Does the Causing Component of a Resultative Have to Involve an Activity?\(^1\)

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1. Introduction

A number of linguists (e.g. Giannakidou & Merchant 1999: 94, Li 1994: 352, Nakamura 1997: 498, Pustejovsky 1991: 65, Rapoport 1990: 40, Rothstein 2004: 83, Tai 1984: 290, Wechsler 1997: 308) claim that only process or activity verbs can function as the causing predicates of resultatives. As is clear from the examples cited by these scholars, "process or activity verbs" should be understood as verbs that involve an activity component, i.e. as including both activity and accomplishment predicates in terms of Vendler’s (1957) classification.

This paper argues that the claim that only a predicate involving an activity component can function as the causing predicate of a resultative cannot hold. It is organized as follows. Section 2 shows that there is evidence from Mandarin resultative verb compounds (RVCs) that the causing eventuality of a resultative can be a state. Section 3 discusses the theoretical and typological significance of a state eventuality’s functioning as the causing component of a resultative. The final section summarizes the main points made in the paper.

2. State Eventuality as the Causing Component

As shown in (1), it is true that the causing component of an English resultative can only be an activity or accomplishment verb, and cannot be a state or achievement verb.

(1)  
\begin{enumerate}
\item a. John ran himself ragged. \hspace{1cm} \text{(activity)}
\item b. John ate the plate empty. \hspace{1cm} \text{(accomplishment)}
\item c. *Bush knew John proud. (Intended: Bush knew John, and as a result John became proud.) \hspace{1cm} \text{(state)}
\item d. *John found his son happy. (Intended: John found his son, and as a result the son became happy.) \hspace{1cm} \text{(achievement)}
\end{enumerate}

However, crosslinguistically there is evidence from Mandarin RVCs that the causing predicate of a resultative is not necessarily an activity or
accomplishment predicate. As shown in (2), the causing eventuality of Mandarin RVCs can be a state, although as shown in (3), the causing component can also be an activity or accomplishment verb.

(2)  
a. Zhangsan lei-bing-le. (state)  
   Zhangsan tired-sick-PERF  
   ‘As a result of Zhangsan’s being tired, he became sick.’  
b. Zhangsan e-shou-le. (state)  
   Zhangsan hungry-thin-PERF  
   ‘As a result of Zhangsan’s being hungry, he became thin.’

(3)  
a. Zhangsan pao-lei-le. (activity)  
   Zhangsan run-tired-PERF  
   ‘Zhangsan ran himself ragged.’  
b. Zhangsan chi-kong-le panzi. (accomplishment)  
   Zhangsan eat-empty-PERF plate  
   ‘Zhangsan ate the plate empty.’

According to Vendler (1957: 146-147), states like be tall and achievements like find cannot be used in “continuous tenses” as shown in (4), and the two differ in that the former last for a period of time, while the latter occur instantaneously.

(4)  
a. *John is being tall.  
b. *John is finding the book.

Based on this, the stative status of lei in lei-bing ‘tired-sick’ and e in e-shou ‘hungry-thin’ in (2) can be established by the fact that as shown in (5), they cannot be used in the continuous tense (or, more exactly, in the progressive aspect) and that they have to be interpreted as lasting for a period of time when used in (2).

(5)  
a. *Zhangsan zai lei.  
   Zhangsan PROG tired  
   Intended: ‘Zhangsan is in the continuous state of being tired.’  
b. *Zhangsan zai e.  
   Zhangsan PROG hungry  
   Intended: ‘Zhangsan is in the continuous state of being hungry.’

On the basis of the data from Mandarin RVCs, it can be concluded that the claim that only a predicate involving an activity component can function as the causing component of a resultative cannot hold crosslinguistically.

3. Theoretical and Typological Significance

The fact that a state eventuality can function as the causing component of a resultative is both theoretically and typologically significant. Theoretically speaking, the reason that many linguists make the claim that only a predicate involving an activity component can function as the causing predicate of a resultative is that resultatives are typically accomplishments,
which are generally assumed to involve an activity component. However, if it is agreed that Mandarin RVCs in (2) are accomplishments, then it can be concluded that accomplishments do not necessarily involve an activity component. Rather, they necessarily involve a duration component, which can be an activity or a state.

In addition to the theoretical significance, the fact that a state eventuality can function as the causing component of a resultative is also typologically significant. This is because crosslinguistically it is unusual for a stative predicate to serve as the causing component of a resultative. Specifically, by examining resultatives in eight languages (i.e. English, French, German, Japanese, Korean, Mandarin, Romanian, and Swedish), it is found that although the resultative in all the languages examined allows an eventuality which involves an activity component to function as the causing predicate, no grammatical counterparts of the two Mandarin examples in (2) are found in the other seven languages under investigation.

I argue that the rarity of the stative causing eventuality is partly because states are not typical causing eventualities, and partly because not many languages have the right resources to allow the using of a stative predicate as the causing component of a resultative. Specifically, if the resultative of a language is not realized as a compound, then its causing component must be an element which can function as the main predicate by itself. This predicts that adjectival stative predicates in English, French, German, Romanian and Swedish cannot serve as causing eventualities of resultatives, because, as shown in (6), an adjective like ‘tired’ in these languages cannot function as a predicate by itself when without a copula. As shown in (7), this prediction is borne out.

\begin{itemize}
\item (6) Intended: ‘John was tired’
\begin{itemize}
\item a. *John tired.
\item b. *John fatigué. (French)
\item c. *John müde. (German)
\item d. *John obosit. (Romanian)
\item e. *John trött. (Swedish)
\end{itemize}
\end{itemize}

\begin{itemize}
\item (7) Intended: ‘As a result of John’s being tired, he became sick.’
\begin{itemize}
\item a. *John tired sick.
\item b. *John fatigué malade. (French)
\item c. *John müde krank. (German)
\item d. *John obosit bolnov. (Romanian)
\item e. *John trött sjuk. (Swedish)
\end{itemize}
\end{itemize}

In addition, as shown in (8), although adjectives like ‘tired’ in Korean can be used as the main predicate of a sentence, ‘tired...sick’ as a resultative is bad in the language.

\begin{itemize}
\item (8) a. John-i phikonhay-ess-ta.
\end{itemize}

\begin{itemize}
\item John-NOM tired-PAST-IND
\end{itemize}

‘John was tired.’
   John-NOM sick-KEY tired-PAST-IND
   Intended: ‘As a result of John’s being tired, he became sick.’

This is because such a resultative is strong in the sense that the causing component of the resultative does not implicate or entail a change denoted by the result component (cf. Washio 1997a, 1997b, 1999, 2002). However, there is independent evidence that Korean does not allow strong resultatives, as shown in (9).

    they-TOP shoe-soles-ACC thin run-PAST-DCL
    ‘They ran the soles of their shoes thin.’ (Washio 1999: 682)

    horse-NOM log-ACC smooth drag-PAST-DCL
    ‘The horses dragged the logs smooth.’ (Washio 1999: 684)

Moreover, as shown in (10), although words like ‘tired’ can be used as predicates on their own in Japanese, ‘tired … sick’ as a non-compound resultative is bad because as shown in (11-12), non-compound resultatives must be weak in this language in the sense that the causing predicate implicates or entails a change denoted by the result component (cf. Washio 1997a, 1997b, 1999, 2002). Therefore, as far as non-compound resultatives in Japanese are concerned, no predicates like ‘tired’ can be used as the causing eventuality, either.

(10) a. Jon-wa tsukarete-ita.
     John-TOP tired-exist.PAST
     ‘John got tried.’

   John-TOP sickness-NI tired-exist.PAST
   Intended: ‘As a result of John’s being tired, he became sick.’

(11) Strong Resultatives
   horse-NOM log-ACC smooth drag-PAST
   ‘The horses dragged the logs smooth.’ (Washio 1997b: 6)

b. *Takusan-no hikooki-ga ozonsoo-o usuku ton-da.
   many-GEN plane-NOM ozone.layer-ACC thin fly-PAST
   ‘Many planes flew the ozone layer thin.’ (Washio 1997b: 20)

(12) Weak Resultatives
   J.-NOM wall-ACC blue paint-PAST
   ‘John painted the wall blue.’ (Washio 1997b: 2)

b. Boku-wa aisu kuriimu-o katikati-ni koorase-t a.
   I-TOP ice cream-ACC solid freeze-PAST
   ‘I froze the ice cream solid.’ (Washio 1997b: 5)

It should be noted that so far we have been concerned with non-compound resultatives with an adjective as the causing eventuality. However, not all
stative predicates are in the form of an adjective, and there are stative predicates which are verbs, e.g. *be, resemble and know* in English. The question is whether such verbal statives can be used as the causing eventuality of a non-compound resultative.

An examination of possible resultatives formed with verbal stative predicates as causing eventualities in different languages shows that the answer to the above question is negative. To begin with, as shown in (13), such resultatives are ungrammatical in English.

(13)  a. *John knows Bill proud. (Intended: John knows Bill, and as a result Bill becomes proud.)
    b. *John resembles Bill happy. (Intended: John resembles Bill, and as a result Bill becomes happy.)
    c. *John was a lawyer rich. (Intended: John was a lawyer, and as a result he became rich.)

Further, as shown in (14-15), non-compound resultatives like ‘know … proud’ are ungrammatical in French, German, Japanese, Korean, Romanian, and Swedish as well.

(14)  Intended: ‘John knows Bill, and as a result Bill becomes proud.’
    a. *John connaît Bill fier. (French)
       John knows Bill proud
    b. *John kennt Bill stolz. (German)
       John knows Bill proud
    c. *John-wa Bill-o koei-ni shitte-iru. (Japanese)
       John-TOP Bill-ACC proud-NI know-exist.PRES
    d. *John-i Bill-ul calangsole-p-key an-ta. (Korean)
       John-NOM Bill-ACC proud-KEY know-PRES-IND
    e. *John il stie pe Bill mândru. (Romanian)
       John him.ACC.CLITIC knows on Bill proud
    f. *John känner Bill stolt. (Swedish)
       John knows Bill proud

(15)  Intended: ‘John resembles Bill, and as a result Bill becomes happy.’
    a. *John ressemble à Bill heureux. (French)
       John resembles to Bill happy
    b. *John ähnelt Bill glücklich. (German)
       John resembles Bill happy
    c. *John-wa Bill-ni shiawase-ni nite-iru. (Japanese)
       John-TOP Bill-DAT happy-NI resemble-exist.PRES
    d. *John-i Bill-ul hayngpokha-key talm-ta. (Korean)
       John-NOM Bill-ACC happy-KEY resemble.PRES-IND
    e. *Ion seamănă cu Bill fericit. (Romanian)
       John resembles with Bill happy
    f. *John liknar Bill glad. (Swedish)
       John resembles Bill happy

As non-compound resultatives like ‘know … proud’ are strong, their ungrammaticality in French, Japanese, Korean, and Romanian may be due
to the fact that these languages do not allow strong non-compound resultatives. However, the fact that such non-compound resultatives are also ungrammatical in English, German, and Swedish (all of which allow strong resultatives) suggests that the ungrammaticality of resultatives like ‘know … proud’ might be due to semantic and pragmatic factors and to the fact that resultatives are complex predicates in a single clause. Specifically, unlike cases such as John knows Bill, and as a result Bill becomes proud, there seems to be more restrictions on the formation of monoclausal resultatives. As a result, monoclausal resultatives like John knows Bill proud that involve a great deal of practical reasoning to attain the resultative interpretation are generally banned, even in languages that allow strong resultatives.

The above explanation as to the ungrammaticality of resultatives that involve a causing predicate like know is further supported by the fact that such resultatives are bad even in the form of a compound. Take the compound resultative formed by ‘know’ and ‘proud’ as an example. As shown in (16), such a compound is bad not only in Japanese and Swedish but also in Mandarin (regardless of whether the reading is subject-oriented or object-oriented), although all these three languages allow RVCs.

(16) Intended: ‘John knows Bill, and as a result John/Bill becomes (or has become) proud.’
      John-NOM Bill-ACC know-be.proud
   b. *John zhidao-zihao-le Bill. (Mandarin)  
      John know-proud-PERF Bill
   c. *John stolt-känner Bill. (Swedish)  
      John proud-know Bill

If compound resultatives involving a verbal causing predicate are not attested in any language investigated in this paper, a question arises as to whether compound resultatives that involve an adjectival causing predicate are allowed in Japanese and Swedish. The answer to this question is negative as well. First, concerning Japanese, compound resultatives that involve an adjectival causing predicate are not well-formed in this language because of a language-specific constraint, namely that Japanese resultative verb compounds must be composed of two verbal elements. For example, in (16a), shitteiri-hokoru is composed of two verbs, shitteiru ‘know’ and hokoru ‘be proud.’ In fact, even for those cases that involve a verbal causing predicate like tsukareteiru ‘be tired’ that is typically realized as an adjective in English and other languages, a well-formed compound resultative is apparently not attested because of the constraint mentioned above. Specifically, this is because the result component that is semantically compatible with such a causing predicate is either realized as a noun or as an adjective, thus violating the constraint that the two components of a Japanese RVC must be both verbal. For example, although (17) is grammatical in Mandarin, its counterpart is ungrammatical in Japanese as shown in (18) because the result component that corresponds to ‘sick’ is
realized as a noun, namely *byooki* and because there is no verb in the language that corresponds to ‘be sick’ or ‘get sick.’

(17) Zhangsan lei-bing-le.  
    Zhangsan tired-sick-PERF  
    ‘As a result of Zhangsan’s being tired, he became sick.’

(18) *John tsukareteiri-byooki.  
    John be.tired-sickness  
    Intended: ‘As a result of John’s being tired, he became sick.’

As for Swedish, compound resultatives that involve an adjectival causing predicate are bad in the language for three reasons. First, note that the order of the two components of a Swedish RVC is “result component + causing component.” Second, Swedish RVCs are head-final. That is, the causing component is the head of a Swedish RVC and is the element that bears tense inflection. Finally, as shown earlier, Swedish adjectives cannot be tense bearers, and they have to resort to a copula to have tense inflection. Therefore, a Swedish RVC like *sjuk-trött* ‘sick-tired’ is ungrammatical, as shown in (19).

(19) *John sjuk-trött.  
    John sick-tired  
    Intended: ‘As a result of John’s being tired, he became sick.’

It can be seen from the above discussion that the use of a state eventuality as the causing component of a resultative is crosslinguistically rare, and that the rarity is partly because states are not typical causing eventualities and partly because not many languages have the right resources to allow the using of a state predicate as the causing component of a resultative. Specifically, if the resultative of a language is not realized as a compound, then its causing component must be an element which can function as the main predicate by itself. This correctly predicts that English examples like *tired … sick* and their counterparts in French, German, Romanian, and Swedish are bad because the causing predicate like ‘tired’ in these languages cannot function as a predicate by itself. Further, although similar predicates can be used on their own in Korean and Japanese, no resultatives formed with these predicates are attested. This is because on the one hand the resultatives formed with such causing predicates are strong, and on the other hand there is independent evidence that Korean resultatives and Japanese non-compound resultatives cannot be strong. Moreover, although there are stative predicates like ‘know’ which can be used without a copula, probably due to semantic (and) pragmatic reasons, no well-formed resultatives with such predicates as the causing component are attested. This is supported by the fact that even compound resultatives formed with stative predicates like ‘know’ are not attested in any language under investigation. As for compound resultatives that involve a causing predicate which is typically realized as an adjective in English and other languages, they are not attested in Japanese and Swedish, although these two languages have RVCs. Such compound resultatives are not found in Japanese because on
the one hand the two components of Japanese RVCs must be both verbs, and on the other hand either the stative causing component or the result component has to be expressed by a word which is not a verb. Similar compound resultatives are not attested in Swedish either, because the causing predicate is the head and needs to bear tense inflection and because in such cases, the causing predicates typically cannot be used without a copula and cannot be a tense bearer.

The crosslinguistic investigation undertaken in this section makes the following predictions. First, as far as non-compound resultatives involving a stative causing component are concerned, they are expected to be available only in languages where the causing component is an element that can function as the predicate of a sentence on its own and where the resultative formed with such a causing component does not involve too much practical reasoning (cf. the unavailability of such non-compound resultatives in English, French, German, Japanese, Korean, Romanian, and Swedish). Second, as for compound resultatives involving a stative causing component, they are likely to be found in languages like Mandarin where each of the two components of an RVC can function as a main predicate on its own so that regardless of which is the head of the RVC, the second component can be a tense or aspect bearer. Further, such compound resultatives are unlikely to be available in languages like Japanese where there is a constraint that both components have to be verbal and where either the stative causing component or the result component is typically realized as a category other than a verb. However, these compound resultatives are very likely to be found in languages where both components of an RVC are required to be verbal and where each component is typically realized as a verb.

Moreover, with respect to the causing predicate of resultatives, an implicational universal can be formulated. That is, if a language has resultatives which involve a stative causing predicate, then the language must allow resultatives which involve a causing predicate that is an activity or an accomplishment verb. The reason for this, I believe, lies in the fact that it is normal to have a result caused by an action, but unusual to have a result caused by a state.

Before we proceed to the final section, it should be pointed out that Kaufmann & Wunderlich (1998) regard the following sentences as involving a stative causing predicate.3

(20) Kaufmann & Wunderlich (1998: 22-23; with glosses or translation added)

a. Der Vorhang hängt sich glatt.
the curtain hangs itself smooth
‘The curtain is hanging itself smooth.’

b. Der Säugling hat sich die Beine krumm gestanden.
the baby has himself the legs bandy stood
‘The baby stood so that his legs became bandy.’

c. Er haßte sich in Raserei.
he hated himself in rage
‘He hated himself into a rage.’
If so, then German, like Mandarin, also allows resultatives that involve a stative causing predicate. But the question is whether verbs like hängen ‘hang’ and haßen ‘hate’ (or hassen in the new orthography) express states. As there is no exact “continuous tense” or progressive aspect in German, the continuous tense test used by Vendler (1957) is inapplicable in this case. However, as far as the use of English hang and hate is concerned, the sentences in (21) show that they can be used in the progressive aspect.

(21)  a. The curtain is hanging there.
    b. People are hating him for what he did.

Given this, hang and hate are not true state verbs by Vendler’s criterion. This at least provides some indirect evidence that hängen and haßen in (20) are not state predicates. In fact, as far as hängen in (20a) is concerned, it does not purely express a state; rather, it depicts a resulting state that is due to a hanging action. That is, the hanging action seems to be relevant to the meaning of hängen even in the case of (20a). This further suggests that hängen in this case is not a (pure) state predicate. In this regard, it needs to be pointed out that by Comrie’s (1976: 13) criterion that a state requires no “input of energy” (see also Nedjalkov & Jaxontov 1988: 4, Tenny & Pustejovsky 2000: 15), it seems that hängen ‘hang’ in (20a) is a state verb and haßen ‘hate’ in (20c) is not. However, by taking into consideration both Comrie’s criterion and Vendler’s continuous tense test, it can be concluded that neither hängen nor haßen is a state predicate. Based on this, I tend to view the main predicates in (20) as non-state verbs, and as a result I do not regard the three resultatives in (20) as involving a stative causing predicate.

4. Summary and Conclusion

In sum, the paper shows that contra the usual claim that the causing predicate of a resultative must involve an activity component, there is evidence from Mandarin RVCs that a stative predicate can function as the causing component of a resultative as well. This finding is both theoretically and typologically significant. Theoretically, if it is agreed that Mandarin RVCs involving a stative predicate are accomplishments, then it can be concluded that accomplishments do not necessarily involve an activity component. Rather, they necessarily involve a duration component, which can be an activity or a state.

In addition to its theoretical significance, the fact that the causing predicate of a resultative can be a state is also typologically significant because crosslinguistically it is unusual for a stative predicate to serve as the causing component of a resultative. This rarity is partly because states are not typical causing eventualities, and partly because not many languages have the right resources to allow the using of a state predicate as the causing component of a resultative. Moreover, with respect to the causing predicate of resultatives, an implicational universal can be formulated. That is, if a language has resultatives which involve a stative causing predicate, then the language
must allow resultatives which involve a causing predicate that is an activity or an accomplishment verb.

Notes

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Abbreviations: ACC=accusative; DAT=dative; DCL=declarative; DEF=definite; FEM=feminine; GEN=genitive; IND=indicative; NEUT=neuter; NOM=nominative; PART=participle; PERF=perfective; PRES=present tense; PROG=progressive; SG=singular; TOP=topical marker.

2 The progressive marker *zai cannot be used with verbal statives either, as shown in (i).

(i) *Zhangsan zai zhidao Lisi.
   *Zhangsan PROG know Lisi
   ‘Zhangsan is knowing Lisi.’

3 As shown below, similar English and Norwegian examples are found in the literature as well, although it should be pointed out that (20c) is “ungrammatical” or “rather odd” to my German consultants.

(i) Tenny 1992: 17
   a. John resented his neighbor so much, he resented him right into the hospital (by attacking him with a bat).
   b. Mary admires her brother to pieces.

(ii) Lødrup 2000: 176
   a. Kjøttet har hengt seg mørt
      meat-DEF have-PRES hang-PART REFLEXIVE tender-NEUT.SG
      ‘The meat has hung itself tender.’
   b. Døra har stått seg skjev
      door-DEF have-PRES stand-PART REFLEXIVE lopsided-FEM.SG
      ‘The door has stood itself lopsided.’

References


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