

# Structure: its shadow and substance

van Fraassen, Bas C. (1999) Structure: its shadow and substance.

Full text available as:

[PDF](#) - Requires a viewer, such as [Adobe Acrobat Reader](#) or other PDF viewer.

## Abstract

On December 9, 1908 Max Planck addressed the Student Corps of the Faculty of Natural Sciences of the University of Leiden. His announced topic was <l> The Unity of the Physical World-Picture </l>, but the real intent was a polemic against a whole bevy of famous scientists who had turned against realism in the past fifty years. The debate concerning how science represents nature, and specifically whether it represents more than solely structural aspects of the phenomena, had begun earlier in the 19th century, and would continue for the remainder of the 20th I will discuss both the scientific motivations and the philosophical reactions, including scientific realism and the new Structural Realism, as well as offer an empiricist structuralist view as alternative.

**Keywords:** structuralism, structural realism, scientific realism, constructive empiricism, representation

**Subjects:** [General Issues: Realism/Anti-realism](#)  
[General Issues: Structure of Theories](#)  
[General Issues: Theory Change](#)

**ID Code:** 631

**Deposited By:** [van Fraassen, Bas C.](#)

**Deposited On:** 28 April 2002

**Alternative Locations:** <http://webware.princeton.edu/vanfraas/mss/Leiden-Fine.htm>