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MATHEMATICS IN PHYSICAL SCIENCES: SIGN OR MIRACLE?

*Abstract*

In this paper the relationship between mathematics and physics is sketched by means of the semiotical notion of “sign”. An alternative to the philosophically unsatisfactory thesis by E. Wigner on the unreasonable effectiveness of mathematics in the natural sciences is also proposed. In fact, I argue that the effectiveness of mathematics in physical sciences is not at all a “miracle”, as Wigner stated, but something which can be understood. In order to reach this goal, I propose an atypical approach based on the semiotical triad: sign, interpretant and object. From this point of view, the mathematical sign, i.e., the physical theory, has to be considered as an icon, as an index and as a symbol, that is, as an object in itself and as an object in relationship with the physical world, with the interpreter and with the interpretant.