A Truthmaker Semantics for 'Cases'

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The notion of a possible world has dominated formal semantics at least since Montague grammar became the dominant framework in which to pursue linguistic semantics. It has in particular dominated semantic approaches to conditionals, modals, and to some extent attitude reports. The possible worlds approach is associated with notorious problems, though, by providing an insufficiently fine-grained notion of content. At various times philosopbers and semanticists have pursued an alternative approach based not on entire worlds, but parts of them, that is, situations. More recently Kit Fine has developed a situation-based semantics, called Truthmaker Semantics (Fine 2012, 2014, to appear). What is central in Fine's truthmaker semantics is the relation of exact truth-making that holds between a possible situation (or what Fine calls a 'state') s and a sentence S just in case s is wholly relevant for the truth of S. This contrasts with standard situation-based approaches, according to which if a sentence S is true in a situation s, then S is also true in any larger situation of which s is a part. While in truthmaker semantics, the truth-making relation is part of the metalanguage used to specify the semantics of expressions or constructions of natural language, this paper argues that there is also an overt reflection of the truthmaking relation in the object language, namely in constructions with the noun *case* in English (and corresponding constructions in other languages), such as those below:

Clausal *case*-terms

(1) a. the case in which it might rain
b. the case in which a student fails the exam

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 S.

The paper argues that 'cases', the entities described by the noun *case* in English (or corresponding nouns in other languages), are situations playing the truth-making role within a contextually specified case-space. The paper will also argue that not only sentences have truthmakers (or satisfiers), but also truth- or satisfaction-directed propositional attitudes.

In addition to the clausal *case*-constructions in (1-3), there are nominal *case*-constructions, which, while not involving the very same semantics, share significant similarities which also justify an account in terms of truthmaking:

Nominal *case*-terms

(4) a. the case of the stolen statue

b. a case of flu

The paper will pursue the view that *case* displays a uniform meaning across the various constructions, especially those in (1-3), and that in (4) it displays at least a closely related meaning. A noun for 'case' appears in more or less the very same constructions in a range of European languages, including German (*Fall*), French (*case*), Italian (*caso*), and Spanish (*caso*). Some of the important properties are displayed more transparently by a *case*-construction in other languages than English, which this paper may then make use of.

The term 'truthmaker semantics' itself may be misleading, and it is important that it be understood appropriately. Truthmaking in the sense relevant in this paper is simply the relation between a situation s and a sentence S such that s is wholly relevant for the truth of S. Truthmaking in a different sense is a central topic of discussion in contemporary metaphysics and concerns the question whether the truth of a sentence needs to be grounded, and in particular grounded in entities in the world, that is, in entities acting as truthmakers. Advocates of truthmaking for the grounding of truth generally do not assume that the truthmaking relation plays a role in the semantics of natural language itself. This interest in truthmaking is completely different from that of truthmaker semantics in the sense of Fine, where the truth-making relation in fact only serves semantic purposes and truthmakers are not necessarily part of the world, but include both actual *and* possible (and even impossible) situations. Truthmakers thus are not meant to be part of what there really is or to 'carve reality at its joints'. Cases, on view this paper defends, are actual or possible situations in their role

as truthmakers (in the relevant sense) and as such belong to descriptive' or 'shallow' metaphysics.

1. Quantification over cases and reference to kinds of cases

The overall view this paper develops is that cases, the entities *case*-constructions make reference to, are situations in their role as truthmakers. Situations themselves will be considered primitives, involving entities having (tensed) properties or standing in (tensed) relations to other entities. The situations that may be cases need not involve a continuous and restricted location and do not have a duration or spatio-temporal location, and thus they differ from certain intuitive notions of situation. Cases in particular are not states or events, and in fact they are treated rather differently from the latter in natural language, (Section 6). Situations are on a par with worldly facts in the sense of Austin (1950, 1961b), entities that are parts of the world. Unlike the latter, though, situations that are cases may be merely possible and even impossible. This allows situations to also be truthmakers of false and even necessarily false sentences.

Situations that are cases moreover are different from non-worldly facts in the sense of Strawson (1949).[1] Non-worldly facts are entities that are in a 1-1-relation to true propositions and are described by fact descriptions of the sort *the fact that* S, however they may be conceived ontologically.[2] *Case* NPs with existentially quantified clausal modifiers as below make particularly clear that cases are on a par with worldly facts and not non-worldly facts:

(5) a. several cases in which a student passed the exam
b. the three cases in which a student passed the exam

If several students passed the exam, then there are several cases in which a student passed the exam, not a single case in which a student passed the exam. This permits a suitable quantifier domain for (5a) and a suitable plural referent for (5b). By contrast, if several students passed

[1] For the distinction between worldly and non-worldly facts, see also Fine (1982).

[2] For an ontological account of non-wordly facts as pleonastic entities or entities abstracted from true sentences see Moltmann (2013, Chap. 6).

the exam, there will still be only a single non-worldly fact described by *the fact that a student passed the exam*.

Case quantifiers as in (5a) range over situations that are truthmakers of the clausal modifier, and in fact they range over exact truthmakers of the clausal modifier. (5a) ranges over those and only those situations in which exactly one student passed the exam and nothing else happened, that is, situations wholly relevant for the truth of the sentence *a student passed the exam*. It will not range over sums of such situations or larger situations which make the sentence true, but which include other things that are not relevant for its truth.

Also disjunctions make the difference between cases and non-worldly facts apparent and clearly show that cases take the role of truthmakers rather being constituted by true propositions. A true disjunction such as *Mary has received an invitation or John has received one* will correspond to exactly one non-worldly fact, describable as *the fact that Mary has received an invitation or John has received one*. By contrast, there will be as many cases as there are possible situations making either disjunct true. This then permits the use of the plural and a numeral in the following examples:

(6) a. the cases in which Mary has received an invitation or John has received one
b. the three cases in which n is smaller than 10, equal to 15 or larger than 20
c. the two cases in which it rains or it snows

Cases as truthmakers are fully specific and thus cannot be disjunctive or existentially quantified.

Case quantifiers and case plural descriptions as in (5) and (6) range over particular cases and need to be distinguished from definite descriptions that describe kinds of cases, as below:

(7) a. the case in which a student passes the exam
b. the case in which it is rainy on a Sunday.

Generic case descriptions as in (7a, b) are kind terms in the sense of Carlson (1977).[3] Even though they are not of the form of bare plurals or mass nouns, they are semantically on a par

[3] German, the clausal modifiers of definite kind referring case terms do not appear as relative clause complements of the preposition in, but as a simple *that*-clauses, as in the German translation of (7a) below:

(i) der Fall, dass ein Student das Examen besteht

with terms like *gold* or *giraffes* when used as kind terms. Thus, generic case descriptions allow for the application of typical kind predicates:

(8) a. The case in which someone passes the exam is rare / unusual.
b. The case in which someone passes the exam does not occur often.
c. The case in which someone passes the exam has never occurred before.

Furthermore, generic case descriptions exhibit an existential reading with episodic predicates such as *encounter*, a reading characteristic of bare plurals and mass nouns acting as kind terms (Carlson 1977):

(8) d. I have never encountered the case in which a candidate was unable to speak during the oral exam.

Unlike case descriptions, fact descriptions are never kind terms, that is, terms that would permit typical kind predicates such as *rare* or *widespread*. Thus, 'the fact that a student passes the exam' or 'the fact that it is rainy on a Sunday' could not possibly be 'rare' or 'common'. *The fact that a student passes the exam* and *the fact that it is rainy on a Sunday* stand for single quantificational facts, not a kind whose instances are particular facts involving particular individuals or days.

2. Outline of truthmaker semantics

Let us then turn to the relation of exact truthmaking, which case quantifiers and case terms reflect in their semantics. The relation of exact truthmaking is the relation that holds between a situation s and a sentence S just in case s is wholly relevant for the truth of S. If s is an exact truthmaker of a sentence S, then a larger situation properly including s need no longer be an exact truthmaker of S, namely if it involves 'information' not relevant for the truth of S.

Truthmaker semantics (and the semantics of *case*-constructions in particular) involve a domain of situations containing actual, possible as well as impossible situations. This domain is ordered by a part relation and is closed under fusion. The following standard conditions on

the truthmaking of sentences with conjunctions, disjunctions, and existential quantification then hold (Fine, 2012, to appear):[4]

(9) 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.

As in Fine (to appear), I take the truthmaking conditions for disjunction to be exclusive, which means that besides the truthmakers of the disjuncts disjunctions won't have as truthmakers sums of situations of truthmakers of the disjuncts. Plural case descriptions with disjunctive modifiers reflect that in the choice of a numeral, which needs to match the number of disjuncts:

(10) a. the two cases in which Mary has received an invitation or John has receives one

b. ??? the three cases in which Mary receives an invitation or John receives one

The unacceptability of t*hree* in (10b) means that a sum of situations in which Mary and John have received an invitation won't count as a truthmaker of the disjunction and thus that the truthmaking conditions for disjunctions need to be exclusive.

Truthmaking conditions for negative sentences are a matter of controversy. Negative sentences are generally considered a challenge to the truthmaking idea since it is not obvious what sort of entity there is in the world that could make the sentence *John failed to show up* or *no one is satisfied* true. On some views of truth-making, negative sentences do have truthmakers; on others, they don't. The semantics of *case*-terms itself bears on the issue. Negative clausal modifiers generally do not pose an obstacle for the referentiality of definite clausal case descriptions, including of the generic sort:

(11) 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.

[4] The truthmaking condition for sentences with universal quantification and conditionals are less obvious and in fact controversial. I will not give truthmaking conditions for them here since they won't be specifically relevant for the semantics of *case*-constructions. See Armstrong (2004) and Fine (to appear) for discussion and somewhat similar proposals concerning universal quantification..

c. The cases in which either John did not show up or he did not pay attention are numerous.

Clearly, *case*-constructions require a notion of truthmaking that assigns truthmakers to negative sentences. Fine's (2012, 2014, to appear) truthmaker semantics accomplishes that by assigning sentences not only truthmakers or verifiers, but also falsifiers. This allows a straightforward formulation of the truthmaking conditions of negative sentences: a truthmaker for ¬ S is a falsifier for S. With ⫦ being the relation of (exact) falsification, the condition is given below:

(12) s ⫦ *not* S iff s ⫤ S

Also complex sentences are then assigned both truthmaking and falsemaking conditions. For conjunctions and disjunctions the false-making conditions are those below:[5]

(13) a. s ⫤ S *and* S' iff s ⫤ S or s ⫤ S'

b. s ⫤ S *or* S' iff for some s' and s'', s = sum(s', s'') and s' ⫤ S and s'' ⫤ S'

A sentence S is then has as its meaning a pair <pos(s), neg(S)> consisting of a set pos(S) of verifiers of S and a set neg(S) of falsifiers of S.

3. The semantics of *case*-nominals with clausal modifiers

Based on the notion of truthmaking, the semantics of *case*-nominals with clausal modifiers describing particular cases can, in a first approximation, be given as follows, where *case* is taken to simply express the truth-making relation:

[5] Another kind of sentence that has been considered problematic for truthmaking is sentences expressing the predication of essential properties. A quick look at clausal *case*-NPs shows that with an epistemic modal such sentences are perfectly suited for forming referring *case*-NPs:

(i) a. We should not exclude the case in which 388767 might be a prime number.
b. We took into consideration the case in which Sasha might be a cat.

See the next section on the role of epistemic modals in case-constructions.

(14) a. <u>The semantics of *case* with clausal modifiers describing particular cases</u>

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

The semantics of *case*-nominals with clausal modifiers describing kinds of cases can similarly be given as below, where $case_{kind}$ expresses the truthmaking relation that holds between kinds of situations and sentences:

(14) b. [$case_{kind}$ *in which* S] = ιk[$case_{kind}$(k, S)], where k ⊩ S.

How should the truthmaker relation applied to kinds of situations be understood? Kinds by nature inherit relevant properties and relations from their instances. This then should also holds for relations of truthmaking for kinds of situations. The following condition thus holds for the truthmaking relation relating kinds to sentences:

(14) c. For a kind of situation k and a sentence S, k ⊩ S iff for every instance s of k, s ⊩ S.

How are kinds of cases individuated? To address that question, lets us note that the same disjunction can have two kinds of cases as truthmakers, as in (15a); but also a single kind of case, as in (15b):

(15) a. the two cases in which someone arrives late or someone cannot come to the meeting

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

This reflects two ways of individuating kinds of cases that are truthmakers of a sentence S: either by considering the particular situations that are exact truthmakers of S the instances of a kind (15b), and second, by considering the truthmakers of S that are sufficiently similar the instances of a kind (15a). The truthmakers of one of the disjuncts in (15a) are closely similar and thus constitute the instances of one kind, whereas the truthmakers of the other disjunct, being also closely similar, constitute the instances of the other kind. As exact truthmakers, situations making the same non-disjunctive sentence true will naturally enter relations of close similarity.

Both (14a) and (14b) involve a sentential account of the clausal modifier. This may seem problematic, since the construction is not obviously a quotational one.[6] In response one may point out that a sentential semantics of clausal complements of attitude verbs had been proposed by both philosophers and linguists at various times (including Carnap, Davidson, Larson and Ludlow). While sententialism about attitude reports in general is controversial, a sentential treatment of clausal complements of verbs of saying (*say, whisper, scream* etc) is not implausible since such clauses generally have a quasi-quotational and hardly a proposition-referring function. At least some clausal complements might thus involve a sentential semantics for independent reasons. Moreover, a sentential treatment of *that*-clauses in general can be found in Schiffer's (2003) account of pleonastic propositions and a sentential account of *that*-clause complements of nouns like *fact* and *possibility* is given in Moltmann (2013a). On those views, *that*-clauses provide sentences that serve for the introduction of new, 'pleonastic' entities.

If there is then some independent motivation for a sentential treatment of *that*-clauses, this raises the question how that could justify a sentential treatment of *in which*-clauses in English *case*-constructions. Here it is important to note that in other languages *case*-constructions may be formed with *that*-clauses rather than *in which*-clauses, for example definite case descriptions in German (as well as in French, Italian, and Spanish):

(15) a. der Fall, dass es regnet
the case that it rains
'the case in which it rains'

Case descriptions in German thus look like English fact descriptions, which select *that*-clauses rather than *in which*-clauses (or English nominals with *possibility, idea, proof* etc.). However, with other determiners than the definite one German switches to *in which*-clauses:

(15) b. ein Fall, in dem / * dass es regnet
a case in which / that it rains

[6] Note that the truthmaking relation should not actually hold between a situation and a natural language sentence as a syntactic object, but rather a sentence with an assignment of lexical meanings to elementary constituents, which would not obviously be accounted for by appeal to quotation.

This indicates that *that*-clauses are syntactically selected by certain nouns and in addition need to be licensed by the definite determiner, whereas *in which*-clauses appear when those two conditions are not fulfilled.[7] The alternation between *that*-clauses and *in which*-clauses thus is a syntactic one and not indicative of a semantic difference.[8]

4. The Case Distinction Condition

The lexical meaning of *case* as a two-place relation between particular cases or kinds of cases and sentences cannot yet be correct. Not just any occurrence of a sentence allows a situation that is one of its truthmakers to be a case, that is, to fall under the noun *case*. There are particular constraints on when sentences can be constitutive of cases. In this section, I will focus on constraints on sentences in clausal *case*-terms. But the constraint will manifest itself in all the other *case*-constructions as well, as we will see later.

First of all, sentences that describe single particular facts in the past or present cannot be case-constitutive:

(16) 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.

Only with an epistemic modal of possibility do such examples become acceptable:[9]

[7] The preposition *in* in *case*-nominals in fact cannot carry semantic content, but is present for syntactic reasons only (say the need to allow the assignment of Case to *which*). Semantically, in *case*-nominals *like case in which it rains*, *in* could only express the identity relation since the semantics of the nominal requires the argument positions of three predicates at logical form to be 'identified': λx[case(x)], λxy[in(x, y)], and λx[it rains]. But *in* never expresses identity elsewhere.

[8] One might think that one difference between *that*-clauses and *which*-clauses is that the latter but not the former are relative clauses. However, this view is not universally accepted. Thus, Kayne (2010) argues that *that*-clauses are also relative clauses. If this is right, then there are no grounds not to posit the same semantics for *that*-clauses and *which*-clauses in *case*-constructions.

[9] By contrast, modals of necessity do not improve the examples:

(i) ??? The case in which John lust have returned yesterday.

(17) 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

The case terms in (17) no longer describe particular facts, but rather one epistemic possibility besides another.

Also sentences describing situations in the future, with an overt or implicitly understood future tense can be case-constitutive:

(18) a. The case in which John returns tomorrow cannot be ruled out.
b. The case in which I will solve the problem is very unlikely.
c. The case that it will rain tomorrow cannot be excluded.

Such case terms can describe cases because the future represents different options or at least different epistemic possibilities (branching future).

In addition, sentences describing mathematical uncertainties (at the relevant point in time) can be case-constitutive, with or without overt epistemic modal:

(18) d. The case in which there is a solution to the equation is would be very interesting.
e. The case in which there might a largest prime number has long been ruled out.

By contrast, sentences describing known mathematical facts cannot be case-constitutive:

(18) f. ??? The case in which 2 is a prime number
g. ??? The case in which there is no largest prime number is wellknown

The same constraint also holds for predications of essential properties:

(18) h. ??? The case in which my pet is a cat is wellknown.
i. The case in which Sacha, the animal Joe mentioned, is a cat is not unlikely.

Besides involving an explicit or implicit modal, there are other ways for a sentence to be case-constitutive. Two of them we have already seen, namely if a clause is either existentially quantified or disjunctive and has more than one (actual) truthmaker, as in (5) and (6).

Another way to be case-constitutive is for a sentence to describe a part of a mathematical case distinction:

(19) a. the case in which n is a prime number

Of course, (19a) presuppose there being another case than the one it describes, one in which n is not prime.

Another way for a sentence to be case-constitutive is by having one of its constituents be contrastively focused:

(19) b. The case in which Géreon won the race was totally unexpected.

Contrastive focusing by itself is associated with other cases, the alternatives obtained by replacing the semantic value of the focused constituent by others relevant in the context (Roots 1992).[10] These cases, though won't be truth makers of the sentence with the focused constituent, but rather of a sentence obtained at logical form by replacing the focused constituent by a variable.

What is characteristic of all the options for a sentence to be case-constitutive is that they imply there being different alternatives or 'cases'. I will call the requirement of there being a distinction among different cases the *Case Distinction Condition.* The *Case Distinction Condition* allows setting up what I will call a *case space*, a set containing the relevant alternatives.

The Case Distinction Condition is reflected in the semantics of all types of case constructions: case terms or case quantifiers with clausal modifiers, case anaphora, and the predicate *is the case*, as we will see. Semantically, the Case Distinction Condition means that the noun *case* does not just take as arguments a particular situation or kind of situations and a

[10] On the alternative-semantic view of Rooths (1992), the alternatives consist of a set of proposition that make up the second semantic value of the clause containing the focused constituent.

sentence, but also a case-space, a set of alternatives that includes *s* and must have at least two elements.

The case space is not freely available, but rather depends on a contextually relevant attitude, that is, an attitude whose content the relevant sentence is meant to characterize and the speaker has in mind with the utterance of the noun *case*. Let me call this the *case-related attitude*. The case-related attitude thus depends on the context c_{case} associated with the utterance of the noun *case,* and a sentence S. I will call c_{case} the '*case*-related context'.

(20) Characterization of the case-related attitude

The case-related attitude associated with an occurrence S of a sentence and a *case*-related context c_{case} is the attitude whose content is meant to be characterized by S and that is (standardly) associated with the context c_{case}.

With *case* terms or quantifiers with explicit or implicit epistemic modals, the case-related attitude it is an attitude of weak acceptance. With *case* terms or quantifiers describing several actual cases, the case-related attitude should be the attitude of belief, the sincerity condition that goes along with the assertion.

While there are different kinds of case-related attitudes, case-related attitudes must always be truth- or satisfaction directed, such as belief, fear, hope, or hypothetical acceptance (see Section 5). I will take ⊩ to be the symbol for the relation of exact truthmaking or satisfaction holding between a situation (or kind of situation) *s* and such a truth- or satisfaction oriented attitude *a* (s ⊩ a).[11]

The case-related attitude needs to support both a situation or kind of situation making the sentence in question true as well as alternatives to it, namely other situations making the sentence true or else situations that make it false.

When *case* applies to a particular situation s and a sentence S, s needs to make S true and the case space needs to contain at least two situations that either verify or falsify S and are supported by the case-related attitude:

[11] The case-related attitude should best be viewed as an attitudinal object in the sense of Moltmann (2013a, 2014) since attitudinal objects, not mental or illocutionary acts appear to be suited for the role of bearers of truth or satisfaction conditions and thus truthmakers or satisfiers. Attitudinal objects include mental states such as a belief, a fear, or a hope as well as cognitive or illocutionary products of the sort of an acceptance, a judgment, or an assertion.

(21) a. If Case(s, S, C-S(att(S, c_{case}), S)), then s ⊩ S, and |C-S(att(S, c_{case}), S)| > 1

b. For a particular situation s, s ∈ C-S(att(S, c_{case}), S) iff s ⊩ S or s ⊮ S and s ⊩ att(S, c_{case})

The case space may contain just one situation verifying the sentence, as with *the only case in which someone failed the exam*. Here the case space may contain also situations falsifying S, as long as the relevant attitude does not rule them out, and thus the Case Distinction Condition would be satisfied.

How is the Case Distinction Condition satisfied with a clausal modifier containing a focused constituent? Given Roots' (1992) 'alternative semantics', contrastive focusing implies that the propositions obtained by replacing the semantic value of the focused constituent by relevant alternatives are presupposed. In this case, the sentence that is case-constitutive will be a sentence containing a variable in place of the focused constituent. Its truthmakers are supported by an attitude of acceptance, permitting the Case Distinction Condition to be satisfied if there is more than one alternative .

If *case* applies to a kind of case k and a sentence S, then k must be a verifier of S and the case space will consist of both k and a kind of case k' falsifying S if both k and k' are supported by the case-related attitude:

(22) a. For a kind of case k and a sentence S, if $case_{kind}$(k, S, C_k-S(att(S, c_{case}), S)), then k ⊩ S, and |C_k-S(att(S, c_{case}), S))| > 1

b. For a kind of case k, sentence S, and *case*-related context c_{case}, k ∈ C_k-S(att(S, c_{case}), S) iff k ⊩ S or k ⊮ S and k ⊩ att(S, c_{case})

There is yet further support for the attitude-dependent case space being involved in the semantics of *case*-nominals. It comes from constraints on adjectival modifiers of case descriptions. Case descriptions permit adjectival modifiers indicating a very weak form of acceptance, as in (23a), but not those indicating strong form of acceptance, as in (23b):

(23) a. in the unlikely / improbable / unforeseeable case in which the treasure is returned

b. ??? in the likely / probable / foreseeable case in which the treasure is returned

The modifiers in (23b) indicate a case-related attitude of belief, which won't support falsemakers of the clausal modifier, whereas the modifiers in (23a) indicate a case-related attitude of doubt, which will support both verifiers and falsifiers of the clausal modifier and thus sets up a case space.

Case moreover excludes modifiers of the emotive sort:

(23) c. ??? the fortunate / regrettable case in which Mary returns

Emotive predicates generally are factive, indicating a case-related attitude of presupposition which will support only verifiers and not falsifiers of the clausal modifier.

5. Case anaphora with conditionals, disjunctions, and questions

Anaphora with the noun *case* such as *in that case* display the notion of a truthmaker in a particularly revealing way. Moreover, they give further evidence for the Case Distinction Condition as well as the dependence of a case space on an attitude. This section will focus on case anaphora whose antecedent is introduced by conditionals, disjunctions, or yes/no-questions; the following section will deal with case anaphora whose antecedent is introduced by attitude reports and modal sentences.

This dependence of a case space on an attitude is apparent already when the antecedent is introduced by a preceding non-embedded sentence. It makes a difference whether the case anaphor relates to a preceding utterance of the same speaker or a different speaker. Thus, the case anaphor is not very good in the discourse below:

(24) a. ??? Hans won the race. In that case, Mary will be happy.

Here *that case* should refer to the kind of situations making the preceding sentence true. In order for the noun *case* to be applicable, the case space would also have to include a kind of situation making the preceding sentence false. However, such a kind of situation cannot be part of the case space because the attitude of assertion of the speaker associated with the previous sentence excludes it. A case anaphor taking an antecedent introduced by a non-embedded preceding sentence is possible only when the preceding sentence is asserted by a different speaker, as below:

(24) b. A: John won the race.
B: In that case, Mary will be happy.

Here in B's utterance, the case anaphor relates to an antecedent sentence *John won the race* most likely supported not by an attitude of B's belief (as it would go along with B's assertion of that sentence), but only by an attitude of B's hypothetical acceptance that John won the race, as a reaction to A's assertion. The case anaphor in B's utterance is in fact acceptable only if B is not yet convinced that John won the race. Unlike an attitude of assertion, an attitude of weak acceptance of a sentence S does not exclude falsemakers of S and thus sets up a case space consisting both of the kind of situation verifying S and the kind of situation falsifying S. A case anaphor requires the attitude associated with an antecedent sentence to set up a case space. If the antecedent sentence is a declarative sentence, this is generally possible only if the antecedent sentence has been asserted by a different speaker and subsequently only weakly accepted by the speaker in question.

Another observation that is relevant for this point is that yes/no-questions support case anaphora in a subsequent sentence (uttered by the same speaker):

(25) Did John win the race? In that case Mary will be happy.

A yes/no-question obviously is not associated with an attitude of assertion but one of inquiry which permits two kinds of situations, those that make the positive answer true and those that make the negative answer true (or the positive answer false). Thus, there will be a case space for the case anaphor set up by the antecedent sentence and the attitude associated with it.

Also disjunctive declarative sentences permit case anaphora. A disjunction in fact may introduce as many cases as there are disjuncts, just as in the case of *case* nominals with disjunctive clausal modifiers:

(26) 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.

The case anaphora in these sentences refer back to the kinds of cases that are truthmakers of preceding disjunction. As in the case of *case* nominals with clausal modifiers, the disjuncts may individuate truthmakers as kinds, but the kinds themselves are truthmakers of the entire disjunction. Case anaphora with a disjunctive antecedent are associated with a case space because an assertion of a disjunction implies a weak form of (hypothetical) acceptance of the different cases making the disjuncts true.

The presence of *either* in (25a) and *three* in (25b) again show the exclusive semantics of disjunctions: kinds of situations making conjunctions composed of different disjuncts true do not count as cases.

Also conditionals may introduce kinds of situations as semantic values of *case* anaphora:

(27) 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.

That case in (27b) and (27c) refers to the kind of situations that are exact truthmakers of the antecedent of the conditional. [12] Clearly, the attitude associated with the antecedent of a conditional is that of hypothetical acceptance, not that of assertion (Stalnaker 1984). It will also support the kind of situation that makes the antecedent false and therefore sets up a case space.

There are also specific reasons to take truthmaking to be involved in the semantics of conditionals. Thus, Fine (2012, 2014) argues for a semantics of counterfactual conditionals in terms of truth-making of roughly the following sort: [13]

(28) a. *If* S, *then* S' is true iff for every situation s', s' ⊩ S, has a possible outcome containing a part s'' such that s''⊩ S'

[12] The choice of *the* would be expected if *case*-anaphora would work like E-type pronouns standing for single cases introduced by existential quantification over cases in the evaluation of the preceding sentence. That can hardly be used in place of donkey pronouns unless uniqueness is implied:

(i) If John makes a mistake, he corrects it / the mistake /??? that mistake.

[13] I will not go into the motivations and details of Fine's analysis of conditionals since they do not matter for the current purpose. See also Kratzer (online) and references therein for analyses of conditionals on the basis of situations.

Note that the constructions *in that case* and *in the case in which* S also involve the semantics of a conditional. Following Fine for the counterfactual case, this would be the semantics below, where I is the instantiation relation:

(29) in(*that case*, S) iff for every situation s', s' I [*that case*], s has a possible outcome containing a part s'' such that s'' ⊩ S.

Case-conditionals of this sort are generally found in languages that have *case*-constructions (German has *im Fall, dass*, French *dans le cas que*).[14], [15]

Case anaphora show the importance of the sentential argument of the case relation. Case anaphora could not refer to kinds of situations that are given by the nonlinguistic contexts, say visually. Just looking at a particular situation, a speaker may appropriately utter (30a), but not (30b):

(30) a. In that situation, I would flee.
b. In that case, I would flee.

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[14] In *case* can also act as a complementizer *in case*

(i) We will take an umbrella in case it rains.

Here the main clause is said to be true in view of one possible future course of events, namely in which a situation-like case as described by the *case*-NP occurs. Thus, the two readings of conditional *case*-constructions involve different relations regarding the situation-like case described by the clausal *case*-NP: a conditional relation and a relation that one may call the 'in view of'-relation. The truth of a quasi-conditional *in case* S, S' roughly requires that there be a case making S' true and that the case making S' true be part of an extension of a case making S true In English, the construction is grammaticalized, containing no determiner before *case* and no complementizer *that* after it.

(ii) a. * in the case it rains
b. * in the case that it rains

Note, though, that the more explicit construction below is marginally acceptable – and, it appears to reflect the semantics that is at stake explicitly:

(iii) ? In a case in which it rains, we won't go.

[15] There are differences between ordinary *if*-conditionals and *case*-conditionals. *If*-conditionals can go along with adverbs of quantification, of which the *if*-clause appears to act as a restriction, but *case*-conditionals cannot:

(i) a. If a student fails the exam, he usually tries again.
b. ??? In case a student fails the exam, he usually tries again.

The importance of the sentential argument is also apparent with questions. Simple *yes/no*-questions set up only a single kind of case, whereas disjunctive questions set up two kinds of cases:

(31) a. Will you come? In that case / ??? In either case, I would come too
b. Will you come or not? In both cases / In either case / ??? In that case, I would come too.

Both types of questions are associated with a state of inquiry that supports two kinds of situations – the truthmakers of a positive answer and the truthmakers of a negative answer. But a simple question presents only the answer that has one kind of situation as truthmaker, whereas a disjunctive question presents two answers (the disjuncts), which have two kinds of situations as truthmakers and thus introduce two kinds of cases. In the first case, *case* applies as in (32a); in the second case, it applies as in (32b, b'):

(32) a. case(k, *you will come*, C_k-S(att(*you will come*, c_{case}), *you will come*))
b. case(k_1, *you will come or not*, C_k-S(att(*you will come or not*, c_{case}), *you will come or not*))
b'. case(k_2, *you will come or not*, C_k-S(att(*you will come or not*, c_{case}), *you will come or not*))

6. Case anaphora with attitude reports and modals

The dependence of a case space on an attitude manifests itself also with case anaphora relating to a sentence embedded under an attitude verb in a preceding sentence. Case anaphora display striking differences in acceptability with respect to the choices of attitude verbs and clausal complements in the preceding sentence.

First of all, factive verbs do not support case anaphora:

(33) a. ?? John is happy that he won the election. In that case, he will celebrate.
b. ?? John noticed that Mary is at home. In that case, Bill is at home too.

This holds both if *in that case* is understood as subordinate with respect to the described attitude or as modifying the subsequent main clause and thus relating to the speaker's attitude. In the former case, the *case*-related context c_{case} is what I will call the *subordinate attitudinal context*. In the latter case, the case-related context c_{case} is what I will call *the main attitudinal context*: Factive attitudes do not support alternative situations making the clausal complement false. Moreover, since factive attitude verbs presuppose the truth of a clausal complement S and thus imply the speaker's belief that S, the speaker's attitude in that context will not support situations making S false. Thus, factive attitudes do not set up a case space, neither one supported by the described attitude nor one supported by the speaker's attitude. This makes a case anaphor inapplicable both with respect to the subordinate and with respect to the main attitudinal context.

Two attitude verbs that do support case anaphora are *fear* and *hope*:

(34) a. John fears that Mary has lost the election. In that case, he won't / would not celebrate.
b. John fears that Mary has lost the election. In that case, I would be relieved.
(35) a. John hopes that Mary has won the election. In that case, he will / would celebrate.
b. John hopes that Mary has won the election. In that case, I would celebrate.

A fear that S and a hope that S both support S, but they also weakly support *not* S. Emotive attitudes like a fear that S and a hope that S not only support situations that make S true, but involve a comparison of such situations to situations making S false and thus imply at least a weak acceptance (in the sense of taking into consideration) that not S. There will thus be a case space for the case anaphor when relating to the subordinate attitudinal context in (34a) and (35a). A fear that S and a hope that S also support case anaphora when relating to the main attitudinal context, namely if the speaker just hypothetically accepts that S, as indicated by the choice of *would* in (34b) and (35b).

Fear and *hope* contrast with *believe*, which in the examples below does not support case anaphora within the subordinate attitudinal context, but only with respect to the main attitudinal context, and that only if the agent of the described attitude is not the speaker:

(36) a. ??? John believes that Mary has lost the election. In that case, he wants to celebrate.
b. John believes that Mary has lost the election. In that case, I will / would celebrate.

c. ??? I (firmly) believe that Mary has lost the election. In that case, I will celebrate.

A belief that S only supports situations that make S true and excludes situations that make S false. (36b) presupposes that the speaker does not share the degree of John's belief and the choice of *will* or *would* depends on the degree of acceptance of the preceding clausal complement. If the case anaphor is acceptable, the speaker will take into consideration both situations making the complement clause true and situations making it false. (36c) is unacceptable when *believe* expresses strong belief, but not when the use of *believe* (as an 'adverbial verb') serves to weaken the sincerity condition of the assertion.

Other 'purely positive' attitudes, for example expectation and assertion, exhibit the very same pattern as belief:

(37) a. ??? John expects that it will rain tomorrow. In that case he wants to stay home.
b. John expects that it will rain tomorrow. In that case I want / would want to stay home.
c. ?? I expect that it will rain tomorrow. In that case I want / would want to stay home.

(38) a. ??? John claims that Sue won the race. In that case he wants to celebrate.
b. John claimed that Sue won the race. In that case, I will celebrate.
c. ??? I claim that Sue won the race. In that case I will celebrate.

Purely positive attitudes of a third person *a* do not support case anaphora with respect to the subordinate attitudinal context, but only with respect to the main attitudinal context, namely if the speaker does not share the same attitude as *a*, but rather engages in a weaker attitude of acceptance that supports both situations verifying and situations falsifying the content of *a*'s attitude.

Attitude verbs such as *think*, *imagine*, and *dream* behave interestingly different in that they do not support case anaphora at all with respect to the subordinate attitudinal context:[16]

(39) a. ?? John thinks that that Mary is not interested in him. In that case, he will ask Sue out.

[16] Verb of saying such as *remark*, *say*, *whisper*, *scream*, and *write* also fail to support case anaphora in a subsequent sentence, both when applying to the main and the subordinate attitudinal context:

(i) John said /whispered/screamed that Sue won the race. ??? In that case Bill will be disappointed.

Verbs of saying do not convey a particular illocutionary force and do not indicate any attitude that would have satisfaction or truth conditions. The arguably describe merely locutionary, not illocutionary acts.

b. ?? John imagines that he is rich. In that case, he will be generous.

c. ?? John dreamt that he was a bird. In that case he wanted to fly.

The reason appears that attitudes such as thoughts (in the sense of an attitude of 'entertaining'), imaginations and dreams do not have truthmakers in the way beliefs, expectations, and claims have. Such attitudes may have conditions of representational adequacy, but they are not themselves truth- or satisfaction-directed. This is what should prevent the relevant truthmaking relation from applying to them.

There is one circumstance when a purely positive attitude can support case anaphora within the subordinate attitudinal context, namely when the clausal complement is a disjunction:

(40) a. John believes that Mary won the race or Jane won it. In either case, he wants to celebrate.

b. John expects that the party will be held on Friday or on Saturday. In either case, he plans to go.

The reason why disjunctive complements of *believe*-type verbs set up case spaces is the very same as in the case of *case*-nominals with disjunctive clausal modifiers. A complement A v B of a *believe*-type verb sets up a case space consisting of two kinds k_1 and k_2 of situations that are truthmakers of A v B, with k_1 being the kind whose instances are closely similar by being truthmakers of A and k_2 being the kind whose instances are closely similar by being truthmakers of B. In (40a) and (40b), *case* thus takes the arguments below, where the case space in both (41a) and (41b) will contain two kinds of cases, those making A true and those making B true:

(41) a. $case(k_1, C_k\text{-}S(att(A \vee B, c_{case}), A \vee B))$

b. $case(k_2, C_k\text{-}S(att(A \vee B, c_{case}), A \vee B))$

Attitude verbs such as *plan, intend,* and *decide,* which take controlled infinitival complements, show the very same generalization as *believe*-type verbs:

(42) a. John intends to leave the country. ??? In that case, Mary will leave the country too.

b. John decided to come to the party. ??? In that case, we will be happy.

c. John plans to write a book. ??? In that case, he would be occupied all summer.

(43) a. John intends to study medicine or law. In either case, he will study very hard.

b. John decided to invite Mary or Sue to the party. In either case, he wants to send out the invitation only next week.

c. John plans to buy a house or rent an apartment in Berlin. In either case, he wants to keep his apartment in Munich.

However, in contrast to *that*-clauses, controlled infinitival clauses do not support case anaphora very well for the main attitudinal context, as seen in the contrasts below:

(44) a. John hopes that Bill will win the competition. In that case, we will celebrate.

b. John hopes PRO to win the competition. ?? In that case, we will celebrate.

(45) a. John hopes that he has locked the door. In that case, we need not worry.

b. John hopes PRO to have locked the door. ?? In that case, we need not worry.

(46) a. John claims that Bill has won the election. In that case, we have reason to celebrate.

b. John claims PRO to have won the election. ??? In that case, we have reason to celebrate.

This means that a controlled clause as complements of attitude verbs does not provide cases for case anaphora with respect to an attitudinal context that is not that of the agent of the described attitude. This straightforwardly follows if controlled clauses involve the self-ascription of a property as on Lewis' (1979) account of attitudes *de se*, the account according to which in (44b) John self-ascribes the property of winning the competition. If controlled clauses express properties to be self-ascribed by the agent of the attitude in question, then they cannot serve to characterize a different attitude of a different agent. This means that no case-related attitude in the main context will be available, at least not if the described agent is different from the speaker. That is, in (44b), $att(c_{case}, \lambda x[\text{win the competition}])$ is undefined if the *case*-related context c_{case} is the main context. Note that controlled clauses can support case anaphora if the speaker is the described agent:

(47) I hope to win the competition. In that case we will celebrate.

This is expected since the controlled clause serves to characterize an attitude of both the subordinate and the main context.

Attitudinal contexts can be set up also by epistemic modals. Epistemic modals of possibility and necessity both support case anaphora, though speakers differ somewhat as to which modals better support them:

(48) a. John might have arrived. In that case Mary should be relieved.
b. John must be at home. In that case, Mary will be at home too.

The support of case anaphora with epistemic *must* obviously presupposes that epistemic *must* is not factive, a view defended by Karttunen (1972).[17] In fact it should be indicative of an epistemic attitude sufficiently weak to support situations falsifying the prejacent.

Deontic and ability modals differ from epistemic modals of possibility in not permitting case anaphora:

(49) a. You may take an apple. ??? In that case, you may take a pear too.
b. ??? You must leave. In that case, your wife will leave too.
c. ?? John can lift the table. In that case, he should carry it upstairs.

That is because those modals are not indicative of an attitude that would support other alternatives and thus be constitutive of a case space.

7. The predicate *is the case*

Another construction that *case* engages in and that reflects the truthmaking relation particularly well is *is the case*, a syntactic predicate allowing as subject a *that*-clause or a pronoun such as *that*:[18]

[17] However, see von Fintel /Gillies (2010) for a defense of the factivity of *must.*

[18] One might think that *the case* unlike *true* does not have the status of a predicate. However, standard linguistic criteria for predicatehood diagnose *(is) the case* as a predicate syntactically. First, *the case* is able to act as the predicate in small-clause constructions, as below, a standard criterion for predicate-hood:

(i) a. I consider it true that John is a genius.
b. I consider it clearly the case that John is a genius.

(50) a. That it is raining is not the case.

b. John feared that it might rain. That was in fact the case.

Some philosophers hold the view that *is the case* and *is true* mean the same thing:[19]

(50) That it is raining is not true.

However, there are significant semantic differences between *is true* and *is the case*, which, for some reasons, are not as well reflected in English as, say, in German with *ist der Fall* is the case' and *ist wahr* 'is true'. (This may be because English *is true* is actually polysemous, permitting also a use equivalent to *is the case*.) The most important semantic difference concerns adverbial modifiers. First, *ist wahr* and *ist der Fall* differ in their acceptance of location modifiers. Location modifiers are perfectly fine with *is the case*, but often hard to make sense of with *is true*:

(51) a. In unserer Firma ist es nicht der Fall, dass Angestellte ohne Erklaerung entlassen werden.

'In our firm, it is not the case that employees get fired without explanation.'

b. ??? In unserer Firma ist es nicht wahr, dass Angestellte ohne Erklaerung entlassen werden.

'In our firm, it is not true that employees get fired without explanation.'

(52) a. In Hans' Familie ist es nicht der Fall, dass Kinder ihre Eltern respektieren.

Second, like *true, the case* can go with other copula verbs than *be*, such as *remain* and *seem*:

(ii) a. That John is the best player will always remain the case.
b. The generalization remained true despite the changing circumstances.
(iii) a. That John is happy does not seem the case.
b. That John is happy does not seem true.

[19] This at least is a hallmark of the deflationist view of truth (Horwich 1990), according to which 'the key idea […] is that there seems no reason to distinguish *being true* from *being the case*. If there is no distinction between being true and being the case, presumably there is also no distinction between 'It is not the case that *p*' and 'It is not true that *p*' (Stoljar, online). *Is the case*, is implicitly considered a redundant expression even by philosophers that do not share the deflationist view of truth. Not every philosopher shares that view about *is the case*. Correia/Mulligan (online) take the view that *is true* applies to propositions and *is the case* to states of affairs, mistakenly so, because *is the case* cannot actually apply to terms of the sort *that state of affairs*. I am not aware of any other explicit philosophical view about *is the case*.

‘In John’s family, it is not the case that children respect their parents.’

b. ??? In Hans’ Familie ist es nicht wahr, dass Kinder ihre Eltern respektieren.

‘In John’s family, it is not true that children respect their parents.’

Whereas (51a) and (52a) are perfectly natural as statements of facts, (51b) and (52b) are hardly acceptable or at least convey a particular metasemantic notion of location-relative truth.

Furthermore, *ist der Fall* is fine with adverbs of quantification, with which *ist wahr* is hardly acceptable or at least conveys a particular metasemantic notion of time-relative truth:

(53) a. Es ist immer mehr der Fall, dass der Alzheimerpatient etwas vergisst.

‘It is more and more the case that the Alzheimer patient forgets something.’

b. ??? Es ist immer mehr wahr, dass der Alzheimerpatient etwas vergisst.

‘It will more and more true that the Alzheimer patient forgets something.

(54) a. Es war zweimal der Fall, dass jemand von der Versammlung abwesend war.

‘It was twice the case that someone was absent from the meeting.’

b. ??? Es war zweimal wahr, dass jemand von der Versammlung abwesend war.

‘It was twice true that someone was absent.’

In contrast to *ist der Fall*, with *ist wahr*, the subject clause needs to be propositionally complete, that is, complete regarding context-dependent elements, such as quantifier restrictions, tense interpretation, spatial location etc. (though the proposition expressed may involve ‘unarticulated constituents’).

A further difference between *is true* and *is the case* shows up with adverbs that may act as degree quantifiers such as German *kaum* ‘hardly. With *is the case*, such adverbs can act only as adverbs of quantification, whereas with *is true* they most naturally act as degree modifiers:

(55) a. Es ist kaum der Fall, dass Hans Kaffee trinkt.

‘It is hardly the case that John drinks coffee.’

b. ??? Es ist kaum wahr, dass Hans Kaffee trinkt.

‘It is hardly true that John drinks coffee.’

Whereas (55a) means that there are only rare cases of John drinking coffee, (55b) claims that it can hardly be said that John drinks coffee.

The semantic behavior of *is the case* with respect to adverbial modifiers supports an analysis based on truth-making, and specifically, exact truthmaking. That exact truthmaking is involved is apparent from the way adverbs of quantification are understood: [20]

(56) a. It was twice the case that John made a mistake.
b. It was only once the case that John lost the game.
c. It was three times the case that John or Mary received a gift.

Twice in (56a) counts those and only those situations that are completely relevant for the truth of *John made a mistake*, that is, situations that include nothing more than John, a single mistake, and the 'making'-relation holding between the two. *Twice* does not count any larger situations. Similarly, *once* in (56b) counts just situations of a single event of losing, not any larger situations. Finally, *three times* in (56c) counts situations in which either John or Mary received a gift. It does not count larger situations or sums of such situations. Moreover, adverbs of quantification with *is the case* do not count non-worldly facts, which could be quantificational and disjunctive. Otherwise there would only be a single fact to be counted in (56a) and (56c).

The predicate *is the case* itself does not involve reference to a particular case, but rather, in the absence of an adverb of quantification, existential quantification over cases. This is obvious from the interpretation of *is the case*-sentences in the scope of negation and in the antecedent of a conditional:

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[20] This recalls Lewis (1975) use of 'case' in connection with adverbs of quantification, though for Lewis cases are n-tuples consisting of objects and relations.

Adverbs of quantification actually do not strictly count cases, but epistemic situations correlated with cases. Thus (i) appears false:

(i) It is a billion times the case that someone is Indian.

That adverbs of quantification quantify over epistemic situations is not restricted to contexts of *case*-sentences. For example (iia) sounds true, just like (iib) does:

(ii) a. A natural number is many more times even than prime.
b. It is many more times the case that a natural number is even than it is prime.

This also means that the standard treatment of adverbs of quantification as unselective quantifiers ranging over n-tuples of entities (which David Lewis called 'cases') is not adequate.

(57) a. It is not the case that a student failed the exam.

b. If it is the case that a student fails the exam, then that student should be given the chance to repeat it

(57a) states that there is no 'case' that makes the sentence *a student failed the exam* true. Also (57b) involves existential quantification over cases as part of the evaluation of the antecedent.

As a construction expressing quantification over cases, *is the case* requires a case-space. This is reflected in the fact that *is the case* is hardly acceptable when it is not in the scope of negation, the antecedent of a conditional, or the scope of an adverb of quantification:

(58) a. ??? It is the case that a student failed the exam.

By contrast, of course, *is true* is not subject to any such constraint:

(58) b. It is true that a student failed the exam.

In (58), *is the case* quantifies over situations that would be supported by the attitude of assertion with which the sentence is uttered, but assertions do not support alternative situations and thus do not set up a case-space. By contrast, the scope of negation as in (58a) is associated with a different attitude, namely an attitude of consideration, which supports both truthmakers and falsemakers of *a student failed the exam*. Similarly, the utterance of the antecedent of a conditional is associated with an attitude of weak, hypothetical acceptance, which supports both situations making the antecedent true and situations making the antecedent false. A quantificational sentence of the sort *it was sometimes the case that* S presupposes a domain of distinct situations making S true, which thus form a case space, making the noun *case* applicable.

The truth conditions of *is the case*-sentences thus involve existential quantification over truthmakers, as below, taking *case* as before to express a relation between situations, sentences, and case-spaces:[21]

[21] The semantics of *it is the case that* S recalls the semantics that Austin (1950) proposed for independent sentences in general. On Austin's view, with the utterance of a sentence, a speaker refers to an (actual) situation and claims that the situation referred to is of the type specified by the sentence uttered. The situation referred to with the utterance of a sentence thus is meant to be a truthmaker of that sentence. On the present view, this is

(59) a. *It is the case that* S is true iff for some situation s: case(s, S, C-S(att(c_{case}, S), S))

A location modifier in that construction will act as a predicate of cases:[22]

(59) b. For a location modifier X, X *it is the case that* S is true iff for some situation s: X(s) and case(s, S, C-S(att(c_{case}, S), S)).

An adverb of quantification such as *sometimes* will itself introduce a quantifier to range over cases:

(59) c. *It is Q-times the case that* S is true iff for Q-many situations s, case(s, S, C-S(att(c_{case}, S), S))

Note that on this analysis the definite determiner *is the case* makes no semantic contribution, only the noun *case* does. That is because *the case* in that context does not have the status of a referential NP. Several diagnostics show that. First, *the case* in *it is the case* does not permit any other determiner than the simple definite determiner, as seen in (60). Second, it does not permit adjectival or relative-clause modifiers, as seen in (61). Third, it cannot act as the antecedent of a *case*-anaphor, as in (62):

(60) a. * It is not that case that S.
b. * It is not a case that S.

(61) a. * It is not the improbable case that S.
b. * That S is not the case that we expected.

(62) That no one comes to the party might be the case. ?? But we would not like that case.

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only part of the constructional meaning of *is the case*. With *is the case*, adverbs of quantification range over 'cases' and location adverbials act as predicates of cases. Austin's motivations for implicit situation reference were in fact quite different from the present ones. The situation referred to, for Austin, is responsible for contextual restrictions on quantification domains, the interpretation of tense etc. The present motivation for invoking truth-making is the semantics of *case*-constructions.

[22] *Is the case* with a location modifier appears to require a condition of maximality: (38a) is about the maximal situation in the firm, not just some situation within the firm. However, this maximality condition appears independent of the *case*-construction and should be derived independently. *The situation in our firm* is generally also understood as referring to the maximal situation in the firm, unless a particular contextually relevant situation is meant.

The case in *is the case* rather appears to be a mere 'referential residue' with *the* being a pleonastic determiner.[23]

8. More on the ontology of cases

8.1. Existence predicates for cases

So far all that was said about the ontology of cases was that cases are situations and as such distinct from non-worldly facts. Not much was said about how cases relate to similar types of entities such as possibilities, events, and states. There is a particular linguistic criterion that bears on that question, and that is the applicability of existence predicates. A remarkable feature about cases is that they may come with their own existence predicate, that is, an existence predicate not applicable to other types of entities but cases.

This requires a brief remark concerning existence predicates in natural language in general.[24] Natural languages generally display a range of predicates that express existence, English, for example, *exist*, *occur*, and *obtain*. What characterizes existence predicates and distinguishes them from other types of predicates is that they may yield true sentences with an empty subject and negation, as is illustrated with the verb *exist* below:

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[23] There is a potential alternative analysis of the *is the case*-construction that one might think of, namely as a specificational sentence (Higgins 1979), as a sentence of the same sort as those below:

(i) a. That John is innocent is the truth.
b. That we would all go is the idea.
c. That one can walk home is the advantage.
d. That John is incompetent is the problem.

But there are major differences. First, *is the case* does not permit extraposition, unlike specificational sentences:

(ii) a. * It is the truth that John is innocent.
b. * It is the idea that we would all go.

Moreover, *is the case* does not permit inversion, unlike specificational sentences:

(iii) a. The truth is that S
b. The idea is that S.
c. * The case is that S.

Thus, an alternative analysis of the *is the case*-construction as a specificational sentence is not an option.

[24] See Moltmann (2013b) for the notion of an existence predicate.

(63) Vulcan does not exist.

Existence predicates in natural language are generally restricted to particular types of objects. Thus, *exist* applies to material and abstract objects (or empty terms describing them) as in (63) and (64a), but not to events, as seen in (64b):

(64) a. The number four exists.
b. ??? The accident existed yesterday.

The existence predicates that select events are instead *occur, happen* and *take place*. They in turn resist material and abstract objects:

(65) a. The accident never happened / took place.
b. ??? The planet / The number four happened / took place.

Obtain is an existence predicate reserved for condition-like entities, of the sort of non-worldly facts, laws, states, and conditions:

(66) a. The law / condition no longer obtains.
b. The fact obtains that Joe lost the election.
c. The state of emergency no longer obtains.

None of those existence predicates naturally apply to cases:

(67) 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.

Instead, there are special existence predicates for cases. In German, the choice of a 'case'-specific existence predicate is particularly remarkable. German choses *eintreten* 'to enter' as the existence predicate for cases:[25]

(68) Der Fall, daβ Hans nicht zurückommt, ist nicht eintreten.
'The case that John might not return could enter'.

Eintreten as an existence predicate applies to no other sort of entity (except to a very restricted class of events, such a deaths).

Also French uses a special existence predicate for cases, namely *se produire* 'produce itself' (which also applies to certain types of events, but nothing else):

(69) Le cas ou Jean retourne ne s'est pas produit.
'The case that John returns did not produce itself'

In German and French, existence predicates of the sort of *exist, take place, happen,* and *obtain* are inapplicable to cases (*existieren, stattfinden, passieren,* and *bestehen* in German; *exist, avoir lieu, se passer,* and *obtenir* in French).

In English, *present itself* can be used as a case-specific existence predicate; but also *occur* can be used that way (the latter being able to apply also to certain types of events):

(70) 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.

The choice of existence predicates generally is indicative of how natural language categorizes an entity ontologically. The observations from English, German, and French confirm that cases are not on a par with non-worldly facts, since cases do not accept existence predicates of the sort of *obtain*,. Moreover, cases involve tensed properties or relations

[25] *Eintreten* is restricted, though, to possible future situations, as are the case-specific existence predicates in French and English. Eintreten excludes epistemically possible situations of the present or the past:

(i) a. ??? Der Fall, dass n eine Primzahl ist, kann eintreten / ist eingetreten.
'The case that n is a prime number could enter / has entered.'
b. ??? Der Fall, dass Hand das Licht angelasen hat, ist eingetreten.
'The case that John has let the light on has entered.'

holding among entities and thus cannot be states or conditions, which, unlike cases, may obtain at a particular time and 'last'. Cases cannot obtain at a particular time or last. The inapplicability of the existence predicate *exist* means that cases are not 'possibilities' in the sense of the entities that terms of the sort *the possibility that S* stand for. Possibilities as 'mere' possibilities 'exist' (*the possibility that John may never return exists*). By contrast, merely possible cases do not 'exist'. If they have the status of existing, which means if they 'present themselves', then they are not merely possible situations, but actual ones.[26]

Finally, the inapplicability of existence predicates for events, *occur, happen* and *take place,* indicates that cases are not events (as does the inapplicability of German *passieren* and *stattfinden* as well as French *se passer* and *avoir lieu*). Only *occur* is applicable to cases, *happen* and *take place* never are A party may taken place, but not the case in which the party will take place. An accident may have happened, but not the case in which an accident has happened. Later we will see that cases also lack other types of properties characteristics of events. A case may present itself just in case a particular sort of event occurs, but this does not mean that the case is identical to the event.

8.2. Cases and the truthmaker debate

The truthmaking idea is a greatly debated topic in contemporary metaphysics, and the semantics of cases as truthmakers may shed light on some of the issues it raises.

One issue concerns the nature of truthmakers. Some philosophers, in particular Mulligan / Simons / Smith (1984) and Lowe (2006), take truthmakers to be fully individuated entities that play an independent role in the world, such as as objects of perception and relata of causal relations. Ttruthmakers on their view consist in events, tropes and perhaps objects.[27, 28] A trope of John's happiness would then be the truthmaker of the sentence *John is happy*, an

[26] Cases also differ from states of affairs: states of affairs 'exist' whether or not they 'obtain'. States of affairs accept two different existence predicates conveying two modes of being. But cases accept only one, the *case*-specific existence predicate. Other entities that accept *obtain* as an existence predicate also engage in two modes of being. Laws and conditions arguably engage in a mode of being even if they do not actually obtain. Again this is indicative of cases being on a par with worldly facts rather than with entities that go together with non-worldly facts, such as laws and conditions

[27] Armstrong (1997, 2004) takes truthmakers to be states of affairs, which for him also act as causal relata.

[28] This is also the view adopted in Moltmann (2007), who applies truth-making to the semantics of event- and trope-nominalizations and of adverbials.

event of John's walking a truthmaker of the sentence *John walked*, and John himself the truthmaker of the sentence *John exists*. A difficulty for that view is that fully individuated entities cannot fulfill the condition of exact truthmaking. There are always features about a particular walk, for example, that may not be relevant for the truth of *John walked*, for example the location of the walk and the way the walking was performed. There are also many features of John that do not matter for the truth of *John exists.* Truthmakers suited for exact truthmaking need to be thinner than fully individuated objects. This is what the notion of a situation, state, or case is meant to achieve. Such entities are considered part of the world, but not entities in the world, playing independent roles.[29]

Another potential difficulty for the view that truthmakers are ordinary objects is that it is not compatible with presentism, the view that only objects at the present moment exist (Sider 2001, Merricks 2007). Given presentism, most true sentences will fail to have a truthmaker or will at some point lose their truthmaker if truthmakers are entities of the sort of events, tropes, and objects. Truthmakers conceived of as situations or 'cases', by contrast, appear to be compatible with presentism. Cases are entities that exist not in time, but time-independently – and thus derivatively at any time. This is reflected in the use of tense in natural language. Existential quantification over cases whose correlated objects are past events is not possible with sentences in the present tense. By contrast, existential quantification over past events requires past tense. Talking about events in the past, (71a) and (72a) are perfectly fine (that is, possibly true); but (71b) and (72b) are not, as opposed to (71c) and (72c):

(71) a. There are at least three cases of this disease.
b. ??? There are at least three outbreaks of this disease.
c. There were at least three outbreaks of the disease.
(72) a. There are only three cases in which someone managed to cross the border.
b. ??? There are only three crossings of the border.
c. There were only three crossings of the border.

[29] This view differs from that of Rodriguez-Pereyra (2005), who makes use of exact truthmaking, but is non-committal regarding the nature of truthmakers.

Cases are situations constituted by the holding of tensed properties or relations. As such, they will exist not relative to a particular time; but at any time. They won't have a temporal duration, unless a temporal duration is part of their constitutive properties.[30]

The metaphysical truth-making view according to which a sentence is true only in virtue of something in the world that makes it true is a controversial philosophical view.[31] What is controversial is in particular the view that grounding requires an entity to act as a truthmaker. Some philosophers such as Lewis (2001) and Hornby (2005) agree that the truth of sentences should be grounded, but disagree that they need to be grounded in entities acting as truthmakers; rather the truth of sentences should be grounded in *how* thing are. The grounding of truth on that view does not require a 'reification' of entities as truthmakers. C*ase*-constructions given the semantic analysis in this paper do not involve the truth-making relation in the metaphysical sense, but only in the semantic sense, with truthmakers being possible or actual situations reflecting the content of the sentence. But if truthmaking was understood in the metaphysical sense, the semantics of *case*-constructions need not actually involve a commitment to the truthmaking idea itself, but only a commitment to the weaker view that the truth of sentences be grounded. Instead of analysing *case* as expressing a relation between situations and propositions, *case* could be considered a 'nominalizing' or 'reifying' expression, mapping the way things are to support the truth of a sentence onto the set of objects that would act as truthmakers of that sentence. Formally, *case* could then denote a function [*case*] mapping a world w and a sentence S onto the set of entities that are reifications of whatever it is in w that makes S true. Thus for the denotation of *case in which* S at a world w, we would have:

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[30] There is another type of object-related entity that shows the same time-independence as event-related cases. These are entities constituted by the lasting legacy of a person, such as philosophical or literary figures. Below, we see that present tense can be used to quantify over philosophical figures that, as persons, no longer exist, which is not possible with entities viewed simply as persons:

(i) a. There are three famous philosophers that had studied in Tuebingen, Hegel, Fichte and Schelling.
b. ??? There are three people that had studied in Tuebingen and became famous philosophers, Hegel, Fichte, and Schelling.
c. There were three people that studied in Tuebingen and became famous philosophers, Hegel, Fichte, and Schelling.

It is quite plausible that philosophical figures are filtered objects, persons reduced to their philosophical views and achievements. As such, they share their time-independent existence (once they have come into existence in the first place) with cases.

[31] For an overview of the truthmaking debate see Rodriguez-Pereyra (2006) and the contributions in Beebee/Dodd (2005).

(73) [*case in which* S]^{w} = [*case*]^{w}(w, S).

This, of course, presupposes that truth-making is not involved in the semantics of natural language elsewhere, independently of nominalizing expressions that reify grounds for truth as truthmaking entities.

9. Nominal *case*-constructions

Nominal *case*-terms as in (4a, b), repeated below, may seem quite different in their semantics from *case*-terms with clausal modifiers:

(74) a. a case of flu
b. the case of the stolen statue

Moreover, it is not obvious whether and how the two types of nominal *case*-NPs in (74a) and in (74b) are semantically related. *Case*-constructions of the sort in (74a) seem to stand for instances of universals, whereas *case*-constructions as in (74b) refer to cases tied to particular objects and thus can be called *object-related cases*.

There are good reasons not to posit an ambiguity in the word *case* in the three different constructions with *case*. The European languages that have *case*-constructions (such as English, Italian, French, and Spanish) generally display all three constructions, which can hardly be by accident. (By contrast the word for *case* as in *briefcase* translates very differently in those languages.) Moreover, cases described by the two different nominal constructions may be identical, permitting identity statements as below to be true:

(75) a. The case of the missing statue is the case of the recent museum theft.
b. The case of the new cancer patient is a case of stage 2 cancer.

Typical object-related cases are legal and medical cases, and in fact there are constraints on what can be object-related cases restricting them largely to contexts of medicine or law.[32] Despite such constraints, there are good reasons to consider object-related cases as being on a par ontologically with other cases and to take the noun *case* in nominal and in clausal *case*-constructions not to be ambiguous, but to display at least systematically related meanings. In particular, *case* in nominal *case*-terms, it appears, may also express the truthmaking relation, though as a relation applying to a case and a very simple proposition consisting only of an object and a property.

9.1. Property-related cases

Examples of cases described as instances of universals may be medical or legal cases, but also, for example, cases of a particular art movement or a particular virtue: [33]

(76) a. This is a case of insanity.
b. What John has is a case of schizophrenia.
c. The incident is a case of fraud.
d. John's behavior toward Mary is a case of harassment.
e. This building is an unusual case of art deco.

These cases are trope-like or event-like, just as the universals in question have as their instances tropes or events.[34,35]

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[32] Legal cases are also associated with a more special *case*-construction in English of the sort *the case Dominique Strauss-Kahn*, which is a close apposition and syntactically distinct from the construction in (55b). In fact, Chinese, which does not otherwise display *case*-constructions, has a special word for legal or medical cases.

[33] There are also property-related cases that appear to be individuals, noted by van de Velde (ms) with the French example below:

(i) J'ai connu des cas de journalistes honnêtes.
'I knew of cases of honest journalists.'

[34] Such types of cases appear to have inspired Woltersdoff's (1980) use of 'cases' for tropes.

[35] However, not all instances of universals are cases. There are constraints as to what properties a case can be related to. For instance, for a universal to be a case, it needs to have a particular complexity that does not make it too obviously an instance of the universal. Whiteness and darkness do not have instances that are cases (?? *a case of whiteness*, ?? *a case of darkness*), but fraud and modesty, as we have just seen, do. This means that

9.2 Object-related cases

Further examples of *case*-constructions that describe cases related to objects are those below:

(77) a. the case of that incident
b. the case of the man that has suffered from this illness for more than 20 years
c. the case of the stolen statue

Here the complement of *case* describes what I call *the correlated object* of the case.

Generally, a case has very different sorts of properties than its correlated object and should be considered an entity distinct from it.[36] First, a case and its correlated object lead to different readings of predicates expressing object-related attitudes, and that whether the correlated object is a material object or a complex feature or trope. The semantic differences among the following sentences illustrate the point:

(78) a. We studied the case of the disabled student. (as a medical / legal case , ..)
b. We studied the disabled student.
c. We studied the disability of the student.

Obviously, (78a), (78b) and (78c) mean quite different things. Unlike (78b) and (78c), understanding (78a) requires understanding what kind of case the case is supposed to be, a legal or medical case, for example. What the case is, in turn, depends on which features of the student or his disability are relevant. It depends on whether the features are features relevant from a medical or legal point of view, for example, and thus constitutive of a medical or a legal case. Importantly, the features may include not only intrinsic properties of the object in question, but also relations it enters to other entities. No identification of relevant features is

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property-related cases are not just instances of universals. Rather for something to be a property-related case, it needs to fulfill further, or other, conditions.

[36] There are constructions of apparently the same type that seem to express an identity relation between the referent of the complement and the referent of the entire NP, for example *the city of Munich*. But this is not so with the *case*-construction describing object-related cases.

required for (78b) and (78c). Here the object of study may simply be the student himself or his disability.

Cases and their correlated objects differ similarly as objects of discussion and evaluation:

(79) a. We discussed the case of the book.
b. We discussed the book.
(80) a. The case of the stolen statue is interesting.
b. The stolen statue is interesting.
c. The theft of the statue is interesting.
(81) a. John compared the case of the first student to the case of the second students.
b. John compared the first student to the second student.

Again *case*-terms require the identification of relevant features of the correlated object making up the kind of case in question.

Cases and their correlated objects generally also differ with respect to part-whole structures. In general, a case does not inherit its part-structure from its correlated object. Thus, (82a) has a different meaning from (82b), which is about the parts of an artifact, and from (82c), which is about the (temporal) parts of an event:

(82) 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.

The part structure of a case is not based on spatial, functional, or temporal parts, but instead on partial content regarding the situation made up from the relevant properties (intrinsic or relational) holding of the correlated object. Note that *part of the situation* is understood in the same way as *part of the case of the stolen statue* in (82a).

Thus, object-related cases are ontologically distinct from the correlated objects if the latter are material objects or events. In fact, the same cases may be correlated with different objects, as seen in the possibly true identity statement below:

(83) The case of the stolen statue is the case of the museum theft.

The understanding of evaluative properties and the part structure of object-related cases indicate that object-related cases are on a par with cases that are situations acting as truthmakers of sentences. Object-related cases carry just those properties relevant for verifying that the correlated object meets the contextually given condition. This motivates a unified account of cases described by clausal *case*-terms and object-related *case*-terms in terms of truthmaking. Obviously, though, sentences are not available in object-related case constructions. Instead for the semantics of object-related case-terms simple propositions of the form <P, o> can be considered the entities that truthmakers stand in the truthmaking relation to, where P is a property of the sort 'is a potential crime', 'is a crucial element in a potential crime', or 'is seriously ill'. What exactly P is will to an extent depend on the context, subject, though, to a strong preferential restriction to classificatory categories from contexts of law and medicine. The noun *case* in object-related case terms should also involve a case space, which will simply be the extension of the property P (provided it has at least two elements). Thus, an object-related case term will have the semantics below, where R is the relevant restriction on types of cases:

(84) [*case of the stolen statue*] = {<s, <P, [*the stolen statue*]>, [P]> | s ⊩ <P, [*the stolen statue*]> & |[P]| > 1}, for the relevant contextually given property P, whereby R(P).

Since object-related cases can be identical to property-related cases, as in (83), truthmaking should also be involved in the semantics of property-related *case*-terms, as below, where D(s) is the domain of the situation s:[37]

(85) [*case of theft*] = {<s, <[*theft*], d>, [*theft*]> | d ∈D(s) & s⊩ <[*theft*], d>] & |[theft]| > 1}

[37] A somewhat different treatment is required when *case* occurs predicate-initially, as below:

(i) John's illness is a case of cancer.

It is plausible that (i) is not an ordinary subject-predicate sentence, but rather is on a par with (ii):

(ii) True is a truth value.

The predicate in (i) arguably does not just attribute a property to the semantic value of the subject, but involves its reification as an object that is a truth value (Moltmann 2013a, Chapt. 6). Similarly, the predicate in (i) would involve 'filtering' of the subject referent as a case.

Object-related cases may differ from their correlated objects in other respects. Generally, it is difficult for a case to have properties of concreteness. Thus, cases generally do not have a spatial location, even if their underlying object has:

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

Moreover, cases generally do not act as objects of perception:

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

Finally, cases generally are not causally efficacious (except, of course, as objects of mental attitudes):

(88) a. An overweight baby caused the cradle to break apart.
b. ?? The case of an overweight baby caused the cradle to break apart.

These restrictions are expected if cases are on a par with worldly facts, rather than material objects or events. Events are spatially located and enter causal relations, but not facts, at least not on a common view.[38]

The restrictions are not strict, though. Under special circumstances, object-related and property-related cases appear to act as objects of perception and relata of causal relations:

(89) a. This case of musical experimentation sounds horrible.
b. This one case of cholera / The case of that cholera infection was the cause of a great epidemic.

Cases described by nominal *case*-terms may differ from worldly facts also in that they may go along with the existence predicate *exist* or the existence predicate *happen*, unlike cases described by clausal *case*-terms, which have their own special existence predicate:

[38] Note, though, that in Situation Semantics, situations (worldly facts) have been considered objects of (immediate) perception (Barwise / Perry 1981).

(90) a. The case of the cancer patient that Mary described exists / ??? occurred / ??? presented itself.

b. That case of fraud happened yesterday.

Here object-related cases inherit their mode of existence from the correlated object. Similarly, object-related and property-related cases may inherit perceptual or causal properties from the correlated objects. This may be attributed to *case* having another, related meaning, allowing nominal *case*-NPs to describe objects reduced to only some of their properties, those fulfilling the condition in question. Such 'filtered objects' are like the original objects, but they will have only some of the properties of the original objects, such as their modes of being and properties of spatial location and causal efficaciousness.[39] The properties or relations that are constitutive of object-related cases depend entirely on the filtering condition.[40]

9.3. Event-related cases

Another type of *case*-term relates to an event, for example *the case of bad weather* or *the case of a defeat.* Such event-related *case*-terms have a semantics more closely related to the semantics of clausal *case*-terms than object-related ones. But as such, again, their semantics can be based on truth-making. Event-related cases differ from other object-related cases in that they can easily be correlated with a merely possible event. This may lead to sentences having the status of conditionals, as below:

(91) We will cancel the event in the case of bad weather.

A case of an event is not identical to the event itself. The difference is apparent with certain object-related attitude verbs such as *imagine* and *remember*:

[39] Note that filtered entities as entities reduced to some of their features are not tropes or features themselves, that is, instantiations of properties in ordinary objects. While cases may share some of their properties with the correlated objects, tropes hardly ever share properties with their bearers. Cases as filtered entities are not tropes, but 'tropers', to use Loux's (ms) term. A filtered object would be something in between a 'thin particular' and a 'thick particular' to use Armstrong's (1997) terms.

[40] This condition, which sets up object-related cases as situations or filtered objects, may be called an *ontological case filter* mimicking the more familiar, but unrelated, syntactic notion of a 'Case Filter' of Chomsky (1981).

(92) a. The coach remembered an unexpected victory.

b. The coach remembered the case of an unexpected victory.

Whereas in (92a) the coach is likely to remember the details of the victory (as experienced by himself), in (92b) it suffices entirely that the coach remembers just the fact that a victory happened (which he probably was not involved in). Event-related cases need not involve the details of the correlated event, which supports the view that a case of an event is a situation making it true that the event occurs, which is distinct from the event itself.

The difference between events and cases of events is further supported by the observation that cases of events do not have typical event properties. Cases of events do not 'last', 'start', or 'end', and generally cannot be 'sudden', 'visible', or 'audible':

(93) a. A snowfall might be long-lasting / sudden / visible.

b. ?? The case of a snowfall might be long-lasting / sudden / visible.

A case of an event thus has lost the descriptive properties and temporal structure of the event.

Cases of events and events also differ in what prepositions they may go along with. Thus, *during* is a preposition selecting events (*during snow*), but it does not select cases (?? *during a case of snow*). Conversely, *in* applies to cases (*in the case of a defeat*), but not in the same way to events (?? *in a defeat*).

The semantics of event-related *case* terms thus involves truth-making, though in a somewhat different way than for other object-related cases. Regarding the complement of an event–related *case* term as a sort of 'concealed proposition', its semantics should be based on an implicit existence predicate for events, say *occur*, as below:

(94) For an event noun N,

[*the case of an* N] = the kind of case k such that for any instance s of k, s ⊩ *an* N *occurs*.

Event-related *case*-terms thus further support the semantics of cases based on truthmaking.

10. Conclusion

In every day speech, talk about 'cases' in abundant, and it is surprising that constructions with the noun *case* (or similar nouns in other languages) have so far received almost no attention in the linguistic or philosophical literature. This paper has established a range of semantic generalizations regarding *case*-constructions and has argued that the noun *case* expresses the notion of truthmaking in the sense of Fine's truthmaker semantics. *Case*-constructions not only give support for that semantics (including for particular truthmaking conditions such as those for disjunctions and negations), they also enrich that approach with their involvement of kinds of truthmakers, of truthmaking to propositional attitudes, and of existence predicates for cases.

The reflection of the truthmaking-relation in *case*-constructions raises the question of how general *case*-constructions are across languages. As a matter of fact, not all languages have *case*-constructions, not even all European languages. Chinese lacks them, as do Danish and Swedish, to mention just three. This, of course, does not undermine the project of truthmaker semantics as such: the truthmaking relation may play an important in the semantics of natural language even if some languages do not have constructions displaying it overtly.

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