

## MOMENTS AS TRUTH-MAKERS

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Russell wrote in 1918 in *The Philosophy of Logical Atomism*:

When I speak of a fact . . . I mean the kind of thing that makes a proposition true or false. If I say 'It is raining', what I say is true in a certain condition of weather and is false in other conditions of the weather. The condition of weather that makes my statement true (or false as the case may be), is what I should call a 'fact'. If I say, 'Socrates is dead', my statement will be true owing to a certain physiological occurrence which happened in Athens long ago.<sup>1</sup>

This classic statement of Russell's version of the correspondence theory of truth is defective on one point only: Russell was unwise to use the word 'fact'. Objects which perform the semantic role Russell accords to facts I shall call simply *truth-makers*. They are to be contrasted with propositions, or whatever is considered to *bear* the properties of truth and falsehood, which may be called *truth-bearers*. Facts, if they are anything, are not truth-makers but truth-bearers: Ramsey was right to count facts simply as true propositions.<sup>2</sup> I shall leave propositions, true and false, on one side. Arguments for or against the existence of propositions are irrelevant to the question whether there are truth-makers in Russell's sense.

That Russell counted common weather conditions and physiological occurrences as truth-makers is not a weakness but a strength of his theory. It means that a realist theory of truth for elementary predications about the real world requires only concrete entities well known under other names, such as *state*, *condition*, *process* and *event*, and well known in other philosophical contexts, such as causality and action theory. Most, if not all truth-makers are, I hold, *moments*.<sup>3</sup> The notion of a moment, or ontologically non-self-sufficient object, may be traced back to Aristotle's *Categories* I<sup>a</sup>20: "By 'in a subject' I mean what is in something, not as a part, and cannot exist separately from what it is in". Medieval and early modern philosophers called moments 'modes' or 'accidents'. The notion is no longer so prevalent, but moments emerge here and there under various names, such as the 'characters' of G. F. Stout.<sup>4</sup> The term 'moment' is taken from Husserl, whose theory is the most comprehensive in modern philosophy.<sup>5</sup> Husserl also pointed out that not all moments are particularised qualities, but include also boundaries.<sup>6</sup> The formal concept *moment* may be defined as follows:

$a$  is a moment = Df  $a$  is possibly such that it exists, and  $a$  is necessarily such that, either it does not exist, or there exists an object  $b$ , which is possibly such that it does not exist, and  $b$  is not a part (proper or improper) of  $a$ .<sup>7</sup>

The objects on which the existence of a moment thus depends we call its *fundaments*, and say that the moment is *dependent on* its fundaments. The concepts *moment* and *ontologically dependent object* thus coincide.

Russell's weather conditions and deaths are clearly moments. Rainy weather cannot exist without masses of air and water; a death cannot occur unless there is an organism that dies. Many, perhaps all states, events and processes involve substances, and are thus moments. Moments, like the substances they involve, fall into kinds, some natural, like collisions and births, others artificial, like weddings and salutes. Some kinds of moment involve a fixed number of participants or require a fixed number of fundaments, others require a minimum, yet others are freely variable. What kinds of moments there are, and what their characteristics are, is not something to be decided by armchair methods. A great deal of scientific investigation concerns moments, such as energy distributions, chemical reactions, volcanic



eruptions, diseases, courtship rituals, traffic accidents, intonation patterns, and so on throughout *all* the sciences.

The notion of ontological dependence can be applied to Wittgenstein's *Tractatus*. It is the keystone of Wittgenstein's logical atomism that no *Sachverhalt* is the fundament of any other.<sup>8</sup> I differ from Russell and Wittgenstein in rejecting the thesis, most potently active in the *Tractatus*, but already present in *The Principles of Mathematics* of 1903 that "All complexity is conceptual in the sense that it is due to a whole capable of logical analysis".<sup>9</sup> This is the fatal error in their logical atomism. John's headache, which is dependent on him, is logically no more complex than its connected parts. Similarly, the surface of a plane wall is logically no more complex than the connected parts of this surface.

Having tried to sketch out a case for the ontological and scientific respectability of moments, I shall indicate their advantages for the role of truth-makers. Firstly, if we are already convinced that moments exist, then we need not introduce further entities simply to perform the truth-maker role. Secondly, a still sparser ontology than that envisaged here, namely a reistic ontology such as those of Brentano and Kotarbiński, while this still is a sufficient basis for a Tarskian theory of truth, requires, if the theory is to be adequate, a more elaborate metalogical machinery of sets. A truth-theory using moments offers a way of avoiding the heavy commitment to set-theoretical entities which so many philosophers and logicians seem to find so innocuous. A reistic theory further goes no way towards explaining the connection between truth and scientific investigation. According to the realist theory I hold, the kind of moments which go to make an elementary sentence true is in general a matter for *empirical* investigation. Medical science has shown, for instance, that there are several kinds of hepatitis. The sentence 'Cyril has hepatitis' can therefore be made true by different (but relevantly similar) kinds of moment, without exhibiting the slightest ambiguity or hidden logical complexity. Stock logical analysis, even of sentences like 'Hans and Franz are brothers', barely scratches the surface in the study of what makes them true. From the realist point of view, it is *perfectly normal* to know *that* a proposition is true and yet be in the dark as to what exactly makes it true.

The philosophical and logical side of truth theory embodies the chief insight of logical atomism, which is that we do not need to postulate truth-makers for logically complex sentences. There are no negative, conjunctive or disjunctive truth-makers, no moments of universality, existence or identity. Supporters of enterprises such as tense logic may similarly do away with moments of pastness, presentness and futurity in their account of the truth of tensed sentences.

It is then all the more important to consider how elementary propositions are made true. Consider the simplest possible case, where a present-tense elementary proposition is made true by exactly one moment. Then the moment stands to the sentence neither as an object stands to a noun or predicate under which it falls, nor as object designated to designating expression. Suppose that 'John has a headache' is made true by just one moment. What makes it true is simply John's headache itself. We must distinguish this from the fact (i.e. true proposition) *that* John has a headache. If 'that'-clauses designate anything it is propositions and not truth-makers. John's headache can be neither true nor false, but it does start, endure and fade away. That John has a headache may be true or false, but does not start, endure and fade away, nor, like the headache, does it have an intensity. Headaches and kicks fall under the nouns 'headache' and 'kick' just as cats fall under the noun 'cat'. We can form designating expressions like 'John's headache', 'the kick Hans just gave Franz' as easily for moments as for substances. Moments tend not to have proper names, but for purely pragmatic reasons: the beginnings of an explanation can be found in Locke.<sup>10</sup>

Truth-making is a semantic primitive, and not to be explained in terms of designation or falling under. Failure to observe this leads Davidson to suppose that sentences made true by events must quantify over events, since the relation is neither designation nor falling under:



When we are tempted into thinking that a sentence like . . . [Amundsen flew to the North Pole in May 1926] describes a single event we are misled: it does not describe any event at all. But if [it] is true, *then there is an event that makes it true.*<sup>11</sup>

Certainly if moments (including events) may be named, they may be quantified over. And Davidson is right that in general such sentences may be made true by more than one event. Any event falling under 'flight of Amundsen to the North Pole in May 1926' will do. If there is just one, as here, we may designate it by a phrase such as 'the flight of Amundsen . . .' or 'Amundsen's flight . ..'. We can use either the noun 'flight' or the verb 'flew', and get the same result. With the noun we need quantifiers, with the verb we do not, although we can add the optional quantificatory adverbial 'at least once', and for other sentences, e.g. that obtained by adding 'exactly once' to Davidson's sentence, they are indispensable. That there are obvious analogies between 'at least twice' and 'at least two' or between 'exactly once' and 'exactly one' does not imply that we can reduce the one to the other. We need, *pace* Davidson, a theory of predicate (or verb) modifiers to explain sentences involving numerical adverbials. Davidson is right that we can manage without such sentences, but wrong that we can analyse them away. Either verbs with adverbials or nouns with quantifiers will describe the same things alone, but it so happens that in English both options are available.<sup>12</sup>

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#### NOTES

- <sup>1</sup> Russell, B., *Russell's Logical Atomism* (London 1972), p. 36.
- <sup>2</sup> Ramsey, F. P., *Foundations* (London 1978), p. 44. Ramsey (p. 43) also anticipates Davidson's existential analysis of event predications.
- <sup>3</sup> Exceptions might be sentences like 'Sam is a man' or 'Sam exists'. One position on such sentences is to accept that Sam himself makes them true. Another is that the bundle of moments constituting his essence (Sam's *humanitas*) are the truth-makers. I do not discuss such cases further here.
- <sup>4</sup> For a survey of some modern uses see, N. Wolterstorff, *On Universals* (Chicago 1970), p. 137.
- <sup>5</sup> Husserl, E., *Logical Investigations* (London 1970), Investigation III. Cf. my "The Formalisation of Husserl's Theory of Wholes and Parts", in: B. Smith (ed.), *Parts and Moments* (Munich 1982).
- <sup>6</sup> Husserl, E., *Experience and Judgment* (Evanston 1973), § 32. In: G. E. M. Anscombe, *Three Philosophers* (Oxford 1961), p. 9, Anscombe changes Aristotle's particularised quality examples for a boundary example.
- <sup>7</sup> I thank Professor Roderick Chisholm for help in improving this definition.
- <sup>8</sup> This was the theme of my contribution to the previous symposium: P. M. Simons, "Logical and Ontological Independence in the *Tractatus*", in: E. Morscher & R. Stranzinger (eds.), *Ethics: Foundations, Problems, and Applications: Proceedings of the Fifth International Wittgenstein Symposium* (Vienna 1981), pp. 464—7. Whether *Sachverhalte* are moments (in my sense) of the objects they involve, depends on whether the objects are *parts* of the *Sachverhalte*. I am inclined to think they are, so the objects are not fundaments of the *Sachverhalte*. In a sense of 'found' obtained by dropping the requirement that *b* be not part of *a*, the objects may still be said to found the *Sachverhalte*.
- <sup>9</sup> Russell, B., *The Principles of Mathematics* (London 1937), p. 466.
- <sup>10</sup> Locke, J., *An Essay Concerning Human Understanding* (Oxford 1975), p. 465.
- <sup>11</sup> Davidson, D., *Essays on Action and Events* (Oxford 1980), p. 117.
- <sup>12</sup> This paper was presented at the Symposium in connection with those of K. Mulligan and B. Smith.

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