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Integrating philosophy into science education - Enhancing critical reasoning and understanding of General Relativity in school curricula

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The relationship between philosophy and science has historically been characterized by a deep interconnection between the empirical construction of reality and theoretical frameworks. Physics, as an epistemologically autonomous discipline with its own experimental scientific method, has its roots in philosophical reflection on natural phenomena. However, in today's educational system, science teaching—including the teaching of modern science—often struggles to design curricula that truly reflect the processes of experimental sciences, also neglecting the significant contribution of philosophy to the birth of science. This oversight is paradoxical, considering that students, from their early years of schooling, frequently pose questions that touch upon the great domains of knowledge.

Following studies that investigate the relationship between phylogenesis and ontogenesis, this contribution seeks to explore whether and how the dialogical-philosophical approach, from the early years of schooling, can contribute to the construction of scientific knowledge. In order to increasingly integrate the foundations of General Relativity into school curricula, the use of the philosophical approach could indeed stimulate the critical reasoning skills necessary for investigating abstract physical phenomena.

Primary author: MATTIELLO, Sara (Università degli Studi di Torino)

Presenter: MATTIELLO, Sara (Università degli Studi di Torino)

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