On Proportional Correlative Constructions in Chinese and Mongolian

Su-ying HSIAO

Academia Sinica

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 ‘comparision’ 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:

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.

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.’

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 'uŋ phrase', if not embedded in a complex NP, never appears at the initial of a sentence.

Zhangsan compare Lisi tall
‘Zhangsan is taller than Lisi.’

compare Lisi Zhangsan tall

you more scold (s)he (s)he more not happy
‘The more you scold him/her, the more unhappy (s)he is.’

244
more you scold (s)he (s)he more not happy

more scold (s)he you (s)he more not happy
‘There are few people taller than Lisi.’

‘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, 比 many’ is embedded in an NP.¹

(s)he compare I buy PERF very many book
‘(S)he bought more books than I did.’

(s)he buy book compare I buy DE many
‘(S)he bought more books than I did.’

(s)he buy book buy DE compare I many
‘(S)he bought more books than I did.’

你 read DE more many book you father then more
‘The more books you read, the happier your father gets.’

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

(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 duǐ ‘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.
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

As far as meaning is concerned, the ‘yuè...yuè...’ construction has a proportional reading, the part with yuè1 contains an independent variable X while the part with yuè2 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’.

We will discuss the semantics and syntax of Mandarin ‘yuè...yuè...’ construction in the following section, with reference to its counterpart in 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 yuè1 contains an independent variable X while the part with yuè2 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’.

#### 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, \( \text{land} n \text{ jmhh} \text{'kun} s\text{'m} n n f p b n \) and \( k n h s n f o k n n b i j m n h p w f g b n \) In actuality, there are only two variables, that is, \( \text{land} n \text{ s'm} \) and \( k n h s n f o k n 3 n \text{ land} m n s \text{'m} \) is a coordinating structure. Semantically, it is anomalous to have any proportional relationship between \( p i n g \) and \( s' m \). Phonologically, there is a longer pause between \( y u e p i n g y u e k \text{'m} \) and \( y u e h n h s n f o k n \) than the pause between \( y u e p i n g \) and \( y u e s' m \). Syntactically, \( y u e p i n g y u e s' m \) may appear in a conditional clause while \( y u e h n h s n f o k n \) occurs in the consequence clause. Besides, \( y u e p i n g y u e s' m \) may occur in a complex NP while \( y u e h n h s n f o k n \) is in the predicate.

\[
\begin{array}{cccccccc}
\text{road} & \text{more smooth} & \text{more wide} & \text{more good} & \text{drive} & \text{car} \\
\text{\( p\text{'m} n m n \text{ land} m n s\text{'m} m n k n h \)} & \text{\( s n f o k n \)} \\
\text{‘The smoother and wider a road is, the easier for drivers to drive on it.’} \\
\text{\( u\text{'m} n m n \text{ land} m n k n h s n f o k n \)} & \text{\( \text{snf} o k n \)} \\
\text{‘The smoother a road is, the easier for drivers to drive on it.’} \\
\text{\( o\text{'m} n m n s\text{'m} m n k n h s n f o k n \)} & \text{\( \text{snf} o k n \)} \\
\text{‘The wider a road is, the easier it is to drive.’} \\
\text{\( p\text{'m} n m n \text{ land} m n s\text{'m} m n k n h \)} & \text{\( s n f o k n \)} \\
\text{‘The smoother and wider a road is, the easier for drivers to drive on it.’} \\
\text{\( b\text{'m} n m n \text{ land} d n n m n s\text{'m} m n k n h \)} & \text{\( \text{snf} o k n \)} \\
\text{‘The smoother and wider a road is, the easier for drivers to drive on it.’} \\
\end{array}
\]
The smoother and wider a road is, the easier for drivers to drive on it. Roads which are smoother and wider are easier to drive on.
On Proportional Correlative Constructions in Chinese and Mongolian

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).

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.

‘People who take a higher position are richer and more powerful.’

‘The sweeter an apple is, the more delicious it is.’

‘The angrier you are, the happier (s)he becomes.’

‘The later one comes, the less food (s)he can eat.’

‘The faster one runs, the bigger prize (s)he may get.’
2.2.2 Sentences with yuè₁ in the topic portion and yuè₂ in the comment part

In the second type of the ‘yuè...yuè...’ construction, yuè₁ appears in the topic portion and yuè₂ appears in the comment part of a sentence, as (19)a and (19)b illustrate. In (19)a, yuè₂ occurs in the subject portion in the comment part. In (19)b, yuè₂ appears in the predicate phrase.

((((a( [TOPI(Yu[((h(de sh(hi ([I(((N T SUB(ju( ([P R(DI(A T(yu(((h u(n more good RC book more many people see 'The better a book is, the more people like to read it.’

un[((e(x(h u(n more sweet RC apple I more like eat 'The sweeter an apple is, the more I like to eat it.’

2.2.3 X₁ yuè₁ Y₁, X₂ yuè₂ Y₂

The third type of the construction consists of two adjacent clauses containing yuè₁ and yuè₂ respectively, which is exemplified in (20)a and (20)b.

you more angry (s)he then more happy 'The angrier you are, the happier he is.'

weather more hot I more sleep-not-well 'The hotter it is, the more difficult it is for me to have a sound sleep.’

The two clauses of the ‘yuè...yuè...’ construction may have shared arguments as topics or subjects, as (21)a–c show. In these cases, they look like coordinate structures.³

this CL thing I more see more like 'The more I look at this thing, the better I like it.’

³ For example, Chang (1990) lists ‘yuè...yuè...’ as a pair of adverbs marking a coordinate structure.
On Proportional Correlative Constructions in Chinese and Mongolian

We claim, however, that the ‘yuè...yuè...’ constructions are not coordinate structures. First, the constructions in question allow backard 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.

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.

yesterday I go ASP Taipei Zhangsan stay at home
‘I went to Taipei and Zhangsan stayed at home yesterday.’

yesterday Zhangsan I go ASP Taipei stay at home
*‘Yesterday Zhangsan, I went to Taipei and ti stayed at home esterday.’

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

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.

yesterday I go ASP Taipei Zhangsan stay at home
‘I went to Taipei and Zhangsan stayed at home yesterday.’

yesterday Zhangsan stay at home I go ASP Taipei
‘Zhangsan stayed at home and I went to Taipei yesterday.’

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.’

(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 yuè₁ occurs in the antecedent clause and yuè₂ in the consequent clause. The conjuncts of a coordinate structure cannot occur in such places.

\[
\text{you more angry (s)he more happy} \quad \text{‘The angrier you are, the happier (s)he is.’}
\]

\[
\text{you if more angry (s)he then more happy} \quad \text{‘The angrier you are, the happier (s)he is.’}
\]

\[
\text{this CL shirt material good price furthermore reasonable} \quad \text{‘The material of this shirt is good and furthermore, the price is reasonable.’}
\]

\[
\text{this CL shirt material if good price then furthermore reasonable} \quad \text{‘*If the material of this shirt is good, and then, furthermore, the price is reasonable.’}
\]

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.

\[
\text{you more angry (s)he more happy} \quad \text{‘The angrier you are, the happier (s)he is.’}
\]

\[
\text{you more angry DE time (s)he more happy} \quad \text{‘The angrier you are, the happier (s)he is.’}
\]

\[
\text{mother everyday must wash clothes and must cook}
\]
very busy
‘Mom has to do laundries and cook everyday. She is very busy.’

mother everyday must wash clothes DE time and
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 no matter...’ and no sooner than’, the second element of the pair, yuè2, cannot precede the first one, yuè1.

weather more hot more many person sleep-not-well
‘The hotter the weather is, the more people cannot sleep well.’

more many person weather more hot sleep-not-well

weather more hot I too sleep-can-well
‘No matter how hot it is, I can sleep well.’

I too sleep-can-well weather more hot

weather as-soon-as hot I then sleep-not-well
‘I cannot sleep well as soon as the weather becomes hot.’

I then sleep-not-well weather as-soon-as hot
Note that yuè₁ cannot occur in the main predicate of a sentence, as shown in (35)a and (36)a. The modificational scope of yuè₁ cannot contain that of yuè₂.⁴

(35)a. *Tā yuè₁ [pāo de [yuè₂ [lèi]].
(s)he more run DE more tired

un en m₃n₁ [ الوح] m₃n₁ [زئف]n
(s)he more run more tired

‘The more (s)he runs, the more tired (s)he becomes.’

(36)a. Tä yuè₂ [pāo de [yuè₁ [lèi]].
(s)he more run DE more tired

un en m₃n₁ [ الوح] m₃n₁ [زئف]n
(s)he more run more tired

‘The more expensive a thing is, the more I like to buy it.’

Summarizing our observation, the distributions of yuè₁ and yuè₂ are as follows: Yuè₁ and yuè₂ 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 yuè₁ and yuè₂

<table>
<thead>
<tr>
<th></th>
<th>Main subject</th>
<th>Main predicate</th>
<th>Topic</th>
<th>conditional/temporal clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>yuè₂</td>
<td></td>
<td>+</td>
<td>+</td>
<td>−</td>
</tr>
<tr>
<td>yuè₁</td>
<td>−</td>
<td>+</td>
<td>+</td>
<td>−</td>
</tr>
</tbody>
</table>

Main subject

<table>
<thead>
<tr>
<th></th>
<th>VP</th>
<th>Object</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>yuè₁</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
<tr>
<td>yuè₂</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
</tr>
</tbody>
</table>

Main predicate

<table>
<thead>
<tr>
<th></th>
<th>Topic</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>yuè₁</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>yuè₂</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Topic

---

⁴ Jo-wang Lin (pc.) suggests that there is a positional constraint governing the relative position between yuè₁ and yuè₂ in that ‘yuè₁’ cannot c-command ‘yuè₂’.
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 yuè₁ occurs in the topic part and yuè₂ occurs in the comment part of a sentence.

(38) The distribution of yuá1 and yuá2 (revised)

| 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.

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

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).
Xiaomei is getting more and more beautiful.

Xiaomei more come her mother more beautiful
The older Xiaomei grows, the more beautiful she becomes.

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

In fact, no elements except pause particles may appear between *yuè*₁ *lái* and *yuè*₂. as (42)a–c show.

Zhang Miss more come more beautiful LE

‘Miss Zhang is getting more and more beautiful.’

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

What is the internal structure of the ‘*yuè*₁ *lái* *yuè*₂...’ construction? What does the deictic verb *lái* subcategorize? There are at least three analyses.

The first analysis is treating the ‘*yuè*₁ *lái* *yuè*₂...’ construction as a special case of serial VP constructions. By analyzing the ‘*yuè*₁ *lái* *yuè*₂...’ 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*₁ *lái* *yuè*₂...’ construction has no semantic restriction with its subject. Furthermore, although the subject of the ‘*yuè*₁ *lái* *yuè*₂...’ sentence always appears before ‘*yuè*₁ *lái*’ as typical serial VP constructions do, the subject of a corresponding construction in Hôlô Taiwanese may appear before or after the deictic verb, as shown in (43).
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).

(44) (((a( T(yu( m(n g(y u( j(ngr((s)he more busy more have energy
‘The busier (s)he is, the more energetic (s)he becomes.’

(45) (((u( en( m(n mnd( m( m( m( m( vndwn( (s)he more busy PAUSE more have energy
‘The busier (s)he is, the more energetic (s)he becomes.’

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.

(46)a (((a( Z h(n g s(n [yu(l(i [yu(b( xi(oq((s)he more come more stingy
‘(S)he is getting more and more stingy.’

(46)b (((u( en( m(n m nd( m( m( m( m( vndwn( (s)he more come PAUSE more stingy
‘(S)he is getting more and more stingy.’

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).

(47) (((a( Z h(n g s(n [yu(l(i [yu(b( xi(oq((s)he more come more not like go Lisi he home
‘Zhangsan is getting more and more unwilling to go to Lisi’s house.’

(48) (((u( en( m(n m nd( m( m( m( m( vndwn( [rumnsnjkn pb wnf m( m( vnd]
Zhangsan final-exam RC day more close more nervous
‘As the day for final examinations approaches, Zhangsan gets more and more nervous.’
‘The day for final examinations is approaching.’

‘(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 ‘spring’ is personified and lái denotes moving of a ‘person’ rather than that of time.

‘The final examination is coming.’

‘Spring is coming.’

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

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 khí láu’ construction in Hīplo Taiwanese may appear at sentence initial position, as shown in (43) above.
On Proportional Correlative Constructions in Chinese and Mongolian

Concluding from the examples above, we find that the deictic verb lái has several characteristics. First of all, the subject of the main clause of the ‘yuè lái yuè...’ construction is not the subject of the deictic verb lái. The external argument of lái is missing. We propose that the verb in question is a zero-place predicate without subcategorizing any arguments. It occurs in a few special constructions, such as the ‘yuè lái yuè...’ construction, and never stand alone as a full sentence. Since the distribution of temporal lái is somewhat ‘frozen’, we might say that yuè lái yuè is an idiomatized expression.

2.3 The position of ‘yuè’

‘Yuè’ may appear between the subject and the modal or between the modal and the VP. Its distribution is very similar to that of temporal and locative expressions. The only difference is that ‘yuè’ alone may not appear sentence-initially while temporal and locative expressions may. According to C. J. Tang (1990), temporal and locative expressions are base-generated at the IP or PrP adjuncts. They may appear at sentence-initial position by topicalization, adjoined to the adjunct position of CP (S’). Tsao (1990) also argued that temporal and locative expression are clause or verbal adjuncts and may be topicalized and adjoined to the sentence-initial position. We suggest that ‘yuè’, like temporal and locative expressions, is base-generated at the adjunct position of a predicate. Since ‘yuè’ is a bound form, it is impossible to topicalize ‘yuè’ alone. This accounts for the fact that ‘yuè’ alone cannot occur sentence-initially. Compare (52) and (53).

I went to office yesterday.
 Yesterday I went to office.

The hotter it is, the more difficult it is for me to have a sound sleep.

More weather hot I more sleep-not-well
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.

(s)he not should at this one-CL time cruel-DE/use stick beat me
‘(S)he shouldn’t beat me cruelly/with a stick now.’

(s)he not should cruel-DE/use stick at this one-CL time beat me

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

Zhangsan tomorrow more early come more good
‘The earlier Zhangsan comes tomorrow, the better.

Zhangsan more tomorrow early come more good

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

do business more not have experience more not easy earn money
‘In business world, the less experienced one has, the more uneasy for him/her to earn money.’

do business more not have experience not more earn money
‘Yuè’ may occur before or after うん phrases and ‘bef’ phrases.

you more slovenly others more not ba you see

‘The more slovenly you are, the more likely you will be slighted.’

you more slovenly others more ba you see not at eye in

‘The more slovenly you are, the more likely you will be slighted.’

you more slovenly others BA you more not see at eye in

‘The more slovenly you are, the more likely you will be slighted.’

you more slovenly then more うん/give people

‘The more slovenly you are, the more likely you’ll be looked down upon.’

you more slovenly then うん/give people more

‘The more slovenly you are, the more likely you’ll be looked down upon.’

2.4 Dependency and selectional restrictions

2.4.1 yuè₁ and yuè₂ are mutually dependent

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

you more angry (s)he more happy

‘The angrier you are, the happier (s)he becomes.’
The distance between yuè₁ and yuè₂ is unbound, as sentences in (61) show.

\[ \text{I more like RC person will more early come} \]

‘People who I like more will come earlier.’

\[ \text{I more like RC person I then ask him/her more early come} \]

‘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. They are state, activity, accomplishment, semelfactive, and achievement. Yuè₁ but not yuè₂ 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 (Downy (1979), Smith (1991, 1997), Hsiao (1992, 1993, 1995), and Tsao and Hsiao (2002), among others.)
2.4.2.1 States

Both ūé1 and ūé2 may modify scalar states, which can be modified by degree adverb k̍n ‘very’ as well. (62) illustrates this point.

apple more sweet more delicious
‘The sweeter an apple is, the more delicious it is.’

this CL apple very sweet
‘This apple is very sweet.’

this CL apple very delicious
‘This apple is very delicious

Some modal verb phrases are also scalar and might be modified by ūé.

Zhangsan very possible will enter-selection
‘Zhangsan is very likely to be selected.’

more possible enter-selection RC person more nervous
‘The more likely for a person to be selected, the more nervous (s)he becomes.’

more (work)-hard RC person more possible will succeed
‘People who work harder are more likely to succeed.’

Like the degree adverb k̍n and the comparative marker jiao, ūé may not modify a reduplicated predicate. Compare (65) and (66).

that CL house very old
‘That house is very old.’

that CL house than this CL old
‘That house is older than this one.’
That house is quite old.

That house is very old.

That house is than this house old.

The older the house is, the more difficult it is to clear it.

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 kàn. For example, yào ‘want’ and huì ‘will’ may take yuè as its adjunct but cannot take kàn ‘very.’

People who are more willing to work hard are more likely to succeed.

Zhangsan will succeed very much.

more be good friend more should each-other help
‘The better friends they are, the more necessary for them to help each other.’

Zhangsan and Lisi very be good friend

2.4.2.2 Activities

Unlike \textit{kim} ‘very,’ \textit{yuè} may be followed by quantifiable activities. \textit{Yuè} can modify quantifiable activities and semelfactives even though \textit{yuè} cannot. Compare (70)b, c and d.

\begin{align*}
\text{Zhangsan \ often \ play \ basketball} & \quad \text{‘Zhangsan plays basketball frequently.’} \\
\text{Zhangsan \ very \ play \ basketball} & \quad \text{‘The more frequently Zhangsan plays the basketball, the better he plays it.’}
\end{align*}

2.4.2.3 Accomplishments and Achievements

Neither \textit{yuè}1, \textit{yuè}2, nor \textit{sui} may modify accomplishments or achievements. It is a

\begin{align*}
\text{Cup \ break \ DE \ more \ fragmentary \ more \ hard \ clean} & \quad \text{The more pieces a cup is broken into, the harder it is to clean them up.} \\
\text{Clothes \ wash \ DE \ more \ clean \ more \ good} & \quad \text{The cleaner clothes are washed, the better.}
\end{align*}

\text{The above sentences, however, are not counterexamples for our generalization. Though the VC constructions \textit{jk.nf} \textit{j.n} and \textit{mp.n} are an achievement and accomplishment respectively, \textit{sui} and \textit{dp.jing} are gradable states. \textit{Yuè} can modify the gradable complement part of a \textit{V(-de-)}C construction as in (i)a and (ii)b, but cannot modify a bounded VC construction, as shown in (ii)a,b.}

\begin{align*}
\text{Cup \ more \ break \ fragmentary \ more \ hard \ clean}
\end{align*}
natural consequence because accomplishments and achievements are bounded and thus not gridable.

‘The more pieces a cup is broken into, the harder it is to clean them up.’

Clothes more wash clean more good

‘The cleaner clothes are washed, the better.’
Yuè does not modify the VPs with adjuncts or complements of quantity or frequency. Compare (73) and (74).

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, *yuè₁* may modify scalar states and quantifiable activities, while *yuè₂* modifies scalar states only. We might generalize that *yuè₁* 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 ‘èëèè èëèè’ 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.’

(75)b. sain ix m n !

uŋ m ŋ !
Unlike the ‘yuè...yuè...’ construction, it might express an equivalence between two fixed values on two scales, as shown in (76).  

(76)a. Bat xedii nas-tai bol, bi tödii nas-tai.
   Bat how-much age -with if I that-much age-with
   ‘My age is the same as Bat’s.’

b. Bat xedii calin av-dag bol tödii
   Bat how-much salary take-PRESENT TOPIC that-much
   tögrög zarcuul-dag.
   money spend-PRESENT
   ‘Bat spends all the money he earns.’

‘Quanto...tanto’ in Latin has the variable reading and the constant reading, too. The sentence (77)a yields a variable reading in which the degree of someone’s grief increases as the duration of deliberation increases. (77)b yields a constant reading where the height attained equals to downfall suffered.

(77)a. hane rem meo magis voluto, tanto mi aegritudo auctior est in animo.
   ‘The more I turn this matter over in my mind, the greater the grief is in my spirit.’ (Michaelis (1992): (1))

b. sed non statuendo felicitati modum altius elatus erat tanto foedius conruit.
   ‘But by not setting a limit to his success, to the extent that he {M. Atilius} had risen high, he fell badly.’ (Michaelis (1992): (2))

---

9 \[\text{Quanto...tanto} \]
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.

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.  

(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 ‘lú...lú...’ in Southern Min have the same distributions (Hsiao 1993; Tsao and Hsiao 2002; Section 2 above). We have generalized that yuè1 and lú1 occur in the topic portion while yuè2 and lú2 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
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...tödii...’ 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 tödii 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 construcions, 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.
References


Su-ying HSIAO

History and Philology 59.3. Taipei: Academia Sinica.

Su-ying HSIAO
Institute of Linguistics (Preparatory Office)
Academia Sinica
suying@sinica.edu.tw
漢語與蒙古語的比例關聯句式

蕭素英
中央研究院

本文探討漢語“越…越…”句與蒙古語“xedii…tödii…”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“tödii”）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係，但是“xedii…tödii…”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」的比例關係，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。因為比例關聯句式涉及到的變化，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