Conceptual Categories and Linguistic Categories IV:
Part 2: The Causative Alternation: A First Look

1 The causative alternation: An introduction

- While the localist, aspectual, and scalar approaches to event conceptualization focus on events of change in the property and motion domain, another theory of event conceptualization, the causal approach, is formulated to capture the grammatically relevant causal relations between events.

- Understanding the nature of causal relations is crucial to the analysis of the causative alternation, which relates verbs with transitive and intransitive uses, where $V_{\text{trans}} = \text{\'cause to } V_{\text{intrans}}$.

(1) a. Pat broke the window. (Causative variant)
b. The window broke. (Anticausative variant)

- The causative alternation is well-attested among change of state verbs.

(2) a. Tony opened the door./The door opened.
b. Kelly cooled the soup./The soup cooled.
c. Sam melted the chocolate./The chocolate melted.

- But there are intransitive verbs which lack transitive “causative” counterparts.

(3) a. The children played.
b. * The teacher played the children.
   (cf. The teacher made the children play.)

(4) a. The actor spoke.
b. * The director spoke the actor.
   (cf. The director made the actor speak.)

(5) a. The crowd laughed.
b. * The comedian laughed the crowd.
   (cf. The comedian made the crowd laugh.)

- And there are transitive “causative” verbs which lack intransitive counterparts.

(6) a. The terrorist assassinated/murdered the politician.
b. * The politician assassinated/murdered.
THE BIG QUESTION:
What factors determine whether a verb will show the causative alternation?

WHAT CONSTITUTES AN ANSWER:
— MUCH PREVIOUS WORK: Providing the appropriate lexical entry to causative alternation verbs.
— OUR PROPOSAL: Not only specifying the contribution of the verb via its lexicalized meaning, but also identifying the contribution of the event structure and the context.

DESIDERATA OF AN ACCOUNT:
— It should as much as possible not be tailored to individual lexical items.
— It should minimize polysemy, i.e. avoid giving alternating verbs multiple lexical entries.
— It should make the right division of labor between the verb, the event structure, and the context.

(7) “The knowledge that the speaker brings to bear . . . may be separated into the ‘general’ and the ‘specific.’ One’s ‘general’ knowledge about a language is organized and displayed in his ‘grammar’; one’s ‘specific’ knowledge about the individual linguistic objects known as words or ‘lexemes’ is collected and itemized in a ‘dictionary’ or ‘lexicon’ of the language.” (Fillmore 1970: 121)

2 Approaches to the lexical entries of causative alternation verbs

Assuming causative alternation verbs have a single lexical entry, two hypotheses about the meaning of these verbs are possible, which have consequences for which variant is basic:


⇒ The causative variant is taken as basic: The approach reviewed in this lecture.

• The verb simply selects the patient argument; that is, it does not lexicalize a notion of cause (RH&L in press).

⇒ The anticausative variant is taken as basic: The approach discussed in Lecture V.

The first approach requires specifying the conditions for anticausativization; the second the conditions for causativization.

3 Lexically causative analyses of causative alternation verbs

3.1 A synopsis of the L&RH (1995) analysis

• There is a basic distinction between verbs describing externally vs. internally caused eventualities (see Section 3.2), with ALL causative alternation verbs being externally caused.

• Externally caused verbs necessarily have a causative lexical semantic representation—a structured representation of lexicalized meaning; that is, they lexically specify a cause argument as well as a patient. Internally caused verbs do not have a causative lexical semantic representation.
This difference in lexical semantic representation distinguishes between *break*, which is externally caused, and *laugh*, which is internally caused; in the absence of a productive operation of causativization, this representation explains why *laugh* lacks a transitive causative use.

(8) Transitive *break*:

Lexical Semantic Rep.: \[
[ [ x \text{ DO-SOMETHING} ] \text{ CAUSE} [ y \text{ BECOME } \text{BROKEN} ] ]
\]
Linking Rules: ↓ ↓
Argument Structure: x < y

(9) Intransitive *laugh*:

Lexical Semantic Rep.: \[ x \text{ DO } \text{LAUGH} \]
Linking Rules: ↓
Argument Structure: x

- Externally caused verbs that do not lexically specify any information about the causing event allow the causer argument to be lexically “bound”, giving rise to the anticausative variant (see Section 3.4).

(10) Intransitive *break*:

Lexical Semantic Rep.: \[
[ [ x \text{ DO-SOMETHING} ] \text{ CAUSE} [ y \text{ BECOME } \text{BROKEN} ] ]
\]
Lexical Binding: 0
Linking Rules: ↓
Argument Structure: < y

Thus, causative and anticausative *break* have the same causative lexical semantic representation.

- There is a constraint which disallows lexical binding of the causer argument if the event comes about with the continued involvement of an agent, hence the lack of anticausative counterpart in (6).

### 3.2 Motivating the externally vs. internally caused eventuality distinction

- The externally vs. internally caused eventuality distinction is introduced to characterize what differentiates the meaning lexicalized by a verb showing the causative alternation from that of an intransitive verb which is NOT regularly paired with a transitive causative use.

- Agentive verbs do not participate in the causative alternation, but the relevant distinction cannot be equated with agentivity: there are nonagentive verbs which do not show the causative alternation.

(11) Animate agentive argument:

a. The politician spoke./*The press spoke the politician.
b. The athletes jogged./*The coach jogged the athletes.
(12) Animate nonagentive argument:
   a. Charlotte blushed./*The rude comment blushed Charlotte.
   b. Kelly coughed./*The medicine coughed Kelly.
   c. The crowd laughed./*The comedian laughed the crowd.

(13) Inanimate nonagentive argument:
   a. The stream burbled./*The rocks burbled the stream.
   b. The embers glowed./*The draft glowed the embers.
   c. The chimney smoked./*The draft smoked the chimney.

• THE RELEVANT DISTINCTION: Verbs denoting internally caused eventualities vs. verbs denoting externally caused eventualities.

   — An INTERNALLY CAUSED EVENTUALITY “cannot be externally controlled” (Smith 1970:107), but is conceived of as arising from inherent properties of its argument. An inherent property of the argument is “responsible” for the eventuality denoted by an internally caused verb.

   Internal causation subsumes agentivity—monadic agentive verbs are internally caused—but not all internally caused verbs are agentive.

   The prototypical internally caused eventuality involves an agentive argument with a self-controlled body acting volitionally.

   Internally caused verbs that depart from the agentive prototype tend to exert strong selectional restrictions on their subject since the eventuality they denote must result from inherent properties of the verb’s argument, and thus the argument must have the requisite properties.

   — EXTERNALLY CAUSED EVENTUALITIES inherently involve an external cause with immediate control over the event: agent, natural force, or circumstance.

   The core externally caused verbs are change of state verbs and (nonscalar) change of position verbs:

(14) Jespersen’s “Move” and “Change” Verbs:
   a. bounce, move, roll, rotate, spin, . . .
   b. bake, blacken, break, close, cook, cool, dry, freeze, melt, open, shatter, thaw, thicken, whiten, widen, . . .

   The set of externally caused verbs is not coextensive with the set of change of state verbs: there are internally caused change of state verbs, which apparently lack causative uses.

(15) Internally caused change of state verbs: bloom, blossom, decay, erode, flower, wilt, . . .

(16) a. The cactus bloomed/blossomed/flowered early.
   b. * The warm weather bloomed/blossomed/flowered the cactus early.

(17) a. The logs decayed.
   b. * The humid weather decayed the logs.
L&RH take internally caused change of state verbs to be no different from other internally caused verbs; thus, they are not given a causative analysis, cf. (9).

3.3 Consequences of the L&RH (1995) analysis

3.3.1 There may be asymmetries in selectional restrictions

Since the variants are based on the same lexical semantic representation, the selectional restrictions on the subject of the anticausative variant and the object of the causative variant are expected to be largely similar.

(18) a. Tony broke the vase/the window/the bowl/the radio/the toaster.
    b. The vase/the window/the bowl/the radio/the toaster broke.

(19) a. * Tony broke the cloth/the paper/innocence.
    b. * The cloth/the paper/innocence broke.

However, since causative alternation verbs basically have a causative analysis, where the selectional restrictions on the variants diverge, the anticausative variant is expected to have stronger selectional restrictions on its subject than the causative variant has on its object, as indeed seems to be the case.

(20) a. He broke his promise/the contract/the world record.
    b. * His promise/the contract/the world record broke.

(21) a. The wind cleared the sky./The sky cleared.
    b. The men cleared the table./*The table cleared.

(22) a. Kelly opened the door/window./The door/window opened.
    b. This book will open your mind./*Your mind will open from this book.

3.3.2 There are no externally caused verbs lacking a causative variant

If externally caused verbs are inherently causative, then if they lack a variant, it should be the anticausative one.

(23) a. The assassin murdered the senator./*The senator murdered.
    b. The nurse sterilized the instruments./*The instruments sterilized.

3.3.3 Deadjectival alternating verbs are based on stage-level adjectives

- Individual-level adjectives, which describe inherent and, thus, unchangeable properties of entities would not be expected to be the basis of externally caused change of state verbs.

- A survey of the many English deadjectival causative alternation verbs supports this prediction; see also Dixon (1982).
(24) **ZERO-RELATED ADJECTIVE:**
brown, clear, clean, cool, crisp, dim, dirty, dry, dull, empty, level, loose, mellow, muddy, narrow, open, quiet, shut, slack, slim, slow, smooth, sober, sour, steady, tan, tense, thin, warm, yellow, . . .

(25) **–en AFFIX:**
awaken, blacken, brighten, broaden, cheapen, coarsen, dampen, darken, deepen, fatten, flatten, freshen, gladden, harden, hasten, heighten, lengthen, lessen, lighten, loosen, moisten, neaten, quicken, quieten, redder, ripen, roughen, sharpen, shorten, sicken, slacken, smarten, soften, steepen, stiffen, straighten, strengthen, sweeten, tauten, thicken, tighten, toughen, waken, weaken, whiten, widen, worsen, . . .

- There are some adjectives that allow both stage- and individual-level interpretations, but the related deadjectival verbs retain only the stage-level interpretation.

(26) a. *smart* can mean ‘intelligent’ or ‘well and fashionably dressed’ but *smarten* is related only to ‘well and fashionably dressed’
b. *tough* can mean ‘difficult’ or ‘resistant to tearing’ but *toughen* is related only to ‘resistant to tearing’ (Dowty 1979)

- Nor can deadjectival verbs be formed from both members of those antonym pairs where one member is individual-level.

(27) a. harden/soften, clean/dirty, widen/narrow
b. tame/*wild(en)

### 3.3.4 Alternative event construals have consequences for the availability of the alternation

This analysis makes predictions about the availability of the causative alternation when the classification of a happening in the world as internally or externally caused is underdetermined.

**Speaker variation regarding the availability of the causative alternation**

- If a language must make a choice in those instances when a happening could be construed as internally or externally caused, then speakers might vary in their classification of the verb naming this eventuality.
- This variation should be reflected in the availability of the causative alternation.

**AN EXAMPLE:** Some speakers allow causative uses of the verb *deteriorate*

(28) a. The roof deteriorated.
b. The pine needles were deteriorating the roof.
Apparent synonyms which differ in behavior (Atkins & Levin 1995)

If two apparently synonymous verbs behave differently with respect to the causative alternation, then there should be evidence of a corresponding difference in their classification as externally vs. internally caused.

(29) a. She shook./I shook her.
b. She shuddered./*I shuddered her.

(30) a. Things that shudder: people, animals, earth, machines/engines
    (have “self-controlled” or “autonomously controlled” bodies )
b. Things that shake: the above and leaves, furniture, dishes, . . .

shudder describes an involuntary emotional or physical reaction, which is itself a response to an external stimulus. The reaction is internally initiated; the indirect, external stimulus may be expressed in an at phrase.

(31) a. . . . shuddered at the thought of drowning in such loneliness . . .
    (Oxford Corpus; 5Gates)
b. . . . shuddering at tales of the Big Bad Wolf . . . (Oxford Corpus; OnEdge)

3.3.5 Variable behavior may be attributable to polysemy

• The verb burn shows the causative alternation for only some choices of patient.

(32) a. The marshmallows burned./The campers burned the marshmallows.
b. The fire burned./*The campers burned the fire.

• THE REASON: burn has two senses, one externally caused and one internally caused:
  — Externally caused: ‘consume by fire’: predicated of flammables, such as paper, leaves, food, . . .
  — Internally caused: ‘blaze, emit heat/light’: predicated of fire, torches, candles, . . .
• Hebrew uses two different verbs for these two senses of burn:

(33) a. saraf (trans)/nisraf (intr) ‘burn’ (consume by fire)
b. ba’ar (intr)/hiv’ir (trans) ‘burn’ (blaze)

3.4 A condition allowing an anticausative variant of an externally caused verb

Change of state verbs found in the anticausative variant are those in which the change can come about independently “in the sense that it can occur without an external agent” (Smith 1970: 102).

(34) The vandals/the rocks/the storm broke the windows.
• Transitive verbs that have anticausative counterparts describe an eventuality that can come about spontaneously without the volitional intervention of an agent.

• Verbs that require animate, volitional, intentional agent never have anticausative uses.

(35)  

a. The terrorist assassinated/murdered the senator.

b. *The senator killed/assassinated/murdered.

c. *The explosion assassinated/murdered the senator.

• However, the availability of the anticausative variant is not purely lexically determined: some verbs allow it only for some choices of patient because only for these choices can the change come about without the intervention of an agent.

(36)  

a. The waiter cleared the table.

b. *The table cleared.

(37)  

a. The wind cleared the sky.

b. The sky cleared.

The relative contribution of lexical and contextual factors was never fully resolved in the L&RH (1995) account.

3.5 Reinhart’s causative analysis (2002, to appear)

• This analysis parallels L&RH’s account in important respects.

• Like L&RH, Reinhart takes alternating verbs to be lexically dyadic; that is, the causative variant is taken to be basic for all causative alternation verbs.

• The class of causative alternation verbs is defined in terms of the thematic role labels of the arguments of the causative variant (where these roles are given a feature decomposition).

(38)  

\[ V ([+c] (=\text{underspecified cause}), [-c,–m] (=\text{theme})) \]

An underspecified cause can be an agent, a natural force, or an instrument; cf. (34).

• There is a lexical rule which derives the anticausative variant from the causative variant:

(39)  

Decausativization: Reduction of a [+c] role

\[
V_{\text{Acc}} (\theta_{[+c]}, \theta_i) \rightarrow V (\theta_i)
\]

(Reinhart to appear: 27, (52))

• Thus, all verbs lexically specified as ([+c], [–c,–m]) alternate. If they lack either the causative or anticausative variant in a particular language, this form is considered a “frozen entry”.

• The specification ([+c], [–c,–m]) is the analogue of L&RH’s constraint on anticausativization.
References


