Distinguishing between POSS-*ing* and ACC-*ing*: Evidence from *with(out)*

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Gerunds in English

▶ Clay won the match.

▶ Verbal gerunds:
   POSS-*ing*   Clay's/his winning the match
   ACC-*ing*   Clay/him winning the match

▶ Nominal gerunds:
   -ing$_{\text{of}}$ Clay's/his/the winning of the match

▶ Vendler's (1967) narrow containers:
   #Clay('s) winning the match was fast/happened on Saturday.
   Clay's winning of the match was fast/happened on Saturday.

▶ Nominal gerunds denote events, verbal gerunds denote facts
   (Vendler 1967), propositional entities (Portner 1992),
   possibilities or facts (Asher 1993), fluents (Hamm & van
   Lambalgen 2002), etc.

Roadmap

▶ Question: Should POSS-*ing* and ACC-*ing* be assigned
different interpretations? If so, in what ways are they
different?

▶ Introduction: Difference between POSS-*ing* and ACC-*ing*
in theories

▶ New data: *with(out)* + POSS-*ing* and ACC-*ing*

▶ Analysis 1: The interpretation of *without* + POSS-*ing*

▶ Analysis 2: Two hypotheses for the asymmetry in the
distribution of verbal gerunds as complements of *with(out)*

▶ Conclusion

POSS-*ing* and ACC-*ing* in theories

- Same interpretation:
  - Asher (1993): Possibilities or facts
  - Hamm & van Lambalgen (2002): Fluents
- Different interpretations:
  - Portner (1992): Propositional entities.
    POSS-*ing* is definite and ACC-*ing* is indefinite.
  - Grimm & McNally (2015): Event kinds.
    POSS-*ing* carries Possessive Existential Import.

Portner (1992): Definiteness

▶ Verbal gerunds denote propositional entities (in Kratzer's Semantics of Situations). POSS-*ing* is definite and ACC-*ing* is indefinite.

▶ When used in a non-factive context, POSS-*ing* is still factive, while ACC-*ing* is non-factive:

(1) a. George imagined Clay's winning the match.
       → Clay won the match, or *Clay's winning the match* is under discussion
    b. George imagined Clay winning the match.
       ↛ Clay won the match.

▶ POSS-*ing*, being definite, carries a familiarity presupposition: in a factive environment, an actual situation described by it is familiar; in a non-factive environment, there is a possibly hypothetical entity under discussion.

Grimm & McNally (2015): PEI

▶ POSS-*ing* and ACC-*ing* are both event kind descriptions. In analogy to kinds in the entity domain, event kinds are sortal concepts that can be instantiated by tokens.

▶ ACC-*ing* can remain kind-referring or entail a token when anchored to matrix tense:

(2) a. Clay winning the match is what I expect to see.
   ↛ Clay won the match.
b. Clay winning the match upset George.
   → Clay won the match.

▶ POSS-*ing* contains a possessive relation and therefore carries Possessive Existential Import (PEI) (Peters & Westerståhl 2013): if the possessive relation exists, the possessee must exist.

Grimm & McNally (2015): PEI

- However, POSS-*ing* does not always entail a token event:
  - (3) George prevented Clay's winning the match.
         ↛ Clay won the match.

- PEI does not require the existence of an event token, but makes sure that the event kind exists. An event kind exists when:
  - A token instantiation of it exists
  - It is familiar.
    Müller-Reichau (2011): The interpretation of a definite kind-level NP presupposes the "existence" (establishedness) of the kind in the universe of discourse.

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Data

- ▶ Collected from a dependency-parsed version of the BNC (2007):

(4) She had been very ill and suddenly taken to hospital without Darren's knowing why.

(5) It was signed by Andrew Stavanger without his fully realising what he was doing.

(6) The hours passed without our receiving any news.

- ▶ *Without* and its counterparts in other languages have various senses, and some of them have been formally discussed (Bosque, 1980; Feigenbaum, 2002; Müller, Roch, Stadtfeld, & Kiss, 2012; Castroviejo, Oltra-Massuet, & Pérez-Jiménez, 2015), but *without* + POSS-*ing* has not been accounted for.

- ▶ Analysis 1: The semantics and pragmatics of *without* + POSS-*ing*

Asymmetry

▶ Out of a total of 818 POSS-*ing* cases from the BNC, 39 are selected by *without*, but only 3 by *with* and none has a relevant reading.

▶ Replacing *without* with *with* leads to unacceptability:

(4′) #She had been suddenly taken to hospital with Darren's being fully informed.

(5′) #It was signed by Andrew Stavanger with his totally ignoring the content.

(6′) #The hours passed with our receiving no news.

▶ At the same time, ACC-*ing* is compatible with both:

(7) She had been suddenly taken to hospital with Darren being informed/without Darren knowing why.

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Asymmetry

▶ Both POSS-*ing* and ACC-*ing* are compatible with *without*, but only ACC-*ing* is compatible with *with*:

▶ Clay won the match...
   with + POSS-*ing*   ??with George's supporting him.
   with + ACC-*ing*   with George supporting him.
   without + POSS-*ing*   without George's supporting him.
   without + ACC-*ing*   without George supporting him.

▶ Analysis 2: How the different interpretations of POSS-*ing* and ACC-*ing* explain the asymmetry

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The basic interpretation

▶ VP modifier

(8) To do so is to help the opponent to win without his having to
hit you with a single scoring technique.
≠ Without his having to hit you with a single scoring
technique, to do so is to help the opponent to win.

▶ Distinguished from the free adjunct (Stump 1981): adjunct to
the sentence, prosodically separate from the main clause, may
interact with main clause tense, modal, quantifiers, etc.

▶ Basic interpretation: temporal overlap

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Interpretation of *without* + POSS-*ing*: Semantics

- Bosque's (1980) intuition: The hearer infers that the same activity is talked about.

- I follow Grimm & McNally (2015) in assuming that the main predicate begins on the kind level and is instantiated by tense.

(9) Clay won the match without George's supporting him.
= Clay won the match, and during that time, George didn't support him.
= It happened at one time that Clay won the match and George didn't support him.

(10) ⟦(9)⟧ = PAST(⟦Clay win the match without George's supporting him⟧)
= PAST(⟦without⟧(⟦George's supporting him⟧)(⟦Clay win the match⟧))

Derivation

▶ *Without* connects two event kinds and produce a complex event kind such that (i) any instantiation of the complex event kind (e_{k3}) entails that the event kind described by the modified predicate (e_{k1}) is instantiated, and that at the same time, the event kind described by POSS-*ing* (e_{k2}) is not instantiated (ii) the runtime of the complex event token is identical to that of the modified VP event token.

(11) $\llbracket$without$\rrbracket =$
$\lambda P_{k2} \lambda P_{k1} \lambda e_{k3} \exists e_{k1} \exists e_{k2} [P_{k1}(e_{k1}) \wedge P_{k2}(e_{k2}) \wedge \forall e_3 [\mathbf{R}(e_3, e_{k3}) \rightarrow \exists e_1 [\mathbf{R}(e_1, e_{k1}) \wedge \neg \exists e_2 [\mathbf{R}(e_2, e_{k2}) \wedge \tau(e_1) \circ \tau(e_2)] \wedge \tau(e_3) = \tau(e_1)]]$

▶ The resulting event kind can be embedded or instantiated

▶ Suggests that kind modification is a non-monotonic process, i.e. the resulting complex event type is a different kind with distinct implications.

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Derivation

▶ ⟦Clay win the match⟧=
$\lambda e_{k1}[\mathbf{win}(e_{k1}) \wedge \mathbf{Agent}(\mathbf{c}, e_{k1}) \wedge \mathbf{Theme}(\mathbf{m}, e_{k1})]$

▶ ⟦George's supporting Clay⟧=
$\lambda e_{k2}[\mathbf{support}(e_{k2}) \wedge \mathbf{Agent}(\mathbf{g}, e_{k2}) \wedge \mathbf{Theme}(\mathbf{c}, e_{k2})]$

▶ ⟦Clay won the match without George's supporting him⟧=
$\lambda t \exists e_3, e_{k3}[t < \mathbf{now} \wedge \exists e_{k1} \exists e_{k2}[\mathbf{win}(e_{k1}) \wedge \mathbf{Ag}(\mathbf{c}, e_{k1}) \wedge \mathbf{Th}(\mathbf{m}, e_{k1}) \wedge$
$\mathbf{support}(e_{k2}) \wedge \mathbf{Ag}(\mathbf{g}, e_{k2}) \wedge \mathbf{Th}(\mathbf{c}, e_{k2}) \wedge \forall e_3[\mathbf{R}(e_3, e_{k3}) \rightarrow$
$\exists e_1[\mathbf{R}(e_1, e_{k1}) \wedge \neg \exists e_2[\mathbf{R}(e_2, e_{k2}) \wedge \tau(e_1) \circ \tau(e_2)] \wedge \tau(e_3) =$
$\tau(e_1)]]] \wedge \mathbf{R}(e_3, e_{k3}) \wedge \tau(e_3) = t]$

$= \lambda t \exists e_3, e_{k3}[t < \mathbf{now} \wedge \exists e_{k1} \exists e_{k2}[\mathbf{win}(e_{k1}) \wedge \mathbf{Ag}(\mathbf{c}, e_{k1}) \wedge$
$\mathbf{Th}(\mathbf{m}, e_{k1}) \wedge \mathbf{support}(e_{k2}) \wedge \mathbf{Ag}(\mathbf{g}, e_{k2}) \wedge \mathbf{Th}(\mathbf{c}, e_{k2}) \wedge$
$\exists e_1[\mathbf{R}(e_1, e_{k1}) \wedge \neg \exists e_2[\mathbf{R}(e_2, e_{k2}) \wedge \tau(e_1) \circ \tau(e_2)] \wedge \tau(e_3) =$
$\tau(e_1)]] \wedge \mathbf{R}(e_3, e_{k3}) \wedge \tau(e_3) = t]$

Interpretation of *without* + POSS-*ing*: Pragmatics

► Normally, when an event of the modified VP occurs, there should also be an event described by the POSS-*ing*. For example,

(9) Clay won the match without George's supporting him.

   implies that normally, when Clay wins a match, George should have supported him.

(12) #Clay won the match without Thoth's blessing him.

► *Without* is similar to concessive connectors like *however*:

(4′) She had been very ill and suddenly taken to hospital *without, however, Darren's knowing why.*

Generic incausality

- Zieleke (2020) for German *dennoch* and *trotzdem*:
  Generic incausality: a regularity which generalizes over entities,
  predications and/or situations and accepts exceptions.

- *p dennoch q* asserts $p \wedge q$ and produces the implicature that
  $\text{GEN}(v)[P_p(v); \neg Q_q(v)]$ (P and Q are predicates and v an
  unrestricted variable).

(13) $\text{GEN}(x, y)[\text{player}(x) \wedge \text{teammate}(x, y) \wedge \text{win}(x); \text{support}(y, x)]$
       Generally, for a player to win, his teammate should support
       him.

(14) $\text{GEN}(x, y)[x=\text{Clay} \wedge y=\text{George} \wedge \text{play}(x); \text{support}(y, x)]$
       Normally when Clay plays, George supports him.

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Asymmetry

▶ Both POSS-*ing* and ACC-*ing* are compatible with *without*, but only ACC-*ing* is compatible with *with*:

▶ Clay won the match...

with + POSS-*ing*	??with George's supporting him.
with + ACC-*ing*	with George supporting him.
without + POSS-*ing*	without George's supporting him.
without + ACC-*ing*	without George supporting him.

▶ Hypotheses: The asymmetry comes from...

1. Redundancy
2. Different temporal anchoring abilities of POSS-*ing* and ACC-*ing*

With/Without asymmetry in the nominal domain

(15) a. #lion with a tail
    b. lion without a tail
    c. lion with a mane
    d. lion without a mane
    e. ?lion with a crossbow
    f. #lion without a crossbow

► Being a lion entails having a tail and not using a crossbow, so (15a) and (15f) are infelicitous unless in specific discourse conditions.

Information redundancy

- Portner (1992): POSS-*ing* is definite, ACC-*ing* is indefinite
- Assume that the basic interpretation of *with* is also that of temporal overlap.
- Since ACC-*ing* is indefinite, it introduces a new discourse referent, and it temporally overlapping the matrix event is always informative.
- For POSS-*ing*, which is familiar in the discourse, its relation with the matrix clause event kind is likely known in the context. In this case, *without* is informative because it introduces an exception, but *with* is not.
- In a context where we know George always supports Clay: #Clay won with George's supporting him. → not informative

Information redundancy

If, in the same context, *with* + POSS-*ing* is rejected because of redundancy, *with* + ACC-*ing* should also be redundant. Also note that *with* + POSS-*ing* can sound bad without a context.

▶ What is involved here is perhaps not redundancy

Temporal anchoring

► Since POSS-*ing* is familiar, it is either anaphoric to an event token/kind in the discourse or is under discussion, and has its own temporal index.

► When used as complement of *without*, it is not committed to having a token that occurs at a certain time, so there is no conflict.

► When used as complement of *with* and POSS-*ing* is anaphoric to a token event, there is a conflict because it cannot be temporally anchored again. When it refers to a kind under discussion, it should not be temporally anchored.

► Assume *with* also forms a complex event kind. It is unnatural to identify a part (POSS-*ing*) before identifying the whole (complex kind). ⟶ Further research

Temporal anchoring

► ACC-*ing* can easily be anchored to the main clause tense because it is always newly introduced and, since it is not the main predicate, does not carry its own temporal index. A piece of evidence comes from their compatibility with temporal prepositions. Though Vendler (1967) claims that both POSS-*ing* and ACC-*ing* do not serve as complement of temporal prepositions:

(16)   This concept met resistance in Tehran, particularly as Iraq underlined its position with another offensive just after Iran's accepting the principle of a cease-fire. (BNC)

while POSS-*ing* is marginal, ACC-*ing* is impossible.

Other potential uses of *with* + POSS-*ing*

▶ This analysis predicts that *with* + POSS-*ing* is fine if POSS-*ing* is not temporally anchored to the modified VP. For example, if Clay's victory is marked by (therefore, temporally dependent on) his killing of the dragon:

(17) Clay won the match with his skillfully killing the dragon.

▶ This analysis also does not eliminate other senses of *with* (e.g. "on the basis of") that are potentially compatible with POSS-*ing*, therefore, it does not support a syntactic restriction on *with* + POSS-*ing*.

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Conclusion

▶ New data from the BNC: *without* + POSS-*ing*, a use that had not been discussed in the literature. I proposed a denotation for *without* which connects two event kinds and produces a complex event kind, and applied the approach by Zieleke (2020) to account for the implicature.

▶ An asymmetry: ACC-*ing* can be selected by *with* or *without*, but POSS-*ing* is only compatible with *without*. Possible explanations: (1) information redundancy; (2) different temporal anchoring abilities of POSS-*ing* and ACC-*ing*, both following the proposal of Portner (1992) that POSS-*ing* is definite and ACC-*ing* indefinite.

▶ The data support assigning different interpretation to POSS-*ing* and ACC-*ing*. The claimed difference in their discourse function needs to be tested empirically.

Selected references

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► Portner, P. (1992). *Situation Theory and the Semantics of Propositional Expressions* (Unpublished doctoral dissertation). University of Massachusetts at Amherst, Amherst, MA.

► Zieleke, R. (2020, Sept 3-9). *The incausality of* dennoch *and* trotzdem [Conference presentation]. Sinn und Bedeutung 25, London.

► Please refer to the handout in the OSF respository or contact me for the complete list of references: `zi.huang@upf.edu`

Thank you for your attention!

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