Using theories of causation to model non-culmination and agency

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In this presentation we explore and evaluate familiar and under-represented possibilities in the theoretical hypothesis space for non-culmination of telic predicates, as in (1):

(1) Kerim ešik-ni ac-xan-dɨ, alaj boša-ma-ʁan-dɨ.
Kerim door-ACC open-PERF-3SG but finish-NEG-PERF-3SG
(Context: The lock is broken and Kerim tries to open the door.) Lit. 'Kerim opened the door, but he did not succeed.' (Karachay-Balkar; Tatevosov 2008)

We further show that one's choice of how to model non-culmination can make it easier or harder to relate non-culmination to agency.

Existing theories of non-culmination are split largely into two strategies: the **(i) causation plus possible world strategy** that uses two sub-events with a causal relation between them and have the caused event happening only in certain possible worlds (Matthewson 2004, Tatevosov 2008, e.g.) and the **(ii) causal skeptic strategy,** which avoids the problem of non-actual results by using a relation between a non-maximal (sub)event and a maximal event (Parsons 1990, Singh 1998, Koenig and Muansuwan 2000, Piñon 2009, e.g.). The possible worlds strategy is heir to Dowty's (1979) inertia worlds account of the English progressive, which builds on Lewis's (1973) counterfactual theory of causation.

We present a third, under-utilized stratgegy: one can avoid complicating the semantics with possible worlds without being a causal skeptic if one's theory of causation does not entail the occurrence of the result. Non-result-entailing theories of causation exist and fall into two categories: force-dynamic theories (Wolff 2007, Wolff et al. 2010, e.g.) and probabilistic theories (Suppes 1970, Eells 1991, e.g.). But as far as we know, the **(iii) non-result-entailing causation strategy** has rarely been used to account for non-culmination, and then only the force-dynamic option (Dell 1987, Copley & Harley, 2012). We present an alternative, probabilistic approach to non-culmination that involves Gehrke's (2012) event kinds:

(2) O(ek) = 1 iff there is an eventuality e such that e realizes ek
1. for any eventuality c and eventuality kinds ck and ek where c realizes ck :
c causenon-culminating ek iff p(O(ek)|O(ck)) > p(O(ek) | ~O(ck))
2. for any eventualities c, e, and eventuality kinds ck and ek where c realizes ck and e realizes ek: c causeculminating e iff p(O(ek)|O(ck)) > p(O(ek) | ~O(ck))

We note that non-result-entailing causation strategies should be palatable to causal skeptics, since other relationships besides the causal relation can be accounted for in either force-dynamic or probabilistic models of verbal predicates. And since strategy (iii) puts the complexity of "inertia" in the conceptualization of causation, it also has the advantage of expressing the truth conditions of non-culmination but not placing the burden of this complexity in the semantics (as does strategy (i)) or eliding the issue altogether (as does strategy (ii)).

Considering the Agent Control Hypothesis proposed by Demirdache & Martin 2013, in which non-culmination is argued to pattern with the presence of an animate agent, an adequate theory of non-culmination should also make it easy to represent agency. We show in the second oart of the presentation that many if not all "agency" requirements in language—including the Agent Control Hypothesis—allow a limited set of non-volitional causers in certain stereotypical situations, as argued by Martin & Schäfer 2012, 2013 for cases as in (3):

(3) a. Cette situation leur a montré le problème, #mais il ne l'ont pas vu.
'This situation showed them the problem, but they didn't see it.'
b. Clairement, cette situation leur a bel et bien montré le problème! C'est fou qu'ils ne l'aient pas vu!
'Clearly, this situation well and truly showed them the problem! It's crazy that they didn't see it!"

Other apparent agent requirements that nonetheless allow a limited set of inanimate causer counterexamples include futurates (Copley 2002), Activities (Folli & Harley 2008), and deverbal nouns (Sichel, 2010).

We argue that a dispositional (Stalnaker, 1978) rather than a preference-based (Heim, 1992) account of volition is desirable for accounting for such requirements, since inanimate causers may have dispositions, but surely do not have preferences. Dispositions can be modeled using theories of causation, so strategies (i) and (iii) are preferred; there is no particular connection between dispositions and the causal skeptic strategy (ii).

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