

Imperfect Nominals selected by Temporal Prepositions

Presentation at JENom 9

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Perfect and imperfect nominals

- ▶ Vendler (1967) divides nominals into two types.
- ▶ **Perfect nominals**: more nominal properties
 - ▶ Event nouns: *Clay's/his victory*
 - ▶ Nominal gerunds: *Clay's/his winning of the game*
- ▶ **Imperfect nominals**: more verbal properties
 - ▶ POSS-*ing*: *Clay's/his winning the game*
 - ▶ ACC-*ing*: *Clay/him winning the game*
 - ▶ *that* clauses: *that Clay won the game*
- ▶ In this talk, I only focus on gerunds.

Narrow and loose containers

- ▶ Containers: sentence-roots with a noun-gap suited for a nominal
- ▶ **Narrow containers** only accept perfect nominals.
 - ▶ **Eventive predicates** (*occur, take place, begin, end...*)
Clay's winning *(of) the game took place at 3 pm.
 - ▶ **Extensional adjectives** (*fast, slow, sloppy, gradual...*)
Clay's winning *(of) the game was long and painful.
 - ▶ **Temporal prepositions** (*before, after, since, until...*)
Everyone got excited after Clay's winning *(of) the game.
- ▶ **Loose containers** accept both.
 - ▶ **Intensional adjectives** (*possible, useful, necessary...*)
Clay's winning (of) the game was unlikely.
 - ▶ **Other predicates** (*surprise, astonish, imply, entail...*)
Clay's winning (of) the game implied a huge conspiracy.

Ontological distinction

- ▶ Nominal and verbal gerunds denote different ontological objects.
- ▶ Nominal gerunds denote **events**.
- ▶ Verbal gerunds denote...
 - ▶ **facts**, which are not located in either space or time (Vendler 1967)
 - ▶ **propositional entities**, or sets of minimal situations (Portner 1992)
 - ▶ **facts or possibilities** (Asher 1993)
 - ▶ **states of affairs** (Zucchi 1993)
 - ▶ **fluents** (Hamm & van Lambalgen 2002)
 - ▶ **event kinds** (Grimm & McNally 2015)

which are incompatible with narrow containers, because these only select (token) events.

In this talk...

- ▶ I present corpus data where temporal prepositions select *POSS-ing* and *ACC-ing*.
- (1) Anyway, shortly *after* my joining the board of United Racecourses, it became necessary to find a manager.
- ▶ My data contradict Vendler's judgments and challenge the proposal that facts are not located in time.
- ▶ I argue that an ontological distinction between nominal and verbal gerunds should be maintained, and that the data shed light on the temporal properties of "facts".

Data collection

- ▶ *POSS-ing*: Searched from a dependency-parsed version of the BNC (2007), manually cleaned
- ▶ *ACC-ing*: Searched from the BNC through SketchEngine (limited to personal pronouns)
- ▶ Initial observation: *POSS-ing* can be selected by temporal prepositions:
 - (2) [...] delays incurred in the processing of such items **between** their leaving the Library and subsequently returning to it [...]
 - (3) [...] express provision for the retirement of a trustee **on** his ceasing to be a partner.
 - (4) “I don’t know whether Dersingham knew him **prior to** his appointing him.”

Classification of temporal prepositions

- Pattern Dictionary of English Prepositions (PDEP) (Litkowski 2014), based on Quirk et al. (1985)

PDEP Temporal Class (93 senses)

Preposition	Sense	Subclass	Srtype	Supersense	Classed	Count	Pct	NF
against	4(2)	Preceding	EventInFuture		Yes	0	100.0	0.19
upon	17(8)	SimpleTime	Day	Time	Yes	0	100.0	0.19
upon	18(8a)	SimpleTime	Occasion	Time	Yes	0	100.0	0.19
about	6(n)	SimpleTime	TimePoint		Yes	2	100.0	89.35
across	1(1)-1	Period	PeriodTraversed	Duration	Yes	4	100.0	21.64
afore	1(1)	Preceding	TimePoint	DeicticTime,RelativeTime	Yes	1	100.0	0.19
after	1(1)	Following	TimePeriod	RelativeTime	Yes	142	100.0	4463.68
after	2(1a)	Period	PeriodRepeated	Frequency	Yes	1	100.0	31.43
after	3(1b)	Following	Hour	ClockTimeCxn	Yes	0	100.0	31.43
after	4(1c)	Period	ThingDeparting		Yes	15	100.0	471.52
against	4(2)	Preceding	EventInFuture		Yes	16	100.0	342.97
agin	4(2)	Preceding	EventInFuture		Yes	0	100.0	0.19

Classification of temporal prepositions

- ▶ **Event-selecting:** srtype = Occasion
Select event descriptions, but not temporal expressions (in the relevant reading)
on, upon
- ▶ **Point-selecting:** srtype = TimePoint
Select points of time, among others
after, around, at, beyond, following, from, near, etc.
- ▶ **Period-selecting:** srtype = TimePeriod
Select periods of time and not points of time
across, along, during, for, in, over, throughout, etc.

Event-selecting prepositions

- ▶ *On* and *upon* select both POSS-*ing* and ACC-*ing*.
- (5) I felt rather as I should if, **on** my asking him what he would like for lunch, he had replied “thriftiness”, or “thirty-seven degrees Centigrade”.
- (6) [...] **on** my telling him he must give me his hand in pledge that he would stay here and work longer if necessary, he, after a little hesitation, consented.
- (7) Even my wife, [...] **upon** my expressing my desire not to go to a certain gathering would say, “Normal people like parties, they want to go.”
- (8) It was thought that the Shropshire Country Council were the owners, but **upon** them looking through their records, it appears that [...]

Point-selecting prepositions

- ▶ *Before, after, between, following, since*, etc. are found to take verbal gerunds.

- (9) Well, **after** them telling me how good Gary Kelly was, they said they had a Leeds youth team member in their squad.
- (10) They get paper first **before** you sending them money.
- (11) [...] if so required by the Vendor in writing within 60 days **following** it being notified ...
- (12) We're less than twenty-four hours away **from** you beginning this inquiry, this inquest you have longed for.
- (13) I didn't see any past... I did see some past papers but it was **subsequent to** my setting these exam questions, right?

Period-selecting prepositions

- ▶ Period-selecting prepositions such as *during*, *through* and *throughout* express a relation to a period of time, either represented by a temporal expression (*February*, *the morning*) or an durative event (*during the construction* but **during his arrival*).
- ▶ Cases of period-selecting prepositions + verbal gerunds are not attested.
- ▶ Experiments are required to demonstrate the incompatibility.

A note on TempPrep + ACC-*ing*

- ▶ This use was lost in the course of Modern English (van de Pol 2019).
- ▶ Data from my pilot study show that native speakers still have a preference for ACC-*ing* after temporal prepositions:
 - (14) This concept met resistance in Tehran, particularly as Iraq underlined its position with another offensive just after _____ the principle of a cease-fire.

Iran accepting (11/20), Iran's accepting (4/20), both (5/20)
 - (15) Even my wife, enlightened, but energetically gregarious, upon _____ my desire not to go to a certain gathering would say [...]

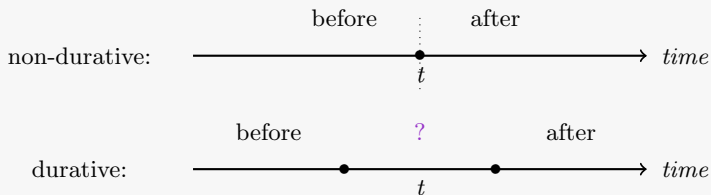
me expressing (17/22), my expressing (0/22), both (5/22)

Observations

- ▶ Though very few cases are attested, the data show that temporal prepositions do select verbal gerunds.
 - ▶ Both *POSS-ing* and *ACC-ing* can be selected by temporal prepositions.
 - ▶ Verbal gerunds can be used to locate the time relative to either an actual event (9) or a potential one (12).
- (9) Well, **after** them telling me how good Gary Kelly was, they said they had a Leeds youth team member in their squad.
- (12) We're less than twenty-four hours away **from** you beginning this inquiry, this inquest you have longed for.

TempPrep + eventualities

- ▶ Temporal trace: $\tau(e) = t$



- ▶ Traditionally: *before* takes the onset and *after* takes any part of the eventuality.
- ▶ Condoravdi (2010): *Before* and *after* are interpreted with respect to *earliest*. $T = glb(itop.T)$ if defined.
The greatest lower bound of the right bounds of the elements in T ;
picks up the onset of states and activities, and the culmination point
of an accomplishment.

Analyses

My data contradict Vendler's observations and seem to suggest that verbal gerunds, like events, have a temporal trace. I will discuss three possible analyses:

1. Verbal gerunds also denote events.
2. Verbal gerunds impose an aspect on the event description.
3. Verbal gerunds are fact-denoting, but facts are able to provide a time.

1. Verbal gerunds as events

- ▶ Asher (1993): Fact/event denotation is dependent on the syntactic structure. A structure that only derives the factive reading cannot explain the following observations: POSS-*ing* is marginally acceptable with eventive predicates (16). Bare gerunds are compatible with (at least some) eventive predicates (17).

(16) {?Fred's/*Fred} shooting Bill took place behind the bar/happened yesterday.

(17) Building the Panama Canal took longer than expected.

- ▶ However, Asher admits that the examples motivating an alternative analysis are fragile:

(18) *?Gathering pecans in Central Texas lasted two months.

1. Verbal gerunds as events

Analyzing verbal gerunds as event-denoting faces serious problems:

- ▶ Verbal gerunds that do not have an eventive reading, such as *Clay's having won the game*, have a different syntactic structure.
- ▶ ACC-*ing* is not compatible with eventive predicates, but is selected by temporal prepositions.
- ▶ Verbal gerunds are still not compatible with most other narrow containers.
- ▶ Eventivity spectrum?
- ▶ It does not explain why period-selecting prepositions do not take verbal gerunds.

2. Verbal gerunds imposing aspect

It has been claimed that nominalizations can impose an aspect on an event description:

- ▶ Achievements are odd in nominal gerunds (Borer 2013):

- (19) *Kim's reaching of the summit
*the arriving of the train (at 5pm)

Fonteyn (2018) shows that such cases are attested in the corpus.

- ▶ The nominal infinitive in Spanish is necessarily [-perfective] (de Miguel 1995):

- (20) *El llegar tardío de Juan
the to-arrive late of Juan

2. Verbal gerunds imposing aspect

- ▶ We can hypothesize that verbal gerunds “collapse” accomplishments into their culmination point:

- (21) Clay complete the task:

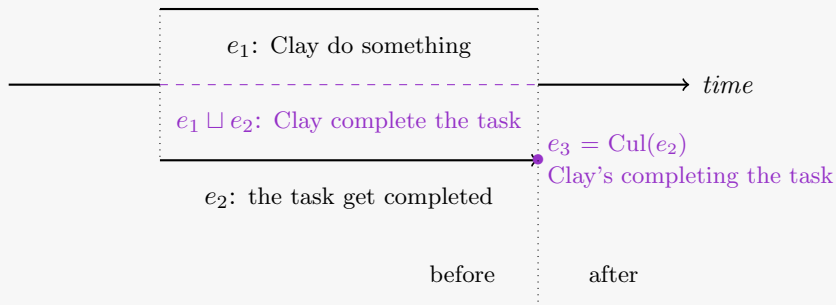
$$\lambda e \exists e_1, e_2 [e = {}^S(e_1 \sqcup e_2) \wedge \mathbf{ACT}(e_1) \wedge \mathbf{Ag}(e_1) = \mathbf{Clay} \wedge \mathbf{Th}(e_1) = \mathbf{the-task} \wedge \mathbf{BECOME-DONE}(e_2) \wedge \mathbf{Arg}(e_2) = \mathbf{Th}(e_1) \wedge \mathbf{INCR}(e_1, e_2, \mathbf{C}(e_2))]$$

- (22) Clay's completing the task:

$$\lambda e_3 \exists e, e_1, e_2 [e = {}^S(e_1 \sqcup e_2) \wedge \mathbf{ACT}(e_1) \wedge \mathbf{Ag}(e_1) = \mathbf{Clay} \wedge \mathbf{Th}(e_1) = \mathbf{the-task} \wedge \mathbf{BECOME-DONE}(e_2) \wedge \mathbf{Arg}(e_2) = \mathbf{Th}(e_1) \wedge \mathbf{INCR}(e_1, e_2, \mathbf{C}(e_2)) \wedge e_3 = \mathbf{Cul}(e_2)]$$

2. Verbal gerunds imposing aspect

Using Rothstein's (2004) notation:

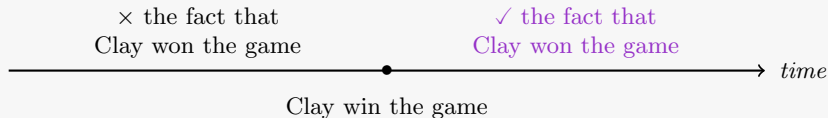


2. Verbal gerunds imposing aspect

- ▶ Verbal gerunds denote punctual events, and therefore they are incompatible with narrow containers targeting their duration, like *short* and *long*, *begin* and *end*. However, it does not explain their incompatibility with *take place*.
- ▶ Eventive predicates take events as complements, not time points.

3. Verbal gerunds as facts

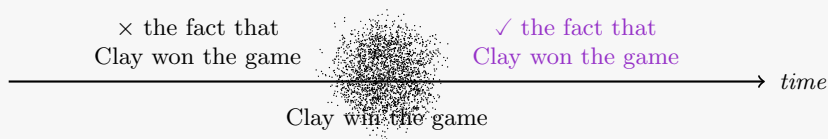
- ▶ Intuition: facts do not exist regardless of time.



- ▶ If the speaker locates an event in relation to a fact, the only thing that is pragmatically useful is to locate it with respect to the moment at which the fact comes into existence.

3. Verbal gerunds as facts

- ▶ A fact is associated with a (potential or actual) event but does not have access to the internal structure of the event.
- ▶ The relevant moment is when a change is produced, e.g. the point when “Clay hasn’t won the game” turns into “Clay has won the game”, but its location relative to the event is vague.



- ▶ Why are verbal gerunds not compatible with *start/begin*?

Conclusion

- ▶ Corpus data show that verbal gerunds (both POSS-*ing* and ACC-*ing*) can be selected by a variety of temporal prepositions, but not period-selecting ones (need further testing).
- ▶ Verbal gerunds have certain temporal properties that permit the location of other events with respect to them.
- ▶ Whether verbal gerunds can provide a time is a separate question from their ontological status. Different ontological objects may provide a time in different ways.

Selected references

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Acknowledgements

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