*Advanced Course: Revisiting Events Semantics*

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**Handout 1**

**Davidsonian Event Semantics: The Semantics of Adverbials and Its Challenges**

**1.1. General intuitions about events**

Linguistically reflected intuitions about events

1. Referential expressions used to refer to events
2. Other ways of talking about events

Examples of event terms

Deverbal nominalizations describing events

(1) a. John’s walk, the invasion of the Ukraine, the negotiation

 b. the end of the negotiation, the beginning of the negotiation

Why deverbal nominalizations? Because verbs describe events

But in what sense? Different views ….

Underived event nouns

(3) war, fire, kiss, party, ceremony, protest, scream (?)

Event sortals

(2) event, process, state, situation

**1.2. What types of properties characterize events?**

Events bear a close connection to time

1. Events are in time

Temporal predicates:

(4) a. the protest yesterday

 b. the rain last night

(5) a. The ceremony was yesterday.

 b. The start of the negotiations was this morning.

(6) a. ? The accident was an hour ago.

 b. ?? The rain was yesterday.

Parameter involved:

Planned events vs. spontaneous events?

2. Events have temporal parts

Linguistic diagnostics for part structures:

Application of part-related expressions: *part of, all of, partially*

(7) a. Part of the walk was difficult. (temporal part)

 b. Part of the apple is red. (spatial part)

Relation of events to space

Location in space, sometime changeable location in space

(8) a. The meeting took place in another room.

 b. The meeting moved to another room
 c. ?? The rain moved to the south of the country.

 d. The hurricane moved to the south of the coast.

Spatial parts of at least some events:

(9) a. Part of the war took place in the south of the country.

 b. Part of the couple’s walk was on the left side of the road.

**1.3. Existence predicates for events**

(10) a. The house existed for years.

 b. ??? The accident existed yesterday.

Restrictions on *occur* and *happen*:

(11) a. The accident occurred / happened yesterday.

 b. ??? The rain occurred / happened yesterday.

 c. The rain lasted for hours.

**1.4. The sortal noun *event***

Restrictions on the applicability of the noun *event*:

(12) a. the event of the outbreak of the war

 b. The outbreak of the war was an event that shocked everyone.

 c. ??? the event of the rain / of the laughter / the walk

**1.5. Events and related entities**

Events and processes

outbreak of the war vs. rain

Events and states

war vs. the state of war

Existence predicates for states

(13) The state of war still obtains / ??? is taking place.

‘Eventuality’:

cover term for events and states

Events and actions

Are actions just events or should one distinguish the two, also for semantic purposes?

Acts and attitudinal objects

Acts of claiming vs. claims

Acts of speaking vs. speeches

Tropes (particularized properties)

The redness of the apple (trope) vs. the apple’s being red (state)

Situations

The situation of John’s being in France

‘Situation’ primarily used as a term in semantic theory for parts of worlds playing certain semantic roles (situations as a replacement of possible worlds)

‘Situation’ used also as a cover term for events, states, actions, tropes etc. – a good idea?

**1.6. The real importance of events for semantics**

Not events as referents of event-referring NPs, but events described by verbs

Davidsonian event semantics

Verbs as predicates of events

The Davidsonian view:

*Walk* expresses a relation between events and agents: walk(e, John) ‘e is a walking by John’

(14) a. John walked slowly.

 b. There is an event e, walk(e, John) and slowly(e) and and e is past the utterance.

Challenges for Davidsonian event semantics

1. Justification of implicit arguments and of existential quantification over events

2. Applicability of to all adverbials?

3. Further applications: complex predicates, decomposition of predicates, plurals, …

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**2. Davidson’s analysis of ‘action sentences’**

**2.1. Motivations for the Davidsonian analysis**

(1) John walked slowly.

The pre-Davidsonian analysis

(2) [slowly(walk)](John)

*Slowly* as a predicate modifier:

*Slowly* denotes a function from sets to sets (or n-place relations to n-place relations)

The inference of Adverbial Drop (‘Adverb Drop’)

(3) John walked slowly.

 John walked.

Davidson’s analysis of ‘action sentences’

(4) e(slowly(e) & walk(e, John))

Generally taken as an analysis of adverbial modification of any ‘eventive’ verb.

**2.2. Further support for the Davidsonian analysis**

Predicates and modifiers of deverbal nominalization

Event nouns on the Davidsonian analysis

(5) a. [*John's walk*] = e[walk(e, John)] – problematic, no uniqueness guaranteed!

 b. [*John’s death*] = e[death(e, John)]

 c. [*John's walk*] = max e[walk(e, John)]

Compare definite even NPs with definite mass NPs:

*the water in the bottle* refers to the maximal quantity of water in the bottle.

But maximality condition also with quantified NPs: John took several walks.

General question to be addressed:

Do nominalizations generally preserve the argument structure of the verb?

Inferences to Deverbal Nominalizations

(6) John walked slowly.

 John’s walk was slow.

Not strictly valid, since only part of John’s walk may have been slow given the premise.

(7) a. [*John's walk*] = max e[walk(e, John)] (maximal event of walking by John)

 b. slow([*John’s walk*])

(8) a. The tree died slowly.

 The tree’s slow death occurred.

 b. occur (the e [death(e, the tree)])

Yet further support for the Davidsonian analysis?

Davidsonian semantics of sentences with several adverbials:

(9) a. John walked slowly with a stick on the street.

 b. ∃e(walk(e, John) & slowly(e) & with a stick(e) & on the street(e))

The inference of Adverb(ial) Permutation (Landman 2000)

(10) a. John walked slowly with a stick.

 (?) John walked with a stick slowly.

 b. Yesterday John walked slowly on the street.

 ?? Slowly John walked yesterday on the street.

Fact

The inference of Adverbial Permutation does not generally go through.

Adverbial permutation creates at least discourse semantic differences between premise and conclusion.

Motivation for cartographic theories of adverbials (Cinque, Rizzi):

Different syntactic positions in the syntactic structure of sentences reserved for different types of adverbials (temporal, manner, location adverbials etc.).

An open issue

What does cartography applied to adverbials mean for the semantics of adverbials?

How would a more adequate semantics of adverbials based on a cartographic syntactic structure look?

**2.4. General issues for the Davidsonian analysis of adverbials**

1. Is it justified positing implicit arguments?

Are there syntactic constraints on implicit arguments?

Is the Davidsonian argument even an implicit argument position? Not on the Neodavidsonian view.

2. What justifies the implicit existential quantifier?

How does the existential quantifier behave semantically with respect to other operators and quantifiers that occur explicitly in the sentence?

3. Does every verb take implicit event arguments?

Perhaps not: stative verbs (of a certain type) have been argued not to take event arguments (= the Stative Adverb Gap) (next time!)

4. Do other categories than verbs take implicit event arguments?

Adjectives have been argued to take states or tropes as implicit arguments?

Some nouns (*dancer, buyer*) have been argued to take implicit event arguments

Radical view: all nouns take implicit event arguments (Schwarzschild)

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**3. The Neo-Davidsonian view (Parsons 1990)**

Verbs are one-place predicates of events.

Thematic relations connect individuals to events based on the syntactic position of the DPs referring to the individuals (subject, object and indirect object positions).

(11) a. John saw Mary.

 b. ∃e(see(e) & agent(John, e) & theme(Mary, e))

Advantage

Easy representation of alignment of syntactic positions with roles of participants in the event.

Difficulty

Can there be a seeing event without an agent and a theme?

A response: no, but lexical argument structure need not reflect the essential relations of an entity to others (ontological dependences).

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**4. Davidsonian semantics of adjectives**

Events or states as implicit arguments of adjectives?

(12) a. John is happy

 b. ∃s(happy(s, John))

Deadjectival nominalizations:

(13) a. John’s happiness

 b. max s[happiness(s, John)]

Gradable adjectives taking measure phrases:

(14) a. John is two meters tall.

 b. John’s tallness is two meters.

 c. John’s height is two meters.

Adjective modifiers: *profoundly, highly, extremely*

Degree modifiers: *two meters* (*two meters tall / wide*)

Adjective modifiers in general:

Can they be viewed as predicates of events, states, or something else?

Problems with states being implicit arguments of adjectives?

(15) a. Mary is profoundly happy.

 Mary is happy.

 b. Mary is happy.

 Mary’s happiness is profound.

 c. ??? The state of Mary’s being happy is profound.

 d. ??? Mary’s being happy is profound.

(16) a. John is highly intelligent.

 John’s intelligence is high.

 c. ??? The state of John’s being intelligent / John’s state is high.

 d. ??? John’s being intelligent is high.

The notion of a *trope* (Williams 1953):

particularized property, property instance, property manifestation

Older terms: *mode* (medieval metaphysics), *accident* (Aristotle)

(17) a. ∃t(happy(t, Mary) & profound(t)) (Davidsonian analysis)

 b. ∃t(happy(t) & PRED(t, Mary) & profound(t)) (Neo-Davdsonian analysis)

An issue: contribution of *is*?

Inference to De-adjectival Nominalizations

(18) a. Mary is profoundly happy.

 Mary’s happiness is profound

 b. profound(max t[happiness(t, Mary)])

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**5. Limits of the Davidsonian view and possible alternatives**

Stacking of adverbials without permutability

(19) a. The ball suddenly rolled quickly.

 b. John spoke very slowly with patience.

 c. Mary danced slowly very elegantly.

Peterson’s (1997) solution

(20) e'e(suddenly(e') & quickly(e', e) & roll(e, the ball))

That is, adverbials denote two-place relations between events and events.

Better:

Adverbials denote two-place relations between modes of events and events (or modes of events).

(21) the suddenness of the quickness of the ball’s rolling

Adverbials taking scope over negation – negative events?

(22) a. John intentionally did not get up before 8am.

 b. John frequently does not get up before 8 am.

Scope of universal quantifier and adverbial

(23) a. John carefully eliminated every mistake.

 b. John intentionally mentioned every participant.

(24) a. John eliminated every mistake carefully.

 b. John mentioned every participant intentionally.

Seems to require event argument position for quantifiers

(25) ∃e'(carefully(e') & every(e', [*mistake*], {x | ∃e(eliminate(e, John, x)}))

Alternative to the proliferation of event argument positions

Events in the role of truthmakers

The notion of truthmaking (Armstrong 1997, 2004, Mulligan/Simons/Smith 1984, Moltmann 2007, Fine 2017)

An event e is a *truthmaker* of a sentence S (e ╟ S) iff S is true in virtue of S and e is wholly relevant for the truth of S.

For present purposes structured propositions <P, d>, for a property P and an entity d, as bearers of truthmaking conditions

Stacked adverbials using truthmaking only

(26) e ╟ *The ball suddenly rolled quickly* iff ∃e’ ∃e’’(e╟ <[*suddenly*], e’> &

 e’╟ <[*quickly*], e’’> & e’’╟ <[*roll*], the ball>)

Stacked adverbials keeping Davidsonian event arguments

(27) e ╟ *The ball suddenly rolled quickly* iff ∃e’ ∃e’’(e╟ <[*suddenly*], e’> &

 e’╟ <[*quickly*], e’’> & e’╟ <[*roll*], e’’, the ball>)

Adverbials taking scope over universal quantifiers with truthmaking

(28) e ╟ *John carefully eliminated every mistake* iff there is an event e’ such that:

 e ╟ <[*carefully*], e’> & e’╟ *John eliminated every mistake*

Standard truthmaking conditions

(29) a. e╟ A v B iff e╟ A or e ╟ B

 b. e ╟ ∃x S iff for some substitution instance S’ of S with respect to ‘x’, e╟ S’

(30) e╟ S & S’ iff there are entities e, e’, and e’’ such that e = sum({e’, e’’}), and

 e’╟ S and e’’╟ S’.

Armstrong (1997, 2004) on truhmakers of universally quantified sentences

(31) e╟ *Every* A *is* B iff there are events e’ and e’’ such that e = sum({e’, e’’}) and for

 any substitution instance S of *every* A *is* B, there is an event e’’’ such that e’’’ < e’’ and

 e’’’╟ S and e’ = ALL(e’’, sum({e | e ╟ S’, for some substitution instance S’ of

 *every* A *is* B})).

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**6. Summary**

- Events as implicit arguments of verbs or as the only arguments of verbs

- Modes (tropes) play the same role of implicit arguments in adjectives.

- Davidsonian events do not suffice to account for the way adverbials apply.

Possible solutions: add events in the role of truthmakers

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