

Logic as a formal science treats about methods that let us decide whether a given argument is or is not correct. Obviously there are examples of argument which are incorrect from common sense point of view while being correct from classical logic perspective. Moreover there are examples of converse situation, where logical incorrect arguments are correct from everyday experience approach. Relating logics as an extension of classical logic enable us to reduce some of a such examples.

Logical system can be introduced in many ways. The paradigmatic one on the ground of proof theory is axiomatic method, which demands a lot of creativity, intuition and luck in case of constructing proofs. Taking this under consideration tableau method seems to be attractive alternative, since it is more algorithmic approach.

While being very effective tableau method is usually presented in a rather intuitive way. But our ambition is to determine a precise tableau frame of relating logic. Hence, the main goal of the project is to construct a formal tableau systems of some relating logics and its metatheory.

On the ground of publications about relating logics and tableau method we can be sure that the main goal of our project is capable of being realized but has not been realized yet.

Analysis which we would like to conduct in our project are theoretical and can be recognised as a methodological foundations of philosophical research. Of course the tableau method itself might be found interesting by mathematicians and IT specialists because of its algorithmic character.

There are two aspects of significance of this research project. A direct and an indirect one. The direct significance of the project consists in a new and wider account which is a generalization of the earlier works in the field of relating logics.

The indirect effect is that the results achieved can be used, for instance, in research on temporal, causal as well as analytical connections. In this way our results help in developing philosophical explorations of such phenomena as causality, determinism and semantic relations.

As so far there has not been given a general frame of relating logics. And publications about tableau approach to relating logics consider only one system. This research project is an attempt to present a new perspective and to fill in this gap.

Proper methods of mathematical logic will be applied in most of parts of the research, i.e. the description of calculi, their semantics, the proofs of their soundness and completeness. Also important part of our analysis will be a reconstruction of philosophical motivation and previous results worked out in field of relating logics, tableau method as well as intersection of this domains.

The final results of the project will be presented in a series of articles published in Polish-language philosophical journals, as well as international English-language ones.