*Language and Ontology*

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Handout 5

**Events and Situations and Truthmaking in Semantics**

**1. The truthmaking idea**

The truthmaker principle

Sentences are true in virtue of some entity in the world making them true.

Motivation

The truth of a sentence must be grounded, and it must be grounded in an entity in the w

Lewis, Hornsby: the grounding of truth does not require an entity making the sentence true, but just ‘the way the world is’.

Different views about truthmakers

* It is left open what sorts of things play the truthmaker role
* Truth makers play an independent role in the ontology: events, tropes, and objects act as truthmakers (Mulligan/Simons/Smith 1984)
* Truthmakers as worldly facts, situations, ‘cases’

Further issues

* Does every sentence have a truthmaker, including negated sentences?
* Does truthmaking play a role only for the notion of truth or also in the semantics of sentences?

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**2. Truthmaker Semantics**

Kit Fine’s Truthmaker Semantics

For each sentence *S* there is a set of (possible or actual) entities that are *wholly relevant* for the truth of *S*, that is, that are exact truthmakers (or verifiers) of S.

In addition, there is a set of entities that are wholly relevant for the falsity of S, the falsemakers (or falsifiers) of S.

Truthmakers: ‘states’, i.e. situations as possible worldly facts.

The truth-making relation╟ as a relation between an entity *s* and a sentence *S*.

‘s ╟ S’: ‘S is true in virtue of e’, or: a is an exact truthmaker for S.

‘s ╢ S’: ‘S is false in virtue of e’, or: a is an exact falsemaker for S

The meaning of a sentence S:

the pair consisting of the set of the truthmakers of S and the set of the falsemakers of S.

Truthmaking conditions

(1) a. s ╟ S *and* S’ iff for some s’ and s’’, s = sum(s’, s’’) and s’ ╟ S and s’’ ╟ S’.

b. s ╟ S *or* S’ iff s ╟ S or s ╟ S’

c. For a one-place property P, s ╟ ∃x S iff s ╟ S[x/d] for some individual d.

Special condition on truthmaking on negative sentences, based the falsemaking relation ╢

(1) d. s ╟ *not* S iff s ╢ S

Consequences

* Disjunctions and existentially quantified sentences can have several truthmakers (in a world)
* Negated sentences always have truthmakers.

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**3. Events as truthmakers**

Truthmaker semantics of event nominalizations

(2) a. [*John’s walk*] = ιe[e╟ *John walks*]

b. [*John’s walk*] = max e[e╟ *John walks*]

Use structured propositions as truthbearers, for the truthmaker semantics of adverbials:

(3) a. John walked slowly.

b. e╟ *John walked slowly* iff there is an event e’, e’╟ *John walked* & e ╟ <[*slow*], e’>

Also for quantified nominalizations:

(4 ) every walk anyone ever took

(5) [*walk*N] = {<e, d> | e╟ <[*walk*V], d>}

Tropes as truthmakers

(6) [*John’s happiness*] = max e[e╟ *John is happy*]

(7) a. John is profoundly happy.

b. e ╟ *John is profoundly happy* iff there is a trope t, t╟ *John is happy* & e ╟ <[*slow*], t>

Stacked adverbials

(8) a. The ball suddenly rolled quickly.

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

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

A Davidsonian account:

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

Adverbials with negated sentences as scope

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

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

a’. e╟ *John intentionally did not get up before 8* iff there is an event e’,

e’╟ *John did not get up* & e ╟ <[*intentionally*], e’>

Adverbials with quantified scope

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

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

A Davidsonian account

*Every* would have to express a three-place relation between events, sets, and sets:

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

Further applications of truthmaker semantics:

conditionals, implicatures, imperatives, modals

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**3. Cases as truthmakers**

Two questions

* Does natural language permit explicit reference to truthmakers?
* Do entities other than events and tropes act as truthmakers?

Answer

Yes: natural language permits explicit reference to truthmakers as ‘cases’, roughly possible worldly facts

Cases are not non-worldly facts

No quantificational cases:

(13) a. several cases in which a student passed the exam

b. the three cases in which a student passed the exam

No ‘disjunctive’ cases:

(14) a. the three cases in which n is smaller than 10, equal to 15 or larger than 20

b. the two cases in which it rains or it snows

Negative cases:

(15) a. We discussed the case in which John fails to show up.

b. The case in which no one is satisfied is not a good prospect.

Reference to kinds of cases

(16) The case in which someone passes the exam is rare / unusual.

(17) The semantics of *case* terms describing particular cases

[*case in which* S] = λs[*case*(s, S)] where *case*(s, S) iff s ╟ S.

The Case Distinction Condition

(18) a. ??? We discussed the case in which John returned yesterday.

b. ??? The case in which I have solved the problem was unexpected.

c. ??? The case in which it is raining outside bothers us.

(19) a. The case in which John might have returned yesterday could not be ruled out.

b. The case in which I could have solved the problem would have been better.

c. The case in which it might be raining outside needs to be taken into consideration

Case anaphora

(20) a. John will interview or Mary will interview. In either case, we should be well-prepared.

b. The exam will be about Goethe, Schiller, or Kleist. In all three cases, there will be the

same sorts of questions.

(21) a. If it rains, we won’t go.

b. In that case / In such a case, we will stay home.

c. Let’s better not think about that case.

What are cases? Are cases event or tropes?

Existence predicates for cases

(22) a. ??? The case in which John will not return might exist / might take place / might

happen.

b. ??? The case in which it rains on a Sunday has never existed / happened / taken place /

obtained.

German:

(23) Der Fall, daβ Hans nicht zurückommt, ist nicht eintreten.

‘The case that John might not return could enter’.

French:

(24) Le cas ou Jean retourne ne s’est pas produit.

‘The case that John returns did not produce itself’

English:

(25) a. The case in which John will not return could occur / present itself.

b. The case in which it rains on a Sunday has never presented itself / has never occurred.

Properties of object-related cases

Part-whole structure:

(26) a. Part of the case of the stolen statue is familiar.

b. Part of the stolen statue is familiar.

c. Part of the theft of the stolen statue is familiar.

No spatial location:

(27) a. ??? The case of the stolen statue is on the table.

b. The statue is on the table.

Not generally object of perception:

(28) a. ??? I saw / noticed the case of the broken vase.

b. I saw / noticed the broken vase.

Not causally efficacious:

(29) a. An overweight baby caused the cradle to break apart.

b. ?? The case of an overweight baby caused the cradle to break apart.

Conclusion

Cases are on a par with worldly facts, rather than material objects, events, or tropes.

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