Lecture 3:
Resultatives, event structure and argument structure

(Excerpts from Huang 2006 “Unaccusatives and resultatives: a parametric view,”

1. Introduction

Compounds and phrasal resultatives:

(1)   a. Zhangsan ku-shi-le shoupa.
      Zhangsan cry-wet-Perf handkerchief
      ‘Zhangsan cried the handkerchief wet.’

    b. Zhangsan ku-de shoupa dou shi le.
      Zhangsan cry-till handkerchief all wet Perf
      ‘Zhangsan cried (so much that) even the handkerchief got wet.’

Four patterns of resultatives in Chinese (Cheng and Huang 1996):

(2)   a. Zhangsan ku-xing-le. [unergative]
      Zhangsan cry-awake-Perf

    b. Zhangsan ku-xing-le Lisi. [transitive]
      Zhangsan cry-awake-Perf Lisi

    c. Zhangsan zui-dao-le. [unaccusative/inchoative]
      Zhangsan drunk-fall-Perf
      Zhangsan got drunk to the floor.

    d. na ping jiu zui-dao-le Zhangsan. [causative]
      that bottle wine drunk-fall-Perf Zhangsan
      That wine got Zhangsan drunk to the floor.

2. The Direct Object Restriction

(3)   a. John hammered the metal flat.

    b. *John hammered the metal tired. (under the resultative reading)

(4)     The DOR (Simpson 1983):
        In a resultative construction, the result is predicated on an object, not the subject.

(5)   a. *John laughed silly.
    b. *Mary ran tired.
    c. *Bill cried sad.
(6)  a. John laughed himself silly.
     b. Mary ran herself tired.
     c. Bill cried himself sad.

The following examples appear to contradict the DOR, with the Result V2 `flat, open, solid` each predicated on their subjects:

(7)  a. The metal was hammered flat.
     b. The garage door rumbles open.
     c. The river froze solid.

But such examples are limited to passives (7a) and unaccusatives or inchoatives (7b-c). Under standard analyses of passives and the Unaccusative Hypothesis, Result V2 is locally predicated on the (deep) object DP, marked by `t`:

(8)  a. The metal was hammered `t` flat.
     b. The garage door rumbles `t` open.
     c. The river froze `t` solid.

DOR in Chinese, the good cases:

(9)  a. Zhangsan ti-bian-le wo-de lanqiu.
     Zhangsan kick-flat-Perf my basketball
     ‘Zhangsan kicked my basketball flat.’

     b. *Zhangsan ti-lei-le wo-de lanqiu.
     Zhangsan kick-tired-Perf my basketball
     ‘*Zhangsan kicked my basketball tired.’

(10) Mengjiangnü ku-dao-le wanli-changcheng.
     Mengjiangnü cry-fall-Perf Great-Wall
     ‘Mengjiangnü cried the Great Wall to ruins.’

(11) Lisi peng-shang-le Zhangsan
     Lisi bump-injured-Perf Zhangsan
     ‘Lisi bumped into Zhangsan and Zhangsan got injured.’

DOR in Chinese, problem (a): unergative resultatives

(12) Lisi tiao-lei le.
     Lisi dance-tired Perf
     ‘Lisi danced [himself] tired.’

(13) Lisi xiao-feng le.
     Lisi laugh-crazy Perf
‘Lisi laughed [himself] crazy.’

(14) Zhangsan tiao-de qichuan-runiu
Zhangsan jump-till panting-as.a.cow
‘Zhangsan jumped (so much that) [he] panted like a cow.’

(15) Zhangsan xiao-de zhan-bu-qilai.
Zhangsan laugh-till cannot-stand-up
‘Zhangsan laughed (so much that) he couldn’t stand up.’

Q1: Why Chinese seems to disobey the DOR?

3. The Inchoative-Causative Alternation

The alternation illustrated below may be seen as an unergative-transitive alternation:

Korea team play-win-Perf
‘The Korean team played and won.’

b. Hanguo dui da-sheng-le Riben dui.
Korea team play-win-Perf Japan team
‘The Korean team played and won over the Japanese team.’

(17) a. xiao baobao ku-xing-le.
little baby cry-aware-Perf
‘The little baby cried [herself] awake.’

b. xiao baobao ku-xing-le baomu.
little baby cry-aware-Perf nanny
‘The little baby cried the nanny awake.’

(18) a. tamen jiao-de kuai fafeng le.
they shout-till almost get-crazy Perf/Inc.
‘They shouted to the point of almost becoming crazy.’

b. tamen jiao-de women kuai fafeng le.
they shout-till we almost get-crazy Perf/Inc.
‘They shouted so much that we are about to get crazy.’

Chinese resultatives also exhibit unaccusative-causative alternations, as illustrated below:

(19) a. Zhangsan lei-si-le
Zhangsan tired-dead-Perf/Inc
‘Zhangsan tired to death.’

b. zhe-jian shi lei-si-le Zhangsan
   this-Cl thing tired-dead-Perf Zhangsan
   ‘This thing tired Zhangsan to death.’

(20)  a. Lisi zui-dao-le
       Lisi drunk-fall-Perf
       ‘Lisi got drunk and fell.’

b. zhe-bei futejia zui-dao-le Lisi
   this-glass vodka drunk-fall Lisi
   ‘This glass of vodka got Lisi to be drunk and fall.’

(21)  a. ta jidong-de liu-chu-le yanlei.
       he moved-till flow-out-Perf tears
       ‘He got so emotionally moved as to come to tears.’

b. pengyou-de zanmei jidong-de ta liu-chu-le yanlei.
   friends’ praise moved-till he flow-out-Perf tears
   ‘Praises from friends got him emotionally moved to tears.’

Similar alternations can be found in English:

(22)  a. The river froze solid.
       b. The change in weather the last few weeks froze the river solid.

(23)  a. The garage door rumbles open.
       b. A few bulldozers passing by rumbled the garage door open.

These are inchoative-causative alternations not unlike the familiar ones below:

(24)  a. The window broke.
       b. They broke the window.

(25)  a. The boat sank.
       b. They sank the boat.

The unaccusative requirement:

(26)  a. The baby cried sadly.
       b. *The little mermaid’s disappearance cried the baby sadly.

(27)  a. They talked themselves silly.
       b. *The event talked them silly.
(28) a. She quickly kicked free.
    b. *The threat of death quickly kicked her free.

These facts are fully expected. (Recall from Lecture 2 that unaccusatives and causatives belong to the same series.) What is unexpected is that Chinese unergative resultatives apparently can also be causativized:

(29) a. xiao baobao ku-xing-le.
    little baby cry-awake-Perf/Inc
    ‘The little baby cried [himself] awake.’

b. yi-chang emeng ku-xing-le xiao baobao.
    One-Cl nightmare cry-awake-Perf little baby
    ‘A nightmare caused the little baby to cry [himself] awake.’

(30) a. ta xiao-diao-le da ya.
    He laugh-fall-Perf big tooth
    ‘He laughed to the point of having his front teeth fall off.’

b. zhe-jian shi xiao-diao-le ta da ya.
    this-Cl thing laugh-fall-Perf him big tooth
    ‘This thing caused him to laugh his front teeth off.’

(31) a. ta tiao-de man-shen-da-han.
    he dance-till whole-body-big-sweat
    ‘He danced [himself] all sweaty.’

b. yi-zhi tangewu tiao-de ta man-shen-da-han.
    one-Cl tango dance-till he whole-body-big-sweat
    ‘A tango dance caused him to dance himself all sweaty.’

(32) a. ta kan-de tou-hun-yan-hua.
    he read-till head-spin-eye-blur
    ‘He read [himself] dizzy and blurred.’

b. baozhi kan-de ta tou-hun-yan-hua.
    newspaper read-till him head-spin-eye-blue
    ‘The newspaper caused him to read [himself] dizzy and blurred.’

In other words, not only can an unergative resultative transitize by adding an internal theme argument, it can also causativize by adding an external Causer argument.

Q2: To repeat, English allows only unaccusatives to be causativized, but Mandarin Chinese also allows an unergative resultative to be causativized. The question is why this should be the case.
5. Resultatives and Unaccusatives: A Parametric Approach

Main point of proposed analysis:

- The observed unergative resultatives are actually unaccusatives at some appropriate level of analysis and therefore:
- The apparent causativization of unergatives is actually causativization of unaccusatives under that same analysis. (Both problems disappear in the same way.) This idea goes back to Gu (1992) and Sybesma (1992), so the analysis if successful is a working-out of this idea. Hoekstra (1999), Mateu (2005) and Washio (2005) have all indicated that in various languages (Dutch, German, and Old Japanese), certain transitive verbs (with meanings like follow, pass, forget and approach), in spite of being transitive, may behave as unaccusatives under auxiliary selection. Washio (2005) on Old Japanese, where the perfective auxiliary ending takes the unaccusative form –nu/-ni, rather than the unergative form –tu.

I suggest that the clue to this question exists in the form of the –de ending observed in the phrasal resultatives. As is well known, the –de ending has evolved from the verb de ‘get’. Just as English get, which has both an inchoative and a causative sense (e.g., got mad vs. got John mad, -de can be associated with these two senses as well: de can be paraphrased as bian-de ‘become’ or shi-de ‘cause’. 得 = 变得 [ =inchoative/unaccusative] or 使得 [ =causative]. Since the meanings of change-of-state and causation are already expressed by –de, the V1 in the V-de construction exists only to express the manner in which some change or causing-to-change occurs. In other words, in an unergative resultative, although the verb occurring with –de is not itself inchoative, the –de that it modifies is.

ASSUME: resultatives are only two types (not 4 types)
(a) the inchoative/unaccusative: X gets into some state S (the 变得 relation)
(b) the causative: X causes Y to get into some state S = the 使得 relation

(1) The inchoative template: (the “变得” template)
[ BECOME<\textit{MANNER}> [ x <\textit{STATE}> ] ]

Meaning: X gets into some \textit{<state>} by some \textit{<manner>}.

If the manner is expressed by an unergative verb, you have a so-called “unergative resultative”, but since the unergative verb is a modifier of de (=become) the entire construction is an inchoative.
(2) 

```
VP_{de}  
  |  
  DP     V_{de'}  
  |  
  de     VP2       
  |  
  V1     DP         
  |  
  -de    V2'        
  |  
  Lisi   xiao        
  |  
  laugh   -become    
  |  
  duzi    teng        
  |  
  stomach ache
```

‘Lisi got to the state of having stomach ache from laughing.’

The modifier of BECOME may be an inchoative verb like lei ‘tired’:

(3) 

```
Lisi lei -de t zhan-bu-qilai  
Lisi tired become cannot-stand-up  
‘Lisi was so tired that he became unable to stand up.’
```

The causative template [= the “使” template] may correspond to either of two causative structures, depending on whether CAUSE or BECOME is modified by V1 expressing <MANNER>:

(4) **the ‘pure’ causative template:**

```
[ x CAUSE [BECOME<MANNER> [ y <STATE> ] ] ]
```

Meaning: X causes Y to get <by some manner/means> into state S

(5) **The ‘causing-with-a-manner’ causative template:**

```
[ x CAUSE<MANNER> [BECOME [ y <STATE> ] ] ]
```

Meanings: X <by some manner> gets Y into state S.  
X <by some means> causes Y to get into state S.

The ‘pure’ causative template is instantiated when an unmodified light verb CAUSE is added on top of an inchoative template with a manner-modified BECOME:

(6) 

```
zhe xiaohua xiao-de, Lisi t, duzi teng  
this joke laugh-de Lisi t stomach ache  
‘This joke got Lisi to have stomach ache from laughing.’
```

[The causativized version of (59).]

(7) 

```
zhe-jian gongzuolei-de, Lisi t zhan-bu-qilai  
this-Cl job tired-de Lisi cannot-stand-up  
‘This job got Lisi tired to the point of not being able to stand up.’
```

[The causativized version of (61).]
The second causative template involves a causative light verb CAUSE modified by V1, embedding an unmodified BECOME. This is the ‘canonical’ transitive resultative:

\[
\text{(8) VP} \quad \text{V} \quad \text{DP}
\]

\[
\text{V1} \quad \text{de} \quad \text{V} \quad \text{de} \quad \text{VP2}
\]

\[
\text{[CAUSE]} \quad \text{V2} \quad \text{DP} \quad \text{V3}
\]

\[
\text{[BECOME]} \quad \text{DP} \quad \text{V}
\]

\[
\text{Lisi} \quad \text{ku} \quad \text{de} \quad \text{shoupa} \quad \text{e} \quad \text{t} \quad \text{dou shi-le}
\]

\[
\text{‘Lisa cried the handkerchief wet.’}
\]

Although the <manner> of BECOME may be instantiated by either an unergative or an inchoative verb, generally the <manner> of CAUSE can only be instantiated by an unergative or active transitive verb. I assume that this follows from semantic and pragmatic considerations of compatibility between the modifier and modifiee.

For resultative compounds: the light verbs BECOME and CAUSE are phonetically null.

\[
\text{(9) a. Inchoative (1): [BECOME} \quad \text{<UNERGATIVE>} \quad \text{[ x <STATE> ] ]}
\]

\[
\text{Zhangsan zhui-lei le.}
\]

\[
\text{Zhangsan chase-tired Perf/Inc}
\]

\[
\text{‘Zhangsan got tired from chasing.’}
\]

\[
\text{b. Inchoative (2): [BECOME} \quad \text{<UNACCUSATIVE>} \quad \text{[ x <STATE> ] ]}
\]

\[
\text{Zhangsan lei-bing-le.}
\]

\[
\text{Zhangsan tired-sick-Perf/Inc}
\]

\[
\text{‘Zhangsan got sick from exhaustion.’}
\]

\[
\text{c. Pure causative (1): [ x CAUSE [BECOME} \quad \text{<UNERGATIVE>} \quad \text{[ y <STATE> ] ] ]}
\]

\[
\text{baozhi kan-hua-le wo-de yanjing.}
\]

\[
\text{Newspaper read-blur my eyes}
\]

\[
\text{‘The newspaper made my eyes blurred from reading it.’}
\]

\[
\text{d. Pure causative (2): [ x CAUSE [BECOME} \quad \text{<UNACCUSATIVE>} \quad \text{[ y <STATE> ] ] ]}
\]

\[
\text{wu xiuzhi de jianku gongzuo lei-bing-le Zhangsan.}
\]

\[
\text{no rest DE hard work tire-sick-Perf Zhangsan}
\]
‘Continuous hard work got Zhangsan sick from over-exhaustion.’

e. Causing with a manner: \([x \text{ CAUSE } <\text{UNERGATIVE}> [\text{BECOME } [y <\text{STATE}>] ]\]
Zhangsan ti-po-le qiuxie.
Zhangsan kick-broken-Perf sneakers
‘Zhangsan kicked the sneakers thread-bare.’

f. Causing with a manner: \([x \text{ CAUSE } <\text{Unaccusative}> [\text{BECOME } [y <\text{STATE}>] ]\]
Zhangsan bing-ji-le ta-de jiaren.
Zhangsan sick-anxious his family
‘Zhangsan got so sick as to cause his family to become anxious.’

6. Summary and the parametric question

- Chinese resultatives are associated with syntactic structures that project the associated event structures quite faithfully (e.g., analytically), with the light verb \(\text{DE}\text{BECOME}\) and \(\text{DE}\text{CAUSE}\) being modifiable by action verbs or serving as the head under V1.

- Chinese-English difference: in Chinese CAUSE and BECOME retain their head-status and ACT serves as an adjunct, in English CAUSE and BECOME have been incorporated into the higher verb. The can be expressed as a difference in analyticity, as a difference in derivational timing (lexical vs. syntactic vs. PF conflation).