Constraints on Correspondence[1]

BARRY SMITH

University of Manchester

§ 1. Introduction

My aim in what follows is to lay down some constraints on a correspondence theory of truth for empirical sentences of a natural language. The constraints in question derive from the attempt to construct such a theory as far as possible without appeal to abstract entities of any sort. Let us concentrate, for the moment, on the fact that our business is natural language. Natural languages are natural. They are parts of the natural world. But that to which a true empirical sentence of such a language corresponds is also a part of the natural world. Can we, then, find some means of delineating those bits of the world which serve as correspondents? Call such bits of reality 'truth-makers'.[2] A moment's reflection shows that, while truth-makers as here conceived are certainly not familiar items of worldly furniture, we none the less have rather strong intuitions as to what the boundary lines around them are in any given case. Such intuitions tell us, for example, that the tallest Finnish spy and Ronald Reagan are not involved in making true the sentence '*I now (sitting here in Graz) have a headache*'. Intuitively, the boundary around the relevant truth-maker has got to be not so tight that it excludes the relevant bits of my head, but tight enough to exclude bits of Finland and Ronald Reagan.

The truth of empirical sentences has a *fundamentum in re*. There are entities in reality to which true empirical sentences correspond. This, at least, is a basic assumption of the ontological theory to be defended in what follows. Of course, not everyone would be happy to call such a theory a theory of 'truth' (of truth in general); and certainly not everything that is involved in a sentence's being true is captured within the framework here presented. The job of describing the relation between sentences and their truth-makers must surely, however, in any case remain.

Truth-makers are, first of all, the objectual correlates of sentences (or of judgments or sentence-using acts). Hence they are distinguished from the *bearers* of truth, whatever these might be. More generally they are distinguished from all meaning-entities (propositions, *Gedanken*,

sentence-meanings, *Sätze an sich*) of the tradition. More generally still, they are distinguished from all abstract entities outside the domain of what is real, be they sets, ideal contents, possible worlds, noemata, propositional guises, or what one will. Many modern philosophers take for granted the thesis that the way to a theory of truth lies in a concern with abstract (normally set-theoretic) structures or 'models' of certain sorts. This thesis derives, I want to claim, from the assumption that it is possible to construct a theory of truth which will work for mathematical sentences (and for other sentences about abstracta) in just the same way that it works for empirical sentences. Because there is nothing in ordinary material reality that makes mathematical sentences true, semantic theorists have turned instead to set-theoretical models, sets of mathematical objects being in every way comparable to sets of empirical objects. Truth has thereby come to be conceived (effectively) as a relation between sentences and sets. But this conception is sustainable only so long as we are content, in our semantic considerations of empirical sentences, to remain at one remove from the empirical world.

This is not by any means to deny that the investigation of abstract set-theoretical structures can serve to throw important light on the logical properties of sentences. Broadly, it can illuminate those properties which are shared in common by all assertive sentences, whether they be empirical or non-empirical and whether they concern what is abstract or what is concrete. Above all—and this is the glory of post-Tarskian semantics—set-theoretic semantics can help us to understand the truth-behaviour of logically compound sentences in terms of a prior understanding of the truth-behaviour of the logically simple sentences from out of which they are constructed.[3] Where, however, we are interested in the special properties of logically simple sentences of one or other sort, be they empirical sentences about reality or sentences of mathematics, then semantics of the post-Tarskian sort quite simply leaves us in the dark.

§ 2. Theories of Truth-Makers

We begin by enunciating the following purely stipulative (REALITY)-principle:

> (REALITY) Truth-makers for empirical sentences are spatio-temporal denizens of the real material world.

It would be a mistake to suppose that for each true empirical sentence there is some real correlate precisely coordinated to it. Above all, it

would be a mistake to suppose that there are logically compound correlates of logically compound sentences. The logical constants do not represent, and nor, either, do the logically compound sentences in which such constants appear. Hence we shall affirm:

(ATOMICITY) There are no truth-maker-like entities corresponding to logically compound sentences.

Thus in particular there are no truth-maker-like entities corresponding to negative judgments. We shall assume also that there are no truth-maker-like entities corresponding to judgments which are false.

In laying down further principles we should like, as far as possible, to be able to draw on the standard accounts of facts, *Sachverhalte*, states of affairs, situations, etc. in the literature since Wittgenstein. Unfortunately such accounts were formulated for purposes other than those of ontology and show insufficient consideration of the problem of how *Sachverhalte* might relate to entities in other categories (for example to the mental acts in which they are apprehended and to the objects which they somehow involve). It will none the less be useful, as part of our attempt to provide a more detailed account of the nature of *Sachverhalte* and of their interrelations with other entities, to examine the more standard accounts, and to point out some of their more obvious virtues and inadequacies.

Six basic approaches to the problem of truth-making can be distinguished in the literature, which lead to distinct but partially overlapping conceptions of what a truth-maker is:

— *The Verb Correlate Theory*: Truth-makers are events (or more generally they are the correlates of main verbs of empirical sentences).

— *The Plurality Theory*: Truth-makers are manifolds, pluralities or sets of real world objects. They involve their objects not as parts, but as members or elements.

— *The Real Complex Theory*: Truth-makers are ordinary real-world complexes including the relevant objects as parts and existing on the same ontological level as these objects.

— *The Sui Generis Propositional Complex Theory*: Truth-makers are special sorts of complex wholes: they contain the relevant objects as parts, but in such a way that what serves as truth-maker has its own *sui generis* 'propositional articulation'.

—*The Higher Order Object Theory*: Truth-makers are higher-order objects which are founded on the relevant objects but do not contain the latter as parts.

—*The Platonistic Theory*: Truth-makers are (in whole or in part) ideal or abstract entities existing outside time and space and thus standing in neither mereological nor foundation relations to the relevant objects.

§ 3. Truth-Makers as Events (The Verb Correlate Theory)

A theory of truth-makers should yield an account of why it is that sentence-shaped chunks of reality are not normally counted in our stocktakings of worldly furniture (and are for example not normally given proper names in natural languages). The verb correlate theory copes with this idiosyncrasy of the *Sachverhalt*-category by denying that there are *Sachverhalte*, as special sorts of entities, at all. It operates instead with occurrences, events, processes and states, entities which enjoy some independent familiarity. Such entities are of course closely tied up with the main verbs of sentences about the empirical world, and this suggests a uniquely economical version of the correspondence theory of truth, according to which an empirical sentence would be made true simply by that entity with which its main verb is associated. Consider Russell's assertion to the effect that what makes it true that Socrates died is 'a certain physiological occurrence which happened in Athens long ago'.[4] Or Davidson's remark that if the sentence *Amundsen flew to the North Pole in 1926* is true, then 'there is an event that makes it true'.[5]

A theory along these lines is made even more attractive by the fact that every sentence *has* a main verb, which makes it particularly easy to locate (or at least produce a name for) the relevant truth-maker. Thus for example 'John kissed Mary', if it is true, would be made true by some particular process of kissing. An account along these lines can be shown to be capable of coping with the truth-behaviour of a wide variety of simple sentences about realia.[6] Yet it faces a number of problems, problems which may lead us after all to embrace a special category or categories of complex entities which would correspond to what, in the tradition, were called '*Sachverhalte*' or 'states of affairs'.

How, first of all, can the verb correlate theory deal with singular existential sentences and with statements of identity? Are we to admit

special 'accidents of existence' and 'accidents of identity' which would make such sentences true? What of sentences asserting predications in the category of substance like 'Tibbles is a cat'? One move open to the defender of the verb correlate theory is to deny that sentences of the given sort are empirical, so that they fall naturally outside the range of truth-maker theory as here conceived. This does not cope with all classes of problem cases however. For what of counterfactual sentences? What of comparative sentences like 'John is taller than Mary', and sentences like 'John is in Salzburg'? Are we to admit special relational accidents of being-taller-than (one for each pair of persons who stand in a relation of the given sort), and special accidents of place? Or must we not much rather find some means of allowing John and Mary or John and Salzburg (and other non-verb correlates) to play some direct role in making true sentences of the given sorts? And what of sentences expressing Cambridge changes, like 'Hans just became a father'? What of sentences involving adverbial modification (even adverbial modification involving reference to other objects, as for example in 'John is sitting *next to Mary*')? The surviving proponent of the verb correlate theory (Mulligan) must show not merely that it is possible to delineate a natural class of sentences for which the theory can be made to work, but also that it is possible to deal with the problem cases outside this class by treating them as derivative of these non-problem cases in roughly the way in which logically compound sentences can be treated as derivative of sentences which are logically simple. Even assuming that all of this can be done, however, and in a non-*ad hoc* way, difficulties of principle will still remain.

The verb correlate theory assumes, in effect, that propositional articulation relates exclusively to what exists on the side of the sentence, not to what exists out there in the world of ordinary objects. Yet this seems to imply that the verb correlate theory has no means to do justice to an opposition among the objectual correlates of our acts, between those capable of being touched, or loved, or noticed, and those capable of being asserted, or questioned, or called into doubt. A parallel distinction may be present also within the realm of perceptual acts: a kiss or a smile, it might be argued, can be perceived in a simple perceptual act. *That Mary is kissing* is not capable of being perceived in this way, but requires a special kind of perceptual act, an act of *seeing that*.

There is in this sense a constraint of intimate union between judgment and truth-maker, so that we can formulate the principle:

> (JUDGEABILITY) Truth-makers must be judgeable. They must enjoy at least the dispositional property that acts of judging (or sentential acts of other sorts) are able to become unified with them in the framework of a larger whole.

The precise nature of the unifying relation here remains to be specified. Already, however, we can see why special truth-makers (tailor-made, as it were, for the job of making true) might be in better shape to become bound up with judgments in the relevant way than are isolated events or processes.

Suppose, now, that 'John kisses Mary' is true. Then we have a strong intuition to the effect that John himself is involved in making true the given sentence. It is this intuition which makes us want to say that the thesis that that to which a sentence corresponds should coincide with the correlate merely of a sentence-part does less than justice to the idea of a 'correspondence' between sentence and reality. Essential to this idea seems to be something like the following mereological principle:

> (CORRESPONDENCE) If *a* makes *p* true then *a* comprehends as parts or elements all those objects to which reference is made in *p*.

Here 'reference'. (like 'object'), has to be taken in a wide sense, a sense in which verbs, too, in their natural settings, will refer to the events, processes or states with which they are correlated.

The (CORRESPONDENCE) principle, too, is restricted in its application to sentences which are logically non-compound. But which sentences are non-compound? If *Napoleon's great-great-granddaughter takes tea with Lenin's secretary's niece* is true, then are Napoleon and Lenin themselves involved in making it true?

The principle of (CORRESPONDENCE) captures part of what is involved in the traditional idea that a truth-maker for *p* must have a multiplicity (a *'logische Mannigfaligkeit'*, as Wittgenstein puts it) which at least approximates to that of *p*. We do not, however, embrace the stronger principle to the effect that a truth-maker for *p* comprehends all *and only* those objects to which reference is made in *p*. This stronger principle is to be rejected not least because the things, events, processes etc., which are responsible for the truth of *p* typically have a multiplicity of their own, not reflected in the sentence *p* itself. (Wittgenstein's solution to this problem is to deny such multiplicity by conceiving *Sachverhalte* as built up out of 'simple objects'.)

§ 4. Truth-Makers as Pluralities of Objects

Closely related to the verb correlate theory is the view which holds that the truth-maker of an empirical sentence is no more and no less than the relevant objects themselves (those to which reference is made in the sentence in question), taken together as a plurality or manifold, i. e. in

such a way that the syntactic distinction between sentence and list has no ontological counterpart.

A view along these lines seems to satisfy (REALITY), (ATOMIC-ITY) and (CORRESPONDENCE). Like the verb correlate theory, however, it has problems with (JUDGEABILITY). Moreover, it has difficulties of its own, as can be seen if we consider, for example, that plurality which consists of John, Mary and the kiss which (if the plurality view is correct) makes true the sentence 'John kisses Mary'. Why does this same plurality not make true the sentence 'Mary kisses John'? It will not do to say that this is because the kiss is connected up to John and Mary in a way appropriate only for making true the sentence 'John kisses Mary'. For it is the very assumption of the plurality theory that we are to treat each object not merely as a single unit but also as separate from the objects with which it is connected in the real world. Within the plurality the kiss has, as it were, lost its direction and it has lost its roots. Objectual pluralities in the sense of the plurality theory thereby seem to manifest too little structure. There is nothing like a *verb*, in an objectual plurality, nothing like tense, aspect, transitivity and passive/active modifications, and nothing like agreement of verb and object. Again, we see that we need to invest in a truth-maker at least some structure of the sort that is involved in the corresponding sentence. One universal feature of the structure of the sentence is that its parts do not form a mere heap but are unified into a whole. A minimal requirement on truth-makers can perhaps therefore be formulated as follows:

> (UNITY) A truth-maker is not a heap of objects. A truth-maker is such that its parts or elements are somehow unified together into the framework of a whole.

One way to meet this (UNITY) requirement (at least partially in the spirit of the verb correlate theory) might be to accept a thesis to the effect that every truth-maker must contain something like a verb, which would act as a sort of glue to provide the unity required.

§ 5. Truth-Makers as Ordinary Complexes

When the attempt is made simultaneously to satisfy (CORRES-PONDENCE) and (UNITY), then the result is a family of what we might call 'complex-theories', which see *Sachverhalte* as existing only where the relevant objects are reticulated together within some larger whole and—in contrast to plurality theories—in such a way that the *Sachverhalt* incorporates this reticulation within itself.

Let us deal, first of all, with what one might call the ordinary complex theory. This holds that the objects in a *Sachverhalt*-complex are

reticulated together in the *Sachverhalt* in just the way in which they are in any case reticulated together in the world. The thesis that *Sachverhalte* exist in this sense is quite trivial. What is not trivial is the issue as to which real world complexes *are Sachverhalte*.

A moment's reflection will show that a whole all of whose components are material things (or are otherwise homogeneous) is not a complex in the sense of our present discussion. A *Sachverhalt* is not something like a table or a watch or a heap of stones. In fact we can lay down the principle:

> (HETEROGENEITY) A truth-making complex must involve a categorial heterogeneity of parts.

It is this heterogeneity which makes (UNITY) possible. One obvious sort of heterogeneity, now, is that between events, processes and states on the one hand, and things on the other (between relational and non-relational accidents and the substances in which they inhere). Might we not therefore embrace a view of the correlates of whole sentences as what results when an event, process or state is joined together mereologically with one or more substances on which it would depend. The *Sachverhalt* corresponding to the sentence 'John is white', for example, would be a complex whole having John and his individual whiteness as parts, bound together in just the way in which they are bound together in the world.[7] No problems are created for this conception by the fact that an accident is normally such as to exist for a shorter period of time than are the substances in which it inheres. Two substances, too, may become married together in different ways, even though they typically exist for different lenths of time. It suffices that the times at which they exist should overlap.

There is however a serious difficulty which confronts the idea of a truth-maker as a complex whole of the given sort. For it seems that, if John is white, then John plus his individual whiteness just is John himself, for John includes his whiteness as a proper part.

§ 6. Truth-Makers as Sui Generis Propositional Complexes

To solve this problem we might be tempted to regard the *Sachverhalt*-complex as involving a *sui generis* mode of configuration, i. e. as being such as to contain the relevant real objects as parts, but in such a way that these objects are bound together in a special ('propositional') way.

This idea may be provisionally understood against the background of the Husserlian idea of a 'syntactic entity', i. e. of an object which is, as Husserl puts it, 'derived from other objects by means of syntactic forms'.[8]

Consider, for example, a group of apples lying on a shelf. The individual apples are, we may suppose, such as to exist unproblematically. The pairs and triples of apples, in contrast, do not exist in and of themselves, but are merely syntactic entities in Husserl's sense.

Conceptions of *Sachverhalte* as *sui generis* complexes are what result when one applies this Husserlian idea to the correlates not of, say, conjunctive nominal phrases, but of entire sentences, so that the *Sachverhalt*-complex, too, is allowed to share directly in some of the sentence's propositional structure. This approach has one potential drawback: to see states of affairs as *sui generis* and supernumerary complexes in the way in which this was done, *inter alia* by Husserl, Reinach, Ingarden, Wittgenstein and Austin, may be to embrace a certain *duplication of reality*. For it implies a conception of the world as consisting not only of Johns and Marys, their hittings and kissings (reticulated together in the normal ways), but also of obtaining states of affairs, *that John is kissing Mary*, etc. But if there is both the ordinary real-world complex of John, Mary and the kiss, and the *sui generis* propositional complex of John, Mary and the kiss reticulated together in a *Sachverhalt*, then how, exactly, would these two superficially coincident entities be related to each other?

§ 7. The Snowfields Problem

Still more important however is a further problem, a problem which applies equally to both the ordinary complex theory and the *sui generis* theory, and which is neatly encapsulated in the following (slightly embellished) interchange between Frege and Russell:[9]

> Frege: ... Mont Blanc with its snowfields [its pieces of solidified lava, its crevices, its underground rodents] is not itself a component of the THOUGHT *Mont Blanc is 4000 metres high*.

> Russell: ... in spite of all its snowfields Mont Blanc itself is a component of what is actually ASSERTED in the PROPOSITION 'Mont Blanc is more than 4000 metres high'. We don't assert the thought ... a private psychological matter: we assert the OBJECT of the thought, ... a certain complex (an objective proposition, one might say) in which Mont Blanc itself is a component part.

Or, to take a slightly different example, are John's kidneys involved in making true the sentence 'John is kissing Mary'? Certainly John is

himself involved, if we accept a complex theory of one or other of the types discussed above; and surely if John himself is a part of some real-world complex, then so also are all the parts of John. Or is there some-way in which the truth-making relation may somehow suspend the trans-itivity of parthood? Note that the same problem arises for the verb corre-late theory, too (and constitutes yet another reason for doubting the cor-rectness of the latter). For we have no natural demarcation of a kissing, either (are John's toe-twitchings involved or not?).

Suppose that it is true that John's head aches. Then we have, in fact, an indefinite number of verb correlate truth-makers for the sentence in question. For it is clear that if some given phase of John's headache makes the given sentence true, then so does every phase including this given phase as part. This suggests the following principle of truth-mak-ing, a principle which has been ignored hitherto by advocates of the cor-respondence theory, though it seems to have a quite general validity, not restricted to the verb correlate theory in which it has its roots.

> (SUPERORDINACY) If a makes p true, then every b including a as part (every superordinate whole) is also such as to make p true.

It may be that some qualifications would have to be inserted here. One might, for example, want to insist that the relevant superordinate wholes be integral or natural wholes in one or other sense. If (SUPERORDI-NACY) can be taken in its most general form, however, then one immediate consequence would be that the world as a whole, which con-tains all other candidate truth-makers as parts, would serve to make all (true, empirical) sentences true.[10]

(SUPERORDINACY), now, suggests one way in which the snow-fields problem may be partially resolved. For it implies that we must reject the hitherto commonly accepted assumption that the relation of correspondence must be in every case a variety of isomorphism. Because not all parts of John are involved in making it true that John kisses Mary, a truth-maker for this sentence which contains the whole of John as part would be in a certain sense too large. (SUPERORDINACY) tells us that this is at least something we can live with. It tells us also that we can have a perfectly satisfactory theory of truth for the sentences of a natural language even though we may lack precise means for delineating those constituent micro-structures of the relevant wholes which would ulti-mately have to be recognised as *directly* relevant to the truth of the given sentences, e.g. from the point of view of natural science.

(SUPERORDINACY) tells us also, however, that if we are to realise our goal of determining precisely what it is in reality that makes a sentence true, then we must develop a conception of a (not necessarily

in every case unique) *minimal* truth-maker for a sentence *p*, an entity which makes *p* true and has no proper parts which make *p* true. Are we to conclude from the snowfields problem that we cannot do justice to this idea of minimal truth-maker after all, so that there is some necessary redundancy (or vagueness) in a theory of truth-making along the lines here conceived? A minimal truth-maker in relation to the sentence 'John kisses Mary' would have somehow to embrace all and only those objects directly involved in making true the given sentence. But what sort of skeletal object would this be? The thin guise, *kissing John?* John minus everything but his quivering lips?

§ 8. Truth-Makers as Objects of Higher Order

The next group of conceptions of truth-makers seeks to solve the snowfields problem without abandoning the view that *Sachverhalte* are real. Such conceptions view states of affairs as 'higher order objects' which are founded on their inferiora but do not contain the latter as parts or elements in any sense.[11] States of affairs are real (temporal) entities which exist (say) whenever the relevant objects are reticulated together in an appropriate way. States of affairs are something like individual relational properties whose relata are the objects unified together in any given case.

Different conceptions of relational properties will follow, now, according to our conception of the dependence of the *Sachverhalt* on associated acts.

At the one extreme is what we might call the objectivistic view, which admits *Sachverhalte* as corresponding to all possible true judgments, whether or not they are formulable in any actually existing language.[12] At the other extreme we have a family of what might be called constructivistic views, which admit (for example) only those *Sachverhalte* which correspond to actually occurring (true) judgings or to actually existing used linguistic forms. Constructivist views hereby add the additional requirement that the *Sachverhalt* be dependent also on the relevant act of judgment (so that it enjoys a merely fleeting existence). The *Sachverhalt* cannot exist unless the judgment exists, but the existence of the judgment (if true) brings with it automatically the existence of the *Sachverhalt* which makes it true. The *Sachverhalt* is then something like a real ('multiple') relation between a unified objectual complex on the one hand and an act of judgment on the other, an intermediary entity, along the lines of Husserl's *noemata* or Castañeda's guises.

Constructivism, which makes *Sachverhalt*-complexes a matter of what exists fleetingly, being in some sense contributed by the acts of the judging subject, has a certain advantage in ontological economy. It seems, however, to come near to making truth itself dependent on our acts, and this means, surely, that it must be rejected. It will not even do to say that the fleeting act-dependent structure has a *fundamentum in re* which serves to guarantee the objectivity of truth. For then the question arises what this *fundamentum* is, and this is just the question with which we began. More generally, it seems clear that whichever line we adopt as to the dependence of *Sachverhalte* on acts, the view which sees *Sachverhalte* as higher order objects does not yet do justice to our intuitions to the effect that (say) John, or John's kissing (a certain real world event which took place in Athens long ago), is directly involved in making true the sentence 'John kissed Mary'.

§ 9. Truth-Makers as Platonic Abstracta

The sixth family of theories are platonistic theories, i. e. theories which take states of affairs to be irreal (ideal or abstract) entities, existing outside time and space.

Platonistic theories can be seen as manifestations of a more general tendency to regard all syntactic entities as abstract or ideal, a tendency which receives its most fully worked out expression in the work of Frege.

Pressure in the direction of platonism flows from the assumption already criticised above that a theory of truth must treat empirical sentences and sentences about abstracta as if they were homogeneous. The most important pressure in this direction, however, derives from consideration of the fact that, if a sentence is true, then this property of the sentence is not subject to change. Hence, or so the argument goes, if the sentence is true because it is made true by some entity S, then S, too, must be immune from change. A similar argument leads to the commitment to 'propositions' as abstract or ideal *bearers* of truth. That this argument is not entirely cogent can be seen if we reflect on the fact that the name-object nexus, too, can obtain even where the object named has ceased to exist (perhaps even where this object does not yet exist).

As in the case of the higher order object theory, so also here, the most difficult problems for the platonist arise in virtue of the difficulties he faces in giving a coherent account of the relations between abstracta and the ever-changing concreta (including acts, uses of signs, etc.) in the world of what happens and is the case. How, above all, are abstract *Sachverhalte* to be linked to objects (John, Mary, kissings, seeings, etc.) in the world? It is no solution to regard the *Sachverhalt* as a universal

species related via instantiation to what is individual. This is to countenance appeal to individual instantiating *Sachverhalte* as additional realia — which brings us back once more to one or other of the views outlined above.

Hence even were we to admit *Sachverhalte* into our ontology as abstract sentence-correlates, this would still leave unanswered the question of what it is in reality which is involved in making true the sentences in question.

A further problem for platonistic views, however, and perhaps for the higher order object theory, too, is that such views threaten to detach truth from perceptual verification. Such detachment is admissible at most e. g. for sentences of mathematics. For our present purposes it seems that we can embrace the following strengthened form of (JUDGEABILITY):

> (VERIFIABILITY) Truth-makers for empirical sentences must be capable of serving as the objects of perceptual judgings (as the objects e. g. of acts of *seeing that* such and such is the case).

It is possible also to conceive the state of affairs as a hybrid complex of what is real and ideal. This conception is embraced by Russell in his doctrine of 'facts' or 'singular propositions',[13] and similar views have recently been resurrected by Kaplan, perhaps also by Barwise and Perry. While Russell saw correctly that sentences including proper names of real individuals have truth-makers which in some sense involve these individuals as parts, he held that such truth-makers involve abstract properties and relations also, properties and relations which are literally out of this world. We would argue therefore that Russell, too, provides only part of the story as concerns the relation between a true empirical sentence and that in the world which makes it true. Even if there are such hybrid Russellian *Sachverhalte*, then entities that are individual through and through will in any case be needed for a truly adequate correspondence theory of truth. For, as we have argued already, when John kisses Mary, then whatever might obtain in the domain of universals or abstracta, there is a certain real world event (or sequence of events) which contributes essentially to making true the relevant sentence. And the issue still remains as to how *this* truth-making relation is to be understood.

§ 10. Conclusion

The plurality theory, to repeat, leaves objects dangling, as if corresponding to a mere list; this destroys the unity of the truth-maker. Com-

plex views leave us with the snowfields problem: they do not tell us how the minimal truth-maker is delineated or demarcated from its surroundings. The *sui generis* complex view seems in addition to imply a duplication of reality, or at least it leaves open the question how ordinary and *sui generis* complexes are related one to another. The view of *Sachverhalte* as higher order objects, while preserving unity and avoiding the snowfields problem, threatens to make truth dependent on acts, and seems in any event not to tell us how objects in reality contribute to making true empirical sentences. Platonism, finally, leaves open the question as to how true empirical sentences relate to the substances, states, processes and events in the world which (help to) make them true, and so is at least in need of radical supplementation.

Each of the above conceptions, then, has problems of its own. Yet it seems that none is entirely without a grain of truth, so that one can at least hold out the hope that a more satisfactory conception might be constructed from the ingredients to hand. One might for example start out from the idea (underlying the constructivist variant of the higher order object theory) that *Sachverhalte* enjoy a merely fleeting existence because they are in some sense dependent upon our judging acts. (This would help to explain, too, the idiosyncrasy of the *Sachverhalt*-category referred to in § 3 above.) The judgment does not however bring the *Sachverhalt* into being from out of nowhere. It serves, rather, merely to delineate or discriminate the relevant underlying matter, and this is something which exists quite independently of the given delineation and can therefore also serve to guarantee the objectivity of the truth relation itself. The *Sachverhalt* is, we might say, delineation-dependent, but not matter-dependent, on a corresponding judgment.

To see how this might work, consider the way in which boundary lines are drawn on a map. The State of Indiana is, we can say, delineation-dependent on certain geographical decisions made by Jefferson. Yet clearly Jefferson did not bring the underlying mass of territory into existence from out of nowhere. Similarly, when I judge that I have a headache, I effect a certain special sort of conventional delineation of that whole which consists of myself together with a certain complex of physiological and psychological events. The given events are drawn together and given unity by dint of their being set into relief against a background that includes a larger mass of physiological and psychological processes in such a way that the resultant fleetingly existent whole possesses a structure something like that which is involved in the corresponding sentence.

It is of course a large question whether a theory of truth-makers along these lines can be constructed in a way that will satisfy all the prin-

ciples set forth in the above. Already, however, we can begin to see how such a theory might be able to find a place for *Sachverhalte* in reality, reticulated together with those objects, events and acts of judgment and perception in whose terms the truth of empirical sentences is ultimately to be understood.

NOTES

1 Earlier versions of this paper were read in Bloomington and Salzburg in 1987 and my thanks go to those who helped to improve it through their comments on these occasions.

2 Cf. K. Mulligan, P. M. Simons and B. Smith, "Truth-Makers". *Philosophy and Phenomenological Research*, 44, 287–321 (1984). I shall here switch back and forth between the terminologies of 'truth-makers' and of '*Sachverhalte*', in part in order to reassure the reader that our problems here are not abstract, but perhaps the most concrete that there are.

3 'Logically compound' in what follows shall signify sentences containing logical constants (including quantifiers) or terms introduced by definitions involving logical constants.

4 See *Russell's Logical Atomism*, D. Pears, ed., London: Fontana (1972), p. 36.

5 Davidson, D. *Essays on Actions and Events*, Oxford: Clarendon (1980), p. 117.

6 See Mulligan, Simons and Smith, *op. cit.*

7 A view along these lines is exploited as the basis of a formal semantic theory by H. Stonert in his "Languages and Theories Adequate to the Ontology of the Language of Science", as extracted in J. Pelc, ed., *Semiotics in Poland 1894–1969*, Dordrecht/Boston: Reidel, 318–41 (1979).

8 See Husserl's *Ideas* I, § 11. Compare also Husserl's reference in the 6th *Logical Investigation* to 'konkret bestimmte Sachverhalte, Kollektiva, Disjunktiva als komplexe "Denkobjekte" ..., die ihre fundierenden Gegenstände reell in sich schließen' (§ 47).

9 See Frege's letter to Russell of 13 November 1904, Russell's letter to Frege of 12 December 1904. The embellishment is due to H.-N. Castañeda, "Direct Reference, the Semantics of Thinking, and Guise Theory", to appear in *Themes of Kaplan*, ed. Joseph Almog, John Perry and H. Wettstein, Oxford: Oxford University Press (1988) (motto).

10 Perhaps this is part of what Frege had in mind with his notion of the true as common referent of all true sentences, each one of which illuminates merely some part or aspect of this whole. Frege's idea may, however, be better compared with Kant's *noumenon* – an object available for all delineations: see Castañeda, *op. cit.*, n. 7.

11 Meinong, from whom Husserl *inter alia* borrowed the term 'foundation', employed it to refer to the relation between a higher order object, for example a sentence or a melody, and its 'inferiora' or 'fundamenta', i. e. the corresponding words or notes. He thereby restricted the notion of foundation to those cases where the founded object is in some sense coincident with its fundamenta (cf. e. g. § 5: "Das Koinzidenz-Prinzip" of his "Über Gegenstände höherer Ordnung und deren Verhältnis zur inneren Wahrnehmung", *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 21, 182–272 und repr. in vol. II of Meinong's *Gesamtausgabe* (1899).

[12] A still stronger version—embraced by Meinong and Reinach—would admit *Sachverhalte* as corresponding to all judgments whatsoever, but this contravenes (REALITY) and departs from our aim of providing a correspondence theory of truth satisfying (ATOMICITY). Such strong versions flow, it seems, from wanting *Sachverhalte* to do two (incompatible) jobs at once: accounting for truth, and accounting for propositional attitudes. Situation semantics, too, seems to face certain problems in this regard.

[13] Such propositions are not meaning-entities: they are to serve as the *objects* of mental states such as beliefs, as also of mental acts of judgment.

* * *