Causation in Semantics and Grammatical Structure
Week 8: Notes on *Notes on Agentivity and Causation*

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November 28, 2019

Reference: DeLancey, Scott. 1984. Notes on agentivity and causation. *Studies in Language* 8, 181–213.

1 Overview

- we've seen that the linguistic encoding of causation is sensitive to a number of interrelated parameters
  - the directness (or mediacy) of the relationship between cause and effect
  - notions of internal (spontaneous) vs. external causation
  - most recently, agentivity
- **causative alternation** verbs – typically describe situations involving a cause(r) that is external to the caused event (usually a change of state)
  - **important point:** the possibility of expressing a (caused) change of state in a transitive form is related to whether or not we can think of the causer as an independent entity from the object that is affected
  - for some cases, this is very clear: someone who throws a rock and breaks a window is very clearly separate from/external to the window
  - it's easy to tell that the rock-thrower is a distinct entity because it has certain properties (cf. Wright 2002)
  - 'external causers' are often volitional, and act in a volitional way (*causer type*)
  - they are often fully in control of the change – if I do not throw the rock, the window most likely will not break (*controllability*) – but the change does not affect them
  - it's harder to tell in some cases (*subject-modification* parameter):
    - is bright sunlight an external cause of plants wilting?
    - it's not volitional, and wilting is usually something we think of as triggered by processes in the plant
    - but: supposing the sunlight is unusually bright and hot, and so the plants wilt earlier than they might have done normally

* then there's a way in which the sun is responsible for (and thus in control of) the chain of causation, so it might be okay to use a transitive clause:

  (1) Intense sunlight wilted the plants.

Several ideas are intertwined here:

- the type of causation has an effect on the sentence structure
- the type of causation (or at least whether we accept something as internal/external) depends on the extent to which we think the cause(r) acts as an agent
- the things that make us more likely to use a transitive sentence are externality (of cause), volitionality, responsibility, whether or not an entity acts as an instigator
- these are properties associated with being an agent
- so: transitive sentences are associated both with causativity AND the semantic properties that allow us to designate something as an agent

1.1 DeLancey (1984)

> "...it is clear that the fundamental sense of agentivity involves causation of an event, and it is this which builders, losers, runners, and the likes of wind and lightning have in common." p.182

Big picture:

- the 'ideal' for a semantic role:
  - a clear, point-by-point definition or checklist
  - which we can use to make sharp predictions about whether or not something appears in agent position/with agent marking
- DeLancey: this isn't realistic
  - semantics roles aren't sharply defined, but they do have clear prototypes
  - e.g., there are cases where something is obviously an agent
  - so, there are *exemplars* or **prototypes**
  - and the properties that get something closer to/farther away from a prototype are tightly related to the overall event structure of a sentence
  - in the case of agents, these properties are related to whether or not something is clearly an 'ideal' causer
- these ideas are related to Dowty's (1991) theory of proto-roles in semantics
  - certain properties matter for agents, patients, etc
  - the NP arguments which satisfy more of the criteria get put into the relevant roles

- we want to look at agentivity properties and causal situations at the same time, since their exemplary or prototypical properties are related to one another
  - here, it isn't just a question of whether something is agentive enough or volitional enough, but also whether or not it acts in the right way in a causal situation
- grammatical distinctions in languages – e.g., unexpected case marking or similar – signal when something deviates in a noteworthy way from the prototype
- languages aren't going to be the same in terms of how much deviation is okay before you have to mark it, which is why defining agents (and defining external causation) sharply is so hard!
- DeLancey's idea is that the semantic features which make something an exemplary or deviant causal situation (or an exemplary or deviant agent, who participates in a causal situation) are essentially the same across languages
- his findings work towards a concept of direct causation, which folds parameters like volitionality, control, mediation in as elements of directness

Specific goal: Get a clearer sense of what makes a prototypical agent by looking at what sorts of things get grammatically marked as deviating from prototypical causal situations

- implicit assumption has a pragmatic flavour: if you're adding material and thus effort to an utterance, you must be signalling something unusual (and thus worth the effort)

DeLancey's starting point: cross-linguistically, the 'prototype' transitive event involves a direct causation event

- something counts as direct causation if the *proximate* and *ultimate causers* are the same/reside in the same entity

  (2) I had the cobbler repair my shoes.

  - proximate cause: the cobbler (closest to the shoes)
  - ultimate cause: my intention/my instructions to the cobbler
  - not direct causation

- implicit claim (explicit at the end): to the extent possible, we seek acts of volition as ultimate causes, because they originate in themselves/are spontaneous (and possibly because we also understand how they arise)

  (3) I swing an axe and break the window

  - proximate cause: the swing of the axe (impacts/comes into contact with the window)
    BUT: axes don't originate their own motion, so we trace this back to me swinging the axe as the relevant cause
  - ultimate cause: my decision to swing the axe

- this counts as direct causation, even though I didn't touch the window directly

- *Question:* How do we know that axes aren't causers? Isn't this getting ahead of ourselves?
  - not really, in this framework – we know that axes aren't causers because they aren't grammatically marked in the same way as things that are obviously causers
  - for instance, if you want to express the situation in (3) without mentioning my role, most languages would require you to mark the axe in a particular way
  - this sentence would have MORE morphological material than a sentence expressing (3) by mentioning me but not the axe, so it's clear that the axe-only sentence is not exactly prototypical (whereas there's no question that I am an agent)

2 Language 1: Hare (Athabaskan)

2.1 Basic grammatical points

DeLancey starts by providing some information about how NP arguments are marking in Hare:

- this is important to understand so we know what normal transitive clauses look like, and can tell if something is marked specially
  - transitive verbs can appear with 0, 1, or 2 overt NP arguments
  - they are transitive in each case
  - if there are no NP arguments, there must be an object prefix, because you're required to overtly specify the object for transitive verbs
  - if there is one argument, you check whether there is a prefix on the verb to see whether the argument is a subject or object
  - Hare is a partial pro-drop language (since 3rd person pronouns can often be left out)
- some normal transitive sentences:

(5) *Peter Joe wéhxį*
kill
'Peter killed Joe'

(6) *Peter ye-wéhxį*
3sg-kill
'Peter killed him/her/it'

(7) *Joe wéhxį*
kill
'She/he/it killed Joe'

(8) *ye-wéhxį*
3sg-kill
'She/he/it killed him/her/it'

- he also mentions a causativizing affix, but as far as I can tell, this never actually shows up anywhere else, so it's not important for us

(3) *Joe lánįwe*
die
'Joe died'

(10) *Joe lánį-**h**-we*
kill-CAUSE
'She/he/it killed Joe'

2.2 Core transitivity data

Subject restrictions for normal transitives:

- unlike English, instruments in Hare can't be subjects

(12) *John gofį hé yejai tá'enįse*
axe with glass broke(tr.)
'John broke the window with an axe.'

(13) **gofį yejai tá'enįse*
axe glass broke(tr)
Intended: 'The axe broke the window'

(14) *gofį hé yejai tá'enįse*
axe with glass broke(tr.)
'He/she/it broke the window with an axe.'

  - NB: in (14), remember that 3rd person subjects aren't marked overtly

- some special cases where instrument-like things CAN be transitive subjects:

(17) *féku hé ye-wéhxį*
gun with 30bj-killed
'S/he killed him/her/it with a gun.'

(18) *féku ye-wéhxį*
'The/a gun killed him/her/it.'

  - we can make sense of this if we recognize that a gun has properties which in principle allow it to act on its own
  - **important:** for the gun to appear as a subject, it has to have 'originated' the causal chain, e.g. gone off spontaneously – (18) is only okay if no one was using the gun as an instrument

- the gun example shows that inanimates can be transitive subjects

> **Hypothesis 1:** transitive subjects/agents are 'first identifiable causes'
>
> - they cannot be traced back any farther in a causal chain

Pursuing this hypothesis:

- some inanimate subjects also occur with a causal postposition *k'é*

(19) *kǫtúé' k'é lánįwe*
liquor died
'S/he died from/due to liquor.'

(20) *kǫtúé' ye-wéhxį*
liquor 30bj-killed
'Liquor killed him/her.'

  - (20) shows that 'liquor' can be a first identifiable cause (at least, by hypothesis)
  - (19) shows that it also deviates from the normal in some way
- not all subjects can be marked with *k'é*:

(21) *sa ye-wéhxį*
bear
'A bear killed him/her.'
(22) **sa k'é lánįwe*

  - animates cannot take *k'é*, so they don't deviate in the expected way
  - true instruments are also bad!

(14) *gofį hé yejai tá'enįse*
axe with glass broke(tr.)
'S/he broke the window with an axe.'
(23) **gofį k'é yejai tá'enįse*

  - whatever *k'é* encodes, it isn't that the NP was an instrument for some other causer
- data supports the hypothesis that transitive subjects are 'first identifiable causes'

Hypothesis 2: *k'é* identifies a cause as an originating but non-agentive cause

- animate/volitional causers are out
- instruments are out because they aren't originating

In examples like (19), we can roughly translate *k'é* as *from* or *because of*

- we can contrast it with *xǫt'e*, which has a similar meaning

(19) *kǫtúé' k'é lánįwe*
liquor died
'S/he died from liquor.'
(34) *kǫtúé' xǫt'e ıánįwe*
'S/he died because of liquor.'

  - plausible scenarios: alcohol as the direct cause of death (alcoholism, an accident while drunk)
  - (34): alcohol influenced the immediate cause (e.g. a drunk driver)
- so, where emphxǫté allows mediated causation (intervening causers in the sense of Wolff 2003), *k'é* can ONLY mark 'direct' causers
  - in this way, *k'é*-marked causers are 'more prototypical'
- to the extent that we can zoom in on a more precise meaning for *k'é*, we learn something about what 'direct' causation (prototypical transitive causation) is.

Similarly:

- DeLancey suggests we can explain *k'é* more simply:
  - prototypical causers are *active*
  - things like disease and liquor don't act, but are also not manipulated
  - *k'é* causers are **inactive**
  - neither controlled nor controlling
- **upshot:** inactivity DOES count as a deviation from the prototype, but not enough of one to rule out subjecthood in regular transitive clauses
- in a way, *k'é* signals both that something is a real cause, and that it is a bit different
- thus, if we can get a better sense of the meaning of *k'é*, we might understand better what qualifies something as a 'real cause' (in Hare, and by extension for the prototypical situation)
  - *k'é* has two other uses: as a causal conjunction and as an indicator of temporal succession (plus something)

2.3 The many lives of *k'é*

2.3.1 *k'é* as a causal conjunction

The particle *k'é* can occur between two clauses, as a subordinating conjunction:

- it has a causal interpretation, signaling that the first clause is causally-involved in the second
- it contrasts/competes with a another causal conjunction, *hé*

(25) *Mary 'éyayi hɬɬi-i* {*hé* / *k'é*} *duye 'egháyeda*
sick is-NOM can't work
'Mary can't work because she's sick.'[9]

- comparing the two will give us a better understanding of the meaning of *k'é*

Comparing causal conjunctions:

- like *k'é*, *hé* doubles as a postposition (for instruments)
- *hé* can be used in contexts where *k'é* is bad:

(26) *Mary 'éyayi hɬɬi-i* {*hé* / **k'é*} *raidi k'odeyǫwi ts'ę́ ráweya*
sick is-NOM doctor to went
'Mary went to the doctor because she's sick.'

  - since *hé* can occur everywhere *k'é* can, (26) indicates that *k'é* signals something MORE than *hé*

– DeLancey: *k'é* requires that the first clause ensures that the second clause occurs (note that the English translation reverses the clause order)

Claim/proposal: *k'é* signals a relationship of **causal sufficiency**

- since *k'é* as a postposition signals that something is almost a prototypical causer, this suggests that sufficiency and direct causation are connected

- **Important:** DeLancey doesn't make too much of this, but if he's right about *k'é*, then there might be more than one kind of causal link
  - we've been working with the idea that causation involves counterfactual necessity
  - now, we have a relationship of causal sufficiency as well
- additional evidence for the sufficiency idea:

(27) *John Mary ghonayitɬ-i* {*k'é* / *hé*} *sǫdi hįlį*
kissed-NOM happy is
'John's happy because he kissed Mary.'

(28) *John ɬesasóné rayetǫ-i* {**k'é* / *hé*} *só'a-ye-h'į*
motor broke-NOM 30bj-fix
'John's fixing the motor because it's broken.'

(29) *'elugu* {*k'é* / *hé*} *xa-ts'e-dedehlu*
cold Pl.-Impers.-freeze
'Everybody's freezing because it's cold.'

(30) *raidi yɬ'a-i* {**k'é* / *hé*} *gonezǫ araja*
medicine ate-NOM well got
'She got well because she took medicine.'

  - something being broken doesn't guarantee it's being fixed
  - at least for DeLancey's informant, medicine doesn't guarantee a cure

2.3.2 The temporal-succession meaning of *k'é*

In its temporal use, *k'é* looks like a postposition again:

(31) *'įts'é k'é 'ejidéhɬa*
moose ran
'He ran after a moose.'

(32) *John Mary k'é déya*
left
'John went after/followed Mary.'

- additional meaning: has to follow precisely (in the path of)
- pragmatically: deliberately following (causal meaning)
- DeLancey/Givón explanation: **teleological imperative**
  - events have comprehensible causes (we can trace back all events to some originating event, usually volitional if the chain involves humans)
  - associated with tendency to put ultimate causes in subject position
  - related to the idea that certain events can be perceived as causal based on the intentions of an agent (even if they fail)
- DeLancey is suggesting that this use of *k'é* also marks its argument as an 'originating cause' (consistent with the earlier hypotheses)

2.4 Conclusions from Hare

Recall: basic assumption is that normal transitives encode prototypical causal situations

- causers that can be marked with *k'é* are mostly normal, but deviate from expectations in certain ways
- *k'é* marks both 'directness' of causation, and 'quasi-agentivity'
  - directness: sufficiency
  - quasi-agentivity: inactive
- so, *k'é* seems to indicate a causal sufficiency relationship between events!

3 Language 2: Newari (Tibeto-Burman)

3.1 Basic grammatical information

Newari is an (absolutive-)**ergative** language:

- this contrasts with nominative-accusative languages like English and German, which mark subjects with **nominative** case in both transitive and intransitive sentences
- **ergative** languages:
  - subjects of intransitives are marked the same way as the objects of transitive sentences: absolutive case
  - subjects of transitives are marked with ergative case
- to a certain extent, ergative marking is indicative of DeLancey's idea about 'prototypical' transitives
- in Newari, ergative seems to (roughly) mark the agent semantic role*

Newari causatives:

- direct causatives take the suffix $k^h al$ ($\sim$ lexical causatives)

- mediated causation takes suffix k^he and verb *yat-*(=do) (∼ periphrastic causatives)

(37) *məca cahil-ɔ*
child walk-PERF
'The child walked.'

(38) *misa-nɔ̃ wo məca-yatɔ cahi-k^{h}al-ɔ*
woman-ERG the child-DAT walk-CAUS-PERF
'A/the woman walked the child.'

(39) *misa-nɔ̃ wo məca-yatɔ cahi-k^{h}e yat-ɔ*
woman-ERG the child-DAT walk-CAUS do-PERF
'A/the woman made the child walk.'

- we can figure out the difference in meaning by looking at scenarios that allow one sentence vs. the other
  - (38) can only be used for cases where the child was dragged or pushed
  - (39) can only be used if the child made a decision to walk (for whatever reason, including to avoid being punished)
- the difference is **causee volition**: active decision-making qualifies the child as an intervening causer, and 'breaks' the chain from the woman to the walking
- compatible with DeLancey's ideas about Hare direct causation
  - since the child's volition is involved, the woman's action in (39) isn't sufficient to guarantee that the child walks, and we mark this with extra morphological material

Question: what else counts as deviating from direct causation?

3.2 The *-yana* construction

Simple transitives have counterparts which:

- mark the transitive agent with ergative case
- introduce a special particle, *-yana*

(40) *wo misa sit-ɔ*
the woman die-PERF
'The woman died.'

(41) *harsa-nɔ̃ wo misa-yatɔ siat-ɔ*[14]
H.-ERG the woman-DAT kill-PERF
'Harsha killed the woman.'

(42) *harsa-nɔ̃-yana wo misa sit-ɔ*
die-PERF
'Because of Harsha the woman died.'

- (41) and (42) differ in terms of directness
  - scenarios for (41): murder, intentional action to cause death, or physical interaction which (accidentally) results in death
  - (42): Harsha delays calling the doctor until it's too late, or Harsha startles a woman with a weak heart

- DeLancey's claim: *-yana* marks Harsha as 'less than' a true agent (i.e. it marks a deviation)
- but it also codes something like 'responsibility'

General characterization of direct vs. mediated causation:

- prototypical transitive: volitional agent acts on patient to cause change of state
- minor deviations remain transitive, major deviations require *-yana*
- *Question:* what counts as a major deviation?
  - mediating events in causal chain (i.e. intervening causers, cf. Wolff)
  - other contributing causes, even if not a result of agent's action
- *-yana* codes **non-direct** rather than mediated causation; covers cases where other factors enable a result
  - the relevance of other causes again suggests a connection between causal sufficiency and directness
  - but the availability of special marking shows that there are other kinds of causal relationships

3.3 Ergative/instrumental marking: inanimate causes

Newari allows inanimates to be transitive subjects if they are natural forces

- this is similar to *k'é* in Hare: natural forces can also occur in the *-yana* construction, but animate subjects cannot

Newari marks ergatives and instrumental NPs the same way (probably polysemy):

(46) *wo misa-nɔ̄ caku-nɔ̄ la dhen-ɔ*
the woman-ERG knife-INSTR meat cut-PERF
'The woman cut meat with a knife.'

- certain inanimate entities can appear with *nɔ̄* and an intransitive verb (usually these inanimates can also appear in the *-yana* construction)

(47) *cikul-ɔ̄ wo misa sit-ɔ*
cold the woman die-PERF
'The woman died from cold.'

- special case: diseases can occur with transitives and intransitive, but not with *-yana*

(48) *jɔr-ɔ̄ wo misa-yatɔ siat-ɔ*
fever-ERG the woman-DAT kill-PERF
'Fever killed the woman.'

(49) *jɔr-ɔ̄ wo misa sit-ɔ*
die-PERF
'The woman died of fever.'

(50) **jɔr-ɔ̄-yana wo misa sit-ɔ*

- ergative/instrumental construction bars both true agents and true instruments: only allows 'inactive' causes
  - this supports the idea, based on the Hare data, that inactive causes are almost-but-not-quite prototypical causes
- DeLancey suggests that the marker codes something that is similar in all three types: an unbroken chain of causation ($\sim$ responsibility), which makes something more of an agent

4 Final comments

Languages accept causal entities in the prototypical construction by considering both the causer's properties and the overall causal scheme:

- there's a directness scale (a bit like Wright's ideas)
  - volitional agent, hands-on at one extreme
  - distinct enabling causes toward the other end
- basic scheme: prototypical transitive events can be traced back to a single cause, with unbroken chain of control leading to the effect
- 'ideal' ultimate causes: act of volition on the part of a (prototypical) agent

Both non-direct and inactive causation deviate from this ideal:

- non-direct causation fails the sufficiency test: there might be intervening (free-willed) causers, enabling conditions independent of the specified causer, and so on
- inactive causation doesn't start with an act of volition
- these are two different ways to deviate: both are marked, but in different ways!
  - inactive causation is not always marked
  - from the data, this seems to be because the qualifying causes can be direct (sufficient)
  - so sufficiency seems to matter more

Comments on semantic roles:

- Proposal: agentivity needs to be defined with reference to event schema
- but since event schemas need to be prototypes rather than discrete categories, case roles are also prototypes

(15) Lightining killed him.

(16) *ídikóné ye-wéhxį*
lightning 3sg-killed
'Lightning killed him'

- lightning is a direct (sufficient) cause, not contributing, enabling, or mediated, which qualifies it as ultimate, and thus for subjecthood

Building on DeLancey's observations and analysis:

- there's a link between direct causation (lexical causative) and causal sufficiency
- but there are other kind of causal links, which need to be marked
  - contributing causes (necessary causes?)
  - enabling causes (static causers?)
- we're starting to see that language might be sensitive to more than one atomic causal relationship
- in the DeLancey data, this becomes clear when we take two examples and contrast the contexts in which one can be used but not the other
- we're going to pursue this idea in the next part of the course:
  - the hope is that if we can match up different causal expressions with different types of causal links, the finer-grained distinction we've been struggling with will be easier to understand
  - for instance, whether or not causee volition matters has to do with whether an expression encodes a sufficiency relationship
- this idea is similar to the idea behind the force dynamics model we previewed in Wolff (2003)