The implications of manner and result for (in)direct causation

Josep Ausensi josep.ausensi@upf.edu

Introduction. It is traditionally assumed that lexical causative verbs (e.g. *kill*) (LC) entail direct causation whereas periphrastic causatives (e.g. *cause to die*) can express indirect causation (Fodor 1970; Katz 1970; Smith 1970; Ruwet 1972; Shibatani 1976; McCawley 1978; Bittner 1999; Wolf 2003; Rappaport Hovav & Levin 2001, 2012, *i.a.*). Roughly put, indirect causation involves an intermediate entity that intervenes between the causing and the caused event. In (1) (from Katz 1970) there is a causal chain between the event of faultily repairing the gun by the gunsmith and sheriff's death, yet this causal relation cannot be expressed with a LC since the gunsmith's faulty repair cannot be interpreted as the immediate cause of such event.

(1) [A gunsmith faultily repairs a sheriff's gun. The sheriff's gun then jams and he is killed.]
a. The gunsmith **caused** the sheriff **to die**. b. #The gunsmith **killed** the sheriff.

Nonetheless, Neeleman and Van de Koot (2012) (NVK) note that examples of the sort in (1) do not actually show that LCs are incompatible with indirect causation since the relevant notion in (1) appears to be 'accountability', i.e. if the subject can be held accountable for bringing about the result state encoded by the LC, LCs appear to be compatible with indirect causation (2). Thus, LCs of the sort *kill* do not entail direct causation; this is an implicature (Martin 2018).

(2) [A gunsmith adds dust on purpose to a sheriff's gun. The sheriff's gun jams and he is killed.]
a. The gunsmith **caused** the sheriff **to die**. b. The gunsmith **killed** the sheriff.

Backdrop. (a) Rappaport Hovav & Levin (2010) (RHL) argue that verbs fall into two semantic classes: manner verbs (e.g. *sweep*), which encode a manner of action, and result verbs (e.g. *kill*), which encode a result state; crucially, no single verb can encode both (Manner/Result Complementarity) (MRC). Yet, **(b)** Beavers and Koontz-Garboden (2012) (BKG) present a series of verbs of killing (i.e. *guillotine*, *electrocute*, *crucify, hang, drown*) and argue that these are manner+result verbs (MRV). However, Rappaport Hovav (2017) notes that most of these MRVs are not monomorphemic or morphologically simple (i.e. *guillotine*, *electrocute*, *crucify*) and therefore they do not defy MRC since MRC is actually a restriction on root meaning (RHL). In a similar vein, Ausensi (2019) argues that (simplex) verbs of killing of the sort *murder* (i.e. *murder*, *slay*, *assassinate*, *massacre, slaughter*) do defy MRC since *murder* verbs, in contrast to *kill*, pattern like canonical manner verbs (e.g. *run*, *wipe*) when subject to the manner diagnostics laid out in RHL and BKG. More specifically, Ausensi argues that *murder* verbs encode a manner of action that brings about a result state, i.e. *murder* verbs encode an intentional action (manner) that is carried out with the intention to cause the death of the patient.

Proposal. Following NVK, I argue that **(i)** LCs of the sort *kill* (i.e. result verbs) do not entail direct causation (= intermediate entities are allowed); rather, this is an inference (Martin 2018). Yet, I depart from NVK and Martin in arguing that LCs of the *murder* sort (i.e. MRVs) entail direct causation (= no intermediate entities are allowed). I propose that **(ii)** entailing direct causation is contingent on encoding a manner of action, apart from a result state (interestingly, the examples that NVK (p. 28) provide of LCs expressing indirect causation are cases of result verbs, e.g. *open*, *break*, *melt*). This follows if LCs of the sort *murder* not only encode a result state, but also a manner of action, i.e. a specific action that brings about the result state (Ausensi 2019). **(iii)** LCs are to be split into two classes: LCs encoding a result state are unspecified for the type of causation (contra traditionally assumed), yet LCs encoding a result and a manner do entail direct causation (contra NVK). I provide **(iv)** further evidence that supports the existence of MRV class as I argue that result verbs and MRVs contrast in the type of causation entailed.

Evidence. (i) Martin (2018) notes that the indirect readings of LCs such as *kill* are facilitated by adverbial expressions of the sort *eventually* or verbs like *manage*. I note that LCs encoding a manner of action (i.e. *murder* verbs) are not compatible with indirect causation even if the indirect causation reading is facilitated, in contrast to LCs encoding just a result state, (3)-(4).

(3) [John's friend, Tom, is a bodyguard for a President. John wants the President dead, so he adds dust to Tom's gun. The next day, there is a terrorist attack, Tom's gun jams and the President is killed.]
a. John <u>eventually managed to</u> **kill** the President.

b. #John eventually managed to **murder/assassinate/slay** the President

(4) [John wants all the citizens of a city dead. He tampers with the city's defense system. The next day, there is a terrorist attack, the city's defense system malfunctions and all the citizens are killed.]
a. John eventually managed to **kill** all the citizens.
b. #John eventually managed to **massacre/slaughter** all the citizens.

(ii) Martin further notes that indirect readings of LCs are also facilitated in contexts where the change of state by LCs is not at issue (e.g. by means of clefting), since "what is under issue is the responsibility of the subject's referent, and/or what the ultimate causing event." I note, however, that LCs of the sort *murder* are not compatible with indirect readings in clefting constructions either. As shown in (5) and (6) (repeating the scenarios in (3) and (4) respectively), only LCs of the sort *kill* (result verbs) are felicitous in such clefting constructions.

(5) a. In the end, it was John that **killed** the President!
b. #In the end, it was John that **murdered/assassinated/slew** the President!

(6) a. In the end, it was John that **killed** all the citizens.
b. #In the end, it was John that **massacred/slaughter** all the citizens.

(iii) Further evidence comes from canonical manner verbs in resultative constructions in which the (manner of) action encoded by the verb brings about the state denoted by the result XP. As Levin (2018) argues (also Bowerman 1982; Simpson 1983; Goldberg 1995; Levin & Rappaport Hovav 1995; Jackendoff 1997) such constructions require that the causal relation be direct, as shown in (7) (from Levin 2018: 22). This is expected under the present analysis since intermediate entities are predicted to be disallowed in causal events in which it is entailed that a result state is brought about by a manner of action (i.e. in (7a) cause the door to open [result] by kicking/pushing [manner] it), just as is the case with *murder* verbs, as argued above.

(7) a. John **kicked** the door **open**. (^{OK} John's foot makes contact with the door causing it to open. | $^{\#}$John kicked a ball which hits the door causing it to open.)
b. John **pushed** the door **open**. (^{OK} John pushed on the door causing it to open. | $^{\#}$John pushes a button which sets a mechanism in operation that opens the door.)

Analysis. Following Beavers & Koontz-Garboden (2019), I argue that **(i)** the difference between the two classes of LCs result from the different semantics of the roots from which LCs are derived. I propose the denotation in (8a) for the roots of LCs encoding a manner and a result (i.e. √MURDER, √ASSASSINATE, √MASSACRE, √SLAY, √SLAUGHTER): (8a) specifies that the cause that brings about the state needs to be of an intentional-type action, i.e. it predicates the state *dead* of a unique argument but it specifies that such state must be brought about by a specific action. In contrast, the denotation for the roots of LCs like √KILL (8b) also predicates a state of a unique argument, but it does not specify anything about the cause. I argue that **(ii)** LCs derived from roots restricting the type of cause to a specific action necessarily entail direct causation. This follows if such roots require that such a specific action bring about the state named by the root. In contrast, I further argue that **(iii)** LCs derived from roots like √KILL are unspecified for the type of causation since such roots name a state but crucially do not require that it be brought about by any specific action, and therefore are unspecified for the type of causation allowed since such roots just require that the state be *caused*, either directly or indirectly.

(8) a. $[[\sqrt{\text{MURDER}}]] = \lambda x \lambda s\, [dead'(x, s) \wedge \exists e' \exists v\, [cause'(v, e') \wedge become'(e', s) \wedge \forall v'[cause'(v', e') \rightarrow intentional'(v')]]]$
b. $[[\sqrt{\text{KILL}}]] = \lambda x \lambda s\, [dead'(x, s) \wedge \exists e' \exists v\, [cause'(v, e') \wedge become'(e', s)]]$

Conclusion. I argue that **(a)** LCs encoding just a result state are unspecified for the type of causation allowed, whereas LCs encoding both a manner and a result do entail direct causation, thus showing that LCs are not a uniform class. I propose that **(b)** entailing direct causation is contingent on encoding a manner of action, which in turns results from the semantics of the different roots LCs are derived from (8). Lastly**, (c)** I provide new evidence that further supports the existence of MRVs as I note that result and MRVs contrast in the type of causation allowed.

Selected references. Ausensi, J. 2019. Agent entailments induce manner properties. To appear in *Proceedings of ConSOLE XXVII*. | **Martin, F. 2018.** Time in probabilistic causation: Direct vs. indirect uses of lexical causative verbs. *Proceedings of SuB22*. | **Neeleman, A. & H. Van de Koot. 2012.** The linguistic expression of causation. In *The Theta System: Argument Structure at the Interface*.