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## Dossier Georges Canguilhem

### *The Birth of the Clinic and the Sources of Archaeological History*<sup>1</sup>

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#### Abstract:

The year 2013 marked the 50<sup>th</sup> anniversary of the publication of a classic of the historiography of sciences, Michel Foucault's *The birth of the clinic: An archaeology of medical gaze*. In different parts of the world, events were organized to reflect on this important work. The article argues that if one cannot draw a direct line linking the work of the leading historians-philosophers of the twentieth-century sciences in France to Michel Foucault's archaeological study of the clinic, we must recognize that the author of *The Birth of the Clinic* has taken up from these historians-philosophers the methodological and conceptual tools that made it possible to study the history of science and knowledge in a new way.

#### Keywords:

Historiography of Medicine; French epistemology; Michel Foucault; Gaston Bachelard; Alexandre Koyré; Georges Canguilhem

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Michel Foucault has painted a masterful picture of French style in the history of sciences:

The history of sciences avails itself of one of the themes which was introduced almost surreptitiously into late eighteenth-century philosophy: for the first time rational thought was put into question not only as to its nature, its foundation, its powers and its rights, but also as to its history and its geography; as to its immediate past and its present reality; as to its time and its place. This is the question which Mendelssohn and then Kant tried to answer in 1784 in the *Berlinische Monatschrift*: “*Was ist Aufklärung?*” (What is Enlightenment?). These two texts inaugurated a “philosophical journalism” which, along with university teaching, was one of the major forms of the institutional implantation of philosophy in the nineteenth century [... ] They also opened philosophy up to a whole historico-critical dimension. And this work always involves two objectives

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<sup>1</sup>This article is based on the closing lecture held at the commemorative event of the 50<sup>th</sup> anniversary of Michel Foucault's *The Birth of the Clinic* at the *Université Paris Descartes*, on June 1, 2013. The event was organized by the *École Normale Supérieure* and the *Université Paris Descartes*.

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which in fact, cannot be dissociated and which incessantly echo one another: on the one hand, to look for the moment (in its chronology, its constituent elements, its historical conditions) when the West first asserted the autonomy and sovereignty of its own rationality [...] On the other hand, to analyze the “present” moment [...] and, in terms of what was the history of this reason as well as of what can be its present balance, to look for that relation which must be established with this founding act: rediscovery, taking up a forgotten direction, completion or rupture, return to an earlier moment, etc.

In France it is the history of sciences which has above all served to support the philosophical question of the Enlightenment: after all, the positivism of Comte and his successors was one way of us once again taking up the questioning by Mendelssohn and Kant on the scale of a general history of societies. Knowledge and belief; the scientific form of knowledge and the religious contents of representation; or the transition from the pre-scientific to scientific, the constitution of a rational way of knowing on the basis of traditional experience; the appearance, in the midst of a history of ideas and beliefs, of a type of history suitable to scientific knowledge; the origin and threshold of rationality – it is under this form, through positivism [...] that the question of the Enlightenment was brought into France [...]

If I have insisted on these points, it is to show that for a century and a half the history of science in France carried philosophical stakes within itself which are easily recognized. Works such as those of Koyré, Bachelard or Canguilhem could indeed have had as their centers of reference precise, “regional”, logically well-defined domains in the history of sciences, but they have functioned as important centers of philosophical elaboration to the extent that, under different facets, they set into play this question of the Enlightenment which is essential to contemporary philosophy (Foucault, 1978, IX-X; Foucault, 1994, 431-432).

1- Georges Canguilhem had already drawn attention to the strength of Auguste Comte’s philosophy, as his incursions into the field of the history of biology are remarkable. This philosopher is undoubtedly one of the first to show how much the science of the living is indebted to the researches of Barthez, Bichat, Meckel and Lamarck. Reading some of the lessons of the *Cours de philosophie positive* is enough to show the relevance of his analysis and the virtuosity with which Comte rises to a level where “he conceives the history of this science as a critical history, that is, not only ordered to the present, but judged by him” (Canguilhem 1968, 63). But what about the history of medicine? Comte’s biological philosophy also imposed his features on it. Charles Robin and Emile Littré are the authors of the *Dictionary of Medicine* which replaces, from 1873, the editions of the *Dictionary* of Nysten. Another direction of research on which Comte’s philosophy has also weighed is the development of lexicographical studies, translations and critical editions of the medical texts of Hippocrates and Galen. Besides Littré, we must mention the name of his disciple, Charles Daremberg, who gave a free course in the history of medicine at the *College de France* from 1864 to 1867. His courses are at the origin of his *History of medical sciences* in two volumes which appears in 1870. A new endeavor, bold, if we believe the author who does not fail to report “that never had such a course been done, not only in Paris, but in France” (Daremberg 1870, vii) (see Braunstein 2005, 367-387). Soon, however, the history of medicine declines. The first reason is institutional. Pierre Laffitte, who held the chair of the history of sciences at the *Collège de France*, hardly innovated and Paul Tannery was blocked from the chair left vacant by Laffitte. The second reason is decisive. By identifying the positive stage with a definitive state of the human mind, the disciples of Positivism have ceased to be interested in history. “All this explains why, in France, the first and the last historian of medicine is one and the same man, Daremberg” (Canguilhem 1972).



The German-American School took over. From the end of the nineteenth century, and during the first decades of the next century, it took center stage. In 1906, the medievalist Karl Sudhoff (1853-1938) founded the *Institute for the History of Medicine* at the University of Leipzig. In 1925, Henry Sigerist (1891-1955) succeeded him. But the fate of the history of medicine is linked to the rise of Nazism. From the 1930s, German historians threatened by the regime left Germany. At the invitation of William Osler, Henry Sigerist and Owsei Temkin join Johns Hopkins University. In 1940, Erwin H. Ackerknecht emigrated and joined the University of Wisconsin in Madison. At the instigation of Sigerist, historical studies emphasize the social, economic and material conditions of collective pathological phenomena. The works of Charles Rosenberg, Georges Rosen and Richard Henry Shryock illustrate this sociological orientation in the history of medicine (see Sinding 2004, 573b-578b).

In 1938, the very year in which the *Institute of the History of Medicine* in Leipzig was called the Karl Sudhoff Institute, Gaston Bachelard published *La formation de l'esprit scientifique: contribution à une psychanalyse de la connaissance objective*. On one side, the 14 volumes of Paracelsus's medical works, edited by Sudhoff; on the other, only one surprising page from Bachelard's book. For the French epistemologist, who wants to show the pre-scientific mentality at work, the history of medicine appeared as a discipline of excellence [*discipline de choix*]. A scientific mind can only be disoriented by Sydenham's reading. Bachelard quotes the physician Chambon de Montaux, who in his *Traité de la fièvre maligne simple et des fièvres compliquées de malignité* (Montaux 1787, 68) divulges the doctrine of the Englishman: "These warm and spirituous particles acquire a great action by their meeting"; they tend to create substances that look like them: "it is thus that fire creates fire, and a liquid corrupted by a malignant depravity carries the infection in the rest of the fluids". This thought is revealing "of a deviation from the scientific mind". Will it be objected that such a theory of specific malignancy announces the discoveries of microbiology? Such anticipation would be tantamount to forgetting that a phenomenology of first coming is the mark of a pre-scientific mind. Everything else is the approach of the scientific mind: "Microbiology develops, on the contrary, by differentiation, isolating in some way the modes of the hidden principle. It is by a long technique that microbiology finds the specific microbe that allows it to perfect the specific diagnosis" (Bachelard, 1965, 109).

At first sight, *La formation de l'esprit scientifique* marks a return to Comte. To explain the general attitudes successively developed concerning the interpretation of phenomena, Bachelard reactivates the law of the three stages. The first period, which represents the pre-scientific stage, goes from Antiquity to the Renaissance and ends in the seventeenth and eighteenth centuries. We recognize the theological, or fictitious, stage of the positivist philosopher who sought, in the child's thought, a term of comparison likely to suit this first stage. Bachelard also made the pre-scientific stage a stage of mind characterized by his most immediate interests. "The worldly or *puerile soul*, animated by naive curiosity, struck with astonishment at the slightest instrumented phenomenon, playing physics to amuse oneself" (Bachelard 1965, 9). But we must not be deceived; under this phenomenon of repetition, we must see a break with the historico-critical order adopted by Comte and his disciples. It was necessary to put an end to the dogmatic line of positivism, which ushered in the transition to the scientific stage, the most perfect expression of progress. Canguilhem said that the history of medicine in France begins and ends with Charles Daremberg. Well, it starts again with Bachelard. Subject to specifying that it resurfaced in the most surprising way that can be imagined. Indeed, the recurring history has made the appearance of a strange world possible, and until then unnoticed. Pointing out the *negatives* of science, Bachelard unwittingly pointed out another history of medical thought. It will be objected, with good reason, that Bachelard shares with Comte the desire to present a scale of the evolution of the scientific mind. But to the opposition of the theological and positive stages he substitutes that of the pre-scientific and scientific stages, even of the outmoded and sanctioned. From there, he brought to light those productions of the pre-scientific mind that were so quick to substantiate so many metaphorical qualities. Let us remember the essential: the history of

medicine makes its entrance in the company of monsters. Epistemology identifies the disorders of thought to the failures of life. In *Rationalisme appliqué*, it is a question of “the monstrosity that proliferates in the field of false explanations of vulgar knowledge” (Bachelard 1949, 148). In *La formation de l'esprit scientifique*, Bachelard announced immediately: “We will expose in bulk our museum of horrors” (Bachelard 1938, 21).<sup>3</sup>

2- Alexandre Koyré was not interested in the verbal and psychological obstacles that Bachelard described in *La formation de l'esprit scientifique*. He does not believe in a history that would be a collection of monsters or a bunch of mistakes. It is not that Koyré rejects the recurring method; on the contrary, he uses it but by regulating the lighting differently that it allows it to bear on the past. Of course, this setting depends on the position of the observer. From the point of view of today's thinking, it is normal that in the eyes of the one who turns towards the past “ancient theories appear as incomprehensible, ridiculous and deformed monsters”. By going back in time “he meets them, at the moment of their death, aged, parched, sclerotic”. Completely different is the position of Koyré who settles, not in a physics laboratory, but in a classroom, where the laws of motion are taught to the children. These laws seem so clear and so natural to us that one would think they have always been known. But it is not so; these laws presuppose the invention of a frame of thought that is all the more likely to be neglected because the discoveries it makes possible seem self-evident. Before finding these simple, evident laws, Galileo and Descartes had to construct the very frame that would make these discoveries possible; “They had, to begin with, to reform our intellect itself; give it a series of new concepts; to develop a new idea of nature, a new conception of science, in other words, a new philosophy” (Koyré 1966, 178-179).<sup>4</sup> It is in this new theoretical horizon that we must situate ourselves, not to say the truth, but to be “in the true” [*dans le vrai*]. For all the real experiences of Galileo leading to a measurement, and to a number, were understood as false by his contemporaries: “And yet, says Koyré, it is Galileo who is in the true” (Koyré 1966, 154-155).<sup>5</sup> By mathematizing physics, he lays the foundation for the new dynamics. Correlatively, Koyré suggests that Aristotelian physics is understood as the space of a qualitative physics that switches “in the false”? [*dans le faux*]. Not only do the *Galilean Studies* offer the model of a recurring history, but the task that the historian of sciences is exalting: “By reworking and re-following the evolution of science, he grasps the theories of the past at birth and lives with them the creative impulse of thought” (Koyré 1971, 258).

3- It is known that *Le normal et le pathologique* (1943) is not a study of the history of medicine. But Canguilhem is close to Koyré when he recalls that with the mathematization of physics, the movement of matter ceases to come under the power of life. And that, conversely, with Bichat biology is founded on the power of life. That is, on the opposition between the natural, which is the term of a finality, and the pathological: “The progress of physical knowledge has consisted, with Galileo and Descartes, in considering all movements as natural, that is, in conformity with the laws of nature, and that the progress of biological knowledge consists of unifying the laws of natural life and pathological life” (Canguilhem 1966, 78-79). Canguilhem is still close to Koyré when he apprehends a concept of the past at its birth and lives, with its elaboration, the creative impulse of thought. This is at least what emerges from his study *La Formation du concept de réflexe au xvii<sup>e</sup> et xviii<sup>e</sup> siècle* (1955). For Willis invents the

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<sup>3</sup>Canguilhem was not mistaken: “Is the history of science only the museum of the errors of human reason?” (Canguilhem 1989, 43).

<sup>4</sup>An English language version of this text had been previously published in 1943. (see Koyré 1943, 333-348).

<sup>5</sup>A note states that the text, “La loi de la chute des corps. Descartes et Galilée”, was first published in *Annales de l'Université de Paris*, (1936, 11<sup>e</sup> année), in 1937 dans la *Revue philosophique de la France et de l'Etranger* (1<sup>er</sup> semestre 1937, n° 123) and in 1939, by Hermann, in the collection of *Actualités scientifiques et industrielles*.

word and concept of reflex movement in the context of a more imaginary than experimental theory of nerve impulses. It would not be wrong to say that Canguilhem has moved the benchmarks of the ages of scientific thought according to the Bachelardian calendar. Indeed, there may be, in terms of physiology, a history of science that “is not exclusively the paleontology of a vanished scientific spirit, [and] who tries to resuscitate in their original vitality the elements of what the same author calls the sanctioned history” (Canguilhem 1955, 166). But about the monstrosity, Canguilhem moves away from Bachelard and Koyré. To be precise, it should be said that he is insensitive to metaphors. It is not he who would see in the monstrosity a reference likely to devalue the pre-scientific thought. It is not he who would see, in an old theory, any resemblance to the monstrous appearance of a decrepit old man. This reserve *vis-à-vis* of the images is the negative counterpart of an element that is both positive and very real: monstrosity comes from teratology; what is normal at a given moment becomes, by its persistence, abnormal at the next moment. Back then, in the true sense of the word: “Monstrosity is the fixation of the development of an organ at a stage exceeded by others. It is the survival of a transient embryonic form. For a given species organism, today’s monstrosity is the normal state of the day before yesterday” (Canguilhem 1962, 179).<sup>6</sup>

Ignorance of the methodological axioms that have been applied by Bachelard, Koyré and Canguilhem block access to *The birth of the clinic*. Admittedly, Foucault took care to specify that his analysis was not a study of the history of sciences. But the technical and conceptual tools implemented in an *archaeology of the medical gaze* are imported from the field of the history of sciences. First, Foucault found in Bachelard the concept of an “epistemological break”. But to be attentive to the identification of epistemological thresholds, Foucault does not accept the division between the scientific and the pre-scientific. The confrontation of the texts of the medical doctors Pierre Pomme and Antoine Laurent Bayle bears direct witness. From the point of view of Bachelardian epistemology, the text of Pomme could be apprehended as an epistemological obstacle. By contrast, Bayle’s text could be read as an objective description. It’s the least we can say, Foucault moves away from Bachelard: “There was no ‘psychoanalysis’ of medical knowledge, or more or less spontaneous rupture of imaginary investments, ‘positive’ medicine is not one that has made an ‘object’ choice that is finally focused on objectivity itself” (Foucault 1972, vi).<sup>7</sup>

There is more; Foucault’s approach is symmetrical and inverses that of Bachelard. On the one hand, he orders a historical narrative from before to after, and not from after to before. Hence the description of the passage from the medicine of the species to the first rational discourse on the disease. On the other, he walks against the current of the path from the concrete to the abstract. In the eighteenth century, Johann-Friedrich Meckel, who treats the pathology of the encephalon, uses the scales. At the beginning of the nineteenth century, Bayle described the encephalic lesions of general paralysis. Then, Foucault found in Koyré an art of periodization that avoids any anachronism. The period he is interested in is the one that invented the first rational discourse on the disease and it matters little that this invention goes through scientifically false propositions. Finally, from Canguilhem’s reading, Foucault retained: “that we could, we should, make the history of science as a coherent and transformable whole of theoretical models and conceptual instruments” (Foucault 1972, 73-74). Or, this methodological axiom applies to the study of epistemological transformations. Does a set subject to rules of internal cohesion not designate a normative system with respect to which a deviation can be said to be monstrous?

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<sup>6</sup>This text has been published in (Canguilhem 1962, 29-43). The examination of this concept already appears in the (Canguilhem 1966 [1943], 81-88).

<sup>7</sup>On this point, see “Foreword to the English Edition”: “This unconscious is always the negative side of science [...] I would like, in turn, to uncover a positive unconscious knowledge: a level that escapes the consciousness of the researcher and yet is part of the scientific discourse, instead of he challenges its validity and seeks to diminish its scientific nature” (Foucault, 1970, xi; 1994, 9).

In the preface to the English edition of his book *Les mots et les choses*, Foucault deplored the fact that in France some limited “commentators” persist in affixing to him the label of “structuralist”. “I have failed to print in their narrow mind that I have not used any of the methods, concepts, or keywords that characterize structural analysis” (Foucault 1970, xiv; 1994, 13). Foucault could have said that he failed in printing in their minds, the idea that he put forward, in his own way, the methods, the concepts and the key words that characterize the history of sciences. Would he have been better understood?

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