

INTRODUCTION: THE FORMS OF IDEALIZATION

To make a picture of science means to construct a model. The philosopher of science who investigates science tries to base his research on the same principles that are valid in the domain he studies. In other words, he aims at building a scientific conception of science. Therefore he constructs a model of science according to the same rules he believes to be observed by the scientists. In a way he imitates the process of building the scientific model in his own research. The better are his insights into the method of science the more accurate is his own method of inquiry and, in consequence, his own theory of science. At least, this is the tacit assumption present in the main contemporary philosophies of science. When we look at different theories of science we can notice how research practice of their adherents deviates from the assumed principle. We can determine to what degree the models of science they propose fit the pattern of the scientific modelling.

The idealizational approach to science introduced in the early seventies by Leszek Nowak [1971a] took this assumption seriously. Nowak admitted that his theory of science was built on principles which he detected and considered as genuine standards of advanced scientific inquiry. His ideas attracted attention of several philosophers working at Poznan University and they jointly continued research on the nature of idealization. It appeared that idealization had many forms and its traces were found not only in natural sciences but in the humanities, philosophy and even in mental acts or practices of ordinary life. It should be stressed that these investigations belong to one research programme and the results are published in the successive volumes of *Poznan Studies in the Philosophy of the Sciences and the Humanities*. The survey of main findings is contained in Nowak [1992].

The papers chosen for the present volume indicate some new extensions of the idealizational research programme.

Andrzej Kupracz ("An outline of the idealizational theory of science. Four basic models") presents an updated version of the idealizational theory of science. Describing the basic models of idealizational theory he concentrates on the problems of explanation, testing and measurement. His exposition displays clearly the interconnections between the idealizational nature of science and the idealizational form of the theory of science.

Leszek Nowak ("On ontological assumptions of idealizational theory") considers the question of the relationship between idealizational theory and its philosophical background. He claims that the acceptance of idealizational theory involves certain form of ontological commitment. The paper describes in detail the character of this commitment and illustrates the arguments with an example taken from linguistics.

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Krzysztof Lastowski ("The idealizational status of the contemporary theory of evolution") convincingly argues that discussions about methodological peculiarity of the Darwinian theory of evolution cannot be resolved unless we acknowledge the idealizational character of this theory. His exposition reveals that methodological affinities between various contemporary theories of evolution consist in the fact that they have complex idealizational structure and are linked by definite intertheoretical relations.

The last paper ("Attitudes in science") introduces a specific problem. It discusses the question: What will change in our picture of science if we replace the model of ideal researcher postulated by the Idealizational Theory of Science by a model of normal participant in science? It shows what happens when the ideal researcher who strives to construct new idealizational theory is replaced by an ordinary researcher whose aim consists in improving chosen fractions of existing theoretical structure. This mode of conduct is described in terms of the attitudes of the idealized participant in science.

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