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METHODOLOGICAL PECULIARITIES OF HISTORY IN LIGHT OF IDEALIZATIONAL THEORY OF SCIENCE

1. Introduction

It is maintained in contemporary methodology of science that idealization of investigated reality is one of the principal methods of research. The theoretician investigating certain phenomenon does not approach the object of study in all its complexity and complication but focuses on such its aspects which are recognized principal from his theoretical perspective, ignoring some properties of the phenomenon under research. On the force of idealizing assumptions, remaining secondary properties of investigating reality are omitted. Scientific cognition does not depend, then, on faithful imitation of reality but on its deformation that is able to demonstrate the most essential associations and relationships. It is only later, at the second stage of scientific research, that the deformed reality becomes “more realistic,” and the researcher introduces into the simplified approach of the investigated object its secondary aspects which were omitted in the preliminary model and which modify crucial laws and relationships.

A standard example of the scientific conduct sketched above in the idealizational theory of science (hereinafter referred to as ITS) is a set of procedures adopted in natural sciences and particularly in physics. That leads to underestimation of methodological peculiarities of the humanities, even those which can be expressed in the conceptual apparatus of ITS. One of such issues, as Hans-George Gadamer remarks, is the paradox of “small causes and great effects”:

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1 Introductory formulation of the method of idealization has been presented in Nowak (1971); whereas a mature reconstruction of that theory may be found in Nowak (1977a, English: 1980).

An old principle of knowing the nature is the equality of a cause and an effect, and in experiencing history it is the opposite: small causes may bring about great effects. It is a surprise that belongs to the experience of man immersed in history. . . . People know what has been planned, and understand what factors have been set working, they know what is expected of them, but they forget about unpredictable, unplanned and surprising events.\footnote{Gadamer (1979), p. 81.}

Gadamer solves the paradox of small causes and great effects on the metaphysical plane. He claims that causes in the social world act in teleological way. Human history is then directed by the previously assigned aim. Therefore, history:

> seems to be governed, as if it were a process of production, by the previously allocated aim, as if they strove for the shape that had been defined before, let us say, the shape of the ripe living organism; that all happens as if what originally existed put itself into motion which aims at the final form: the material which we preferably call the matter appears by itself to motivate the process of growth and change.\footnote{Ibid., p. 85.}

The discussion on the paradox of small causes and great effects may be conducted at the level of metaphysics but it is also worth considering whether that paradox could be also solved by smaller means without committing to inevitably controversial, age-long disputes of metaphysicians. The paradox of small causes and great effects can be also discussed on the methodological plane. In the further part of the present chapter I will characterize the paradox of small causes and great effects, which was perceived by Gadamer, in terms of the idealizational theory of science, though it is also possible to interpret that paradox using the language of other methodological theories.

### 2. Basic Concepts of the Idealizational Theory of Science

Let me characterize two fundamental concepts of the idealization theory of science that are useful for the purposes of the present paper: the concept of influence and that of essentiality. Each magnitude $F$ under study has a number of determinants $\{H, p_1, \ldots, p_2, p_1\}$ that influence it in different ways. The influence in question can be ordered by distinguishing main and secondary factors in an essential structure of the magnitude studied $F$. According to this conception, the influence of magnitude $H$ on magnitude $F$ occurs when adopting a certain value by $H$