

On a Neo-logicistic Conception of Natural Number

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In the report we discuss a neo-logicistic conception of natural number formulated by British philosopher Crispin Wright in his book *Frege's Conception of Numbers as Objects* (1983).

For appropriate understanding of the differences between logicistic and neo-logicistic conceptions of natural numbers, we recall Bertrand Russell's criticism of formal axiomatic systems containing Peano axioms. Russell argued that such systems with Peano axioms could not serve as real foundation for arithmetic, for they define not exactly our ordinary arithmetic but a group of systems sharing the same structure. Russell's argument can be generalized into a principle according to which a foundation of arithmetic may be called logicistic only if in addition to well-known principles of logicism it also retains our ordinary intuition of numbers. We recall also Gottlob Frege's informal definition of natural number in his *Grundlagen der Arithmetik* (1884) and its formalization in the *Grundgesetze der Arithmetik* (1893, 1903).

In the light of Russell's argument we outline the differences between Frege's initial conception and Wright's neo-logicistic conception of natural number.