ m̩n̩f̩ z̩b̩ [L̩_{u3}k̩n̩
 p̩.n̩ j̩k̩n̩h̩
 (s)he compare I buy PERF very many book
 ‘(S)he bought more books than I did.’

u̩n̩ e̩n̩ m̩n̩f̩ j̩k̩n̩ u̩n̩ n̩n̩ m̩n̩f̩ p̩b
 p̩.n̩
 (s)he buy book compare I buy DE many
 ‘(S)he bought more books than I did.’

o̩n̩ e̩n̩ m̩n̩f̩ j̩k̩n̩ m̩n̩f̩ p̩b u̩n̩
 n̩n̩ p̩.m̩
 (s)he buy book buy DE compare I many
 ‘(S)he bought more books than I did.’

nn̩n̩n̩n̩n̩n̩ p̩n̩ p̩b [L̩_{u3} m̩.n̩ p̩.n̩ j̩k̩n̩h̩ n̩n̩ u̩n̩n̩
 v̩f̩n̩ m̩.n̩
 you read DE more many book you father then more
 d̩nh̩i̩m̩d̩n̩
 happy
 ‘The more books you read, the happier your father gets.’

¹ We find, however, sentences like (9)a is better if the compared element ‘du̩n̩’ is modified by ‘gèng’ rather than ‘h̩n̩’, as (i) shows.

n̩f̩n̩ n̩e̩n̩ u̩n̩ n̩n̩ m̩n̩f̩ z̩b̩ d̩n̩d̩ p̩.n̩ j̩k̩n̩
 (s)he compare I buy LE more many book
 ‘(S)he bought many more books than I did.’

In addition, (10)a is bad because *yuè du̩n̩sh̩n̩* ‘more books’, an NP, fails to act as a complement of V-de.

(ii) shows that it is possible for *yuè* ‘more’ to modify a quantity element within an NP.

n̩f̩ f̩n̩ u̩n̩ p̩n̩ m̩.n̩ p̩.n̩ j̩k̩n̩ n̩n̩ u̩n̩n̩ m̩.n̩ d̩nh̩i̩m̩d̩n̩
 you read more many book you father more happy
 ‘The more books you read, the happier your father gets.’

uᠨ uᠨ jkᠨ mᠨ pᠨ pb pᠠᠮ nᠨ uᠨuᠨ
vfᠨ mᠨ
you book more read DE many you father then more
dᠨhᠢᠮdᠨ
happy
'The more books you read, the happier your father gets.'

on un jkn pn pb m.n p.m n n unun
 vfñ m.n
 you book read DE more many you father then more
 dñhĩmndñ
 happy
 ‘The more books you read, the happier your father gets.’

The ‘*yuè...yuè...*’ construction is not always related to a conditional sentences, however. Rather than a conditional construction, (11) is a temporal one.²

nñmñ en m.n pn m.n lfñhzfmd zbñ
 (s)he more old more beautiful LE
 ‘As she gets older, she becomes more beautiful.’

b. *Tñ yàoshì yuè dà jiù yuè piàoliàng le.
 (s)he if more old then more beautiful LE
 ‘*If she gets older, she is more beautiful.’

We will discuss the semantics and syntax of Mandarin ‘*yuè...yuè...*’ construction in the following section, with reference to its counterpart in $\text{m}^2\text{z}^2\text{n}$ Taiwanese when there are differences between them.

2.1 Semantic perspective

2.1.1 ‘*Yuè...yuè...*’ are proportionally correlative

As far as meaning is concerned, the ‘*yuè...yuè...*’ construction has a proportional reading, the part with *yuè*₁ contains an independent variable **X** while the part with *yuè*₂ contains a dependent variable **Y**. When the degree/quantity of **X** changes, the degree/quantity of **Y** changes accordingly, as shown in (12). Therefore, we will call these constructions ‘proportional correlative constructions’ rather than ‘comparative conditional constructions’.

nñmñ m n ɿ n u

2.1.2 ‘*Yuè*’ expressing a proportional relationship of two variables

‘*Yuè*’ can only be used to express a proportional proposition consisting of two variables, not more than two. Though there are sentences containing more than two *yuè*’s, they express a correlative relationship of two complex variables. That is, some variables are

² The same phenomenon is found in English as well.

coordinated. Compare (13)a–h. On the surface, there seems to be three variables, *lᠢᠨᠳᠦ ᠨᠵᠢᠮᠬᠬᠢᠬᠡᠭᠢᠮᠠᠳᠤ ᠰᠢᠮᠤ ᠨᠨᠶᠠᠮᠪᠨ* and *ᠬᠢᠨ ᠰᠢᠨᠶᠢ ᠠᠬᠢᠨ ᠨᠪᠢᠵᠢᠮᠤ ᠶᠢᠬᠡ ᠠᠰᠢᠮᠤᠨ*. In actuality, there are only two variables, that is, *lᠢᠨᠳᠦ ᠰᠢᠮᠤ* and *ᠬᠢᠨ ᠰᠢᠨᠶᠢ ᠠᠬᠢᠨ ᠵᠢᠨᠢᠨ ᠠᠰᠢᠮᠤᠨ*. *ᠠᠰᠢᠮᠤᠨ* is a coordinating structure. Semantically, it is anomalous to have any proportional relationship between *píng* and *ᠰᠢᠮᠤ*. Phonologically, there is a longer pause between *yuè píng yuè ᠬᠢᠨ* and *yuè ᠬᠢᠨ ᠰᠢᠨᠶᠢ ᠠᠬᠢᠨ* than the pause between *yuè píng* and *yuè ᠰᠢᠮᠤᠨ*. Syntactically, *yuè píng yuè ᠰᠢᠮᠤᠨ* may appear in a conditional clause while *yuè ᠬᠢᠨ ᠰᠢᠨᠶᠢ ᠠᠬᠢᠨ* occurs in the consequence clause. Besides, *yuè píng yuè ᠰᠢᠮᠤᠨ* may occur in a complex NP while *yuè ᠬᠢᠨ ᠰᠢᠨᠶᠢ ᠠᠬᠢᠨ* is in the predicate.

ᠨᠠᠵᠢᠮᠤᠨ ᠨᠢ ᠮᠤᠨ ᠠᠨᠳᠦ ᠮᠤᠨ ᠰᠢᠮᠤᠨ ᠮᠤᠨ ᠬᠢᠨ
 ᠰᠢᠨᠶᠢ ᠠᠬᠢᠨ
 road more smooth more wide more good drive car
 ‘The smoother and wider a road is, the easier for drivers to drive on it.’

ᠤᠨ ᠮᠤᠨ ᠮᠤᠨ ᠠᠨᠳᠦ ᠮᠤᠨ ᠬᠢᠨ ᠰᠢᠨᠶᠢ ᠠᠬᠢᠨ
 road more smooth more good drive car
 ‘The smoother a road is, the easier for drivers to drive on it.’

ᠠᠨ ᠮᠤᠨ ᠮᠤᠨ ᠰᠢᠮᠤᠨ ᠮᠤᠨ ᠬᠢᠨ ᠰᠢᠨᠶᠢ ᠠᠬᠢᠨ
 road more wide more good drive car
 ‘The wider a road is, the easier it is to drive.’

ᠠᠨ ᠠᠵᠢᠮᠤᠨ ᠮᠤᠨ ᠠᠨᠳᠦᠨ ᠮᠤᠨ ᠰᠢᠮᠤᠨ ᠮᠤᠨ ᠬᠢᠨ
 ᠰᠢᠨᠶᠢ ᠠᠬᠢᠨ
 road more smooth more wide more good drive car

ᠪᠢᠨ ᠮᠤᠨ ᠮᠤᠨ ᠠᠨᠳᠦ ᠳᠢᠮᠤᠨ ᠮᠤᠨ ᠰᠢᠮᠤᠨ ᠮᠤᠨ
 ᠬᠢᠨ ᠰᠢᠨᠶᠢ
 road more smooth and more wide more good drive
 car
 ‘The smoother and wider a road is, the easier for drivers to drive on it.’

ᠲᠢᠨ ᠠᠵᠢᠮᠤᠨ ᠮᠤᠨ ᠠᠨᠳᠦ ᠳᠢᠮᠤᠨ ᠮᠤᠨ ᠰᠢᠮᠤᠨ ᠳᠢᠮᠤᠨ ᠮᠤᠨ

knh snf
road more smooth and more wide and more good drive
okm
car

dn m mnhjk m.n lnd m.n smn vfn
m.n knh
road if more smooth more wide then more good
snf okm
drive car

'The smoother and wider a road is, the easier for drivers to drive on it.'

kn 3n lnd m.n sm pb zn m.n
knh snf okm
more smooth more wide RC road more good drive car
'Roads which are smoother and wider are easier to drive on.'

Coordinate consequence clauses are also possible, as shown in (14).

ᠨᠠᠭᠤᠯᠠᠭᠤ ᠨᠠᠭᠤᠯᠠᠭᠤ ᠮᠠᠨᠤ ᠫᠤ ᠫᠤ ᠪᠣ ᠪᠣ ᠠᠨᠠᠭᠤ ᠮᠠᠨᠤ ᠮᠠᠨᠤ ᠷᠢᠪᠢᠨ
 ᠮᠠᠨᠤ
 position more big RC person more have money also
 ᠮᠠᠨᠤ ᠮᠠᠨᠤ ᠵᠢᠬᠢᠨ
 more have power
 ‘People who take a higher position are richer and more powerful.’

2.2 Types of the constructions

There are three types of the ‘*yuè... yuè...*’ constructions. The first type are sentences with complex NP as subjects, with the first *yuè* (henceforth, *yuè₁*) in the subject and the second *yuè* (henceforth, *yuè₂*) in the predicate. See (15). In the second type, *yuè₁* appears in the topic portion and *yuè₂* in the comment part of a sentence, as shown in (16). Finally, the construction may consist of two clauses, one subordinate to the other, with the marker *yuè* occurring in each clause. See (17).

ᠨᠠᠭᠤᠯᠠᠭᠤ ᠵᠠᠨᠤ ᠰᠢᠮᠤ ᠫᠣ ᠯᠠᠨᠳᠠᠨᠤ ᠮᠠᠨᠤ ᠬᠢᠨᠬᠣᠬᠢᠨ
 more sweet RC apple more delicious
 ‘The sweeter an apple is, the more delicious it is.’

ᠨᠠᠭᠤᠯᠠᠭᠤ ᠵᠠᠨᠤ ᠰᠢᠮᠤ ᠫᠣ ᠯᠠᠨᠳᠠᠨᠤ ᠨᠢ ᠮᠠᠨᠤ ᠢᠨᠬᠢᠨᠠᠨᠨᠢ
 more sweet RC apple I more like
 ‘The sweeter an apple is, the more I like it.’

ᠨᠠᠭᠤᠯᠠᠭᠤ ᠤᠨᠤ ᠮᠠᠨᠤ ᠵᠢᠬᠢᠨᠳᠠᠨᠢ ᠨᠢ ᠮᠠᠨᠤ ᠳᠢᠨᠢᠮᠠᠨᠳᠠᠨᠢ
 you more angry (s)he more happy
 ‘The angrier you are, the happier (s)he becomes.’

2.2.1 Sentences with *yuè₁* in the subject and *yuè₂* in the predicate

The first type of the ‘*yuè...yuè...*’ constructions are sentences with complex NP as subjects, with *yuè₁* in the subject and *yuè₂* in the predicate part. Note that *yuè₂* might occur in a complement which is a part of the predicate, as (18)b shows.

ᠨᠠᠭᠤᠯᠠᠭᠤ ᠵᠠᠨᠤ ᠨᠠᠨᠤ ᠵᠢᠨᠢᠰᠢ ᠫᠣ ᠪᠣ ᠠᠨᠠᠭᠤ ᠮᠠᠨᠤ ᠮᠠᠨᠢᠰᠢ
 ᠫᠣ ᠣᠬᠢᠨᠢ
 more late come RC person more not DE eat
 ‘The later one comes, the less food (s)he can eat.’

ᠤᠨᠤ ᠰᠢᠨᠢ ᠮᠠᠨᠤ ᠰᠢᠨᠢᠰᠢ ᠫᠣ ᠪᠣ ᠰᠢᠮᠠᠨᠢ ᠨᠢ
 ᠮᠠᠨᠤ ᠫᠣ ᠫᠣ ᠪᠣ ᠠᠨᠠᠭᠤᠨᠢ
 run more fast RC person may take more big RC prize
 ‘The faster one runs, the bigger prize (s)he may get.’

pᠢᠨᠳᠤ jkᠢᠮᠤ
 (s)he book read DE more many more not understand thing
 ‘The more he read, the less sensible he became.’

oᠨ aᠨᠳᠠᠨᠲᠤ ᠮᠤᠨ ᠵᠢᠨ ᠮᠤᠨ ᠳᠤᠮᠤ
 house more large more expensive
 ‘The larger a house is, the more expensive it is.’

We claim, however, that the ‘*yuè...yuè...*’ constructions are not coordinate structures. First, the constructions in question allow backward pronominalization, but coordinate structures disallow it. Compare (22) and (23): both (22)a, a ‘*yuè...yuè...*’ construction, and (22)b, a conditional sentence, allow backward pronominalization, while (23)a–c reveal that coordinate constructions allow forward pronominalization only.

ᠨᠠᠮᠤᠨᠢ ᠤᠨ ᠮᠤᠨ ᠤᠨ ᠵᠢᠨ ᠨᠢ ᠬᠤᠮᠠᠨᠳᠤᠵᠢᠨ
 ᠮᠤᠨ
 you more not pay-attention-to him/her Zhangsan more
 ᠨᠠᠮᠤᠳᠤᠮᠤ
 unhappy
 ‘The less attention you pay to him, the more unhappy Zhangsan feels.’

ᠤᠨ ᠤᠨ ᠮᠤᠨᠬᠢᠵᠢᠨ ᠤᠨ ᠵᠢᠨ ᠨᠢ ᠬᠤᠮᠠᠨᠳᠤᠵᠢᠨ
 ᠬᠤᠨ ᠬᠢᠮᠤ
 you if not pay-attention-to him/her Zhangsan will very
 ᠨᠠᠮᠤᠳᠤᠮᠤ
 unhappy
 ‘If you don’t pay attention to him, Zhangsan will be very unhappy.’

ᠨᠠᠮᠤᠨᠢ ᠤᠨ ᠢᠨᠬᠤᠮᠤ ᠬᠤᠮᠠᠨᠳᠤᠵᠢᠨ_f ᠬᠢᠨᠵᠢᠨ ᠨᠢᠮᠤᠨ
 ᠨᠢ
 you like Zhangsan or dislike him
 ‘Do you like Zhangsan_i or dislike him_i?’

ᠤᠨ ᠤᠨ ᠨᠢ ᠨᠢ ᠬᠢᠨᠵᠢᠨ ᠨᠢᠮᠤᠨ ᠨᠢ
 you love him or hate him
 ‘You love him_i? Or hate him_i?’

oᠨ ᠨᠤᠨ ᠨᠢ ᠨᠢ ᠬᠢᠨᠵᠢᠨ ᠨᠢᠮᠤᠨ
 ᠬᠤᠮᠠᠨᠳᠤᠵᠢᠨ_f
 you love him or hate Zhangsan
 ‘*You love him_i or hate Zhangsan_i?’

Second, coordinate structures are syntactic islands. The movement of a conjunct must follow the ‘across-the-board’ rule application. Example (24)b is ungrammatical because it violates the constraint. On the other hand, the ‘*yuè...yuè...*’ construction is free from the

constraint, as (24)b shows.

ㄞㄞㄞㄞ ㄊㄨㄣˋ ㄈㄢ ㄇㄢ ㄖㄣˊ ㄗㄅ ㄇㄢ ㄈㄨㄣˋ ㄈㄢ ㄊㄎㄢㄩㄣˋ ㄓㄢ ㄗㄈㄣ
 ㄋㄢ ㄈㄢ ㄨㄚㄣ
 yesterday I go ASP Taipei Zhangsan stay at home
 ‘I went to Taipei and Zhangsan stayed at home yesterday.’

ㄨㄣˋ ㄊㄨㄣˋ ㄈㄢ ㄊㄎㄢㄩㄣˋ ㄈㄢ ㄇㄢ ㄖㄣˊ ㄗㄅ ㄇㄢ ㄈㄨㄣˋ ㄈㄢ
 ㄗㄈㄣ ㄋㄢ ㄈㄢ ㄨㄚㄣ
 yesterday Zhangsan_i I go ASP Taipei stay at home
 ‘*Yesterday Zhangsan_i I went to Taipei and t_i stayed at home yesterday.’

ㄞㄞㄞㄞ ㄇㄢ ㄇㄢ ㄇㄢ ㄇㄢ ㄨㄢ ㄇㄢ ㄇㄢ ㄓㄎㄢㄩㄣˋ ㄋㄢ
 weather more hot I more sleep-not-well
 ‘The hotter it is, the more difficult it is for me to have a sound sleep.’

ㄨㄣˋ ㄇㄢ ㄈㄢ ㄇㄢ ㄇㄢ ㄨㄢ ㄈㄢ ㄇㄢ
 ㄓㄎㄢㄩㄣˋ ㄋㄢ
 I_i weather more hot more sleep-not-well
 ‘The hotter it is, the more difficult it is for me to have a sound sleep.’

Third, the order of the conjuncts in a coordinate structure is free, but the order of the two parts of the ‘yuè...yuè...’ constructions is not. Compare (26) and (27): Though (26)b is grammatical, its meaning is different from that of (26)a.

ㄞㄞㄞㄞ ㄊㄨㄣˋ ㄈㄢ ㄇㄢ ㄖㄣˊ ㄗㄅ ㄇㄢ ㄈㄨㄣˋ ㄈㄢ ㄊㄎㄢㄩㄣˋ ㄓㄢ ㄗㄈㄣ
 ㄋㄢ ㄈㄢ ㄨㄚㄣ
 yesterday I go ASP Taipei Zhangsan stay at home
 ‘I went to Taipei and Zhangsan stayed at home yesterday.’

ㄨㄣˋ ㄊㄨㄣˋ ㄈㄢ ㄊㄎㄢㄩㄣˋ ㄓㄢ ㄗㄈㄣ ㄋㄢ ㄈㄢ ㄨㄚㄣ ㄇㄢ
 ㄖㄣˊ ㄗㄅ ㄇㄢ ㄈㄨㄣˋ ㄈㄢ
 yesterday Zhangsan stay at home I go ASP Taipei
 ‘Zhangsan stayed at home and I went to Taipei yesterday.’

ㄞㄞㄞㄞ ㄇㄢ ㄇㄢ ㄈㄢ ㄋㄢ ㄋㄢ ㄋㄢ ㄇㄢ ㄗㄈㄢ
 ㄊㄢ ㄋㄢ
 I more dislike him/her (s)he more come bother me
 ‘The more I dislike him/her, the more frequently (s)he comes to bother me.’

ㄨㄣˋ ㄇㄢ ㄇㄢ ㄗㄈㄢ ㄊㄢ ㄋㄢ ㄇㄢ ㄇㄢ
 ㄋㄢ ㄋㄢ
 (s)he more come bother me I more dislike him/her
 ‘The more frequently (s)he comes to bother me, the more I dislike him/her.’

Furthermore, as McCawley correctly observed, the ‘*yuè...yuè...*’ constructions are possible to be conditional sentences, with *yuè*₁ occurs in the antecedent clause and *yuè*₂ in the consequent clause. The conjuncts of a coordinate structure cannot occur in such places.

ᠨᠠᠵᠢᠨᠠᠵᠢ ᠤᠨ ᠮᠤᠨ ᠵᠢᠭᠤᠨᠳᠢᠷᠢᠮᠤ ᠨᠢ ᠮᠤᠨ ᠳᠠᠬᠢᠵᠢᠮᠤᠳᠤᠨ
 you more angry (s)he more happy
 ‘The angrier you are, the happier (s)he is.’

ᠤᠨ ᠤᠨ ᠮᠠᠨᠬᠢᠵᠢᠨ ᠮᠤᠨ ᠵᠢᠭᠤᠨᠳᠢᠷᠢᠮᠤ ᠨᠢ ᠪᠢᠨ ᠮᠤᠨ
 ᠳᠠᠬᠢᠵᠢᠮᠤᠳᠤᠨ
 you if more angry (s)he then more happy
 ‘The angrier you are, the happier (s)he is.’

ᠨᠠᠵᠢᠨᠠᠵᠢ ᠬᠤᠨ ᠪᠢᠨ ᠣᠭᠤᠨᠵᠢᠭᠤᠨ ᠵᠢᠨᠢᠨᠢᠨᠢᠨ ᠬᠢᠨᠢᠨ
 ᠪᠢᠨᠢᠨᠢᠨ ᠮᠢᠨᠢᠨ
 this CL shirt material good price furthermore
 ᠳᠠᠨᠳᠢᠵᠢᠮᠤᠳᠤᠨ
 reasonable
 ‘The material of this shirt is good and furthermore, the price is reasonable.’

ᠤᠨ ᠨᠬᠢᠨ ᠪᠢᠨ ᠣᠭᠤᠨᠵᠢᠭᠤᠨ ᠵᠢᠨᠢᠨᠢᠨᠢᠨ ᠮᠠᠨᠢᠵᠢᠨ
 ᠬᠢᠨᠢᠨ ᠪᠢᠨᠢᠨᠢᠨ ᠪᠢᠨᠢᠨ
 this CL shirt material if good price then
 ᠮᠢᠨᠢᠨ ᠳᠠᠨᠳᠢᠵᠢᠮᠤᠳᠤᠨ
 furthermore reasonable
 ‘*If the material of this shirt is good, and then, furthermore, the price is reasonable.’

Besides, in Chinese conditional clauses, it is possible to have an NP instead of a clause as the conditional part, as (30)b shows. It is also grammatical to have a complex NP as the antecedent part of a ‘*yuè...yuè...*’ construction.

ᠨᠠᠵᠢᠨᠠᠵᠢ ᠤᠨ ᠮᠤᠨ ᠵᠢᠭᠤᠨᠳᠢᠷᠢᠮᠤ ᠨᠢ ᠮᠤᠨ ᠳᠠᠬᠢᠵᠢᠮᠤᠳᠤᠨ
 you more angry (s)he more happy
 ‘The angrier you are, the happier (s)he is.’

ᠤᠨ ᠤᠨ ᠮᠤᠨ ᠵᠢᠭᠤᠨᠳᠢᠷᠢᠮᠤ ᠫᠤ ᠵᠢᠨᠢᠨᠢᠨ ᠨᠢ ᠮᠤᠨ
 ᠳᠠᠬᠢᠵᠢᠮᠤᠳᠤᠨ
 you more angry DE time (s)he more happy
 ‘The angrier you are, the happier (s)he is.’

ᠨᠠᠵᠢᠨᠠᠵᠢ ᠨᠠᠮᠤᠨ ᠮᠠᠨᠢᠨᠢᠨᠢᠨ ᠮᠠᠨᠢ ᠢᠨ ᠮᠠᠨᠢᠨ ᠮᠢᠨᠢᠨ
 ᠮᠠᠨᠢ ᠵᠢᠨᠢᠨᠢᠨᠢᠨ
 mother everyday must wash clothes and must cook

k_n m_nndz_n
 very busy
 ‘Mom has to do laundries and cook everyday. She is very busy.’

u_n n_nm_n m_nf`f_n m_nh i_n m_nt_n p_b
 jk_nkn_n m_nf_n
 mother everyday must wash clothes DE time and
 m_nh jk_nht_n k_n m_nndz_n
 must cook very busy

Therefore, the ‘yuè...yuè...’ constructions are not coordinate structures. Like conditional constructions, they consist of a subordinate clause and a main clause.

2.2.4 Generalized Topic construction

Like other correlatives such as *n_nf_nn_nm_nn_n* ‘no matter...’ and *yì...jiù...* ‘no sooner than’, the second element of the pair, *yuè*₂, cannot precede the first one, *yuè*₁.

n_nm_n [e_nf_nr_n m_nh [w_n] [m_nh [p_n] w_n]
 jk_nn_nkn_n
 weather more hot more many person sleep-not-well
 ‘The hotter the weather is, the more people cannot sleep well.’

u_n n_nh_n [p_n] w_n] _f [`f_nr_n m_nh [w_n]
 b_f jk_nn_nkn_n
 more many person weather more hot sleep-not-well

n_nm_n e_nf_nr_n n_nf_n w_n n_n m_nh
 jk_nn_np_nkn_n
 weather more hot I too sleep-can-well
 ‘No matter how hot it is, I can sleep well.’

u_n n_n m_nh jk_nn_np_nkn_n `f_nr_n n_nf_n
 w_n
 I too sleep-can-well weather more hot

n_nm_n e_nf_nr_n m_nh w_n n_n v_nf_n
 jk_nn_nkn_n
 weather as-soon-as hot I then sleep-not-well
 ‘I cannot sleep well as soon as the weather becomes hot.’

u_n n_n v_nf_n jk_nn_nkn_n `f_nr_n m_nh
 w_n
 I then sleep-not-well weather as-soon-as hot

Note that *yuè*₁ cannot occur in the main predicate of a sentence, as shown in (35)a and (36)a. The modificational scope of *yuè*₁ cannot contain that of *yuè*₂.⁴

- (35)a. *Tä yuè₁ [páo de [yuè₂ [lèi]]].
 (s)he more run DE more tired
 ун ен м.нн [лн] м.нн [зн]н
 (s)he more run more tired
 ‘The more (s)he runs, the more tired (s)he becomes.’
- nnnnn nn m.нн [нк.нн мнф [[м.нн [д.н]
 pb] pmdif]н
 I more like buy more expensive RC thing
 ун [[м.нн [д.н] pb] pmdif]f нн м.нн [нк.нн
 мнф бf]н
 more expensive RC thing I more like buy
 ‘The more expensive a thing is, the more I like to buy it.’

Summarizing our observation, the distributions of *yuè*₁ and *yuè*₂ are as follows: *Yuè*₁ and *yuè*₂ can appear in the subject and the predicate, the topic and the comment as well as in a conditional/temporal and the consequence clause respectively.

(37) the distribution of *yuè*₁ and *yuè*₂

yuè ₂ / yuè ₁		Main subject	Main predicate		Topic	conditional/temporal clause
			VP	Object		
Main subject		—	+	+	—	—
Main predicate	VP	—	—	—	—	—
	Object	—	—	—	—	—
Topic		+	+	+	—	—

⁴ Jo-wang Lin (pc.) suggests that there is a positional constraint governing the relative position between *yuè*₁ and *yuè*₂ in that ‘*yuè*₁’ cannot c-command ‘*yuè*₂’.

conditional/temporal clause	+	+	+	-	-
-----------------------------	---	---	---	---	---

If we follow the analysis put forth by Tsao (1990) in which subject is regarded as a special case of topic, a temporal or a conditional clause is also topic, then we can generalize the above situations by saying that *yuè*₁ occurs in the topic part and *yuè*₂ occurs in the comment part of a sentence.

(38) The distribution of *yuá*₁ and *yuá*₂ (revised)

		<i>yuè</i> ₂	COMMENT			TOPIC
			Main subject	Main predicate		
<i>yuè</i> ₁				VP	Object	
			VP	Object		
COMMENT	Main predicate					
TOPIC	Topic					
	Main subject					
	conditional/temporal clause					

2.2.5 *yuè lái yuè*...

'*Yuè lái yuè*...' construction is a special subtype of the *yuè...yuè*...construction consisting of two clauses. Deictic verb *lái* 'come' in this construction always yields a temporal reading.

nnnnn θ.nvn̄n jk̄ndm̄n m̄.n̄ zn̄f m̄.n̄ nnn̄n.n̄
zbn̄

Recently business more come more difficult-do LE
'It is getting more and more difficult to do business these days.'

uṅ θk̄ndj̄m̄ sn̄ pb̄ m̄.n̄ zn̄f m̄.n̄ zn̄kn̄f
zbn̄

Zhangsan cough DE more come more heavy LE
'Zhangsan is coughing harder and harder.'

There are several differences between the '*yuè lái yuè*...' construction and the other bi-clausal '*yuè...yuè*...' construction in general. First, the subject of the deictic verb *lái* must be identical to that of the main clause, while the typical bi-clausal type may have different subjects in the two clauses. Compare (40)b and (41).

ᠠᠶᠢᠨᠠᠶᠢᠨᠠᠶᠢᠨ ᠰᠢᠨᠬᠢᠮᠠᠨᠰᠢ ᠮᠠᠨ ᠵᠢᠨᠰᠢ ᠮᠠᠨ ᠯᠢᠨᠬᠢᠵᠢᠮᠠᠨᠳᠤ ᠵᠢᠨᠢ
Xiaomei more come more beautiful LE
'Xiaomei is getting more and more beautiful.'

ᠤᠨ ᠨᠢᠰᠢᠨᠬᠢᠮᠠᠨᠰᠢ ᠮᠠᠨ ᠵᠢᠨᠰᠢ ᠨᠢ ᠮᠠᠮᠠᠨᠠ ᠮᠠᠨ
ᠯᠢᠨᠬᠢᠵᠢᠮᠠᠨᠳᠤ ᠵᠢᠨᠢ
Xiaomei more come her mother more beautiful LE

ㄇㄞㄞㄞㄞ ㄕㄨㄢˋ ㄇㄞㄞㄞ ㄇㄞㄞ ㄆㄞㄞ ㄇㄞㄞ ㄌㄨㄞˋ ㄕㄨㄞˋ ㄗㄞㄞ
 Xiaomei more big more beautiful LE

‘The older Xiaomei grows, the more beautiful she becomes.’

ㄨㄥˋ ㄕㄨㄢˋ ㄇㄞㄞㄞ ㄇㄞㄞ ㄆㄞㄞ ㄨㄞˋ ㄨㄞㄞㄞ ㄇㄞㄞㄞ ㄇㄞㄞ
 rㄞㄞㄞㄞㄞㄞ

Xiaomei more big her father mother more relaxed

‘The older Xiaomei grows, the more relaxed her parents feel.’

In fact, no elements except pause particles may appear between *yuè₁ lái* and *yuè₂*, as (42)a–c show.

ㄇㄞㄞㄞㄞ ㄒㄜˋ ㄕㄨㄞˋ ㄌㄨㄞˋ ㄕㄨㄞˋ ㄇㄞㄞ ㄗㄞㄞ ㄇㄞㄞ ㄌㄨㄞˋ ㄕㄨㄞˋ
 ㄗㄞㄞ

Zhang Miss more come more beautiful LE

‘Miss Zhang is getting more and more beautiful.’

ㄨㄥˋ ㄒㄜˋ ㄕㄨㄞˋ ㄌㄨㄞˋ ㄕㄨㄞˋ ㄇㄞㄞ ㄗㄞㄞ ㄇㄞㄞ ㄌㄨㄞˋ ㄕㄨㄞˋ
 ㄌㄨㄞˋ ㄕㄨㄞˋ ㄗㄞㄞ

Zhang Miss more come PAUSE more beautiful LE

‘Talking about Miss Zhang, she is getting more and more beautiful.’

ㄛㄞ ㄨㄞˋ ㄕㄨㄞˋ ㄌㄨㄞˋ ㄕㄨㄞˋ ㄇㄞㄞ ㄗㄞㄞ ㄨㄞˋ ㄇㄞㄞ
 ㄌㄨㄞˋ ㄕㄨㄞˋ ㄗㄞㄞ

Zhang Miss more come she more beautiful LE

What is the internal structure of the ‘*yuè lái yuè...*’ construction? What does the deictic verb *lái* subcategorize? There are at least three analyses.

The first analysis is treating the ‘*yuè lái yuè...*’ construction as a special case of serial VP constructions. By analyzing the ‘*yuè lái yuè...*’ construction as a serial VP construction we may account for the fact that *lái* and the main predicate have identical subjects since it is a characteristic of all serial VP constructions. However, unlike other serial VP constructions, the deictic verb *lái* in the ‘*yuè lái yuè...*’ construction has no semantic restriction with its subject. Furthermore, although the subject of the ‘*yuè lái yuè...*’ sentence always appears before ‘*yuè lái*’ as typical serial VP constructions do, the subject of a corresponding construction in Hòló Taiwanese may appear before or after the deictic verb, as shown in (43).

ㄇㄞㄞㄞㄞ ㄇㄞ ㄕㄨㄞˋ ㄕㄨㄞˋ ㄕㄨㄞˋ ㄇㄞㄞ ㄗㄞㄞ ㄨㄞㄞㄞ

more go situation will more bad

‘The situation is getting worse.’

ㄨㄥˋ ㄌㄨㄞˋ ㄕㄨㄞˋ ㄕㄨㄞˋ ㄇㄞㄞ ㄗㄞㄞ ㄨㄞㄞㄞ

situation more go will more bad
 ‘The situation is getting worse.’

The second analysis is that ‘*yuè lái yuè*’ is a lexicalized expression, which functions as an adverb. However, while it is true that ‘*yuè lái yuè*’ is a quite frozen form, it is definitely not a constituent. Besides, if we treat *yuè lái yuè* as a lexical item and does not analyze its internal structure, we miss some important generalizations that we can otherwise capture between the ‘*yuè lái yuè...*’ construction on the one hand and other ‘*yuè...yuè...*’ constructions on the other. For example, like other ‘*yuè...yuè...*’ constructions, pause particles such as *a, ne* may appear between *yuè₁ lái* and *yuè₂*. Compare (44) and (45).

ᠨᠠᠨᠠᠨᠠᠨ ᠡᠨ ᠮᠠᠨ ᠮᠠᠨᠳ ᠮᠠᠨ ᠮᠠᠨ ᠮᠠᠨ ᠪᠠᠨᠳᠠᠨ
 (s)he more busy more have energy
 ‘The busier (s)he is, the more energetic (s)he becomes.’

ᠤᠨ ᠡᠨ ᠮᠠᠨ ᠮᠠᠨᠳ ᠢᠨ ᠮᠠᠨ ᠮᠠᠨ
 ᠪᠠᠨᠳᠠᠨ
 (s)he more busy PAUSE more have energy
 ‘The busier (s)he is, the more energetic (s)he becomes.’

ᠨᠠᠨᠠᠨᠠᠨ ᠡᠨ ᠮᠠᠨ ᠵᠢᠨᠮ ᠮᠠᠨ ᠢᠰᠢᠨᠬᠢᠷᠠᠮᠠᠨ
 (s)he more come more stingy
 ‘(S)he is getting more and more stingy.’

ᠤᠨ ᠡᠨ ᠮᠠᠨ ᠵᠢᠨᠮ ᠢᠨ ᠮᠠᠨ ᠢᠰᠢᠨᠬᠢᠷᠠᠮᠠᠨ
 (s)he more come PAUSE more stingy
 ‘(S)he is getting more and more stingy.’

We will propose a third analysis treating ‘*yuè lái*’ as an idiomatized temporal clause adjoined to the adjunct position of an IP. Compare (46)a and (46)b.

ᠨᠠᠨᠠᠨᠠᠨ ᠬᠠᠭᠠᠨᠳᠠᠵᠢᠨ [ᠮᠠᠨ ᠵᠢᠨᠮ] ᠮᠠᠨ ᠤᠨ ᠢᠨᠬᠠᠨ ᠠᠨ ᠢᠨ
 ᠮᠠᠵᠢᠨ ᠨ ᠪᠢᠨᠠᠨ
 Zhangsan more come more not like go Lisi he home
 ‘Zhangsan is getting more and more unwilling to go to Lisi’s house.’

ᠤᠨ ᠬᠠᠭᠠᠨᠳᠠᠵᠢᠨ [ᠷᠠᠮᠠᠨᠰᠢᠬᠢᠭᠢᠨ ᠫᠤ ᠫᠤ ᠪᠠᠨᠸᠠᠨ ᠮᠠᠨ ᠪᠠᠨ]
 ᠮᠠᠨ ᠪᠠᠨᠨᠠᠭᠠᠨᠳᠠᠵᠢᠨ
 Zhangsan final-exam RC day more close more nervous
 ‘As the day for final examinations approaches, Zhangsan gets more and more nervous.’

There are differences between ‘*yuè lái*’ and typical temporal clauses, however. First, the temporal *lái* cannot form an independent sentence, while temporal clauses in general can. Compare (47) and (48).

ㄉㄞㄉㄞㄉㄞㄉㄞ ㄞㄉㄞㄞㄞㄞㄞㄞㄞㄞㄞㄞ ㄐㄎㄞ ㄆㄅ ㄨㄞㄉㄞ ㄈ ㄨㄞㄞ ㄗㄅㄞ
 final-exam RC day close LE
 ‘The day for final examinations is approaching.’

ㄉㄞㄉㄞㄉㄞㄉㄞ ㄉㄞㄞㄞㄞㄞㄞㄞㄞㄞㄞ ㄈㄞㄞㄞ ㄗㄞㄈ ㄗㄅㄞ⁵
 Time come LE
 ‘(Time) is coming.’

Besides, it is not common for a temporal phrase to be the subject of a deictic verb *lái*. In cases like (50)a, it is plausible to proposed that *okim`fim* ‘spring’ is personified and *lái* denotes moving of a ‘person’ rather than that of time.

ㄉㄞㄉㄞㄉㄞㄉㄞ ㄞㄉㄞㄞㄞㄞㄞㄞㄞㄞㄞㄞ ㄐㄅ ㄨㄞㄉㄞ ㄈ ㄞㄞㄞ ㄗㄞㄈ
 zㄅㄞ
 final-exam RC day will come LE
 ‘The day for final examinations is coming.’

ㄨㄞㄞ ㄞㄉㄞㄞㄞㄞㄞㄞㄞㄞㄞㄞ ㄐㄅ ㄨㄞㄉㄞ ㄈ ㄞㄞㄞ ㄆㄞㄞ ㄆㄞㄞ
 zㄅㄞ
 final-exam RC day will arrive LE
 ‘The final examination is coming.’

ㄉㄞㄉㄞㄉㄞㄉㄞ ㄞㄎㄞㄞ`ㄈㄞㄞ ㄞㄞㄞ ㄗㄞㄈ ㄗㄅㄞ
 Spring will come LE
 ‘Spring is coming.’

ㄨㄞㄞ ㄞㄎㄞㄞ`ㄈㄞㄞ ㄞㄞㄞ ㄆㄞㄞ ㄗㄅㄞ
 Spring will arrive LE
 ‘Spring is coming.’

Furthermore, *yuè lái*, unlike other temporal clauses, cannot appear at the initial position of a sentence.⁶

ㄉㄞㄉㄞㄉㄞㄉㄞ ㄞ[ㄗㄞㄞ ㄗㄞㄈ] ㄲㄎㄞㄞㄞㄞㄞㄞ ㄞㄞㄞ ㄨㄞㄞ ㄞㄎㄞㄞㄞ ㄞㄞ ㄞㄞㄞ
 more come Zhangsan more not like go Lisi
 `ㄞ ㄨㄈㄞㄞ
 he home

ㄨㄞㄞ [ㄞㄉㄞㄞㄞㄞㄞㄞㄞㄞㄞㄞ ㄞㄞㄞ ㄨㄞㄞ] ㄲㄎㄞㄞㄞㄞㄞㄞ ㄞㄞㄞ

⁵ Since Chinese is a pro-drop language, the sentence ‘*lái le*’ is grammatical if a covert subject is present. Note that in such cases, the sentence is not interpreted as a temporal clause.

⁶ It is very interesting to observe that the ‘*lú khì lú*’ construction in Hǎi-ló Taiwanese may appear at sentence initial position, as shown in (43) above.

on n3.n `fmrn m.n wn n jk.mun.knh
 more weather more hot I sleep-not-well

C. J. Tang (1990) observes that temporal expressions must have a wider scope than other adjuncts of the same level, as (54) shows.

nnn en un dnf nnf nk n mndb jkn
 nk.km pbmnd
 (s)he not should at this one-CL time cruel-DE/use
 dnfn pn n
 stick beat me
 '(S)he shouldn't beat me cruelly/with a stick now.'

un nen un dnf nk.km pbmnd dnfn
 nnf nk n mndb
 (s)he not should cruel-DE/use stick at this one-CL
 jkn pn n
 time beat me

If Tang (1990)'s observation is right, (55)b is ungrammatical because temporal expressions must take a wider scope than 'yuè.'

nnn θkndjn mnd`fm m.n nh znf m.n
 kh
 Zhangsan tomorrow more early come more good
 'The earlier Zhangsan comes tomorrow, the better.'

un nθkndjn m.n mnd`fm nh znf m.n
 kh
 Zhangsan more tomorrow early come more good

'Yuè' may not appear between the negative form 'bù' and the VP.

nnn θ.n jkndm m.n mnf m.v vndm
 m.n un wndm
 do business more not have experience more not easy
 nk.m rfmn
 earn money
 'In business world, the less experienced one has, the more uneasy for him/her to earn money.'

un nθ.n jkndm m.n mnf m.v vndm
 un m.n
 do business more not have experience not more
 wndm nk.m rfmn
 easy earn money

‘*Yuè*’ may occur before or after *um* phrases and ‘*bèi*’ phrases.

ʌʌʌʌʌ ʌ ʌ ʌ ʌ ʌʌʌʌʌ ʌ ʌ ʌ ʌ
 ʌ ʌ
 you more slovenly others more not ba you see
 ʌʌʌ ʌʌʌ ʌʌ
 at eye in
 ‘The more slovenly you are, the more likely you will be slighted.’

b. ʌ ʌ ʌ ʌ ʌʌʌʌʌ ʌ ʌ ʌ ʌ
 ʌ ʌ ʌʌʌ ʌʌʌ ʌʌ
 you more slovenly others more ba you see not at eye in
 ‘The more slovenly you are, the more likely you will be slighted.’

ʌ ʌ ʌ ʌ ʌʌʌʌʌ ʌ ʌ ʌ ʌ
 ʌ ʌ ʌʌʌ ʌʌʌ ʌʌ
 you more slovenly others BA you more not see at eye in
 ‘The more slovenly you are, the more likely you will be slighted.’

ʌʌʌʌʌ ʌ ʌ ʌ ʌ ʌʌʌʌʌ ʌ ʌ ʌʌʌʌʌʌʌʌʌ
 ʌʌʌ
 you more slovenly then more BEI/give people
 ʌʌʌʌʌʌʌʌʌ
 see-not-high
 ‘The more slovenly you are, the more likely you’ll be looked down upon.’

ʌ ʌ ʌ ʌ ʌʌʌʌʌ ʌʌʌʌʌʌʌʌʌʌʌ ʌʌ
 ʌ ʌ
 you more slovenly then BEI/give people more
 ʌʌʌʌʌʌʌʌʌ
 see-not-high
 ‘The more slovenly you are, the more likely you’ll be looked down upon.’

2.4 Dependency and selectional restrictions

2.4.1 *yuè*₁ and *yuè*₂ are mutually dependent

‘*Yuè*’ appear obligatorily in the *yuè...yuè* constructions. *Yuè* cannot be omitted or substituted partly by its classical equivalent *yù*.

ʌʌʌʌʌ ʌ ʌ ʌ ʌʌʌʌʌʌ ʌ ʌ ʌ ʌʌʌʌʌʌ
 you more angry (s)he more happy
 ‘The angrier you are, the happier (s)he becomes.’

un nun jkmdrm `n m.n dnhydndn
 you angry (s)he more happy
 on nun m.n jkmdrm `n dnhydndn
 you more angry (s)he happy
 nnnn en m.n pn m.n lfzhzfmnd zbñ
 (s)he more old more beautiful LE
 ‘As she gets older, she becomes more beautiful.’
 un en m.n pn m.n lfzhzfmnd zbñ
 (s)he more old more beautiful LE
 ‘As she gets older, she becomes more beautiful.’
 on nen m.n pn m.n lfzhzfmnd zbñ
 (s)he more old more beautiful LE
 pn nen m.n pn m.n lfzhzfmnd zbñ
 (s)he more old more beautiful LE

The distance between *yuè*₁ and *yuè*₂ is unbound, as sentences in (61) show.

nnnn [[m m.n ink.n] pb] wñ [k.n m.n
 nñh znf]ñ
 I more like RC person will more early come
 ‘People who I like more will come earlier.’
 un [[[m m.n ink.n] pb] wñ] [m v fñ
 vñh [`n] [m.n
 I more like RC person I then ask him/her more
 nñh znf]]ñ
 early come
 ‘I ask those who I like more to come earlier.’

2.4.2. *yuè* and situation types

Smith(1991,1997) distinguishes five types of situation.⁷ They are state, activity, accomplishment, semelfactive, and achievement. *Yuè*₁ but not *yuè*₂ goes well with activities and semelfactives. Besides, none of them can occur in accomplishment and achievement situations.

⁷ Vendler (1967) was the first to classify verbs according to their situational types. It is argued that a larger unit such as the whole verbal phrase or the whole sentence rather than the verb alone is relevant in terms of situational types (Dowty (1979), Smith (1991, 1997), Hsiao (1992, 1993, 1995), and Tsao and Hsiao (2002), among others.)

on un v f m t n d n f v f n v f n p b n
 that CL house old-old DE
 ‘That house is quite old.’

p n n u n v f m t n d n f k m v f n v f n p b n
 that CL house very old-old DE

b n n u n v f m t n d n f u n n k n v f m
 v f n v f n p b n
 that CL house than this CL old-old DE

n n n n n a n d n f m n v f n m n n n n k n d z m n
 house more old more difficult clear
 ‘The older the house is, the more difficult it is to clear it.’

u n n a n d n f m n v f n v f n p b m n n n
 n k n d z m n
 house more old-old DE more difficult clear

Semantically, the reduplicated form of a predicate is not scalar any more though its base form is. Reduplication has the effect of making an adverb absolute rather than relative.

The feature ‘scalar’ seems to be relative, however. There are states which can be modified by *yuè* but not by . For example, *yào* ‘want’ and *huì* ‘will’ may take *yuè* as its adjunct but cannot take *k m* ‘very.’

n n n n n u n m n u n w n d n n r n n n n n m n
 m n h r n n
 you more not let me go play I more want go

u n 3 n s m n n z n p b w m m n
 k n o k n d d n d n
 more willing (work)-hard RC person more will succeed
 ‘People who are more willing to work hard are more likely to succeed.’

n n n n n n n k m m n h r n n n n
 I very want go play
 ‘I want to play very much.’

u n n 0 k n d j m k m k n o k n d d n d n
 Zhangsan very will succeed
 ‘*Zhangsan will succeed very much.’

n n n n n 3 n j k n k n h l n d m n m n d n f
 k n i f n d u m d m n d n
 more be good friend more should each-other help

natural consequence because accomplishments and achievements are bounded and thus not gradable.

你 thesis 更 写-完 更 有 时 间 准 备 考
你 thesis 更 写-完 更 有 时 间 准 备 考
你 更 有 时 间 thesis 更 写-完

‘The more pieces a cup is broken into, the harder it is to clean them up.’
你 更 洗 更 好
Clothes more wash clean more good
‘The cleaner clothes are washed, the better.’

on nun znnnnn km ifnnnnn zbn
 you thesis very write-finish LE
 nnnnnn nen mn jn mn mn mndn
 (s)he more die more have fame
 un nen mn mn mnd mn jn
 (s)he more have fame more die
 on nen km jn zbn
 (s)he very die LE
 ‘*(S)he is very dead.’

Yuè does not modify the VPs with adjuncts or complements of quantity or frequency. Compare (73) and (74).

nnnnnn θkndjn unnnn mn nfn zbn
 Zhangsan graduate one year LE
 ‘Zhangsan has graduated for one year.’
 un θkndjn mn nnh unnnn mn knhn
 Zhangsan more early graduate more good
 ‘The earlier Zhangsan graduates the better.’
 on nθkndjn mn nnh mn nfn unnnn
 mn knhn
 Zhangsan more early one year graduate more good
 nnnnnn n `n dndrn `n jn nfn zbn
 I play piano play three year LE
 ‘I have been playing the piano for three years.’
 un nndrn n mn `n mn mn inndrn
 piano I more play more have interest
 ‘The longer I play the piano, the more interested I get in it.’
 on nndrn n mn `n jn nfn mn
 mn inndrn
 piano I more play three year more have interest

Likewise, because a verb phrase with quantity or frequency adjuncts or complement has a fixed point in the scale of quantity or frequency, it is not gradable and cannot take *yuè* as an adjunct. Therefore, it is natural that *yuè* and the quantity or frequency adjuncts or complements are mutually exclusive.

To sum up, *yuè*₁ may modify scalar states and quantifiable activities, while *yuè*₂ modifies scalar states only. We might generalize that *yuè*₁ appear before ‘quantifiable’

unbounded situations. States and activities/semelfactives are unbounded while achievements and accomplishments are bounded. Bounded situations are not quantifiable because they contain information of the quantity inherently. A nongradable state is homogeneous, not scalar, and for that reason it is not quantifiable.

2.5 Summary

Summarizing the sections above, the characteristics of the *yuè...yuè...* constructions are:

The constructions are Topic-Comment constructions, with *yuè₁* in the topic portion and *yuè₂* in the comment part.

Yuè is an adjunct of a predicate.

Yuè can only be used to express proportional proposition consisting of two variables, not more than two.

Yuè₁ and *yuè₂* are mutually dependent, and the distance between *yuè₁* and *yuè₂* are unbound.

Yuè₁ modifies quantifiable unbounded situations including scalar states and quantifiable activities/semelfactives, but *yuè₂* modifies scalar states.

3. The ‘*xedii...tödii...*’ Construction in Mongolian

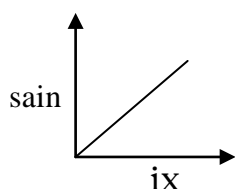
The correlative construction ‘*xedii...tödii...*’ in Mongolian has some striking similarities with its counterparts in other languages such as Latin and Chinese.

3.1 The semantics of the ‘*xedii...tödii...*’ constructions

The ‘*xedii...tödii...*’ construction has two readings. Like the ‘*èěě èěě*’ construction, it can express a link between two variables, as (75) illustrates. In this case, however, the value of the dependent variable Y always equals to that of the independent variable X, as shown in (75)b.

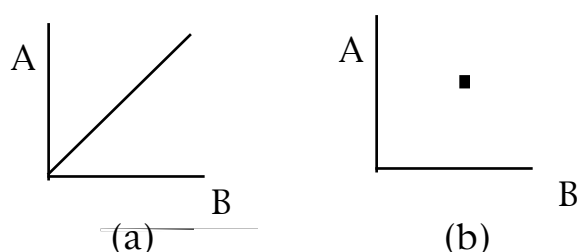
- (75)a. *xedii ix bol tödii sain.*
 how-much many TOPIC that-much good
 ‘The more the better.’

uᠨ ᠮ ᠨ ᠢ



Michaelis (1992:175) schematized the difference between the two readings of the proportional correlative constructions as (78). Mongolian ‘*xedii...tödii*’ constructions can be schematized as such, too. Note that both Latin *quanto* and Mongolian *xedii* mean ‘how much’, while *tanto* and *tödii* mean ‘that much’. The “how much...that much...” construction is a special case of the proportional correlative construction in general. If $a=1$ and $b=0$ in (12), then y always equals to x , as shown in (75)b and (78)a. In that case, the ration between x and y is 1. When we assign a fixed value to x in (75)b, we get the constant reading (78)b. Therefore, it is a natural consequence that the “how much...that much...” type proportional correlative constructions have two readings.

mmmm



(Michaelis (1992:175), figure 2)

3.2 The types of the ‘*xedii...tödii...*’ constructions

Like their counterpart in Chinese, the ‘*xedii...tödii...*’ constructions may consist of two parts, one subordinate clause and one main clause, with the marker *xedii* ‘how much’ and *tödii* ‘that much’ in the clause respectively, as (79) and (80) exemplify.¹⁰

(79) margaash ta xedii ert ir-vel, tödii sain.
tomorrow you how-much early come-if that-much good
‘Tomorrow the earlier you come, the better.’

(80) güilt-iin uraldaan-d xedii xurdan güi-vel,
running-GEN race-DAT how-much fast run-if
tödii ix shagnal av-na.
that-much big prize take-FUTURE
‘In running races the faster one runs, the bigger prize (s)he will get.’

Again, the constructions might be sentences with complex NP as subjects, with *xedii* in

¹⁰ The word order in Mongolian is SOV. The Mongolian data in this paper were collected by the author during 1992–1993.

the subject and *tödii* in the predicate part.

- (81) *xedii* *targan* *max* *tödii* *amttai*.
 how-much fat meat that-much delicious
 ‘The fatter a piece of meat is, the more delicious it is.’
- (82) *xedii* *oroitoj* *ir-sen* *xün-d* *tödii*
 how-much be-late come-PAST person-DAT that-much
bag *xool* *onoo-gd-son*.
 small food distribute-PASSIVE-PAST
 ‘The later a man came, the less food was given (to him).’

In the third type of the ‘*xedii...tödii...*’ constructions, *xedii* appears in the topic portion and *tödii* appears in the comment part of a sentence, as (83), (84) and (85) illustrate.

- (83) *xedii* *targan* *maxan-d* *bol* *bi* *tödii* *durtai*.
 how-much fat meat-DAT TOPIC I that-much like
 ‘The fatter a piece of meat is, the more I like it.’
- (84) *bi* *xedii* *targan* *max-iig* *bol* *tödii* *idex* *durtai*.
 I how-much fat meat-ACC TOPIC that-much eat like
 ‘The fatter a piece of meat is, the more I like to eat.’
- (85) *xedii* *sain* *nom* *bol* *tödii* *olon*
 how-much good book TOPIC that-much many
xün *unshi-na*.
 person read-FUTURE
 ‘The better a book is, the more people will read it.’

To sum up, *xedii* and *tödii* can appear in a conditional and consequence clauses, subject and predicate as well as topic and comment respectively. It is interesting that ‘*yuè₁...yuè₂*’ in Mandarin Chinese and ‘*lü...lü...*’ in Southern Min have the same distributions (Hsiao 1993; Tsao and Hsiao 2002; Section 2 above). We have generalized that *yuè₁* and *lü₁* occur in the topic portion while *yuè₂* and *lü₂* appear in the comment part of a sentence. Now let's look at the Mongolian case. According to Hammar (1983), *bol* is a topic and contrast marker as well as a conditional marker. We find that the subject-predicate type sentences (81) and (82) may be analyzed as topic-comment type sentences as (81') and (82'). If we analyze conditional clauses as topics, then we can get the same generalization as we have in Chinese and say that *xedii* occurs in topic and *tödii* appears in comment part.

- (81') *xedii* *targan* *max* *bol* *tödii* *amttai*.
 how-much fat meat TOPIC that-much delicious
- (82') *xedii* *oroitoj* *ir-sen* *xün-d* *bol*
 how-much be-late come-PAST person-DAT TOPIC

tödii	bag	xool	onoo-gd-son.
that-much	small	food	distribute-PASSIVE-PAST

3.3 Summary

Summarizing the observations above, *xedii* appears in a topic while *tödii* occurs in the comment part of the sentence.

As far as meaning is concerned, like ‘*quanto...tanto*’ in Latin, the ‘*xedii...todii...*’ construction has two kinds of readings, a variable reading and a constant reading. In the variable reading, the part with *xedii* contains an independent variable **X** while the part with *todii* contains a dependent variable **Y**. When the degree of **X** increases the degree of **Y** increases proportionally. In the constant reading, the degree of **Y** equals to the degree of **X**.

4. Concluding remarks

We have shown that Chinese and Mongolian proportional constructions share some syntactic features.

Like Chinese ‘*yuè...yuè...*’ and ‘*lú...lú...*’ constructions, the first marker of the Mongolian proportional correlative construction ‘*xedii...tödii...*’ appears in a topic while the second marker occurs in the comment part of the sentence.

However, the Mongolian ‘*xedii...tödii...*’ construction is closer to Latin ‘*quanto...tanto*’ construction semantically. Both of them have a variable reading and a constant reading. We might call them “how many...that many...” type proportional correlative constructions. In this type of constructions, the value of dependent variable *y* always equals to that of independent variable *x*. On the other hand, Mandarin ‘*yuè...yuè...*’ construction and Taiwanese ‘*lú...lú...*’ construction, like English ‘the more...the more...’ construction, have only a variable reading. We might call them “the more...the more...” type proportional correlative constructions. In this type of constructions, the ration between independent variable *x* and dependent variable *y* is not specified. As a result, they do not develop a constant reading as the “how many...that many...” type constructions do.

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漢語與蒙古語的比例關聯句式

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本文探討漢語“越…越…”句與蒙古語“*xedii...tödi...*”句的語意與語法。兩種句式的第一個關聯詞（即第一個“越”與“*xedii*”）都出現在句子的主題裡，而第二個關聯詞（第二個“越”與“*tödi*”）則都出現在評論的部份。語意上這兩種句式都表示兩個變數之間的比例關聯；但是‘*xedii...tödi...*’句式還能表示兩個量的相等關係。我們主張，相等關係是比例關聯關係的一個特例。McCawley (1988) 發現比例關聯句式的語意與語法跟條件句、比較句常有平行的現象。我們認為，這是由於比例關聯句式與「條件」、「比較」等概念有密切的關係。因為這種句式表示兩個變數「量」的比例關聯，一個變數的量隨著另一個變數的量而增減，語意上本來就跟「條件」有關。因為比例關聯句式牽涉到量的變化，有變化就有增有減，而所謂「增」或「減」其實就是與一個相對的「標準」比較的結果，自然與「比較」也有關係。因此，「越字句」跟「條件句」、「比較句」有類似的語法特性可以由其語意特性預測得知。

關鍵詞：關聯句式、漢語、蒙古語、越