

# The morphological patterns of anticausatives and their interpretations

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## 1. The causative alternation:

Across languages *verbs of change of state* (and *change of degree*) can participate in the causative alternation, i.e. they show either a transitive (causative) or an intransitive (anticausative/inchoative) use.

- |     |    |                                |           |
|-----|----|--------------------------------|-----------|
| (1) | a. | The wind broke the window      | (English) |
|     | b. | The window broke               |           |
| (2) | a. | Il vento ha rotto la finestra  | (Italian) |
|     | b. | La finestra è rotta            |           |
| (3) | a. | Der Wind zerbricht das Fenster | (German)  |
|     | b. | Das Fenster zerbricht          |           |

The meanings of these two variants are always closely related:

- (i) the meaning of the transitive variant is roughly ‘*cause to V-intransitive*’
- (ii) the *subject of the intransitive* variant and the *object of the transitive* variant bear the *same thematic role*

- |     |    |  |
|-----|----|--|
| (4) | a. | <i>causer</i> – V-transitive – <u><i>undergoer</i></u> |
|     | b. | <u><i>undergoer</i></u> – V-intransitive               |

The possibility to participate in the causative alternation has been claimed to be a diagnostic of unaccusativity. Many (but not all) unaccusative verbs participate in this alternation. Verbs that are considered prototypical *unergatives* never do.

- |     |    |  |
|-----|----|--|
| (5) | a. | The crowd laughed  |
|     | b. | *The comedian laughed the crowd<br>(cf. The comedian made the crowd laugh) |

In the literature the causative alternation was used as a probe into the nature of unaccusativity. In order to arrive at the semantic characterization of the unaccusative class the question was “what element of meaning sets causative alternation verbs like *break* apart from nonaltering verbs like *speak*” (c.f. Levin & Rappaport Hovav 1995).

### 1.1 Theories about the derivational relation between causatives and anticausatives:

It was assumed, that one and only one variant of these alternating verbs is listed in the mental lexicon and that the other variant is derived from the listed one. Two directions of derivation are possible and both have been proposed:

- (I) *detransitivization*: transitive → intransitive  
reduction of the external argument/reflexivization (c.f. Chierchia 1989, Levin & Rappaport-Hovav 1995, ...)

As we will see anticausatives are sometimes marked by special morphology and proponents of this view interpret this morphology as the consequence of the process of suppression of the causer.

- (II) *causativization*: intransitive → transitive  
addition of a causer/a causative head (c.f. Williams 1981, ...)

The leading idea of this second view is, that the conceptually easier form is basic.

Both types of analysis assume that anticausative constructions form a homogeneous class. But a closer look on these constructions makes clear that this cannot be true.

- (i) There are differences in *form* (i.e. syntax) across and (more important) within languages (c.f. Haspelmath 1993). Some anticausatives take extra morphology (often a reflexive pronoun (clitic) which does not carry a thematic role of its own in these constructions). Under both accounts in (I) and (II) the question remains why not all anticausatives (within one language) show up with the same morphological device.
- (6) a. Das Fenster zerbricht (**\*sich**)  
'The window breaks'  
b. Das Klima verändert **\*(sich)**  
'The climate changes'  
c. Der Raum kühlt (**sich**) ab  
'The room cools down'
- (ii) As has recently been shown for some languages, these differences in form go together with (subtle) differences in *aspectual meaning*. Here I concentrate on these differences.
- **Lack of uniformity leads one to rethink unaccusativity. Either**
    - 1. not all forms of anticausatives qualify as unaccusatives or**
    - 2. the syntax of unaccusatives is not homogenous.**

Languages to be discussed: Italian, French and Greek.

What we see is that anticausative verbs split in three main groups in these languages with respect to extra (voice) morphology:

- A. verbs that require such morphology  
B. verbs that disallow it  
C. verbs that allow it (i.e. have both variants)

- The pattern with the extra morphology carries special aspectual meaning.

Note: as we will see, the verbs that belong to the three groups are not semantically identical across these 3 languages.

2. Anticausatives in Italian (Folli 2002):

2.1 Syntactic differences:

In Italian there exist three types of anticausative verbs.

A. anticausatives that need the reflexive clitic 'si':

- (7) a. Gianni ha chiuso la finestra  
'John closed the window'  
b. La finestra \*(si) è chiusa  
'The window closed'
- (8) a. Gianni ha rotto la sedia  
'John broke the chair'  
b. La sedia \*(si) è rotta  
'The chair broke'

B. anticausatives that do not take 'si':

- (9) a. Gianni ha aumentato i prezzi  
'John increased the prices'  
b. I prezzi (\*si) sono aumentati  
'The prices increased'
- (10) a. Gianni ha cambiato la temperatura  
'John changed the temperature'  
b. La temperatura (\*si) è cambiata  
'The temperature changed'

C. anticausatives that allow but do not need 'si':

- (11) a. Maria ha fuso il cioccolato  
'Maria melted the chocolate'  
b. Il cioccolato (si) è fuso  
'The chocolate melted'
- (12) a. Maria ha cotto la carne  
'Maria cooked the meat'  
b. La carne (si) è cotta  
'The meat cooked'

Table 1.

<u><b>A:</b> verbs that need 'si'</u>	<u><b>B:</b> verbs that disallow 'si'</u>	<u><b>C:</b> verbs that allow 'si'</u>
rompere (break)	diminuire (decrease)	fondere (melt)
alterare (alter)	aumentare (increase)	cuocere (cook)
svegliare (wake up)	invecchiare (age)	raffreddare (cool)
aprire (open)	cambiare (change)	riscaldare (heat)
chiudere (close)	allungare (lengthen)	asciugare (dry)
estendere (extend)	guarire (heal)	congelare (freeze)
sbriciolare (crumble)	migliorare (improve)	bruciare (burn)
dividere (divide)	affondare (sink)	sgonfiare (deflate)
sfilacciare (fray)	bollire (boil)	ingrandire (enlarge)

## 2.2 Differences in meaning (Telicity):

- The difference in morphological marking is followed by a difference in aspectual meaning. Folli (2002) argues that the *si*-marking of anticausative verbs either reflects the *telic* nature of these verbs or encodes an (in principle optional) *telic* interpretation.

Table 2.

	+ telic	+ telic	+/- telic	- telic
+ si	Class A	Class C <sub>1</sub>		
- si			Class C <sub>2</sub>	Class B

### 2.2.1 Testing verbs of class A:

These verbs are telic in both their transitive and their intransitive uses.

- (i) they can occur with “*in X*” adverbials; these adverbials set a temporal frame in which the event terminates.
- (13) a. Gianni ha chiuso la finestra in un secondo  
‘John closed the window in one second’  
b. La finestra si è chiusa in un secondo  
‘The window closed in one second’
- (14) a. Gianni ha rotto la sedia in un secondo  
‘John broke the chair in one second’  
b. La sedia si è rotta in un secondo  
‘The chair broke in one second’
- (ii) *the negation of the final end-state* by means of the additional phrase is infelicitous.
- (15) a. ?Gianni ha chiuso la finestra, ma non è chiusa  
‘John closed the window, but it is not closed’  
b. ?La finestra si è chiusa, ma non è chiusa  
‘The window closed, but it is not closed’
- (16) a. ?Gianni ha rotto la sedia, ma non è rotta  
‘John broke the chair, but it is not broken’  
b. ?La sedia si è rotta, ma non è rotta  
‘The chair broke but it is not broken’
- (iii) the ongoing activity expressed by the *progressive* must be interpreted as the preparatory activity leading to the event.
- (17) a. Gianni sta aprendo la finestra  
b. “John is about to open the window”  
c. \* “John is in the process of opening the window”
- (iv) the *progressive* form does not entail the past form, as is typical of telic events.
- (18) Gianni sta chiudendo la finestra  $\nRightarrow$  Gianni ha chiuso la finestra  
John is closing the window  $\nRightarrow$  John has closed the window.

The progressive form of an atelic activity in contrast entails the past form.

- (19) If I am living in Rome, then I already have lived in Rome

### 2.2.2 Testing verbs of class B:

In both their intransitive and transitive uses, these verbs are obligatory atelic.

- (i) they can occur with “*for x*”-adverbials which give a period of time in which the event is going on.
  - (20) a. Gianni ha diminuito la temperatura per un’ora  
‘John decreased the temperature for an hour’
  - b. La temperatura è diminuita per un’ora  
‘The temperature decreased for an hour’
  - (21) a. Gianni ha cambiato la temperatura per un’ora  
‘John changed the temperature for an hour’
  - b. La temperatura è cambiata per un’ora  
‘The temperature changed for an hour’
- (ii) the atelicity is further shown by the impossibility of these verbs to occur with the adverbial *completamente* (completely).
  - (22) a. ??Gianni ha diminuito la temperatura completamente  
‘John decreased the temperature completely’
- (iii) they can occur with a phrase denying the achievement of a set final state.
  - (23) b. La temperatura è diminuita, ma non è diminuita completamente  
‘The temperature decreased, but is not completely reduced’
- (iv) if occurring with the progressive, we get an interpretation where the change event is what is modified.
  - (24) Gianni sta diminuendo la temperatura  
‘John is in the process of decreasing the temperature’
- (v) and the entailment test gives the following results.
  - (25) Gianni sta diminuendo la temperatura => Gianni ha diminuito la temperatura  
‘John is decreasing the temperature’ => ‘John has decreased the temperature’

### 2.2.3 Testing verbs of class C:

In their intransitive form without *si*, these verbs are aspectually ambiguous (the same in their transitive use). But in the intransitive form with *si*, they are obligatory telic.

- (i) intransitives without *si* can occur both with “*in X*” and “*for X*” adverbials; intransitives with *si* are not possible with “*for X*” adverbials.
  - (26) a. Il cioccolato è fuso per pochi secondi/in pochi secondi  
‘The chocolate melted for a few seconds/in a few seconds’
  - b. Il cioccolato *si* è fuso \*per pochi secondi/in pochi secondi  
‘The chocolate melted \*for a few seconds/in a few seconds’
  - (27) a. La carne è cotta per pochi secondi/in pochi secondi  
‘The meat cooked for a few seconds/in a few seconds’
  - b. La carne *si* è cotta \*per pochi secondi/in pochi secondi  
‘The meat cooked \*for a few seconds/in a few seconds’

- (ii) negation of the final state by means of the additional phrase is infelicitous with the intransitive form with *si*, but gives rise to grammatical sentences if added to the intransitive form without *si*.
- (28) a. La casa è bruciata (per un'ora), ma non è bruciata  
 'The house burned (for an hour), but it is not burnt'  
 b. \*La casa si è bruciata, ma non è bruciata.  
 'The house burned, but it is not burnt'
- (iii) if these verbs are used in the progressive form, the independent process part of the event can be modified by the progressive operator.
- (29) Gianni sta fondendo il cioccolato  
 'John is (in the process of) melting the chocolate'

### 3. Anticausatives in French (Labelle 1990, 1992):

Again there exist three different classes of anticausatives.

A. anticausatives that need the reflexive clitic *se*:

- (30) Le poulet (??se) cuit  
 'The chicken is cooking'

B. anticausatives that do not take *se*:

- (31) L'image \*(s')agrandit  
 'The picture is becoming wider'

C. anticausatives that allow but do not need *se*:

- (32) Le vase (se) casse  
 'The vase breaks'

Table 3.

<b>A: verbs that need <i>se</i></b>	<b>B: verbs that disallow <i>se</i></b>	<b>C: verbs that allow <i>se</i></b>
s'agrandir (become bigger)	cuire (cook)	gonfler (inflate)
s'alléger (become lighter)	durcir (harden)	élargir (widen)
s'améliorer (improve)	fondre (melt)	épaissir (thicken)
se calcifier (calcify)	grandir (grow)	gonfler (inflate)
se civiliser (civilize)	grossir (to grow bigger)	noircir (blacken)
se couvrir (become covered)	maigrir (to grow thinner)	rougir (redden)
se rabougrir (shrivel up)	moisir (mold)	refroidir (cool)
s'assécher (to dry out)	pourrir (rot)	ramollir (soften)
s'engourdir (to numb)	sécher (dry)	caraméliser (caramelize)

The two morphological variants also seem to induce aspectual differences.

- Labelle (1990, 1992): the version with the reflexive clitic *se* focuses on the final state/the result of the described event, while the version without *se* focuses on the process component of the event.

### 3.1 The *mettre quelque chose à* ('put s.th. on/up to') test:

Anticausatives with *se* are incompatible with the expression *mettre quelque chose à*. This expression describes the fact of creating the appropriate conditions for an process to take place, i.e. it focuses on the beginning of the process. This conflicts with the reflexive, which focuses on the fact of coming to be in a final state.

- (33) a. Le sucre caramélise  
b. Le sucre se caramélise  
'The sugar is turning into caramel'
- (34) a. Le cuisinier a mis le sucre à caraméliser  
b. \*Le cuisinier a mis le sucre à se caraméliser  
'The cook put the sugar on to caramelize'

### 3.3 "in X" and "for X" adverbials:

Verbs like *durcir* 'harden' or *cuire* 'cook' usually form anticausatives without *se*. But with "in X" and "for X" adverbials we find the following picture:

- (35) a. Le ciment a durci pendant 3 heures  
b. \*?Le ciment s'est durci pendant 3 heures  
'The cement has hardened during 3 hours'
- (36) a. Les joints de caoutchouc durcissaient en quelques années  
b. Les joints de caoutchouc se durcissaient en quelques années  
'The rubber joints were hardening in a few years'
- (37) a. Le poulet a cuit pendant 3 heures  
b. \*Le poulet s'est cuit pendant 3 heures  
'The chicken cooked for 3 hours'
- (38) a. Le poulet a cuit en très exactement 30 minutes  
b. ?Le poulet s'est cuit en très exactement 30 minutes  
'The chicken cooked/got cooked in exactly 30 minutes'

It seems that in a number of cases a strong focus on the final state has a licensing role on the use of the reflexive clitic. The effect becomes even stronger with resultative phrases.

- (39) a. L'oiseau a mué sous l'effet du virus  
b. \*L'oiseau s'est mué sous l'effet du virus  
'The bird moulted under the effect of the virus'
- (40) a. \*L'oiseau a mué en un monstre à cinq têtes  
b. L'oiseau s'est mué en un monstre à cinq têtes  
'The bird turned into a five-headed monster'

4. Anticausatives in Greek (Alexiadou & Anagnostopoulou, to appear):

In Greek once again we find three types of anticausatives: one class of verbs uses a special morphological marking, another class always remains morphologically unmarked, and a third class is optionally marked. In contrast to the romance languages the morphological device for anticausatives in Greek is not a reflexive clitic, but it is *non-active* verbal/voice morphology which is also used to form ordinary passive sentences (c.f. 41).

- (41) to vivlio diavastike ktes  
 the book-nom read-Nact yesterday  
 'The book was read yesterday'

A. anticausatives that need *non-active morphology*:<sup>1</sup>

- (42) a. o Janis ekapse ti supa  
 the John-nom burnt-Act the soup-acc  
 'John burnt the soup'  
 b. i supa kegete  
 the soup-nom burns-Nact  
 'The soup is burning'

B. anticausatives that surface with *active morphology*:

- (43) a. o Janis adiase ti sakula  
 the John-nom emptied the bag-acc  
 'John emptied the bag'  
 b. i sakula adiase  
 the bag-nom emptied-Act  
 'The bag emptied'

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<sup>1</sup> Although passives and anticausatives can be identical in morphological form, there is a test which can distinguish between the two constructions: the preposition *apo* 'from' followed by a DP denoting the agent (corresponding to the English 'by-phrase') is licensed with passives but not with anticausatives.

- (i) a. to vivlio diavastike apo ton Petro *passive*  
 the book-nom read-Nact by the Peter  
 'The book was read by Peter'  
 b. \*to bukali adiase apo ton Petro *anticausative*  
 the bottle-nom emptied-Act by the Peter  
 'The bottle emptied by Peter'  
 c. \*I supa kaike apo to Jani *anticausative*  
 the soup burnt-Nact by John  
 'The soup burnt by John'

But *apo* followed by the anaphoric element *mono* to which a possessive clitic attaches (an expression corresponding to Italian *da sè*, English *by itself*) is not permitted with passives and permitted with anticausatives.

- (ii) a. \*to vivlio diavastike apo mono tu *passive*  
 the book-nom read-Nact by itself  
 'The book was read by itself'  
 b. to bukali adiase apo mono tu *anticausative*  
 the bottle-nom emptied-Act by itself  
 'The bottle emptied by itself'  
 c. To pani skistike apo mono tu *anticausative*  
 the cloth tore-Nact by itself  
 'The cloth tore by itself'

Observe that if a verb forms the anticausative construction by means of non-active morphology the passive interpretation is blocked or at least deviant.

C. anticausatives that can surface both with *active* or *non-active* morphology:

- (44) a. o sismos gremise to ktirio  
the earthquake-nom demolished the building-acc  
‘The earthquake demolished the building’
- b. to ktirio gremise apo mono tu  
the building collapsed-Act by itself
- c. to ktirio gremistike apo mono tu  
the building collapsed-Nact by itself  
‘The building collapsed by itself’

Table 4.

<u>A: verbs that use Nact.</u> <i>morph.</i>	<u>B: verbs that use Act.</u> <i>morph.</i>	<u>C: verbs that use Nact. or Act.</u> <i>morph.</i>
kommatiazio (tear)	asprizo (whiten)	zarono (wrinkle)
miono (decrease)	kokinizo (redden)	tsalakono (crumple)
eksafanizo (diminish)	mavrizo (blacken)	zesteno (heat)
veltiono (improve)	katharizo (clean)	skizo (tear)
diplasiazio (double)	stroggilevo (round)	erimono (desert)
singentrono (collect/gather)	klino (close)	madao (pluck)
dhiadhidho (spread a rumor)	anigo (open)	lerono (dirty)
vithizo (sink)	plateno (widen)	gremizo (demolish/collapse)
giatrevon (heal)	stegnono (dry)	stravono (bend)

#### 4.2 Meaning differences within class C:

- Within verbs of class C the *active* form denotes a partial change and the *non-active* form may denote a change of state that takes place completely. The *active* entails and not simply implies ‘incomplete change’.

This is shown by the sentences in (45) which deny the achievement of a complete change. In the first conjunct, which states that the change of state is partial, the *active* form is comfortably used. When complete change is asserted by the adverb ‘completely’ only the *non-active* form is licit. The active is ruled out as a contradiction.

- (45) a. to ktirio gremise se ena simio alla den gremistike/\*gremise entelos  
the bulding collapsed-Act in one spot but neg collapsed-Nact/\*Act completely
- b. to trapezomantilo lerose se ena simio alla den lerothike/\*lerose entelos  
the table-cloth dirtied-Act in one spot but neg dirtied-Nact/\*Act completely
- c. to pukamiso tsalakose s. e. simio alla den tsalakothike/\*tsalakose endelos  
the shirt wrinkled-Act in one spot but neg wrinkled-Nact/\*Act completely

But the *non-active* form does not exclusively denote ‘complete change’. The following examples show that the *non-active* form is also compatible with ‘partial change’. The *non-active* is licit in the first conjunct which asserts partial change:

- (46) a. to ktirio gremistike se ena simio alla den gremistike/\*gremise entelos  
the bulding collapsed-Nact in one spot but neg collapsed-Nact/\*Act completely
- b. to trapezomantilo lerothike se ena simio alla den lerothike/\*lerose entelos  
the table-cloth dirtied-Nact in one spot but neg dirtied-Nact/\*Act completely

- c. to pukamiso tsalakothike s. e. s. alla den tsalakothike/\*tsalakose endelos  
 the shirt wrinkled-Nact i. o. spot but neg wrinkled-Nact/\*Act completely

Thus, while the *active* asserts incomplete change, the *non-active* is compatible with both total and partial change.

Thus far the general picture that seems to emerge is the following:

the verbs that carry special morphology have a special aspectual interpretation  
 i.e. voice morphology has an aspectual reflex.

(at least two) Questions:

- (i) what does this mean for the syntax of unaccusatives? Different structures?
- (ii) Since German seems superficially similar to Romance, do we find a similar partition in German?

### 5. German:

Again three classes of anticausatives.

Table 5.

<u><b>A:</b> verbs that need sich</u>	<u><b>B:</b> verbs that disallow sich</u>	<u><b>C:</b> verbs that allow sich</u>
vergrößern (enlarge)	schmelzen (melt)	abkühlen (cool)
ausdehnen (extend)	kochen (cook)	ausfransen (fray)
verbreiten (spread)	zerbrechen (break)	bräunen ((become) brown)
verbessern (improve)	umstürzen (overturn)	verbiegen (bend)
aufrichten (straighten up)	ein-/zerreißen (tear)	ausleiern (wear out)
verdoppeln (double)	austrocknen (dry out)	verkanten (edge)
verändern (alter)	zerknittern (crumple)	ver-/härten (harden)
verlängern (lengthen)	ab-/zunehmen(in/decrease)	verkrümmen (curve)

- Question: what does ‘sich’ do?

‘Sich’ does not induce/reflect telicity.

In a questionnaire study with 15 test persons no difference in acceptability emerged between the following pairs of sentences with a verb from class C.

- (47) a. Der Raum kühlt sich ab  
 b. Der Raum kühlt ab  
 ‘The room cools down’
- (48) a. Das Wasser kühlte sich eine Stunde lang ab  
 b. Das Wasser kühlte eine Stunde lang ab  
 ‘The water cooled down for an hour’
- (49) a. Das Wasser kühlte sich in einer Stunde ab  
 b. Das Wasser kühlte in einer Stunde ab  
 ‘The water cooled down in an hour’
- (50) a. Das Wasser kühlte sich auf unter 10 Grad ab  
 b. Das Wasser kühlte auf unter 10 Grad ab  
 ‘The water cooled down to under ten degrees’

- (51) a. Das Wasser kühlte sich ab, wurde aber nicht wirklich kalt  
 b. Das Wasser kühlte ab, wurde aber nicht wirklich kalt  
 'The water cooled down but did not become really cold'

Within class A and class B it seems to me that we can find both, verbs that have to be used in a telic sense and verbs that need not be used in a telic sense.

Class A:

- (52) a. Die Pflanze richtet sich auf  
 b. \*Die Pflanze richtet auf  
 'The plant straightens'
- (53) a. Die Pflanze richtete sich in wenigen Augenblicken auf  
 'The plant straightened within a few moments'  
 b. #Die Pflanze richtete sich eine Zeit lang auf  
 'The plant straightened for some time'
- (54) a. Das Gerücht verbreitet sich  
 b. \*Das Gerücht verbreitet  
 'The rumour spreads'
- (55) a. Das Gerücht verbreitete sich jahrelang  
 'The rumour spread for years'  
 b. Das Gerücht verbreitete sich in kürzester Zeit  
 'The rumour spread in a very short time'

Class B:

- (56) a. \*Die Leiter stürzt sich um  
 b. Die Leiter stürzt um  
 'The ladder falls over'
- (57) a. Die Leiter stürzte in wenigen Augenblicken um  
 'The ladder fell over in a few moments'  
 b. \*Die Leiter stürzte minutenlang/sekundenlang um  
 'The ladder fell over for minutes/seconds'
- (58) a. \*Der See trocknet sich aus  
 b. Der See trocknet aus  
 'The lake dries up'
- (59) a. Der See trocknete jahrelang aus  
 'The lake dried up for years'  
 b. Der See trocknete in kürzester Zeit aus  
 'The lake dried up in a very short time'

- Does 'sich' have an impact on the meaning of anticausatives ?
- How is 'sich' different from 'se'/'si'/voice morphology ?

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