

Tropes, Events, and States in the Semantics of Natural Language

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Handout 1

Tropes, Events, States, Situations and Facts

An overview of their Properties and the Philosophical Traditions

1. ‘Minor Entities’

Tropes, events, states, situations, facts are minor entities

But also: holes, shadows, ...

What makes them minor?

- particulars dependent on other objects
- abstractions from objects and properties

A not uncommon view

A single ontological category of ‘situations’ or of ‘events’ plays the very same semantic role

- *implicit arguments* of all lexical categories: verbs, adjectives, nouns
- as *truth makers*

As a matter of fact: the three categories differ more than generally assumed in their ontological properties

Another semantic role

Referents of referential terms, especially nominalizations, part of the domain of (explicit) quantifiers

Tropes

Adjective nominalizations: *John’s happiness, the wisdom of Socrates*

Trope sortals: *John’s behavior, Mary’s figure, Bill’s height*

Events

Deverbal nominalizations, proper names, event sortals: *event, occurrence, ...*

Facts:

canonical fact descriptions: *the fact that Mary is happy*

fact sortals: *that fact*

States:

canonical state descriptions: *the state of Mary's being happy, Mary's being happy*

state sortals: *that state*

States of affairs, situations: canonical descriptions?

Issues:

- Ontological properties
- Different philosophical traditions
- Semantic roles in the sentence

2. Tropes

Some 'standard' examples of tropes

the redness of the apple, the wisdom of Socrates, the beauty of the landscape, John's gentleness

Two kinds of intuitive descriptions of tropes

[1] Tropes are concrete manifestations of properties in individuals, 'concretized properties', 'particularized properties'

[2] Tropes are 'abstract particulars': the things you get when you abstract away from all the properties an individual has except for one, if you attend to only one of the properties an object has

Tropes in contemporary (as well as ancient and medieval) metaphysics

primitives, not defined in terms of properties and individuals

The term 'trope': Williams (1953)

contemporary alternatives: 'abstract particulars' (Campbell), 'attribute instances' (Mertz), 'modes' (Lowe), moments (Mulligan, Simons, Smith 1984), 'cases' (Woltersdorff)

historical alternatives: ‘accidents’ (Aristotle), ‘modes’ (medieval and upwards),

Aristotle (and Plato)

Aristotle: *four-category ontology*

individuals (*substances*) – universals with individuals as instances (secondary substances)

tropes (*accidents* -- instances of accidental properties in individuals) – universals: *qualities*

modern four-category ontologist: Lowe

Medieval philosophy

nominalism: individuals and tropes as the only real entities

universals as predicates (nominalism) or mental concepts (conceptualism) (Ockham)

four-category or two-category ontology

Early modern philosophy: Spinoza, Locke, Husserl

Contemporary metaphysics

interest in tropes for the purpose of a *one-category ontology* (Williams, Campbell, Bacon, Simons): individuals and universals reduced to tropes

individuals: bundles of *compresent* or *concurrent* or *co-located* tropes

universals: collections of *exactly similar* or *resembling* tropes

the foundations of the world: tropes, compresence, resemblance

Further roles of tropes in metaphysics:

causal relata (Williams, ..)

truth makers (Mulligan/Simons/Smith)

Further roles of tropes in the philosophy of mind

- objects of direct perception

- qualia as tropes (Williams)

3. Events

Events as property changes, dependent on participants, particulars, in space and time

Linguistic semantics: the Davidsonian view: events as implicit arguments of predicates

(1) a. John walked quickly.

b. $\exists e(\text{walk}(e, \text{John}) \ \& \ \text{quickly}(e))$

Further roles of events:

objects of direct perception, causal relations

4. Facts

Connection between truth and facts: A sentence S is true iff the fact that S obtains.

Canonical fact descriptions

(2) a. The fact that someone failed the exam.

Other *fact*-constructions

(2) b. What the facts are, these are the facts

c. It is a fact that someone failed the exam.

Different philosophical traditions

Logical atomism (Russell Moore), Austin:

- Facts as ultimate constituents of the world, as parts of the world, as truth makers

Strawson:

- Facts as what is constituted by the truth of a sentence.

The two views yield different ranges of facts

1. The same fact can make different propositions true (disjunctions, existential quantification).

2. Distinct true propositions correspond to distinct facts.

5. States of affairs, situations

States of affairs may or may not obtain.

Facts as states of affairs that obtain.

States of affairs lay primarily a role in various philosophical traditions.

Two views about situations:

- like events
- like states of affairs -- possible facts, parts of possible worlds

Situations play primarily a role in various semantic frameworks.

6. States

(Possible) state descriptions:

The state of John's being happy, John's being happy

A common view:

States like events, but without property change

Issues:

States vs tropes

Abstract (Kimean) states vs. concrete (Davidsonian) States (Maienborn)

7. Semantic roles

Semantic parallelism between tropes and events:

(3) a. [*the rose's deep redness*] = $\iota t[\text{red}(t, \text{the rose}) \ \& \ \text{deep}(t)]$

b. [*John's quick walk*] = $\iota e[\text{walk}(e, \text{John}) \ \& \ \text{quick}(e)]$

(4) a. John walked quickly.

b. the rose is deeply red.

c. $\exists e(\text{walk}(e, \text{John}) \ \& \ \text{quickly}(e))$ (Davidson)

d. $\exists t(\text{red}(t, \text{the rose}) \ \& \ \text{deeply}(t))$

Alternative: events and tropes as truth makers

(5) a. John walked quickly

b. $\exists e (e \models \text{John walked} \ \& \ \text{quickly}(e))$

Facts:

- referents of factive clauses
- objects of knowledge, of 'factive' propositional attitudes

States of affairs, situations:

Various views of implicit roles of situations:

- constitute meanings of sentences
- provide contextual restriction for NPs, quantifiers
- involved in the semantics of conditionals, modals
- involved in the semantics of generics
- involved in the semantics of adverbs of quantification

States:

- States are implicit arguments of stative verbs (Maienborn).
- Stative verbs fail to have an implicit event argument (Katz).

8. Properties of Concreteness and Abstractness of Tropes, Events, and States

8.1. Spatio-temporal location

The common view:

Tropes, events, and states have a spatio-temporal location.

Facts, situations, states of affairs ?

Different relations to time and space

Four-dimensionalism:

Material objects and events are just four-dimensional space-time 'worms'.

Three-dimensionalism:

Material Objects are three-dimensional, bear different relation to time than events.

Events

Have clear temporal boundaries, not clear spatial boundaries,

Cases with unclear spatial location: transactions, mental events

Tropes

The 'Australian' view (Williams, Campbell, Bacon):

Tropes come with similarity relations and spatio-temporal location,

Similarity: constitutive of universals

Colocation; constitutive of individuals:

Individuals as bundles of co-located tropes

Temporal duration of tropes:

(6) John's happiness lasted only two years.

Common view

Tropes inherit their spatial location from their bearer

Problem: not always intuitive

(7) a. ??? The heaviness / roundness / greenness of the vase is on the table.

b. ?? John's heaviness on the bed

Facts:

Facts have no spatio-temporal location (Vendler).

No temporal duration:

(8) a. ??? The fact that it is raining lasts for two hours.

No spatial location:

(8) b. ??? The fact that it is raining was in Munich.

States: distinction between abstract and concrete states

8.2. Object of perception

Events as objects of perception:

Naked infinitival complements:

(9) a. John saw Mary kiss Bill.

Nominalizations:

(9) b. John saw Mary's kissing Bill.

Tropes as objects of perception:

(10) a. John saw the beauty of the rock formation.

b. ? John the redness of the apple.

Facts, states

(11) a. ? John saw the fact that it was raining.

b. ?? John saw (the state of the) the rock formation being beautiful.

Not objects of perception, but arguably objects of other epistemic attitudes

Situations

Situation semantics:

Situations act as objects of perception in naked infinitival complements

8.3. Causal relata

A common view:

Events, tropes: acts as causal relata

Facts: act as relata of causal explanation, but not causation

8.4. Part-whole structureTropes

Tropes may have a part-whole structure: as complex tropes with other tropes as parts

Linguistic indications:

(12) all of Mary's happiness / talent / comfort / beauty

Spatial parts of tropes?

(13) a. ? Part of the greenness of the leave is due to John's paint.

Temporal parts of tropes:

(13) b. ?? Part of John's happiness lasted only one year.

Events

Common view:

- may have parts that are spatio-temporally coincident with the event itself.
- may have spatial subevents
- may have temporal subevents

Facts, situations, states:

Two sorts of possible parts:

- individuals, properties, locations composing facts

But the ‘constituents’ of facts and states of affairs are not treated as parts:

(14) a. ??? all of the fact that Mary likes Bill – namely Mary, Bill and the liking relation

b. ??? all of the state of Mary’s liking Bill – namely Mary, Bill and the liking relation

- ‘smaller’ facts, smaller situations, constitutive conditions of a state:

(15) All of the situation / Part of the situation is incomprehensible

Common view:

Situations are ordered by part-whole relations (Situation Semantics, Kratzer).

The world as a maximal situation.

8.5. Measurable extent

Tropes:

Extent not due to spatial extension, but degree of property instantiated

(16) a. Mary’s happiness exceeds Bill’s happiness.

b. The darkness of the cellar exceeds the darkness of the kitchen.

(17) the extent of Mary’s happiness.

Events?

(18) a. Mary’s jump exceeds Bill’s jump.

b. Mary’s jumping exceeds Bill’s jumping.

c. John’s walk exceeds Joe’s walk.

(19) a. the extent of May’s jump

b. the extent of Mary’s jumping

Facts?

(20) a. ??? The fact that Mary likes Bill exceeds the fact that Mary is tall.

b. ??? the extent of the fact that Mary is tall.

States?

(21) a. ? The state of Mary’s liking Bill exceeds the state of Mary’s being tall.

b. ??? the extent of the state of Mary’s being happy

8.6. Specificity, description-dependence

Tropes and events vs facts and states

Generally have an internal structure ‘below’ the description used to refer to them

(22) a. John described Mary’s beauty.

b. John described Bill’s walk.

(23) a. ?? John described the fact Bill is tall.

b. ?? John described (the state of) Mary’s being beautiful.

(24) a. John compared Mary’s beauty to Sue’s beauty.

b. John compared Bill’s walk to Joe’s walk.

(25) a. ?? John compared the fact Mary is beautiful to the fact that Sue is beautiful.

b. ?? John compared (the state of) Mary’s being beautiful to (the state of) Sue’s being beautiful.

Can in principle be described in various different ways

the redness of the apple = the intense redness of the apple

John’s walk = John’s long walk

Someone’s walk to the house = John’s walk to the house

not constituted by determinable properties, quantificational properties

must be grounded in natural, sparse properties

Facts / states / states of affairs

Strictly correspond to the content of the canonical fact or state description that could be used to refer to them:

the fact that the apple is red \neq the fact that the apple is intensely red

9. Further difference among minor entities: existence predicates

Obtain, occur, exist

(26) ??? The object / The house occurred / obtained.

(27) a. The event occurred / took place / ??? existed / ??? obtained.

b. The fact / situation / state of affairs / state obtained.

(28) a. The fact exists.

b. The situation / state of affairs / state still exists.