



Narrative and epistemology: Georges Canguilhem's concept of scientific ideology



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ABSTRACT

In the late 1960s, Georges Canguilhem introduced the concept of 'scientific ideology'. This concept had not played any role in his previous work, so why introduce it at all? This is the central question of my paper. Although it may seem a rather modest question, its answer in fact uncovers hidden tensions in the tradition of historical epistemology, in particular between its normative and descriptive aspects. The term ideology suggests the influence of Althusser's and Foucault's philosophies. However, I show the differences between Canguilhem's concept of scientific ideology and Althusser's and Foucault's respective concepts of ideology. I argue that Canguilhem was in fact attempting to solve long-standing problems in the tradition of historical epistemology, rather than following the lead of his younger colleagues. I argue that Canguilhem's 'refurbishment without rejection' of Bachelard's epistemology, which the concept of scientific ideology was aimed to implement, was necessary to justify the historical narratives that Canguilhem had constructed in his own work as a historian of concepts. A strict acceptance of Bachelard's epistemology would have made it impossible to justify them. Canguilhem's concept of scientific ideology therefore served as a theoretical justification of his practice as a historian. I maintain that the concept of scientific ideology was needed to reconcile Bachelard's normative epistemology with Canguilhem's view of the history of science and its aims, which differed from Bachelard's more than it is generally acknowledged.

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1. Introduction

In the late 1960s, Georges Canguilhem introduced the concept of 'scientific ideology', at a time when he had already published his two major books, *La formation du concept de réflexe aux XVII^e et XVIII^e siècles* (1955) and *The Normal and the Pathological (Le normal et le pathologique, 1966, first part [1943])*. Before his seminal article 'What is scientific ideology?', eventually published in *Ideology and Rationality*,¹ this concept had not played any role in his work, so why introduce it at all? This is the central question of my paper. Although it may seem a rather modest question, its answer in fact

uncovers epistemological and historiographical complexities and hidden tensions in the tradition of historical epistemology.

It is tempting to see Canguilhem's introduction of the concept of scientific ideology simply as a response to the philosophical and political agendas of the Sixties. In fact, in the Preface of *Ideology and Rationality*, written in 1977, Canguilhem told his readers that he had introduced the concept of scientific ideology in his lectures under the influence of Louis Althusser and Michel Foucault. Humble as always,² he paid homage to the younger academics and rising stars who were critically continuing the tradition of historical epistemology that Canguilhem and Bachelard had established. More than two decades later, again he responded in the affirmative to François Bing and

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¹ He gave a paper entitled 'Qu'est-ce qu'une idéologie scientifique?' in 1969, published the following year in the journal *Organon*, and eventually in (Canguilhem, 1993 [1977]). English translation in (Canguilhem, 1988 [1977]).

² Canguilhem was certainly more of a 'mandarin' than a public intellectual. A strong testimonial of Canguilhem's lack of ambition to stardom is Pierre Bourdieu's (Bourdieu, 1998).

Jean-François Braunstein's question about whether his use of the concept of ideology was inspired by Althusser. Unfortunately, he did not elaborate on the extent or detail of this inspiration (Bing & Braunstein, 1998, 128). There is no doubt that the context of Canguilhem's introduction of this new concept is important. However, it would be far too hasty to think that his younger colleagues had caused a significant change in his epistemology. Claude Debru has argued that with his article on ideology Canguilhem in fact intended to remind Foucault and Althusser of what they owed to epistemology and to the distinction between science and non-science (Debru, 2004, pp. 79–80). Indeed, already in the third paragraph of his short Preface of *Ideology and Rationality*, Canguilhem declared that his ideas had not changed. In the same volume, he rejected the Althusserian interpretation that Dominique Lecourt had made of Bachelard's philosophy, even suggesting that what the Althusserians called science had in fact nothing to do with science, but rather only with politics. He also distanced himself from Foucault's turn in history of science (Canguilhem, 1993 [1977], pp. 27–8). Moreover, an immediate issue is that Canguilhem wrote about 'scientific ideology', which for Althusser would have been no more than an oxymoron. Canguilhem did not even mention Althusser or Foucault in his paper on scientific ideology.³ His only substantial reference to a previous concept of ideology is to Marx's. Despite introducing a new concept into his philosophy, Canguilhem appeared to look back rather than forward: he explained that the introduction of the concept of scientific ideology was a way of 'refurbishing without rejecting the lessons of... Gaston Bachelard' (Canguilhem, 1988 [1977], p. ix; Canguilhem, 1993 [1977], p. 9). So the question remains: why was this revision called for? And how was the concept of scientific ideology going to help?

Canguilhem presented the concept of scientific ideology in relation to a historiographical issue, that of the object of the history of science. I shall follow him and examine his concept from a historiographical point of view. I shall argue that his 'refurbishment without rejection' of Bachelard's ideas was in fact more profound than it may appear, and it was also necessary because of a tension between the normative and descriptive characters of historical epistemology. I shall show that Canguilhem introduced the concept of scientific ideology as a solution, or an attempted solution, to a historiographical problem: that a straightforward application of Bachelard's normative view of science would have made it very difficult to construct narratives in history of science, in particular those narratives that Canguilhem had constructed in his practice as a historian of concepts.⁴ This is not only a historiographical problem, but also an epistemological one, as I shall show. I shall start by presenting the problem. I shall then sketch Canguilhem's concept of scientific ideology, and evaluate it against the background of related concepts elaborated by Bachelard, Althusser and Foucault. In this series of brief comparisons, it will emerge that aspects of Canguilhem's view of science and its history are conceptually more closely linked to Léon Brunschvicg's than later developments of historical epistemology and its legacy. Canguilhem's introduction of the concept of scientific ideology also contributes to show that his view of the aims and shape of the history of science departed from Bachelard's more than it is generally acknowledged.

³ Although he does so in the Preface of the volume in which the article appears, as mentioned.

⁴ The relationship between history and philosophy of science is a very complex and long-standing problem. The tradition discussed here was one of the attempts at the integration of history and philosophy of science; this question has returned on many occasions, notably with Thomas Kuhn in Anglophone philosophy, and more recently with the 'integrated HPS' project (see Schickore, 2011). I will not discuss this general issue, but the present article may nevertheless indirectly contribute to it.

2. The problem: narrative and epistemological break

The problem at the core of Canguilhem's paper on ideology is at the same time historiographical and epistemological. It is historiographical because it concerns the object of the history of science: Canguilhem discussed what history of science should be history of (Canguilhem, 1993 [1970], p. 33). It is also an epistemological problem, as it entails determining which body of beliefs and practices counts as science and which does not. The normative and the descriptive approaches cannot be easily disentangled. Canguilhem argued that epistemology has always been historical, as epistemologists cannot but refer to the history of science for their models of scientific knowledge. As Léon Brunschvicg and Gaston Bachelard before him, Canguilhem thought that the previous epistemologists' mistake had been to believe that science had reached its definitive form with Newton. This was Kant's 'error', which Canguilhem ascribed to the 'culture of the period', that is the Enlightenment: it was difficult at that time to 'envision the possibility of a history of categories of thought' (Canguilhem, 1988 [1977], p. 11). The project of historicisation of Kantian philosophy, which had been extensively pursued by Brunschvicg, had been fully absorbed in the tradition of historical epistemology by the time Canguilhem wrote his works. Brunschvicg argued that Albert Einstein had shown that the Kantian intuitions of space and time are not the only 'containers' of human experiences (Brunschvicg, 1922; Brunschvicg, 1920; Brunschvicg in Einstein et al., 1922). Similarly Bachelard had interpreted Einstein's theory of relativity as the emergence of the 'new scientific mind' (Bachelard, 1993 [1938], p. 7; Bachelard, 2002 [1938], p. 19).

If our categories of thought change, then epistemology must be revised in accordance with the advancement of science. In other words, epistemology for both Canguilhem and Bachelard should be truly historical. Epistemology should follow the history of science because it is current science that dictates what knowledge is. This is precisely what Bachelard thought: for him, current science is the norm of truth and scientificity. In his words: 'the major lesson that the philosopher should learn from the evolution of science is that philosophy itself should be altered' (Bachelard, 1972 [1953], p. 135). Canguilhem often referred to Bachelard's conception of scientific truth, and did so also in *Ideology and Rationality*, where he favourably quoted Bachelard saying that 'truth is simply what science speaks' (Canguilhem, 1988 [1977], p. 11). Just as for Bachelard, for Canguilhem, science, which is 'a project aimed at the truth', dictates what is true and what is false. Truth, as a consequence, is the same as scientific truth, and knowledge the same as scientific knowledge. He argued that 'scientific knowledge' is a pleonasm, just as 'true knowledge' is (Canguilhem, 2015 [1965], pp. 1206, 1203).

Canguilhem accepted Bachelard's normative approach to the history of science: for him past theories and practices should be evaluated from the point of view of current science. However, the issue of the links between the present and the past of science is complex; as I shall argue that Bachelard and Canguilhem offered partially different solutions to it.

Bachelard regarded the history of science as characterised by 'epistemological breaks', that is re-organizations of knowledge, as the above-mentioned revolution in physics that the theory of relativity brought about. For him, science advances by 'saying no' to previous doctrines and practices. However, this does not mean that science rejects its past to start anew; in fact science produces what can be called a dialectical synthesis of its past and the negation of its past in order to create something new that maintains a relation with its past. The past is re-interpreted in order to be assimilated by current doctrines; if this re-interpretation did not take place, no synthesis would be possible. This re-interpretation is a 'rectification' and 'rationalisation' of past doctrines. (Bachelard, 1988 [1940];

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