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PARADIGMS IN SCIENCE – WITH OR WITHOUT METAPHYSICAL PRESUPPOSITIONS

Abstract

The physical sciences are fascinated by reality and draw their concept of reality from experiential knowledge. In science, we interpret what we see so we can understand it. This means that an event or phenomenon makes sense not only superficially, as it registers to our senses, but also as our interpretation of those senses — that is, as we find it intelligible within certain routines of analysis and expectation formulation. Therefore, cognition and perception are inseparable acts because understanding cannot see and the senses cannot think. This is the basis for a particular kind of reasoning which in scientific research becomes a model. As models become increasingly dominant, they are called paradigms. Moreover, certain preconceptions precede theoretical formulations — that is, Kuhn's concept of paradigm.

Paradigms are governing models that, in some fairly broad range of experience, set the context of explanation and intelligibility of that which is to be explained and understood. Since paradigms range in scope from broad to narrow, discussing a hierarchical ordering of paradigms is reasonable: i.e., their scopes may be listed in descending or ascending order. Therefore, the possibility of choosing, within reasonable bounds, a set of hierarchically ordered paradigms reveals the numerous layers of metaphysics that exist in reality and its description (science). What remain are the questions that arise as to the nature of these metaphysical presuppositions and the method through which they are formulated, which also stands on a metaphysical ground.