'Causative' **make**: A veridical, metaphysical conditional?

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1 Introduction

This talk is concerned with 'causative' **make**: Uses of the verb **make** with the complementation pattern in (1)

(1) *NP* make *NP VP*.

That is, I will ignore:

- Uses of **make** as a generic creation verb (**make ice cream**, **make a card**) and other uses with a single NP complement.
- Uses of **make** with an NP and adjectival complement (**make me sick**, **make them afraid**).
- Uses of **make** with two NP complements (**make him president**, **made her a widow**).

1.1 A puzzle about 'causative' *make*

(2) a. John caused the children to dance.
b. John made the children dance.

- On hearing (2b), but not (2a), we are likely to infer/assume . . .
  (i) that John *intended* to bring about the dancing (Wierzbicka 1998).
  (ii) that the children did not have a say in the matter.
  (iii) that the children were unwilling to dance (Dixon 2005, Shibatani 1976, 'coercive causation')
  (iv) that John commanded or requested that the children dance (Shibatani 1976, 'directive causation')
  (v) that the children were aware that John wanted them to dance (Wierzbicka 1998))

- But **make** is felicitous with inanimate causers/causees:

(3) The sun made the flowers wilt.

- Clearly, the sun does not intend or command, and the flowers are not (un)willing to wilt.
- Dixon (2005, p. 312f) seems to think that a broader notion of resistance it what is at play:

> It is generally only appropriate to use a **make** construction when the subject of the complement clause is—by its character or nature—impeding the success of the activity; **make** refers to overcoming this impedance.

- But it is unclear what the 'impedance' is in case of (3), and even less with examples like

(4) His attentions made her giddy.

- So we are faced with a conundrum: One the one hand, the mere presence of **make** (as opposed to **cause**) seems do induce a wide variety of perceived entailments, on the other, many or all of these can be absent in other contexts. What gives?

Plan for today:

- Argue that **make** and **cause** do not stand in a hyponym relation.
- Make plausible that what distinguishes **cause** and **make** is mainly that the former predicates *causal necessity*, while **make** predicates a form of *sufficiency*.
- Outline how the latter notion can be formally implemented in a branching-time model.
- Suggest that, in this way, we can have a uniform meaning for ('causative') **make**, and still predict the varying contribution of **make**, given plausible assumptions about speaker's conceptualization of the world (in particular, intentional decision-making).
- In the implementation suggested here, the uses of **make** we are concerned with are not so much *causative*, rather **make** is analyzed as *a veridical, metaphysical conditional*.

2 'Coercive' implications

- Reconsidering (2b), consider the following variant, in context.

(5) [Sue has been seeing a prankster hypnotist, who conditioned her to dance wildly whenever she hears the Pixie's *Here Comes Your Man*.] John made Sue dance (by playing *Here Comes Your Man*).

- (5) is adequate even if . . .
  - John did not want Sue to dance (contra (i)),
  - Sue was not unwilling to dance (contra (iii)),
  - John did not commit any verbal act (contra (iv)),
  - Sue does not know that John was the one to put the song on (contra (v)).
- So it seems, all that really matters in (5) is that Sue *could not choose otherwise*.
- The same implication shows up fairly regularly *when the causee is a volitional entity and the embedded verb phrase denotes an intentional action*.

3 Causal Necessity and Suffiency

- Classical Lewis (1973)-style analysis ($\Box\!\!\rightarrow$ being Lewis' counterfactual connective):

(6) **E causally depends on C** iff
C occurs $\Box\!\!\rightarrow$ E occurs
and
$\neg$ C occurs $\Box\!\!\rightarrow$ $\neg$ E occurs

- For a veridical causative (such as **cause** and **make**), the first condition is trivially true, leaving us with the second one, which says that *C* **was counterfactually necessary for** *E*.
- Indeed, for **cause**, this analysis does seem to capture a real intuition: Someone who asserts (7a) arguably is committed to the truth of (7b):

(7) a. The recession cause Paul to loose his home.
b. (Other things being equal,) If the recession had not happened, John would not have lost his home.

- Is the same true for **make**? Initially we may think so, and both Shibatani (1976) and Wierzbicka (1998, 2005) claimed it is.

- I think this is mistaken. Consider the following example from the *Rachel Maddow show* (MSNBC, Monday, August 10, 2009):

(8) MADDOW: You worked for CIGNA for 15 years, you left last year.

What **caused** you to change your mind about what you were doing and to leave?

POTTER: Well, two things. One, it was kind of gradually. One instance or in one regard because I was becoming increasingly skeptical of the kinds of insurance policies that the big insurance companies are promoting and marketing these days. [. . .]

The other thing that really **made** me make this final decision to leave the industry occurred when I was visiting family in Tennessee a couple of summers ago, and [narrates the experience of happening on a 'healthcare expedition' where uninsured patients were treated by volunteer doctors in animal stalls at a fairground].

- While it is clear that, according to Potter, his visit to the 'healthcare expedition' was the 'final straw' that brought about his decision to quit, arguably, the above quote does not commit him to the truth of (9)

(9) (Other things being equal,) If Potter had not visited the 'healthcare expedition', he would not have left CIGNA.

- By contrast, Potter might have just as well become gradually convinced to quit by his growing doubts about the policies of insurance companies.

- At the same time, it seems that he does claim that anything which happened *after* the 'healthcare expedition', which might have furthered his decision was actually causally inert, or unnecessary: After his visit, the decision to quit was a foregone conclusion.

- I wan to suggest that *this* is what is predicated by **make** (in contrast to the counterfactual necessity condition above):

Sufficiency thesis:
A sentence **A made B VP** asserts that given that A happened (or what A did) was *sufficient* for B VPing, that is: Given that A happened (what A did) B's VPing was inevitable, in a certain, weak sense.

- If this is correct, it seems that we can explain the 'coercive'/'directive' implications of a sentence like (2b) in virtue of the fact that after what John did, the dancing of the children was inevitable, that is: They did not have a say in the matter, they had no choice.

(2b) John made the children dance.

4 Formally speaking (well, somewhat).

- How can the sufficiency thesis be cashed out formally? Here is a way:
- Assume we have a forward-branching time model, e.g. a $T \times W$ frame in the style of Thomason (1984).
- Then we can construe **make** as a quantifier over possible future courses of affairs (from the viewpoint of the time of the 'cause').
- Crucially, though, not *all* possible future histories
- For a **make**-assertion does not typically claim that *nothing could have happened* to prevent the caused event.
- Reconsider Potter's assertion from the *Rachel Maddow* example (8): Surely, Potter does not claim that *nothing could have happened* after the health-care expedition to change his mind.
- So we do not want to take into account (far-out) possibilities in which events happen that did not actually happen
- At the same time, we want to allow that events that actually happened in the future of the cause do not play a role: We want to allow those to not have happened.

Proposal
make quantifies over those alternative courses of events that . . .

(i) share the same history up to the time of the cause.

(ii) diverge from the actual course of events in that events that actually happened (after the time of the cause) did not happen

(iii) but are otherwise as similar to the actual course of events as possible.

Make asserts that, in all these courses of events in which the cause happened (and the actual one), the effect happened, as well.

5 Explaining implications

5.1 Making someone do something

- Arguably, in a branching time model a (free) decision of a volitional agent should be conceptualized as a (non-trivial) branching point.
- It is up to the volitional agent which way history develops.
- But then, if **A made B do C**, where C is an action under the control of B, A must have taken away B's alternative options (to not-C, or do something other than C).
- For else, the **make** assertion would not be true: If B had the option to choose whether or not to do C, then there would be an alternative course of events in which the 'effect' did not happen.

5.2 Making someone decide something

- The 'final straw'-type implications (as in the *Rachel Maddow* example above) arise fairly directly from the semantics of **make**.

5.3 Making something happen

- One of our initial examples:

(10) The sun made the flowers wilt.

- We no longer need to wonder where the impedance, or other correlate of unwillingness is that the flowers put up to the sun: All the sentence asserts is, given the way the sun shone, there was no way the flowers could not have wilted.
- The sufficiency analysis goes some way to explain why **make** is typically fine with 'internally-caused' change-of-state verbs (such as **wilt**, Levin and Hovav (1995)), and is often preferred to **cause**.

6 An open issue

- Vindicating Dixon's talk of 'impedance', there is a range of verbs for which **make** often gives rise to an implication that achieving the effect was difficult:

(11) John made the window break.

- Hunch: This happens in particular with change-of-state verbs that participate rather freely in the *causative alternation*.
- If this hunch turns out to be correct, it seems we could explain the implication as a 'blocking' implicature, arising from the availability of (12), similar to what many (following McCawley (1978)) take to be the source of the implication of indirectness for (13)

(12) John broke the window.

(13) John caused the window to break.

- Of course, for this explanation to be viable, we'd have to assume that (transitive) **break** is not only entails **cause to break**, but also of **make break** . . . but this may be attractive on independent grounds.

Take-home messages

- Carefully distinguishing causal necessity and sufficiency is useful for understanding the semantics of causative constructions.
- Assuming that English **make** selectively encodes a type of 'historical sufficiency' possibly allows us to state a single, uniform meaning for **make**, but nonetheless predict a variety of its contextual implications

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