



Probabilistic kingdom: problem of objectivity in contemporary science*

Paweł PRUSKI**

ABSTRACT

In modern science the theory of probability is one of the basic tools. Scientists using probability often refer to its objective interpretation. They emphasize that their probabilistic hypotheses concern objective facts, not degrees of belief. Accordingly, the following questions arise: What is the meaning of this type of probabilistic hypothesis? Is the assumption of objectivity necessary? The paper addresses these questions by analyzing objective probability in the context of the scientific debate on determinism. Two types of arguments will be presented. On the one hand, there is the assertion that objective probability can exist only in an indeterministic world. Then, on the other hand — I analyze the assertions of those who believe in the co-existence of objective probability and determinism. As a result I show that the acceptance of deterministic and indeterministic fields as possible areas where objective probability can occur is extremely problematic. Depending on the chosen area we encounter different types of problems. Therefore, I show that a significant number of these problems are associated with the acceptance of incorrect metaphysical assumptions. And finally, I postulate that the objectivity of probability (and assumptions pertaining to it) can be reduced (without any losses) to the epistemic variant.

KEYWORDS

philosophical interpretations of probability; the objectivity of probability; probabilism; scientific realism; determinism

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** Ph.D. student, Department of Philosophy, Jagiellonian University in Krakow, Poland.
E-mail: minoo.music@gmail.com.