

## **-ing nominalizations: Implications for natural language ontology**

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The analysis of *-ing* nominalizations (e.g. (1)), has often invoked a distinction between propositions, or proposition-like objects, and events. While the analysis of the form in (1d) as referring to an event has been comparatively uncontroversial since at least Vendler 1975, the analysis of (1a-c) has consistently engendered proposals for divergent ontological objects: e.g. ‘facts’ (Vendler 1975), ‘propositions’ (modeled as sets of Kratzer’s 1989 situations, Portner 1992), ‘states of affairs’ (primitive objects in the subdomain of propositional entities; Zucchi 1993) or ‘fluents’ (primitive time-dependent properties; Hamm & van Lambalgen 2002).

- (1) a. raking the leaves (VP-*ing*)
- b. Al’s raking the leaves (POSS-*ing*)
- c. Al raking the leaves (ACC-*ing*)
- d. Al’s raking of the leaves (*-ing<sub>of</sub>*)

While concurring that propositions are grammatically relevant semantic objects, e.g. as complements of propositional attitude verbs, we argue that invoking propositions is not appropriate for *-ing* nominalizations. Building on a corpus analysis, we argue that *-ing* forms are best handled by appealing exclusively to event types and tokens. We first discuss differences between *-ing* nominalizations and what we consider clear cases of proposition-denoting expressions, outline our proposal, then discuss the implications.

**Examples of differences:** We examined all uses (except in the progressive or as a prenominal modifier) of 40 different *-ing* forms in the Brown Corpus (Francis & Kucera 1979), chosen to represent a sample of different argument realization types. Although the propositional analysis of *-ing* nominalizations has been largely motivated by paraphrase data (e.g. Vendler 1967, Zucchi 1993), a large proportion of *-ing* nominalizations occur in environments where full clauses cannot be substituted, e.g. free adjuncts (2) or with certain predicates such as *capable* (3).

- (2) ...he collapsed and lay on the ground, dying, the Reverend holding his head and wiping his hot brow/\*that the Reverend holds his head...
- (3) Ed is capable of driving a car/\*that he drives a car.

Nominalizations are also known to be limited in the functional material that they may contain: In English, they arguably do not contain tense, although this varies cross-linguistically, while a well-known typological generalization is that modals are not compatible with nominalizations (Comrie & Thompson 2007). If *-ing* nominalizations denote propositions, these restrictions remain mysterious.

**Event Type/Token Analysis:** Following e.g. Carlson 2003, our analysis builds on the premise that, just as a type/token distinction is motivated in the domain of object reference, so it is in the domain of event reference. Event types are primitive objects in natural language ontology, which can be realized by event tokens. Extending Carlson, who argues that VPs containing incorporated nominals denote event types, we posit that all VPs denote event types, which can be highly specified, in line with the fact that the same individual (e.g. Al), can participate in the same type of event even at the same time of day or same location on multiple occasions. VPs come to denote event tokens only in the presence of tense. If we take a simple surfacist analysis and treat the *-ing* forms in (1a-c) as VPs (see e.g. Abney 1987 on POSS-*ing*),

it follows that they denote event types. Extending ideas in Zamparelli 1995 and others, we take nominalized *-ing* forms (1d) to denote primarily event tokens.

Appeal to event types, rather than propositions, accounts for the facts in (2)-(3). It also sheds light on why (4b) is closer in meaning to (4c) than to (4a).

- (4) a. Mary remembered that John examined the witness
- b. Mary remembered John's examining the witness
- c. Mary remembered John's examining of the witness.

We account for the failure of the forms in (1a-c) to occur with Vendler's narrow containers (e.g. *happen*) via blocking: The use of a type-denoting expression when a token-denoting one is available should be pragmatically marked, as happens with object nominals:

- (5) a. That animal is alive/dead.
- b. ??That kind of animal is alive/dead.

In the talk we offer further details of how our account handles these and other contrasts, including the difference between the predicates in (5) and (4).

**Implications.** Our treatment of *-ing* nominals narrows the range of data for which propositions and other related categories might be appealed to, ultimately facilitating a better understanding of the way, if at all, the latter are manifest in natural language. To this end, we will briefly return to Zucchi's notion of 'state of affairs', Hamm & van Lambalgen's notion of 'fluent', and the much-discussed notion of 'fact', showing how we can recast these notions in our simpler ontological set-up. Finally, we compare our results with the Kratzer/Portner approach to modeling propositions in terms of situations.

## References

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