

## Chapter 2

# Roberto Torretti's Philosophy of Science



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**Abstract** In this chapter, we provide an analysis of Torretti's main views in the general philosophy of science. I shall examine his Kantian take on objectivity (Sect. 2.2), the creative understanding thesis (Sect. 2.3), his critique of scientific realism (Sect. 2.4), his elaboration of mathematical fictionalism (Sect. 2.5), his analysis of physical laws (Sect. 2.6), and his examination of the contribution of philosophical reflection to scientific progress (Sect. 2.7). For this, I will consider Torretti's publications from the late 1960s to the early 2010s in the hope of expounding some of his ideas that may not be well known to some of his readers coming exclusively from either the history and philosophy of physics and geometry, or from the history of philosophy. With this, we fill a gap in our understanding of Torretti's views in various fields in the philosophy of science, assessing their motivations and arguing that they yield an attractive alternative for various issues in current debates.

### 2.1 Introduction

Roberto Torretti is widely known for his contributions to the history and philosophy of physics and geometry, as well as for his work on the history of philosophy. Apart from these research fields, Torretti was a prominent contributor to various debates in the general philosophy of science. In this chapter, to provide an analysis of what I consider Torretti's main views in the general philosophy of science, I shall examine his Kantian take on objectivity (Sect. 2.2), the creative understanding thesis (Sect. 2.3), his critique of scientific realism (Sect. 2.4), his elaboration of mathematical fictionalism (Sect. 2.5), his analysis of physical laws (Sect. 2.6), and his examination of the contribution of philosophical reflection to scientific progress (Sect. 2.7). For this, I will take into consideration Torretti's publications from the late 1960s to the

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