

# A Contextual Approach to Scientific Understanding

de Regt, Henk and Dieks, Dennis (2003) A Contextual Approach to Scientific Understanding.

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## Abstract

Achieving understanding of nature is one of the aims of science. In this paper we offer an analysis of the nature of scientific understanding that accords with actual scientific practice and accommodates the historical diversity of conceptions of understanding. Its core idea is a general criterion for the intelligibility of scientific theories that is essentially contextual: which theories conform to this criterion depends on contextual factors, and can change in the course of time. Our analysis provides a general account of how understanding is provided by scientific explanations of diverse types. In this way, it reconciles seemingly conflicting views of explanatory understanding, such as the causal-mechanical and the unificationist conceptions.

**Keywords:** Understanding, explanation, causation, causality, unification, realism

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**ID Code:** 1354

**Deposited By:** [Dieks, Dennis](#)

**Deposited On:** 22 August 2003

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