

On the Ontology of ‘Cases’

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Talk about ‘cases’ is abundant in everyday speech. Yet constructions have hardly received any attention in the semantic literature with the exception of recent work in progress by van de Velde.¹ In this paper, I will focus on the ontology of the cases we refer to with noun phrases with *case* as head noun. I will argue that ‘cases’ form an ontological category of their own and as such play the role of truthmakers. Cases are not identical to material objects, events, tropes, facts, states of affairs, or ‘possibilities’. Thus, a medical case is distinct from a patient and a legal case from the act of the crime. Cases rather form a distinctive ontological category and generally come with their own existence predicate, shared with no other type of entity.

In English, which this paper will focus on, the noun *case* plays a role in the following sorts of constructions:

Nominal case-NPs

- (1) a. *the case of the stolen statue*
b. *a case of flu*

Clausal case-NPs

- (2) a. *the case in which it might rain*
b. *the case in which a student fails the exam*

Conditionals and modals

- (3) a. *In case it rains, we won’t go. In that case we will stay home.*
b. John might go to the party. In that case, I will go too.

The predicate *is the case*

- (4) a. *It is not the case that John is at home.*
b. *It is sometimes the case that John is at home.*

I will argue that the constructions in (1)-(3) involve reference to cases acting as truthmakers in one way or another. *Is the case* in (4), I will argue, does not act as a truth predicate, but rather expresses the truth-making relation, relating situation-like cases to the *that*-clause. (4b) involves existential quantification over situation-like cases as truth makers for the sentence S.

The noun *case* in the very same constructions has counterparts in a number of other European languages, such as German (*Fall*), French (*cas*), Italian (*caso*), and Spanish (*caso*).

I will propose that cases are ‘filtered objects’ or ‘filtered pluralities of objects’. They are obtained, so to speak, by reducing an ordinary object or plurality of objects to just some of its properties (including relational properties) relative to a general condition.

I will start with a number of observations about clausal *case*-NPs. I will then look more closely at nominal *case*-NPs and propose a particular ontological account of the sorts of entities they describe. This account will then be extended to the entities described by clausal *case*-NPs. Finally, I will argue that *is the case* expresses truth-making with cases being

¹ See D. Van de Velde (ms).

suitable candidates for the truth-making role in general, and I will sketch semantic analyses of the various *case*-constructions on the basis of truth-making.

1. Clausal *case*-NPs: Situation-like cases

There are two kinds of clausal *case*-NPs. The first type, illustrated in (5), appears to describe a particular possible situation; the second type, illustrated in (6), a kind of situation, in the sense of Carlson (1977):

Particular clausal *case*-NPs

(5) a. *the case in which John will return*

b. *The case in which it might rain*

Generic clausal *case*-NPs

(6) a. *the case in which it rains on a Sunday*

b. *the case in which a student fails the exam*

What are situation-like cases? Are they worldly facts (or possible facts), possibilities, events, or states of affairs?² A remarkable feature of situation-like cases is that they come with their own existence predicate. In general, existence predicates in natural language are restricted to particular types of objects. Thus, *exist* applies to material and abstract objects, but not to events, which instead take *happen* or *take place*. *Obtain* is yet another existence predicate, reserved for entities like facts, laws, and conditions. None of those existence predicates naturally apply to cases:

(7) 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.*

In English, *present itself* and *occur* are used as existence predicates for cases (the latter can apply also to certain types of events):

(8) 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.*

In some other European languages, the choice of a case-specific existence predicate is even more remarkable. In German *eintreten* ‘enter’ is the existence predicate reserved for cases (and certain sorts of events), as in (9a); In French, the existence predicate for cases is *se produire* ‘produce itself’ (which also applies to certain types of events), as in (9b):

(9) a. *Der Fall, daß Hans nicht zurückkommt, ist nicht eintreten.*

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

b. *Le cas ou Jean serait retourné ne s’est pas encore produit.*

‘The case where John returns did not produce itself.’

² To say that situation-like cases are situations does not help much since the notion of a situation in semantics is a rather technical one and allows for various sorts of construals.

If the choice of existence predicates is taken as an indication of ontological categories, then several conclusions can be drawn. First of all, cases are not (worldly or nonworldly) facts. Cases can be merely possible, whereas facts cannot. Moreover, cases do not go along with the existence predicate *obtain*, the existence predicate specific to facts and similar entities. Second, cases are not ‘possibilities’. Possibilities as ‘mere’ possibilities ‘exist’ (*the possibility that John may never return exists*). By contrast, merely possible cases do not ‘exist’, that is, occur or present themselves. If the existence predicate *occur* or the existence predicate *present itself* is true of a case, it means that the case is a factual one, not a merely possible one. Finally, cases are not states of affairs. States of affairs exist whether or not they obtain. By contrast, merely possible cases do not ‘exist’ and cases can never be said to obtain.

Situation-like cases are also involved in *case*-constructions of a conditional or quasi-conditional sort:

- (10) a. *In case it rains, we won't go.*
b. *We will take an umbrella in case it rains.*

There are no specific *case*-constructions involving modals. However, modals of possibility may introduce a situation-like case to serve as the referent of a subsequent *case*-anaphor:

- (11) *John might go to the party. In that case, I will go too.*

2. Nominal *case*-constructions

How should situation-like cases be conceived ontologically given that they cannot be identified with facts, possibilities, events, or states of affairs? To answer that question, I will first take a closer look at nominal *case*-NPs and develop an account that can then be carried over to situation-like cases as well.

Three types of nominal *case*-NPs need to be distinguished: those describing cases as instances of universals, those describing cases as correlated with objects, and those describing cases as correlated with events.

2.1. Cases as instances of universals

Examples of cases described as instances of universals may be medical or legal cases or cases of a particular art movement:

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

The cases described as instances of universals are trope-like or event-like, which is of course because the universals in question have as their instances tropes or events. But also individuals and quantities may be described as cases of universals (Van de Velde, ms):

- (13) a. *I knew cases of honest journalists.*

b. *I am not aware of a case of outstanding Indian wine.*

What kind of entity may be described as an instance of a universal depends on the universal itself, whether it is a quality, a kind of event, a kind of individual, or a kind of quantity.

2.2 Object-related cases

Case-constructions that describe cases as related to objects are those below:

- (14) 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 describes what I call *the correlated object* of the case.

Generally, a case has different properties than its correlated object and should be considered an entity distinct from it. First, a case and its correlated object behave differently with respect to predicates expressing object-related attitudes. This is so whether the correlated object is considered a material object or a complex feature or trope, as illustrated by the semantic differences among the following sentences:

- (15) a. *We studied the case of the disabled student.*
b. *We studied the disabled student.*
c. *We studied the disability of the student.*

Understanding (15a) 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 in the context. It depends on, let's say, whether the features are features relevant from a medical or legal point of view and thus constitutive of a medical or a legal case. Importantly, the features may include not only intrinsic features of the object in question, but also relations it enters to other things, relational features.

No filtering condition is not required for (15b) and (15c). Here the object of study may simply be the student himself or his disability.

Cases and their correlated objects behave quite differently also as objects of discussion and evaluation:

- (16) a. *We discussed the case of the book.*
b. *We discussed the book.*
(17) a. *The case of the stolen statue is interesting.*
b. *The stolen statue is interesting.*
c. *The theft of the statue is interesting.*

Again *case-NPs* require a contextual filter reducing the correlated object to just relevant properties.

Cases and their correlated objects also display different part structures. In general, a case does not inherit its part-structure from its correlated object. Rather, its part structure is 'reset', that is, entirely driven by the relevant features (intrinsic or relational) obtained by filtering the correlated object through the relevant general condition:

- (18) 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.*

Cases 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:

- (19) 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;

- (20) a. ??? *I saw / noticed the case of the broken vase.*
- b. *I noticed the broken vase.*

The condition is not strict, though. Under special circumstances, cases do act as objects of perception:

- (21) *This case of musical experimentation sounds horrible.*

The acceptability of such examples can be traced to the perceivable quality forming part of the filtered features constituting the case.

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

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

Again, particular circumstances allow for exceptions:

- (22) c. *This one case of cholera was the cause of a great epidemic.*

What properties cases have depends entirely on the filtering condition. Some properties of the correlated object may pass through the filter. But other properties of cases will be reset on the basis of what features are filtered through. This in particular holds for attitudinal and evaluative properties as well as for properties based on the part structure of cases.

2.3. An account of object-related cases

We have seen that cases can be described by two different constructions: one involving reference to a universal and the other involving reference to the object correlated with the case. The two constructions together in fact reflect the way cases are individuated. We have seen that an implicit general filtering condition plays a role also in the individuation of cases described by reference to the correlated object. Thus, cases in general are driven both by a general condition or universal and a correlated object. The general condition serves to filter

the underlying object, reducing it to relevant intrinsic and relational features. Cases thus will be *filtered entities*³.

Given the implicit presence of a filter, the lexical meaning of *case* can be considered a three-place relation taking the general condition and a particular object as an explicit or implicit argument. The noun *case* actually is generally used as a functional noun, expressing a function mapping an object and a general condition onto the case that is the result of filtering the object through the general condition. Thus we have (23), where C is the contextually given filter:

(23) [*The case of the stolen statue*]^C = [*case*](C, [*the stolen statue*])

How would this account for situation-like cases? Let us consider the clausal construction *the case in which John marries Mary*. The future case described by this NP will involve John and Mary and their standing in the relation of one marrying the other. This relation may itself be considered the filter. Thus, the proposal is that situation-like cases are pluralities of objects reduced to the properties and relations specified by the sentence in question.

How would this work for quantificational clausal *case*-NPs such as *the case in which someone discovers a solution*? We will see that the cases described by such *case*-NPs are not constituted by existential quantifiers, but involve particular individuals, in this case a particular person and a particular solution. This matches the account of the semantics of clausal *case*-NPs based on truth-making proposed later.

A generic clausal *case*-NP will stand for a kind whose instances are situation-like cases, which means, given the proposal, pluralities of objects filtered through the complex condition specified by the *that*-clause.

Cases described by nominal *case*-NPs may go along with the existence predicate *exist* or the existence predicate *happen*, unlike cases described by clausal *case*-NPs:

- (24) a. *The case of the cancer patient that Mary described exists / ??? occurred / ??? presented itself.*
b. *That case of fraud happened yesterday.*

The reason is that cases described by nominal *case*-NPs may inherit some properties from their correlated objects. These properties include the mode of existence expressed by the existence predicate that the correlated object goes along with. By contrast, cases described by clausal *case*-NPs cannot inherit properties, but rather set up their own mode of existence.

3. The *is the case*-construction

A particularly interesting construction that *case* engages in is *is the case*, a syntactic predicate allowing a *that*-clause or a sentential pronoun as subject:

- (25) a. *That it is raining is not the case.*

³ Note that filtered entities as entities reduced to some of their features are not tropes or features themselves, the tropes that have the unfiltered entities as bearers.

While cases may share some of their properties with the correlated objects, as we have seen, tropes hardly every share properties with their bearers. Cases or filtered entities are not tropes, but ‘tropers’, to use M. Loux’s (ms) term.

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

A common view among philosophers is that *is the case* and *is true* mean the same thing:

(26) *That it is raining is not true.*

However, there are significant semantic differences, in some languages, between truth predicates and *is the case*. English *is true* and *is the case*, for some reason, do not show the difference very well, but, for example, German *ist wahr* ‘is true’ and *ist der Fall* ‘is the case’ do. One semantic difference concerns adverbial modifiers. Thus in German *ist wahr* ‘is true’ and *is the case* differ in their acceptance of location modifiers. Location modifiers are perfectly fine with *ist der Fall*, but they are generally hard to make sense of with *ist wahr*:

(27) a. *In unserer Firma ist es nicht der Fall, dass man ohne Erklärung entlassen wird.*

‘In our firm, it is not the case that one gets fired without explanation.’

b. ??? *In unserer Firma ist es nicht wahr, dass man ohne Erklärung entlassen wird.*

‘In our firm, it is not true that one gets fired without explanation.’

Whereas (27a) is perfectly natural as a statement of fact, (27b) is unacceptable or at least conveys a somewhat particular metasemantic notion of location-relative truth.

Furthermore, *is the case* is fine with adverbs of quantification, with which *is true* is hardly acceptable:

(28) a. *It was twice the case that someone was absent.*

b. ??? *It was twice true that someone was absent.*

The use of adverbs of quantification with *is the case* shows that the subject clause may be evaluated with respect to the various situations that the adverb of quantification ranges over. By contrast, the *that*-clause with *is true* needs to be propositionally complete.

The semantic behavior of *is the case* with respect to adverbial modifiers supports an analysis based on truth-making⁴. While truthmaking is not an uncontroversial philosophical notion, for present purposes it should suffice to clarify that truthmaking is a relation that holds between an entity and a sentence just in case the sentence is true in virtue of that entity. The entity in virtue of which the sentence is true is the truthmaker of the sentence. Instead of holding between an entity and a sentence, truth-making may alternatively be taken to hold between an entity and a proposition⁵.

Making use of truth-making, *that S is sometimes the case* will involve existential quantification over cases (with *sometimes*) and claims that some cases make S true. The semantics of *is the case* with a location modifier and an adverb of quantification will thus be as follows, where \Vdash is the truth-making relation:

(30) a. For a location modifier PP, PP *it is the case that S* is true iff for the maximal actual ‘case’ s such that $PP(s)$, $s \Vdash S$.

⁴ For the notion of truth-making see, for example, K. Mulligan/P. Simons/B. Smith (1984), D. Armstrong (1997, 2004), and G. Rodriguez-Pereyra (2006).

⁵ A notion related to the notion of truth-making when applied to situation-related ‘cases’ is the relation of exemplification in Kratzer (online), a relation that holds between situations and propositions.

b. *It is sometimes the case that S* is true iff for some ‘cases’ s , $s \Vdash S$.

I will assume standard conditions on truth making of conjunctions, disjunctions, and existential quantification as follows⁶:

- (31) a. $s \Vdash S \ \& \ S'$ iff for cases s' and s'' , $s = \text{sum}(s, s')$ and $s' \Vdash S$ and $s'' \Vdash S'$.
b. $s \Vdash S \vee S'$ iff $s \Vdash S$ or $s \Vdash S'$
c. $s \Vdash \exists x S$ iff $s \Vdash S[x/d]$ for some individual d .

The relation between a ‘case’ and the *that*-clause that is involved in the semantics of the *is the case*-construction needs to be the relation of exact truth-making⁷. This is clear from the way adverbs of quantification are understood:

- (32) a. *It was twice the case that John made a mistake.*
b. *It was only once the case that John lost the game.*

Twice in (32a) counts 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 larger situations or sums of situations. Similarly, *once* in (32b) counts situations of a single event of losing only.

If adverbs of quantification with *is the case* count truthmaking cases, then those should be part of the world and not nonworldly facts (that is, facts that correspond to the truth of a proposition). The latter could be quantificational and disjunctive, the former cannot. The way indefinites and disjunctions contribute to the ‘cases’ that adverbs of quantification count makes this very clear:

- (33) a. *It was only once the case that someone failed the exam.*
b. *It was three times the case that John or Mary received a gift.*

Once in (33a) counts cases involving exactly one individual failing the exam; it does not count a single fact, the fact that someone failed the exam. *Three times* in (33b) counts cases involving either John or Mary; it does not count a single disjunctive fact.

The truth-making relation has applications to the semantics of other *case*-constructions as well. First, it helps to account for anaphoric reference to cases introduced by modals of possibility, as in (11). Here the truthmaker of the modal sentence will be a merely possible case, which will then act as the semantic value of *that case*.

Truthmaking is also suited for the analysis of conditional and quasi-conditional *case*-constructions. Ordinary conditionals in fact have been analysed on the basis of truth-making (K. Fine 2012), and it is expected that such an analysis is suited for conditional *case*-constructions as well⁸. For conditional *case*-constructions, truth-making may come into play

⁶ The condition for sentences with universal quantification and conditionals are less obvious and in fact controversial and I will not specify truthmaking conditions for them here. See D. Armstrong (2004) for a discussion and a proposal.

⁷ This is the truth-making relation that is used in G. Rodriguez-Pereyra (2005), F. Moltmann (2007) and K. Fine (2012).

⁸ I will not go into the details of Fine’s analysis of conditionals, but adopt a much simplified analysis.

in roughly the following way. The truth of a conditional *in case* S, S' requires that for any case making S true, there will be a larger case part of which makes S' true⁹. 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. Truth-making should also be involved in the semantics of clausal *case*-NP. Clausal *case*-NPs will refer to cases making the *which*-clause true, which on the present view would amount to the cases being filtered pluralities of objects. Note that clausal *case*-NPs with a modal will not refer to a unique case, but a plurality of cases, as below:

(34) a. [*the case in which might* S]^w = the cases ss such for any s, s < ss and s R w, s ⊨ S.

Here R is the relevant relation of accessibility and < the relation that holds between an object and a plurality of objects of which the former is part.

Truth-making can also be used to specify the semantic values of clausal *case*-NPs referring to kinds of cases. Kinds of cases may be viewed as pluralities of possible and actual cases so that we have the following very simple analysis:

(34) b. [*the case in which* S] = the ss such that for any s < ss, s ⊨ S.

Truth-making finally can be applied to the semantics of nominal *case*-NPs describing object-related cases. This might be done as below, where C is the contextually given filtering condition, and what is made true is now a structured proposition consisting of that condition and the object in question:

(34) c. [*the case of* X]^C = λs[s ⊨ <C, [X]>], for a referential NP X.

It is the case that S appears to involve as its interpretation the sort of semantics that J. L. 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. That is, the situation referred to acts like a truth maker of that sentence. On the present view, this is 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 quite simply the semantics of the *is the case*-construction.

4. Conclusion

The truth-making idea as a general view about truth says that if a sentence is true, it is true in virtue of something in the world that makes it true. The view that grounding requires an entity

See also A. Kratzer (online) and references therein for analyses of conditionals on the basis of situations.

⁹ For a more developed analysis of *if*-conditionals based on truth-making states see Fine (to appear). Such analysis may apply to *in*-phrases with clausal *case*-NPs as well.

to act as a truth maker is a highly controversial philosophical view, though.¹⁰ Philosophers such as D. Lewis (2001) and J. Hornby (2005) agree that the truth of sentences should be grounded, but not in entities acting as truth makers, but rather in *how* things are. If truth-making just plays a role in the semantics of *case*-constructions, then the use of truth-making for the semantics of that construction appears compatible with that view: *case* could be considered a ‘nominalizing’ or rather *reifying expression*, mapping the way things are to support the truth of a sentence onto the set of objects that would act as the truthmakers of the sentence. Formally, *case* would then be an expression denoting a function mapping a world *w* and a proposition onto the set of objects that are reifications of whatever it is in *w* that makes the proposition true.

(35) [*case in which S*]^w = {*s* : [*case*](*w*, [*S*]) (*s*)}

If *case*-constructions in English (and some other European languages) are revealing as to the notion of truthmaking and the nature of truthmakers, this raises the question how general such constructions are across languages. As a matter of fact, not all languages have *case*-constructions, not even all European languages. Chinese lacks them, as does Swedish, to mention just two. This does not undermine the view, though, that cases are entities of a particular sort, act as truthmakers, and play particular semantic roles. Cases may to an extent play the very same roles in the semantics of a language that does not have expressions to describe them explicitly, for example in the semantics of conditionals. Moreover, cases may play the role of truthmakers regardless of whether or not a language has expressions to refer to them or to quantify over them. And finally, cases may be what was proposed that they are (namely filtered object) independently of any language.

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¹⁰ For an overview of the truthmaking debate, see G. Rodriguez-Pereyra (2006) and the contributions in H. Beebe/J. Dodd (2005).

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