Warsaw, September 20, 2019

*Semantics and Philosophy in Europe* 11

**Tutorial Truthmaker Semantics**

Friederike Moltmann

**Explicit reflection of notions of truthmaker semantics in the semantics of *case*-constructions (Moltmann to appear)**

**1. Situations and kinds of situations as truthmakers**

*Case*-constructions:

*Case*-NPs with a *case-*clause as modifier

(1) a. the cases in which a student failed the exam

b. the case in which it might rain tomorrow

*Case*-anaphora

(2) a. John might go to the party. In that case, I will go too.

b. If John has lost, Mary is happy. In that case, she will celebrate.

c. Mary claims that John has won the race. In that case, we will celebrate.

The predicate *is the case*

(3) It is sometimes the case that a student fails the exam.

Nominal *case*-constructions

(4) a. a case of flu

b. the case of the stolen statue

c. the case of the theft of the stolen statue

General idea of the semantics of case constructions:

Cases are truthmakers of sentences of sentences (1a) or epistemic states (1b) within a space of alternatives (which again are truthmakers of a sentences or an epistemic state).

The Case Space Requirement

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

b. ??? The case in which John has solved the problem was unexpected.

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

d. ??? The case in which 3 is a prime number is well-known.

(6) Semantics of clausal case-constructions involving reference to single cases

[*the case*i *in which* Si] = the s[<s, CS(S)> ∈ [*case*] & s ∈ S]

Individual cases vs kinds of cases

Counting individual cases:

With indefinites:

(7) a. the three case in which a student passes the exam

With disjunctions:

(7) b. the two cases case in which it is rains or it snows

Referring to kinds of cases:

(8) a. the case in which a student passes the exam

b. the case in which rains or it snows

Pluralities of kinds of cases vs single kinds of cases:

(9) a. the two cases in which someone arrives late or someone cannot come

b. the case in which someone arrives late or someone cannot come

(9a) refers to a plurality of the two kinds of cases:

(10) a. k([*someone arrives late*]), k([*someone cannot come*])

(9b) refers to a single kind of case:

(10) b. k([*someone arrives late or someone cannot come*])

Truthmaker semantics for kinds of cases:

(11) Identity condition on kinds of truthmakers

For any two kinds *k* and *k’* of truthmakers, k = k’ iff for all s, s I k ↔ s I k’.

(12) Existence condition on kinds of truthmakers

For any sentence *S*, there is a kind of truthmakers of *S*, k(S), such that for every situation

*s*, s I k(S) iff s ╟ S.

Kind-indexed sentences will have kinds of truthmakers as truthmakers:

(13) Truthmaking with kinds of truthmakers

For a sentence *S* , k(S) ╟ Sk.

(14) The kind-based positive denotation of sentences

For a sentence S, [Sk] = {k(S)}

Denotations for kind-indexed disjunction Sk *or* S’k :

(15) [Sk *or* S’k] = {k(S), k(S’)}

(15) is also the dentation of an alternative question:

(16) Did someone arrive late or did someone not come?

Kind-based meanings serve different semantic purposes:

the semantics of *case*-NPs and the semantics of alternative questions.

(17) The semantics of *case*-nominals describing particular cases

For a context c, [*case in which* S]c = {s | <s, CS(S)> ∈ [*case*] & s ∈ [S]}

(18) a. The semantics of *case*-nominals describing kinds of cases (preliminary version)

For a context *c*, [*casekind in which* Sk]c = {k | <k, X> ∈ [*casekind*]c & k ∈ [Sk]c}, X a set

of kinds of cases including k

b. For a context *c* , kind k of situations and set X of kinds of cases,

<k, X> ∈ [*case*kind]c iff for all *s*, if s I k, then s ∈ [*case*]c.

-----------------------------------------------------------------------------------------------------------------

**2. Truthmaker semantics and alternative semantics**

(19) Truthmaking for sentences with focus structure

For a context c and a situation s, s╟ S[Yfocus]c iff ∃X(X∈ CATY, c & s╟ S[X/Y]c

CATY, c the set ofexpressionsof the same category as y relevant in the context c.

(20) Sentential case space for *case*-NPs with focused *case*-clause

For a context *c*, [*the case*i *in which* S[Yfocus]i]c = the s[<s, CS(S[Yfocus])> ∈ [*case*]c &

s ∈ Sc]

Advantage of truthmaker semantics over standard alternative semantics

allows *case*-NPs to make reference to a plurality of cases as well as reference to a single case within a background of alternatives.

A unified semantics of *case*-NPs would not be available on the standard, propositions-based version of alternative semantics, which does not allow for reference to particular cases.

Situations making up the case space:

(21) the case in which Jérry wins the race

Kinds of situations making up the case space:

(22) the case in which an Américan wins the race

Set consists of kinds of the sort ‘the case in which an American wins the race’, ‘the case in which a Frenchman wins the race’, ‘the case in which a German wins the race’ etc.

(23) Sentential case space

For a sentence S, CS(S) = {s |s╟ S & ∃s’(s’╟ S & s≠ s’)}

Sentential case spaces are based on a syntactic (indexing) relation between the noun *case* and the *case*-clause:

(24) For a context *c*, [*the case*i *in which* Si]c = the s[<s, CS(S)> ∈ [*case*]c & s ∈ Sc]

---------------------------------------------------------------------------------------------------------------

**3. What are truthmakers?**

Can situations (‘states’) be events, or tropes, or objects?

New criteria from *case*-constructions:

*Case*-constructions involve explicit reference to truthmakers in the object language.

Arguments against situations being events or objects:

Events go with particular existence predicates (*occur, take place, happen*), which are inapplicable to situations or (‘cases’).

Cases may come with their own existence predicates: German *eintreten* ‘enter’, English *present itself*

Events have temporal parts:

Part of the theft of the state

Situations, at least as cases, have ‘information-based’ parts:

Part of the case of the theft of the statue

Same argument against objects being truthmakers:

Part of the case of case of the broken vase

Part of the broken vase

What *case*-constructions indicate

‘Cases’ are never events, objects, or tropes.

-----------------------------------------------------------------------------------------------------

**Reference**

Moltmann, F. (to appear); Situations, Alternatives, and the Semantics of ‘Cases’. *Linguistics and Philosophy*.