

خيال العلماء بين التعقل والتصور SCIENTISTS' IMAGINATION BETWEEN REASONING AND VISUALIZATION

An article on the philosophy of science

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The ability to engage oneself in constructive philosophical imagination and to use the scientist's imagination are among the most significant characteristics a scientific researcher should have, exactly like the painter when he visualizes something or someone out of the characteristics given to him. The history of sciences often emphasizes the importance of such characteristics that can lead to scientific discoveries of facts of phenomena prevalent in horizons and souls. Facts and ideas are *per se* inanimate; it is the imagination that gives them life. Faraday, with his known scientific sense and methodical imagination, used to say that he nearly could perceive the electromagnetic fields before Maxwell could put them into mathematical formulas. Cognitive characteristics or faculties as such are only possessed by the talented and they play an important role in achieving and developing scientific findings through refining the scientist's talent and sensing the laws of nature.

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