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# JEAN-FRANÇOIS STOFFEL INTRODUCTION TO THE READING OF THE FAMOUS DUHEMIAN ARTICLES FROM THE REVUE DES QUESTIONS SCIENTIFIQUES (1892-1896), 173 p.

## MIRELLA FORTINO — JEAN-FRANÇOIS STOFFEL (EDS.) PIERRE DUHEM: REALTÀ E RAPPRE-SENTAZIONE, ALLA ORIGINI DELLA THÉORIE PHYSIQUE, SCRITTI 1892–1896, 603 p.

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BOOK REVIEW

Numbers 4 and 5 of the Duhemiana series form a diptych. Number 4, entitled *Realtà e rappre-sentazione, alla origini della Théorie physique, Scritti 1892–1896*, and directed by Mirella Fortino and Jean-François Stoffel, is a bilingual edition in French and Italian of the seven articles published by Pierre Duhem in the *Revue des Questions Scientifiques* between 1892 and 1896. Number 5, entitled *Introduction to the Reading of the Famous Duhemian Articles from the Revue des Questions Scientifiques* (1892-1896), authored by Jean-François Stoffel, contains an introductory work and guidance for reading these seven articles.

The seven articles reedited in *Realtà e rappresentazione* are the following: *Quelques réflexions au sujet des théories physiques* (49–120), *Notation atomique et hypothèses atomistiques* (121–238), *Une nouvelle théorie du monde inorganique* (239–318), *Physique et métaphysique* (319–372), *L'École anglaise et les théories physiques* (373–434), *Quelques réflexions sur la physique expérimentale* (435–528), *L'évolution des théories physiques du XVIIème siècle à nos jours* (529–298). These articles are arranged in their original chronological order from the *Revue des questions scientifiques*.

It is worth noting that, until now, these seven articles by Duhem were only available in French in a 1987 facsimile reprint, which did not even include one of them, namely *Notation atomique et hypothèses atomistiques*, which is, however, the largest of these articles. Therefore, this is the first French edition to offer a new layout, as well as an index, annexes, and a bibliography. As for the Italian translations, there were simply none for four of these articles. This alone would suffice to demonstrate the interest of *Realtà e rappresentazione* for Duhemian research.

In addition to these articles, there is, of course, the text of Jean-François Stoffel's introduction, as well as two prefaces. The preface of *Realtà e rappresentazione*, written in Italian by Mirella Fortino, notably aims to contextualize Duhem's thought within the history of philosophy. The

preface of Jean-François Stoffel's introduction, written in French by Fábio Rodrigo Leite, allows us to determine the status of the seven articles by Duhem reissued here in the entirety of his intellectual journey, thus effectively complementing this work.

As for Jean-François Stoffel's introduction, it goes beyond merely presenting the contents of Duhem's articles. It intricately contextualizes the conditions of writing and publishing these articles, providing insight into how Duhem's thought develops and refines through the debates and controversies in which it is engaged. It is worth noting that this introduction relies on significant research, including the examination of Duhem's unpublished correspondence, allowing it to move beyond the information presented in the articles themselves. Therefore, it represents genuine historical research, not just a textual commentary. It serves as a rigorous, precise, and well-documented companion text for reading Duhem's articles.

The Introduction is specifically divided into thirteen chapters, preceded by an introduction and followed by a conclusion. The first chapter (35-43) provides a convincing justification for the interest in reading Duhem's seven articles, and the second (43-44) offers a reminder of the historical context before delving into the main subject. Chapters three (45-52), four (53-56), six (63-68), eight (85-92), ten (101-106), eleven (107-114), and thirteen (123-128) each focus on one of Duhem's seven articles. Chapters five (57-62), seven (69-84), nine (93-100), and twelve (115-122) are dedicated to reactions, debates, or communications between the articles. This alternating between analysis of the articles and inventory of debates maintains a chronological treatment throughout, allowing readers to trace the development of Duhem's thought.

This allows us to identify developments, even reversals, in Duhem's thinking while situating them in a continuous process of complexification. As an example, we can examine the evolution of the functions of theory in these seven articles. In 1892, in Quelques réflexions au sujet des théories physiques, Duhem argues that the formation of mathematically coherent theories serves a purely mnemonic function (45-46). However, as Vicaire objects, if the goal were merely to condense experimental laws into a small number of easily memorizable elements, it would not be necessary or particularly convenient to demand a single mathematically coherent theory (71). Duhem responds to this in L'École anglaise et les théories physiques acknowledging that the requirement of mathematical coherence and unity is indeed superimposed on the essentially mnemonic work of theorization, in order to maintain that the theory may asymptotically approach reality (104–105). Stoffel's work has the merit of showing us that this evolution is not so much a renunciation as a complexification. While Duhem admits that mathematical unification is not intrinsic to the mnemonic condensation work, as he had previously suggested, and thus goes beyond the framework of a purely phenomenalistic epistemology, he decides to retain this requirement. This allows us to consider that the theories are both effectively phenomenalistic and potentially realistic. This nuanced position, which Jean-François Stoffel describes as sophisticated (37), was already evident in Duhem's opposition to eclecticism (48-19) developed in the 1892 article.

As evident in the above example, this Introduction clearly involves Duhem's interlocutors, sometimes revealing the origin of important elements of his thought. While Vicaire's objections may have played a structuring role, as in the case we just discussed, or for instance in the emergence of the theme of beauty (70) that will play a role in the *Théorie physique*, other contributors are noteworthy. This includes Couette, "unjustly forgotten" in Jean-François Stoffel's words, who is said to have first formulated the argument of holism and the impossibility of crucial experiments in his remarks to Duhem (74–75). Another figure is

Mansion, to whom Duhem owes the discovery of a historical tradition more in line with his epistemological views (91–92).

A notable consequence of these clarifications is that Duhem's epistemology, despite its legacy, is revealed to be constructed in debates that belong at least as much, if not more, to theology than to epistemology. It is evident how much Duhem cares about reflections and objections from neo-Thomism, to which he wants to convey, with very limited success, that while physical theory can never support metaphysics, it can never undermine it either. Jean-François Stoffel particularly shows how Duhem was keen to avoid accusations of scepticism or Kantism while continuing to reject adopting theoretical realism.

One might regret the separate edition of Duhem's articles and Jean-François Stoffel's Introduction, and even if it may seem more anecdotal, that such a reissue did not provide an opportunity to compile an exhaustive bibliography of Duhem's work. Nevertheless, the reissue of Duhem's articles, along with the quality of the Italian translation, not to mention the clarity and rigor of the accompanying texts, both Jean-François Stoffel's Introduction and the prefaces by Mirella Fortino and Fábio Rodrigo Leite, are more than sufficient to recommend these works to those engaged in Duhemian research.



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