INTRODUCTION:
THE EMERGENCE OF THE NOTION
OF THOUGHT EXPERIMENTS

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In Internet forums for model makers, one sometimes finds discussion threads entitled “Luftwaffe 1946.” Participants in this scenario imagine that World War II did not end in 1945, but continued into 1946, and that the German jets, which in 1944 or 1945 were only projects or prototypes, were operational. Given this scenario, they then describe the aerial combats that could have taken place between these planes and similar ones developed by the Allies as if they had actually taken place (the most gifted among the forum members accompany their posts with very spectacular computer-generated images). A minimum of historical realism is required: one cannot imagine, for example, a mutiny of the Soviet generals, who would eliminate Stalin and demand a separate armistice. We note that a scenario of this type is all the more credible when the person who imagines it has good knowledge of aerial warfare and the aeronautics industry. The last notable element is that the computer-generated images are the most convincing when they respect the tactical principles later developed during real conflicts, for example in the Korean War. Are these elements sufficient to make a scenario of this type a thought experiment?

This question would never have been asked fifty years ago. But during the last two decades of the 20th century, a wave of thought experiments hit all sorts of areas of knowledge; in particular philosophy. Highly imaginative examples, seemingly coming straight out of a B movie, flourished in contemporary philosophy: Searle’s Chinese Room, Jackson’s Mary and Dennett’s Mary, Putnam’s Twin Earth, variations on the Brain-in-a-vat, Thomson’s violinist, and sundry zombies are the best known of this zoo. Historians of science and philosophy saw no reason to stay on the sidelines, and claimed the title of thought experiment for almost

1 I would like to thank Christoph Lehner for discussing the issue of Einstein’s thought experiments with me, and Carla Rita Palmerino for her comments on a previous version of this paper.
any argument: Hobbes’ and Locke’s states of nature, Carneades’ plank, Descartes’ evil genius, Hume’s hypotheses on the annihilation of gold or paper money, Theon and Dion, Molyneux’s problem, Buridan’s ass, Boyle’s mechanical angel, Archytas’ man standing at the edge of the universe, Condillac’s statue, Zeno’s paradox, Leibniz’ ring, Gyges’ ring, Huygens’ boat, the ship of Theseus. Entire books are now devoted to collecting philosophical thought experiments of this kind. Last, but not least, the field of science fiction, not to the say the broader field of literary fiction, came to be seen in general as a repository of thought experiments.

Along with this came debates and attempts of philosophical clarification. In one of his seminal papers, Thomas Kuhn pointed out the paradox of scientific thought experiments: since they rely exclusively on familiar data, how can they lead to new knowledge of nature? It was only in the early 1990s that a systematic debate began concerning the epistemological status and cognitive functioning of thought experiments. The first question was epistemological, to decide if, as James Robert Brown argued, thought experiments are glimpses in a Platonic world of eternal laws, or if instead they are arguments relying on previous experiences, as the empiricist John Norton argued. Another related but nevertheless distinct question concerned the kind of knowledge involved in thought experiments: to say, like Norton, that thought experiments are arguments which may imply (and indeed implied for Norton) that there are only verbal inferences disguised in vivid and picturesque narratives. Against what could be called “the inferentialist position” of Nor-

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2 Ierodiakonou, in “Ancient Thought Experiments,” established a list of arguments that are now considered as thought experiments, although they were not conceived as such by ancient philosophers; the same could be done for other periods as well.

3 Cohen, Wittgenstein’s Beetle; Tittle, What if ....

4 This trend can take inspiration from Ursula Le Guin, who analysed explicitly her own novel The Left Hand of Darkness as a thought experiment on gender; see Le Guin, “Introduction,” 156; eadem, “Is Gender Necessary?,” 163–167.


6 Horowitz and Massey, Thought Experiments in Science; Sorensen, Thought Experiments; idem, “Thought Experiments and the Epistemology.”

7 Brown, Laboratory; idem, “Platonic Account”; idem, “Thought Experiments Transcend”; Norton, “Thought Experiments in Einstein”; idem, “Are Thought Experiments”; idem, “Why Thought Experiments.” In their contribution to this volume, Goffi and Roux start from the weak thesis that thought experiments are arguments, to be distinguished from the strong Nortonian thesis that thought experiments are only arguments.