Negation, bi-eventivity and causation

Elitzur Bar-Asher Siegal & Nora Boneh

{ebas, nora.boneh}@mail.huji.ac.il

Linguistic Perspectives on Causation Workshop

HUJI, June 29th 2017

0. Introduction

Aims of the talk:

Examine the interpretative properties of various causative constructions

More specifically, we would like to examine the nature of the dependency in each of the relevant constructions:

- Whether the relevant dependency is asserted or presupposed?
- What are the components of this dependency (its logical form, the temporal relation between the arguments/relata; the nature of the relata: individuals vs. events/properties)?

This will lead us to the following general inquiries:

- Is there a unitary analysis for all causative constructions?
- What is the relationship between these dependencies and the way causation is defined in the philosophical/psychological literature?

Layout

1. The data

1.1 Working definition of causative constructions:

> Causative Constructions, for our purposes, are linguistic constructions, which can be divided into three parts:
>
> 1) a cause (c);
>
> 2) the effect of the cause (e); and
>
> 3) the dependency (D) between c and e.
>
> ► "cause" and "effect" are used here loosely in a pre-theoretical manner
>
> (1)   [c] D [e]

> ► **The goal of this paper, accordingly, is to understand the nature of the relation in (1) in various constructions.**

1.2 Four causative constructions

The following are 4 types of causative constructions, classified according to some basic syntactic characterization. As will become clear, some of these types, when we consider their interpretative properties, can be further divided into sub-groups.

A. Overt verbs (periphrastic causative constructions)

Verbs that seemingly express causal relations, where the subject is the cause and the complement of the verb is the effect.

English: *cause, make, enable,…*

Hebrew: *garam* "cause", *ifšer* "enable", *natan* "let", …

(*inter alia* Abbott 1974, Eckardt 2000; Lauer 2010, Copley et al. 2015)

(2)   a. [c The neighbor/the music] **caused / made/ enabled** [e the kids (to) dance].

      b. [c ha-šxena/ha-musika]   **garma / ifšera** [e la-yeladim lirkod].

          The-neighbor/the-music made / let   the children dance

B. Connectives

The elements that appear after the connectors either as prepositions or as conjunctions conveys the cause, while the main clause expresses the effect.

English: *because (of), from-PPs, as a result of, out of, ...*

Hebrew: *biglal (še)* "because (of)"*, me-/ merov/ mitox/* "from"/"as a result of"/"out of"*...*

(*inter alia* Kadmon & Landman 1993: 389-398; Johnston 1994, Degand 2000, Solstad 2010, Copley et al. 2015, Hertfelder & Maienborn 2015; Maienborn & Hertfelder 2015, 2017)

(3)   a. [e The kids danced] **because of** [c the music].

        b. [e The door opened] **because of** / **from** [c the wind].

        c. [e she lost this case] **because of** [c the witness' death].

        d. [e She died] **from** [c drinking too much water].

        e. [e The kids danced] **because** [c they were happy].

(4)   a. [e ha-yeladim rakdu] **biglal** / **me**-   [c ha-kecev].

            The-kids danced   because / from   the-beat

        b. [e ha-delet niftexa]   **biglal** / **me**-   [c ha-ru'ax].

            The-door opened because / from   the-wind

        c. [e hi meta] **biglal** / **me**-   [c štiyat mayim].

            She died because / from   drinking water

C. Lexical causation

Verbs in which the subject is perceived as the cause responsible for bringing about the state-of-affairs denoted by the VP (effect).

   Hebrew: *patax* "open"*, harag* "kill"*, hirkid* "make dance"

   English: *open, kill,… hammer the metal flat, …*

(5)   a. [c John/the wind/the key] [e opened the door].

(6)   a. [c ha-šaxen/ha-ruax/ha-mafteax] [e patax   et ha-delet]

            The-neighbor/the-wind/the-key   opened ACC the-door

        b. [c ha-šxena/ha-musika]   [e hirkida   et ha-yeladim]

           the-neighbor.F / the-music   dance.CAUSE ACC the-kids

Notes:

- At this preliminary stage, we abstract away from the issue of whether the cause is an individual or an event or a proposition (Fodor 1970, McCawley 1976, Dowty 1979, Rappaport Hovav & Levin 1991 *et seq*., Reinhart 2000, Doron 2003, Pylkkänen 2008, Neeleman & van de Koot 2010).

- We consider under this category not only verbs of change of state (6a), but also caused activites (6b) – as will become clear these two categories should be kept separated.

- In this talk we set aside causation involving psychological predicates (Belletti & Rizzi 1988, Pesetsky 1995, Arad 1998, Doron 2012, 2017, Ahdout 2016, Gaulan 2016).

D. Affected participant construction

It has been claimed with respect to various constructions that they involve a participant who is affected by the event described in the clause in which it appears (for example, O'Connor 2007, and more broadly Beavers 2011). However, while constructions which involve cause (c) are often considered as causative constructions, constructions with an affected participants (e) are not customarily listed among the causative constructions.

We would like to deal with the construction that received the name Affected Dative (Hole 2005, 2006) in which the affected participant is added to a clause with a datival expression (the preposition *l-* in Hebrew) and its English rough equivalent, in which the affected is expressed with the preposition "on". In this case, the dependency relation holds between the expressed eventuality and the contextually determined one (cf. Bosse et al. 2012, Bar-Asher Siegal & Boneh 2015).

(7)   'od Eli Zohar lo   yaxol liško'ax 'ex   [c met [e **lo]**   pa'am 'ed   be-'emca xakira negdit]
      Att. E. Z. NEG   can   forget   how died   **to.him** once witness in-middle investigation cross
      'Attorney Eli Zohar cannot forget how a witness once died on him during a cross investigation.'

> ► The death of the witness during the cross investigation caused Attorney Eli Zohar the trial. He was unable to win the case because of the witness' premature death. Similarly in English with the added participant being introduced by the preposition *on* (cf. Bosse 2015).

(8)   [c The old bugger (went and) died] [e **on me]**.

(8')   [c The old bugger died] D [e-context Attorney Eli Zohar cannot win the trial]

Here is an additional example:

(9)   'axarkax hu   tas   **li**   le-šana   la-mizrax,
      Then   he   flew to.me   to-year   to.the-east,

      ve-hiš'ir 'oti   xareda   ve-lexuca
      and-left   me   anxious   and-stressed

      'Then he flew on me to the Far East for a year, and left me anxious and stressed.'

(9')   [c He flew to the Far East for a year] D [e-context I am anxious and distressed]

⌘

The above constructions feature both overt markers for the presumed causal dependency as well as covert ones. In what follows, we will examine the nature of the dependency in them.

2. The nature of the dependency: The cause

In the linguistic literature, when D is not taken to be the primitive CAUSE (*inter alia* Dowty 1979, Eckardt 2000, Copley & Wolff 2014), it is often assumed that D is similar to what our intuition recognize to be The Cause in the given circumstance. This intuition is, to a large extent, the "folk theory of causation" implicitly held by everyone, which is the object of the philosophical inquiries (*inter alia* Lewis 2000, Thomason 2014). Moreover, empirical reasons to doubt this assumption (i.e. counter examples), are often considered as a theoretical problems to be solved (Abbott 1974, Dowty 1979, Eckardt 2000).

However, we would like to demonstrate briefly that, as a matter of fact, none of the above constructions, seems to express what is intuitively taken as "The Cause", mainly for two reasons:

- From a linguistic point of view, this can be demonstrated by the fact that tokens of the above causative constructions (p^{cDe}) cannot be paraphrased as "C is the cause of E":

(10) $p^{cDe} \overset{?}{\Rightarrow}$ "C is the cause of E"

- The same expressions can be used to express cases that are not considered to be causation, but as denoting other types of dependencies, such as grounding,[1] teleology and reasoning.

Overt causative verbs

As has been shown by e.g. Eckardt (2000), the entailment described in (11) does not hold in cases of fragile events, what she consider as *pseudocausal* statements:

(11)   a. The traffic jam caused Pat's cooking spaghetti late $\nRightarrow$

   b. The traffic jam is the cause of Pat's cooking spaghetti late.

Connectives

Similarly in the case of the connective *because*: (12a) does not entail (11b); (12b-c) do not convey causation at all, but rather purpose or explanation:

(12)   a. Pat is cooking spaghetti late because of the traffic jam $\nRightarrow$ (11b)

   b. Pat is cooking spaghetti tonight because of her sister's arrival tomorrow (teleology)

   c. Fractions are not even numbers or odd numbers, because they are not whole numbers. (explanation)

The connective *from* too covers cases to be included under the category of grounding (cf. Maienborn & Hertfelder's 2015 stative reading of causation).

(13)   The table is black from the ants (Maienborn & Hertfelder 2015)

On the other hand, in most cases the entailment described in (14) seems to hold firmly:

(14)   A British woman died from drinking too much water while hiking $\Rightarrow$

   Drinking too much water was the cause of her death.

Lexical Causation

Such verbs can be used in contexts where the entailment in (15a) does not hold:

(15)   a. The baby opened the door. $\Rightarrow$ The baby is the cause for the opening of the door.

   b. The baby opened the door. His mom pushed his hand over the button that opens the door. $\nRightarrow$ The baby is the cause for the opening of the door.

---

[1] Schaffer (2016: 96) enlists the following differences between causation and grounding:
- causation can be non-deterministic, grounding must be deterministic;
- causation can only connect distinct (grounding-disconnected) portions of reality; and
- causation can be non-well-founded, grounding must be well-founded.

Affected participant construction

We can encounter cases in which e is part of c and therefore it will be inappropriate to refer to c as "The Cause".

(16) nišbar   la-šulxan   ha-regel
      broke   to.the-table the-leg
      'The leg of the table broke' / 'The table had a leg broken off of it.'

> There is no separation between the breaking of the leg and the "effect" on the table. This is the same event, and therefore no temporal separation into c and e is possible

⌘

In sum:

- **for some of these cases, c is merely a condition/causal factor in the causal structure (vs. causal judgments)** (see for example, Hesslow's 1988 *problem of causal selection*)**,**
- **in others, D can be something outside of the scope of causation (grounding, teleology, explanation).**

⌘

This observation leads us to seek for the semantics of each construction separately, in a way that is unbiased towards a denotation of some rigid concept.

3. Counterfactuality

The starting point for this discussion is the Affected Participant Constructions.

Delving into the semantic of the dependency involved in these constructions reveals that D is presupposed, and gives rise to counterfactuality clearly apparent under clausal negation. Consider the following examples:

(17) lo   met   **li**   ha-'ed.
      NEG   die   to.me   the-witness
      It's not the case that the witness died on me. **Had he died, I would have been affected [e.g. loss of reputation].**

(18) The old bugger didn't die **on me**.
      It is not the case that the old bugger didn't die, **had he died I would have been affected [e.g. sadness, sense of loss].**

►**It must be emphasized that the only contribution of the addition of the datival expression *li* in (17) and of the PP "on me" in (18) is the counterfactual claim.**

What is the origin of this counterfactual entailment? It can be understood, if the analysis of this construction involves two components:

1. D is a counterfactual dependency.
2. The relation D is presupposed and therefore projected under negation.

Thus, Bar-Asher Siegal & Boneh (2015) propose (19) as the semantic representation of the AD in Hebrew.

(19) $[[le\text{-}]]= \lambda e.\lambda e'.\lambda F.\lambda G.\lambda x:[(e\leq e') \ \& \ (Fe \leftrightarrow_\partial Ge')]=1.Fe \ \& \ Participant(x, e')=1$

- We take Hebrew *le-* 'to' to be the realization of an applicative head introducing the participant affected in the contextually available caused eventuality $_\partial G(e')$.

- F(e) and G(e') stand for everything which is stated to be true about the event described in the clause: in (17), *the witness' dying*; $_{\supset}$G(e') is a description of the relevant state of affairs known or given by the context (contextual knowledge is indicated with $_{\supset}$).

- In this construction, D is counterfactuality, with precedence in time of the c or simultaneity holds between them (below y): [(e≤e') & (Fe $\leftrightarrow_{\supset}$Ge')]

- D is a presupposition (as indicate by the ".").

Thus, even when ~Fe, (Fe $\leftrightarrow_{\supset}$Ge') holds true, and this is the origin of the counterfactual reading under negation.

> ► **Crucially, this is an example where counterfactuality is directly relevant for the meaning of the linguistic expression in question.**

⌘

Once it has been established that counterfactuality is part of the meaning of one type of construction, we would like to examine to what extent it is relevant for the other constructions as well. We will ask the following questions for each of them:

a. If the relevant p^{cDe} is true, whether the counterfactual claim is necessarily true?
D^c: $p^{cDe} \Rightarrow (\sim c \Rightarrow \sim e)$

b. Is this enough to capture the nature of D**?** More specifically, does D indicates sufficient condition (cf. Mackie 1965)**?** Or other dependencies?

Connectives

In the case of *because*, clearly (20b) does not hold. Consider the following example:

(20)   a. I did not go to France **because** of the rain / **because** it rained.

      b. (20) $\not\Rightarrow$ Had it not rained I would have gone to France.

(20a) can come as an **explanation** for the removal of France from the speaker's list of destinations, but the final choice for the destination was due to a different reason.

► But not all connectives pattern alike:

From-PPs contrasts with *because of* :

(21)   She is not functioning from stress.

(22)   hi   lo   metafkedet   me-ha=laxac.
      She   NEG   function. F   from-the-stress

    (21/22) $\Rightarrow$ Had she not been stressed she would have functioned.

Overt causative verbs:

Next, it has been noted that in the case of overt causative verbs such as in the following examples, the causing part is a necessary condition (hence counterfactuality holds, cf. Eckardt 2000) for the effect, but it doesn't have to be sufficient (Lauer 2010):

(23)   The rain made him not go to France $\Rightarrow$

    (Other things being equal,) had it not been raining he would have gone to France.

(24) The recession caused Jerry to lose his home ⇒

(Other things being equal,) if the recession had not happened, Jerry would not have lost his home. (Lauer 2010: ex. 10)

(25) The heat caused me to open the door =>

If it weren't hot I would not have opened the door.

Lexical causative verbs

Lexical causative verbs seem to pattern differently in terms of whether they underlie counterfactuality, according to whether they encode a cause to a change of state or a cause to an action.

Von Wright (1968), has in fact introduced the notion of counterfactuality with change-of-state verbs, as can be demonstrate in the following examples (in which it has been established earlier that c is not The Cause) (see also Dowty 1979).

(26) The baby opened the door. His mom pushed his hand over the button that opens the door ⇒

Hadn't the baby pushed the button, the door would not have opened (at the given moment).

With lexical causatives of caused activity verbs, like Modern Hebrew *hirkid* 'make dance' counterfactuality does not necessarily hold:

(27) ha-zamar   hirkid   et ha-yeladim.
     The-singer dance.CAUSE   ACC the-kids.
     ≈'The singer made the kids dance.'

(27) can be equally well uttered in a context where the kids started to dance and then the singer started singing. Therefore, hadn't it been for the singer, the kids could have danced as result of a different cause; the music is not a necessary condition for their dancing.

We return to this contrast in the next subsection.

3.2   More on the dependency in lexical verbs

Change of state lexical causatives, on top of indicating a counterfactual relation also entail the following:

(28) D^{RCF}: p^{cDe} ⇒ (~e ⇒ ~c)

Thus in the case of (26), (29) can be inferred:

(26) The baby opened the door. His mom pushed his hand over the button that opens the door.

(29) If there was no opening of the door, there must not being a pressing of the button by the baby.

Importantly, in this regard there is no difference between lexical causatives of change of state and caused activity verbs:

(27) ha-zamar   hirkid   et ha-yeladim.
     The-singer dance.CAUSE   ACC the-kids.
     ≈'The singer made the kids dance.'

8

(30) If there was no dancing we can infer that there was no singer (of the type that make that kids dancing at the given situation).

Qualifying lexical causatives:

Caused change-of-state verbs (*open*): $D^{CF}+D^{RCF}$

Caused activitites (*leharkid* "dance.CAUSE"): D^{RCF}

► Using such verbs assume world-knowledge of what are the possible causal factors (c's) that can bring about the situation described in the VP (the e), in a given situation (g).

► The subject is asserted to be part of one of such of these c's.

Accordingly, the subject is a participant in an event ($_C$) which is a member in the set of events defined in the following way [O=occurrence]:

(31) $\{c| [O_C \Rightarrow Oe] \wedge [\sim Oe \Rightarrow \sim O_C]\}^g$

Observation:

There is no commitment for the agent/actor to be the relevant participant in the event (cf. discussion in Neeleman & van de Koot 2010):

(32) John's turning of the key opened the door:

    i. John opened the door

    ii. The key opened the door

    iii. Turning the key in the keyhole opened the door

(33) John's lighting a fire boiled the water:

    i. John boiled the water

    ii. The fire boiled the water

    iii. the lighting (of the fire) boiled the water

Advantage:

Explanation for the following contrast (adapted from Thomason 2014):

(34) **Context**: it was hot in the room and the so John opened the door

    a. The heat caused the door to open

    b. #The heat opened the door.

Although, in the given situation, without the heat the door would not have been opened (counterfatuality); it is not true that if the door remained close that it entails that it was not hot in the room.

4. Dependencies under negation

4.1 Negating the dependency: D as asserted or presupposed?

In section 3 we have seen that the Affected Participant constructions underlies a presupposed D^{cf} relation.

Purpose for this section: to explore whether the dependency in (1) [c]D[e] in the other three constructions is part of what is *asserted* or not.

Let us take *p* to be the entire relevant linguistic expression, namely, the entire proposition with the relevant verbs and their arguments or the connectors and their relata.

We ask what is the relation between *p* and the construct in (1) [c] D [e] underlying *p* in each of these constructions:

Does *p* **assert** the relation expressed by [c] D [e]?

Does *p* **presuppose** the relation expressed by [c] D [e]?

In order to test this, we will be using the regular tests for presupposition, among them, whether the relevant dependency is projected under negation; in other words whether ~*p* can be interpreted as c&e&~[cDe].

Note: in the following discussion, we set aside readings where negation operates on a focused constituent, e.g. ***John*** *didn't come, Bill came/did,* since the denial of the causal relation can be an indirect result of raising alternative c's.

(35) a. [$_c$ The neighbor/the music] **didn't cause / didn't make** [$_e$ the kids (to) dance].

   b. [$_c$ ha-šxena/ha-musika   **lo garma**   [$_e$ la-yeladim lirkod].

      the-neighbor/the-music   NEG made   to.the-children dance

(35) is true in a situation where there was music and the kids danced, and the claim is that one didn't induce the other.

(36) a. [$_e$ The kids didn't dance] **because of** [$_c$ the music].

   b. [$_e$ The door didn't open **because of** / **from** [$_c$ the wind].

(37) a. [$_e$ ha-yeladim   lo rakdu]   **biglal** / **me**-   [$_c$ ha-kecev].

      the-kids   NEG danced   because / from   the-beat

   b. [$_e$ ha-delet lo niftexa]   **biglal** / **me**-   [$_c$ ha-ru'ax].

      the-door NEG opened   because / from   the-wind

(36a)-(37a) are true in a situation where there was music, there was dancing, but one wasn't related to the other.

→ in the last two constructions, the dependency is part of the assertion, and therefore targeted by negation ~[cDe] ⇒ ~p.

Lexical causatives

We would like to argue the following:

D^{CF} is an assertion
D^{RCF} is a presupposition

(38) John/the wind didn't open the door.

   POSSIBLE READING: John did the relevant action/the wind blew and the door is open, but still it was not open due to John's action / the wind (~D^{CF})

However,

It is still true that: if the door is close then, under the given circumstances, it indicates that John didn't do the relevant action / the wind didn't blew (D^{RCF})

(39) ha-zamar   lo   hirkid   et ha-yeladim.
The-singer NEG dance.CAUSE   ACC the-kids.
≈'The singer made the kids dance.'

ONLY READING: the singer didn't do the relevant action (D^{RCF}).

Explanation:

	D^{CF}: ASSERTION	D^{RCF}: PRESUPPOSITION	$\sim p$ can be interpreted as c&e&~[cDe]
Caused-change-of-state, *open*	+	+	+
Caused-activity, *hirkid* 'dance.CAUSE'	-	+	-

Since as we saw (27)/(39), in the case of caused activity verbs, there is no D^{CF} but only D^{RCF}, therefore $\sim p$ cannot be interpreted as c&e&~[cDe].

4.2   Negating the dependents

There is an additional dimension in which the four constructions differ with respect to negation, and this will be used to examine the nature of c and e in the various constructions, and the availability of independent predications.

The starting point of the discussion is Neeleman & van de Koot (2010)'s endeavor to show that there are no clear linguistic manifestations of there being a causing event in lexical causatives as well as with subject taking periphrastic causatives. We would like to propose a test to whether a syntactic head introduces an event-like argument and not only an event participant (cf. Parsons 1990, Pylkkänen 2008, Ramchand 2008, a.o.).

Our proposal relies on the fact that non-occurrence of an event (i.e. omission or absence) can be stated to be a causal factor for a given effect, and also that the effect can be a non-occurrence:

(40) a. [c NEG taking the medicine] D [e her death]

b. [c the wind blew] D [e the door NEG open]

c. [c NEG turning the key in the lock] D [e the door open]

For our purposes, it is sufficient to mention that even philosophers who deny that absence can be a cause, admit that we often explain causal relations with the non-occurrence of certain events (cf. Beebee 2004).

In what follows, we survey the possibilities to negate c and e in constructions A-D.

Note: we do not take this to be a solid proof for the availability of events as the relata, but merely state that the possibility to negate c or e is indicative of some general level of predication, therefore it can be event/proposition/instantiation of a property.

Both c and e in overt causatives can be negated, albeit not via clausal negation:

(41) a. His **not** standing still caused the window to break.   [~c] D [e]

 b. Her **not** drinking water caused her to die.

(42) a. His standing still caused the window **not** to break.   [c] D [~e]

 b. His drinking water caused her **not** to die.

With the connective *because (of)*, clausal negation can apply to the [e] alone (cf. Johnston 1994, Lakoff 1970, Kadmon & Landman 1993):

(43) She didn't lose this case **because** of the witness' death.   [c] D [~e]

 i. It's not the case that lost this case because of the witness' death.

 ii. The witness' death is the cause of her not losing this case.

(44) hi   lo   meta   biglal   ha-trufot   [c] D [~e]
   She   NEG died.F   because (of)   the-medicines
   Because of the medicine she did not die. (contrasting with: she died because of the medicine)

Here too, *because (of)* seems to pattern differently from the connective *from*:

(45) She didn't die from the medicine.

(46) hi   lo   meta   **me**-hatrufot
   She   NEG died.F   from-the-medicines
   Because of the medicine she did not die. (contrasting with: she died because of the medicine)

 ONLY READING (45/46): it is not the case that she didn't from the medicine.

 NON-AVAILABLE READING (45/46): the medicine was the cause of her survival.

However this does not seem to be an absolute constraint in Hebrew, at least, since the following are fine with negation scoping under the *from*-PP.

(47) hi   lo   barxa   me-ha-paxad   [c] D [~e]
   She   NEG run.away.F from-the-fear

 AVAILABLE READING: Fear caused her not to run away, to stay put.

(48) hi   lo   metafkedet me-halaxac
   She   NEG function.F   from-the-stress

 AVAILABLE READING: Stress causes her to be dysfunctional

This seems to depend, at least in some cases, on what the normative state of affairs is. In (47), one is normally taken to be alive, and dying is the deviation from the norm, but in (48) the normative state of affairs is not to run away, and in (47) the normative state of affairs is to function:

An additional factor for the availability of a local negation with connectives seems to be lexical (*merov* vs. *mitox*). Consider the following pair:

(49) ha-delet   lo niftexa   **merov**   laxac   [c] D [~e]
       The-door   NEG opened as result of pressure
       The door did not open due to the pressure on it.

       It is not the case that the door opened from the pressure.

(50) ha-delet   lo   niftexa **mi-tox**   laxac.
       The-door   NEG opened from-out   pressure

       It is not the case that the door opened out of pressure.

Hebrew Affected Participant constructions display the mirror image of connectives: clausal negation can target c:

(51) **Context**: said by a gangster facing imprisonment
       lo   met li   ha-'ed.   [~c] D [e]
       NEG die to.me   the-witness

       AVAILABLE READING: The witness' not dying affects the speaker.

(52) hu   lo   'acar le-dani   be-adom   [~c] D [e]
       he   NEG   stop to-Danny   in-red (light)
       'He did not stop at the red light for/on Danny.'

       AVAILABLE READING: the non-stopping at the red light was the cause of affect on Danny

       Context: Danny is sitting in the speeding car, which does not make a stop when it should, putting his life in danger

In contrast, with the English *on*-PP construction, clausal negation cannot target c:

(53) The bugger didn't die on me.

       ONLY AVAILABLE: It's not the case that the bugger died on me. Had he died, I would have been affected [e.g. how to handle the estate].

       NOT AVAILABLE: The witness' not dying affects the speaker [e.g. said by a gangster facing imprisonment].

A clear contrast emerges between the Hebrew Affected Participant and ditransitives with selected datives, which were also claimed to involve causation (e.g. caused motion/possession, Rappaport Hovav & Levin 2008, Beavers 2011):

(54) hu   lo   natan   matanot la-yeladim
       He   NEG gave   presents to.the-kids

       'It is not the case that he gave presents to the kids.'

       NOT AVAILABLE: he did not give presents and it was to the kids / his not giving presents was to the kids.

Crucially, in transitive change of state verbs, and caused activities, a negated clause cannot be interpreted as conveying that the first part of the underlying eventuality is negatively related to its outcome. Namely:

(55) The baby didn't open the door

    i. It is not the case that he broke the window.

    NOT AVAILABLE: The baby's action lead to the door remaining closed (not open)

    NOT AVAILABLE: He didn't open and it was the door / he didn't do something and as a result the door opened.

Similarly:

(56) hu   lo   hirkid   et   ha-yeladim
      He   NEG dance.CASUE   ACC   the-kids

    'It is not the case that he made the kids to dance'

    Not available: he didn't perform actions that could causally induce the kids to dance

Note further that it is impossibile to have a negative causer with lexical causatives

(57)   a. *i-kibuy   ha-eš   hirtiax   et ha-mayim
          NEG-turning.off   the-fire   boiled   ACC the-water

      b. i-kibuy   ha-eš   garam   la-mayim   lirtoax
          NEG-turning.off   the-fire   caused/made   to.the-water   to boil

      'The non-turning off of the fire boiled the water.'

Another revealing comparison is the following:

(58) a. The window didn't open from the wind.

      b. The wind didn't open the window.

A crucial difference between transitive change of state verbs and their so called *from*-PP is revealed with *from*-PP (in Hebrew, at least), since in (58a) the wind could have been the cause of the door not opening, but this cannot be the case in (59), (cf. Alexiadou et al. 2006).

►**Puzzle**: on the one hand, we've shown the dependency to hold between events, or event like entities, but the non-availability of local negation is counter evidence for the a bi-eventive underlying representation.

It seems that the subject DP realizes the one who opens or the one who makes dance, but semantically, an independent event is necessary, but there can be no opener or causer to dance when there is no opening or dancing, respectively.

5. Summary and discussion

See slides.

Appendix: Temporal contingency relations

Overt causatives and connectives

(59)) a. The failure of universal instantiation **makes** the proof in line three invalid

    b. Mary's living nearby **causes** John to prefer this neighborhood

                                    (Dowty 1979: ex. 132a, c)

(60) a. The proof in line three is invalid **because of** the failure of universal instantiation

    b. John prefers this neighborhood **because of** Mary's living nearby.

(61) a. Strike action by London Underground staff is **causing** mayhem on the North Circular Road.

    b. Tomorrow's strike by London Underground staff is **causing** mayhem on the North Circular Road tonight.   (Neeleman & van de Koot 2010: ex. 32)

(62) He fainted because of the exam tomorrow.

Note that in this respect *from* differs from *because*, where c can only precede e:

(63) He fainted from the exam tomorrow.

Lexical causatives

(64) The pressure/John opened the door   c entirely precedes e

(65) ha-zamar   hirkid   et ha-yeladim.   c can be simultaneous to e
The-singer dance.CAUSE ACC the-kids.
≈'The singer made the kids dance.'

Affected Participants

(66) gader   makifa   le-dani   et ha-bayit
Fence   surround   to-dani   ACC the-house
'A fence surround the house for/on dani' (e.g. he can sleep quietly)

→ temporal precedence is not part of the lexical semantics of so-called overt causal verbs and connectors: *cause*, *because of*

→ temporal precedence is dependent on lexical aspectual properties of the relata