
Theory of logical modalities without “possible worlds”

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The article examines the main problems of “traditional” modal logic semantics — so called possible worlds semantics. Interpreting modal operators meanings semantics data involve either the notion of the real world, or the notion of the model structure and the accessibility relations between the worlds. The last one does not have the monosemantic interpretation, therefore leads to series of paradoxes. In addition, we have researched the main principles of the alternative semantics construction for the Lewis system S5 — semantics of restricted set of state-descriptions and relatively restricted sets of state-descriptions. This semantics uses only the “classical” notions such as state-descriptions, state-descriptions sets, semantical validity, satisfiability, etc. That is what distinguishes them from possible world semantics.

Keywords: modality, possible world, model structure, accessibility relation, restricted set of state-descriptions, truth, false, validity, satisfiability.

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