

On the connection between Russell's description theory and his theory of types

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Russell recollects in his *Autobiography* and *My Philosophical Development* that his description theory gave the first clue to the solution to the set-theoretic and logical paradoxes that had been annoying him for years. This may sound strange, since the description theory is generally thought to have been established with a view to solving the problems about reference by denoting phrases, and to have nothing to do directly with the solution to these paradoxes. In fact, in “On denoting”, where he exposes the description theory, he doesn't mention them at all. It was his theory of types, advocated in “Mathematical logic as based on the theory of types”, that Russell solved the problems of paradoxes. Nevertheless, the description theory and the theory of types do have a close connection with each other. The aim of this article is to show what the connection is.

The description theory and the theory of types can be viewed as related, through the same semantic principle, to the same atomistic ontology, which can be characterized as having as its terms only particular individuals and universal concepts. A remarkable feature of the theory of types is that it is a constructive grammar. It comprises, as its terms other than logical constants, only individual names and predicates applicable to them. Every other thing is constructed by degrees from them according to specific procedures. It should be noted that this theory admits neither denoting phrases nor names for sets to be grammatical. Russell intended it to provide a system which conforms to “the vicious circle principle”, but it also conforms to the resulting ontology from the description theory together with his persistent conviction in the principle of correspondence.