

# Two notions of scientific justification

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## Abstract

Scientific claims can be assessed epistemically in either of two ways: according to scientific standards, or by means of philosophical arguments such as the no-miracle argument in favor of scientific realism. This paper investigates the basis of this duality of epistemic assessments. It is claimed that the duality rests on two different notions of epistemic justification that are well-known from the debate on internalism and externalism in general epistemology: a deontological and an alethic notion. By discussing the conditions for the scientific acceptability of empirical results, it is argued that intrascientific justification employs the deontological notion. Philosophical disputes such as those on scientific realism can by contrast be shown to rest on the alethic notion. The implications of these findings both for the nature of the respective epistemic projects and for their interrelation are explored.

**Keywords:** Scientific justification; Methodology; Scientific realism; Epistemology of science; Internalism and externalism

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