The Basics of Neo-Realist Cosmology: Bertrand Russell against Alfred North Whitehead

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The article presents a comparative analysis of neo-realist views of Russell and Whitehead on cosmology in the first decades of the 20th century. It is noted that despite the similarity of the basic theoretical and methodological principles of their philosophizing, these thinkers formulated philosophico-cosmological conceptions that differed significantly from each other. The reason for this was that Russell, at the epistemological level, used the theory of degrees of certainty, and on the logical one he developed the theory of descriptions, but Whitehead, in contrast, was a supporter of the theory of critical realism in epistemology and the method of extensive abstraction in logic. All this influenced the former to pay more attention to the questions of analysis and, accordingly, to use the basic concepts of facts, logical atoms, and propositions, and the latter to focus on the question of synthesis and to consider the structure of being through the prism of concepts of actual entities, eternal objects and prehension. Hence the world for Russell is a static formation (set of events), and we only need to define its laws, and for the Whitehead world is a dynamic formation (set of processes), the laws of which still need to be understood. It is emphasized that as a result, Russell’s cosmology rejected the previous metaphysics, but Whitehead’s cosmology aimed at finding the origins of modern cosmology in the writings of early thinkers. Nevertheless, it is argued that the cosmological teachings of both had a significant influence on the development of analytic philosophy.

Keywords: neo-realist cosmology, fact, logical atom, actual entities, eternal objects, law, reality

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Introduction

Influenced by the rapid development of science in the early twentieth century, a number of British thinkers — firstly George Edward Moore and later Bertrand Russell and Alfred North Whitehead, made a sharp critique of the prevailing neo-Hegelian methodology of absolute
idealism. In general, the main points of idealism Moore reduced to the following two: “(1) … the Universe is very different indeed from what it seems, and (2)… it has quite a large number of properties which it does not seem to have” (Moore, 1903: 433). Such theses were counterproductive. Notwithstanding the limitations of science in its expressive possibilities, it was already demonstrating progress and remarkable empirical and theoretical results, while philosophy in its metaphysical interpretations continued to multiplying concepts, each with a claim to truth, but without the possibility of verification. That is why the philosophical theory of neo-realism was offered as an alternative to idealism. It is based on simple principles: 1) material objects actually exist and can be perceived by subject; 2) they exist even if no one perceives them; 3) space and time are real; 4) sufficient evidence to prove the presence of other minds can be given; 5) the process of analyzing objects of knowledge is a reliable means of obtaining adequate knowledge of the external world. It is clear that in neo-realism, much attention is paid to the issues of epistemology, as well as logic and ethics.

However, despite the precision in definitions, argumentation, and appeal to empirical facts, the very first neo-realist conceptions differ significantly from one another. This is especially noticeable in the process of studying the cosmologies of Whitehead and his student Russell. At the same time, they had a lot in common: both began as mathematicians, together in the fundamental work “Principia Mathematica” (1910-1913) formulated the foundations of a program of logicism, and made considerable efforts for the ideas of scientific philosophy and methodology of neo-realism. But when asked the question of what reality is, what principles are at its heart and how to know them, they diverge in their own cosmological interpretations. This issue has not yet been adequately explored in the scientific literature, despite the growing interest in Whitehead’s cosmology today (Bansal, 2018; Berve & Maassen, 2016; Kling, 2019; etc.) and some attention to Russell’s one (Pribram-Day, 2018). Therefore, the purpose of the proposed article is to make a comparative analysis of the cosmologies of Russell and Whitehead, which is extremely important, given the contribution both of them have made to the development of analytic philosophy and philosophy of science. To achieve this goal, I will study the basic categories of their cosmological conceptions, as well as how they interpreted the essence of laws, the nature of the Universe and the metaphysical foundations of cosmologies.

Facts against actual entities

The difference in Russell’s and Whitehead’s views in cosmology arose primarily from the development of different theories of correlation between sense-data and physical objects. Thus, Whitehead adhered to the theory of critical realism, according to which the full coincidence of sense data and physical objects is impossible, since every time we have to interpret our own perceptions. He wrote: “There is no world corresponding to the world of our common experience” (Whitehead, 1926: 48). But Russell was a supporter of the theory of degrees of certainty, according to which there are different types of sense data, which are generally heterogeneous in nature, and therefore in the process of epistemological analysis, this must be taken into account. That is why he distinguished “hard” data and “soft” data, stating the following: “I mean by ‘hard’ data those which resist the solvent influence of critical reflection, and by ‘soft’ data those which, under the operation of this process, become to our minds more or less doubtful” (Russell, 1969: 78). The difference between these types of data determines the validity of our experience. However, Russell himself prefers to use the term fact that is the content of sense data and can be clearly defined. Also, this concept enables the transition from empirical research to more abstract one in ontological and epistemological terms.