

Between Political Orthodoxy and Personal Conviction: Terletsky's Role in the Debate on Quantum Mechanics

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In the 1950s, a heated debate unfolded in the USSR regarding the philosophy of quantum mechanics. Yakov Petrovich Terletsky, a professor of theoretical physics at Moscow State University and a member of the local bureau of the Communist Party, actively participated in this debate, questioning the Copenhagen interpretation and the principle of complementarity. His critique had significant influence, and many—from contemporaries to later commentators—interpreted his writings as a defense of party ideology and support for Blokhintsev's ensemble interpretation, which at that time was seen as most compatible with dialectical materialism. Nevertheless, Terletsky personally advocated a realistic conception of the wave function and a causal interpretation of quantum mechanics. This position became clearer when he engaged with the de Broglie-Bohm theory through the mediation of Vigier. Amid the Cold War, he traveled to Paris to meet de Broglie and Vigier, with whom he collaborated on two articles. He also edited the Russian publication of Bohm's papers, together with Hungarian physicists Fényes and Janossy, among others. In subsequent works, he continued to challenge the Copenhagen interpretation while promoting an objective, causal view of quantum mechanics. Later on, when most Soviet voices had shifted toward supporting complementarity, he publicly endorsed the de Broglie-Bohm-Vigier interpretation at an All-Union conference, confronting ideological prejudices against alternative interpretations. This study examines Terletsky's role in the debate, aiming to rebut the misconception that he was merely a watchdog of ideological orthodoxy.

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