

# Complementarity and Scientific Rationality

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## Abstract

Bohr's interpretation of quantum mechanics has been criticized as incoherent and opportunistic, and based on doubtful philosophical premises. If so Bohr's influence, in the pre-war period of 1927-1939, is the harder to explain, and the acceptance of his approach to quantum mechanics over de Broglie's had no reasonable foundation. But Bohr's interpretation changed little from the time of its first appearance, and stood independent of any philosophical presuppositions. The principle of complementarity is itself best read as a conjecture of unusually wide scope, on the nature and future course of explanations in the sciences (and not only the physical sciences). If it must be judged a failure today, it is not because of any internal inconsistency

**Keywords:** Bohr, Copenhagen, Complementarity, quantum mechanics, de Broglie, pilot-wave, Bohm, Cushing

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