

# “Unknown Material”? Georges Canguilhem, French Philosophy and Medicine



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**Abstract** In the introduction to the *Normal and the Pathological*, Canguilhem’s doctoral dissertation in medicine, defended in 1943, he claimed, “philosophy is a reflection for which all unknown material [*matière étrangère*] is good.” In this case the “unknown material” was precisely medicine; “a technique or art at the crossroads of several sciences” which was supposed to provide “an introduction to concrete human problems.” Canguilhem had started studying medicine six years before, while he was a high-school professor in Toulouse. At the time he was distancing himself from the philosophical framework that had marked his studies and writings during the previous decade. This framework implied an anti-vitalist, Kantian and Cartesian approach to man, strongly influenced by his mentor Emile Chartier, also known as Alain. In this chapter, I try to provide concrete explanations concerning his decision to study medicine. I will not rely on those proposed by the existent scholarship, which frequently relate his decision to his interest in technology and technique. On the contrary, by examining unpublished material, such as a series of lectures given between 1933 and 1935, I claim that the motivation of his turn has to be related to the readings of works in psychology and ethology undertaken during this period.

**Keywords** Medicine · Psychology · Canguilhem · Ethology · Concrete

## 1 Introduction

At the very beginning of the *Normal and the Pathological*, originally intended as a doctoral dissertation in medicine, defended in 1943 in Strasbourg’s Faculty of Medicine, Georges Canguilhem (1904–1995) famously claimed that “philosophy is

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a reflection for which all unknown material [*matière étrangère*] is good” (Canguilhem, 1991, 33). During the last two decades, this sentence has become a catchphrase, and it has even been used to name a French book series from the Vrin publishing house. This definition of philosophy as a peculiar discipline able to treat all kinds of “unknown materials,” much like a gigantic stone-crusher, is often presented as particularly original and radical. However, I will try to show that this is a very classical definition of philosophy, proper to Kant’s heritage in France. In the case of Canguilhem, the “unknown material” belonged to medicine, that he considered neither an academic discipline, nor an independent science – as Claude Bernard (1813–1878) and, before him, François Magendie (1783–1855) or François Broussais (1772–1838) believed – but rather as “a technique or an art at the crossroads of several sciences.” This “unknown material” was thus supposed to provide “an introduction to concrete human problems” (Canguilhem, 1991, 33).

Canguilhem started studying medicine six years earlier, during the autumn of 1937, at Toulouse’s medical school, after having obtained, in Toulouse University, the previous year, his “certificat d’études physiques, chimiques et biologiques” (*certificate of physical, chemical and biological studies*), mandatory to study medicine [*Faculté de médecine*]. At this time, he was teaching at the Fermat high-school. He then continued studying at the more important Strasbourg medical school (from 1941 until 1943), where, under the invitation of his friend Jean Cavaillès (1903–1944), he taught philosophy and logic at the local university. As for all philosophers studying medicine, teaching philosophy was, for Canguilhem, a way to finance his studies. The development of his career as a philosopher – from high school to preparatory undergraduate school, or *khâgne*, up to university – was accompanied by the progression of his medical training. Once he had gained a basic knowledge of medicine during the period spent in Toulouse’s medical school, he encountered the determinant “unknown material,” through the intercession of different figures at Strasbourg University: his friend, the psychopathologist, Daniel Lagache (1903–1972), who played a major role in his discovery of Kurt Goldstein’s (1878–1975) work; the histologist Marc Klein (1905–1975), and the physiologist Charles Kayser (1899–1981).

Nonetheless Canguilhem never practiced the “art” of medicine – but he was registered in the Order of the Physicians. One exception was during the Resistance in the French region of Auvergne, where he treated the wounds of his comrades.<sup>1</sup> He never took an active part in the discipline of medicine, since he never published anything concerning practical contemporary medical problems. From the *Normal and the Pathological* onwards, medicine, and especially its history, were a simple source of “unknown material” for him, which had to be treated philosophically.

My central question is: why did Canguilhem choose medicine as a source of “unknown material”, instead of another practice or science? In this chapter I will try to provide some answers concerning this decision and attempt to correct other hypotheses I formulated in an essay published almost a decade ago (Bianco, 2013).

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<sup>1</sup> See Limoges, “Introduction,” in Canguilhem (2015), 15.

The treatment of this question is not a simple matter of detail – a question reserved for “canguilhemologues.” On the contrary, it provides an opportunity to investigate the history of the relation between philosophy and medicine in France, and to understand how this relation changed during the peculiar period of the interbellum.

This paper is structured in three parts. In the first, I try to elucidate the meanings of “*matière*” [matter or material] and “concrete.” I insert these terms into a semantic field which emerged during the French interbellum that was trying to render what the role of philosophy was at that moment. In the second part, I consider the “unknown material” that Canguilhem’s generation chose to treat during the 1930s; paying particular attention to sociology and psychology, as well as the peculiar relationship that medicine had with philosophy. In the third and final part, I try to provide some answers concerning his choice for medicine.

## 2 Matter/Material, Concrete

The term “matter” [*matière*] was progressively becoming a buzzword during the interwar period, since it was at the centre of the writings of an author who was slowly gaining success, namely Karl Marx (1818–1883), who, after half a century of stigmatization, started to be read by philosophers. In fact, one can find expressions like the ones used by Canguilhem in the writings of many authors belonging to the same generational cohort, many of whom were influenced by Marx, Engels (1820–1875) and Lenin (1874–1925). Two examples are striking, specifically, the philosopher Georges Politzer (1903–1942), as well as Canguilhem’s schoolfellow at the *École normale supérieure*, Paul Nizan (1903–1942). Politzer and Nizan authored two of the most devastating – and influential – philosophical pamphlets of the interbellum: *La fin d’une parade philosophique: le Bergsonisme* (1929) [*The End of a Philosophical Parade: Bergsonism*], that Canguilhem reviewed and praised,<sup>2</sup> and *Les chiens de garde* (1932) [*The Watchdogs*].

In a short essay from 1925, which anticipated *La fin d’une parade philosophique*, simply entitled “Introduction,” Politzer (2013, 59) wrote that “spiritual life needs matter to nourish itself”; that “philosophy needs a real matter to be valid”. At the same time, French philosophy had been denounced and considered “lacking matter.” In *Les chiens de garde*, Nizan (1932, 13–14) claimed something similar: “Philosophy is a type of exercise of synthesis which consists in bringing together and ordering elements of any kind: there is no such thing as a proper “philosophical matter”. However, he also stated that “philosophy in general is what remains of the various philosophies when they have been emptied of all matter”. Nizan stigmatized contemporary French philosophy, epitomized by figures such as Henri Bergson (1858–1940), Dominique Parodi (1870–1955), André Lalande (1867–1963) and

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<sup>2</sup> See Canguilhem, 2011, 221–226.

Léon Brunschvicg (1869–1944), equally, since he considered it a philosophy “emptied of all matter.”

Both Canguilhem, Nizan and Politzer, conceived of philosophy as a way of problematizing and synthesizing the “materials” coming from the different specific sciences. As anticipated, this is an extremely traditional definition of philosophy, which I would name “idealist,” since it states that all problems can be treated in a “philosophical way.” This is in contrast to the regional sciences, which limit themselves to their own objects. In an essay from 1938, “Activité technique et création” [“Technical Activity and Creation”], Canguilhem (2011, 501), quoting the Catholic spiritualist philosopher René Le Senne (1882–1954), an important reference for him at that time, claimed that the philosopher has to be a “professor of unity,” someone who looks for the unity of human experience in its scientific, moral, and aesthetic aspects.<sup>3</sup> During the 1930s, Canguilhem thought that this unity had to be found in a transcendental consciousness; a source of three different values – aesthetic, scientific and moral. This is particularly clear in the preliminary notes of a series of lectures that he gave at Valenciennes’ high-school between 1933 and 1935. Here, Canguilhem (1933–1935, 2) writes:

Philosophy does not have its own object, if by object we mean a specialisation of judgement or thought. It [philosophy] was originally the ambition of a total explanation [...]. Philosophy would thus be defined as an inventory and critique of possible values or standards of affirmation.

Canguilhem inherited this idealist or transcendentalist conception of philosophy from a series of French authors, such as René Le Senne, Jules Lagneau (1851–1897), Emile Boutroux (1845–1921), Emile Chartier *aka* Alain (1868–1951), and finally Léon Brunschvicg. In the essay “L’éducation et la liberté,” originally published in 1902 and then republished in the book *Nature et liberté* [*Nature and Freedom*], Brunschvicg (1921, 123) wrote that “philosophy has no material of its own; for its material is the mind as it has been formed by the study of history, the discipline of science, and aesthetic culture; it is on this mind that it [philosophy] exercises its reflection in order to show its unity”. It is probably this essay that Canguilhem, Politzer and Nizan had semi-consciously in their minds when they insisted on the importance of “matter” in philosophy. Let us not forget that at the end of the “Introduction” to *The Normal and the Pathological*, Canguilhem obliquely quotes an excerpt taken out of Brunschvicg’s essay “La méthode dans la philosophie de l’Esprit,” republished in the book *L’idéalisme contemporain* [*Contemporary Idealism*] (1921), which would be a frequent reference in the preparatory notes for his high-school classes from the 1930s. Here Brunschvicg (1921, 179) stated that “philosophy is the science of solved problems”, namely, a way of unfolding the conditions that allowed mind (*Esprit*) to overcome these problems. Brunschvicg also stated that, according to idealism “all problems remain open, because Mind [*Esprit*] does not cease to live and work in all of us.”

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<sup>3</sup> See Roth, 2013.

Nonetheless, despite the respect that Canguilhem felt for Brunschvicg,<sup>4</sup> there was a big difference between the two thinkers and between their ways of treating the “unknown material” coming from the past. According to Brunschvicg, the history of the sciences is nothing but the history of the conquering march of human Mind, or Spirit [*Esprit*]; the progressive, though not teleological, unfolding of truth. Therefore, once one theory wins against the others, these other theories end up being relegated to the past, like archaeological remains. The role of philosophy is to explain the transcendental conditions according to which one theory won over another. This vision is clearly depicted in one of his most important books, *Le progrès de la conscience dans la philosophie occidentale* (1927) [*The Progress of Consciousness in Occidental Philosophy*], a book which was mocked by Nizan (1932, 56) and described as a “philosophical breviary of the Universe where all is well that ends well.” Similarly, starting from the 1940s, Canguilhem realized that the march of human knowledge was discontinuous, and philosophy’s role was to unearth old debates and re-interrogate the winning theories. In *The Normal and the Pathological* (Canguilhem, 1991, 35), one of these winning theories was the one “according to which pathological phenomena are identical to corresponding normal phenomena save for quantitative variations.”

More generally, a big gap separated the generational cohort of Lalande, Brunschvicg and Bergson from Canguilhem, Nizan and Politzer. This latter group of young men, born during the first decade of the twentieth century, wanted to oppose the “philosophy without matter” of their mentors, in the name of the “unknown material” and the “concrete.” The term “concrete” was, in fact, tied to the term “matter.” Starting from the interwar period, it turned into a buzzword; constantly opposed to the “abstract.”<sup>5</sup> In France, the oppositional couple, concrete/abstract, only started to be used obsessively starting from the 1920s, because of the importation into France of texts coming from Germany, especially Hegelian, and then Marxian texts. Hegel (1770–1831) had reactivated the old semantic layers present in the verb *concretere*, at the root of “concrete.” According to his absolute idealism, abstract thought consists in separating one term from others, thus ignoring the totality of the dialectical relations between them. Conversely, the concrete is reality itself, or what has grown together from several determinations. Reason is the faculty of the “concrete universal,” namely the one able to grasp this organized unity, the “concrete.”

The peculiar social and ideological context of the post-war period was at the root of the interest of a new cohort of intellectuals studying “unknown material”. The trauma of the conflict created a neat divide, separating the dark post-war years from the Belle Époque’s splendours, and the new cohort born at the dawn of the twentieth

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<sup>4</sup>Brunschvicg was always praised by Canguilhem. For instance, in the 1988 conference “La problématique de la philosophie de l’histoire au début des années 30” [“The problem of philosophy of history at the beginning of the 1930s”] Canguilhem (2018, 1123–1141) considers Brunschvicg as the academic philosopher who, during the 1920s, was the most respected by him and his school fellows.

<sup>5</sup>For the history of the oppositional couple concrete/abstract, see Bianco, 2023a.

century from their mentors. This cohort was aware of the horrors experienced by their older peers during the conflict. Moreover, the long months soldiers spent in the trenches had put young intellectuals in contact with men from the working class. On top of this, the Bolshevik Revolution started to be considered by many of these men as the proof that a radical change, led by the principles of Marxism, was possible. This transformation provoked a sudden increase in the use of the term “concrete”, accompanied by critiques addressed to the academic “abstractions” produced during the Belle Époque.

The new cohort of scholars, all born during the first decade of the century, attacked both the idealism of Kant-influenced authors such as Brunschvicg and Lalande – accused of confining themselves to epistemological problems considered from the “idealist” standpoint of an anonymous transcendental consciousness – and the “intuitive” and “irrational” philosophy of Bergson and his followers – attacked for having practiced a useless introspective psychology that invited inaction. The accusations were theoretical, but also moral and political. In fact, most of the authors targeted by the younger scholars took active part in war propaganda and were accused of being the voice of the bourgeoisie or at least of being no more than disengaged cowards who justified the war’s massacres. Addressing themselves to a wider readership, these young men took advantage of new, and more generalist publishing houses and journals. They created new and, in many cases, short-lived periodicals. They sometimes resembled the surrealist avant-garde who inaugurated the roaring twenties, publishing caustic tracts and manifestos where they opened an invitation to violent action and messianically invoked a forthcoming revolution. In some cases, they made use of a violent language and became more and more politicized. Being “concrete” meant being actively involved in politics, or being “engaged” [*engagés*], another buzzword of the period. This new cohort displayed some of the same features as the previous critics of “abstraction”, including the hatred of “idealism”, now used as synonym of “spiritualism.”

Finally, the gap between the growing number of students and the stable number of academic positions produced a perceptible decrease in the possibility of pursuing academic careers and resulted in the phenomena of de-professionalization.<sup>6</sup> While continuing to teach philosophy in secondary education, many graduates tried to find alternatives outside of the philosophical field. Some examples are: Jean-Paul Sartre (1905–1980), Emmanuel Mounier (1905–1950), Pierre Morhange (1901–1972), Norbert Guterman (1900–1984), Georges Friedmann (1902–1977), Paul Nizan (1905–1940), Henri Lefebvre (1901–1991) and Georges Politzer. Each engaged in the creation and editing of journals addressed to a wider public, the latter six having become communist militants. Most of them, along with Simone de Beauvoir (1908–1986), also wrote novels and journalistic articles. Friedmann and Lefebvre, along with Raymond Aron (1905–1983), Claude Lévi-Strauss (1909–2009) and, briefly, Raymond Polin (1910–2001) played an important role in the consolidation of the social sciences.

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<sup>6</sup> See Fabiani, 2010.

### 3 Different Material: Sociology or Psychology

The young philosophers were looking for “unknown material” in political action, or in new topics of inquiry. It was especially the two new twin disciplines of sociology and experimental psychology, which attracted many young graduates. The first would not be institutionalised as a separate curriculum from philosophy until 1957. Until then, it had simply been a sub-discipline of philosophy since it belonged to the “moral sciences” [*sciences morales*].<sup>7</sup> Canguilhem had an ambivalent attitude towards the social sciences,<sup>8</sup> an attitude he inherited from his mentor Alain, who was a role model of philosophical and political rigour during the 1920s. I wrote about Canguilhem’s relation to Alain elsewhere (Bianco, 2013), but let’s briefly revisit some facts.<sup>9</sup> During the period spanning from 1924 to the mid-1930s, Canguilhem embraced Alain’s Cartesian and Kantian philosophy, as well as his militant pacifism and his political radicalism. Canguilhem contributed to his journal *Libres Propos*, and even played the role of chief editor from 1930 to 1932. Alain provided him with a philosophy – specifically, an anthropology – and a political ethics. He also provided him with political contacts in the pacifist movement, figures such as: George Demartial (1861–1945), Romain Rolland (1866–1944), Félicien Challaye (1875–1967) and Jean-Michel Bloch (1913–1987). Alain even helped him publish articles in other pacifist journals, such as *Europe*. In 1934, Canguilhem started disagreeing with many pacifists concerning the attitude one had to adopt towards the rise of fascism. Alain himself was against any violent uprising. In 1935, Canguilhem joined the Comité de Vigilance des Intellectuels Antifascistes [Vigilance Committee of Anti-Fascist Intellectuals] and published a booklet *Le fascisme et les paysans* [*Fascism and Peasants*] (Canguilhem, 2011, 535–593). This happened just one year before Canguilhem’s decision to start his medical training. Elsewhere (Bianco, 2013), I claimed that his decision must be directly connected to a political change which made Canguilhem question Alain’s philosophy. Without simply discarding this bold hypothesis I formulated ten years ago, I’ll try to correct it on some points.

According to Alain, philosophy is an ethics. It aims at the realization of wisdom, achieved through a purification of mind from the passions which affect it and divert rational judgment. Alain’s philosophy depended on an idea of subjectivity as pure agency. Without will, perception and knowledge are impossible. Will must be educated and purified from the passions which affect it. Alain condemned all the sciences of man that produced laws explaining human behaviour through simple causation. These sciences negated the existence of the willing subjectivity, reducing the subject to an object. Therefore, Alain, and Canguilhem after him, were extremely

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<sup>7</sup>The term “human sciences” [*sciences de l’homme*] become common only at the end of the 1940s, as a translation of Wilhelm Dilthey’s (1833–1911) *Geisteswissenschaften*.

<sup>8</sup>See Bianco, 2024.

<sup>9</sup>For these aspects, see Braunstein, 2000, Roth, 2013.

sceptical towards certain trends within sociology, and especially Durkheim's, which considered that "social facts must be treated as things."

Nonetheless, Alain had a lot of respect for Auguste Comte's (1798–1857) sociology<sup>10</sup> which relied on the positivistic appropriation of François Broussais's "principle." According to this principle, there is merely a difference of degree, which can be quantified, between the healthy organism – called "normal" – and the one affected by a pathology. According to Broussais, the structure of an organism cannot be changed, and the transition from pathology to normality is gradual. Following Comte's application of the principle to sociology, Alain considered that society cannot be changed abruptly, and that brutal changes would lead to social pathology. Finally, Alain inscribed Comte's sociology into his philosophy of freedom. This is the reason why Canguilhem chose Comte as the topic of his master's degree dissertation (*Diplôme d'études supérieures*) and chose, as a supervisor, Céléstin Bouglé (1870–1940), a sociologist sympathetic to Durkheim, but not as dogmatic as other Durkheimians. Just like his friend Alain, Bouglé was close to the centre-left radical party. As I have shown elsewhere (Bianco, 2023a), his dissertation *La doctrine de l'ordre ou du progrès chez Auguste Comte* [*The Doctrine of Order and Progress in Auguste Comte*] (1926) depicts a fully Alainian Comte and turns the supposed fatalism of the doctrine of order and progress into a voluntarist theory proving human freedom and the necessity of *desiring* progress. Between 1927 and 1934, the references to "social theory" become frequent in Canguilhem's work, but he never praises Durkheim's sociology, privileging other authors, such as Paul Vidal de La Blanche (1845–1918), the godfather of the French school of geography; Max Weber (1864–1920) and Maurice Halbwachs (1877–1945). In 1931, Canguilhem (2011, 375–382) reviewed Halbwachs' *Les causes du suicide* (1930) [*The Causes of Suicide*] and extensively used this book and his *La théorie de l'homme moyen, essai sur Quételet* (1913) [*The Theory of the Average, Essay about Quételet*] in the *Normal and the Pathological*.

Let us now turn to psychology, which, since the 1830s, was a mandatory discipline for all philosophy students. Psychology only became independent from philosophy in 1947, when the first independent curriculum in the discipline was instituted by Daniel Lagache. Alain, just like Canguilhem, appreciated Comte's and Kant's condemnation of psychology,<sup>11</sup> both of whom saw it as a contradictory pseudo-science. According to Alain, in the study of man, there are two options: physiology – including brain physiology – and philosophy, understood as a reflexive analysis of the conditions of possibility of knowledge and action. Therefore, there was no space for introspective psychology, which had been condemned by Broussais and, after him, by Comte. Professor Georges Dumas' (1866–1946) famous "presentations" of clinical cases at Sainte Anne hospital, enthused some of Canguilhem's school fellows like Daniel Lagache, Maurice Merleau-Ponty and Jean-Paul Sartre. Canguilhem attended to them just once, accompanied by Lagache, and never came

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<sup>10</sup> See Bianco, 2024.

<sup>11</sup> For this, Braunstein, 2012 and Sturm, 2001.



back. According to Canguilhem, psychology, even more than sociology, reduced man to a fact. By mobilizing determinants to explain human behaviour and knowledge, psychology reduces the human ability to act. It constitutes an invitation to inaction and becomes a means of controlling men. This thought would be a constant throughout Canguilhem’s career, which involved the denunciation of behaviourism and cognitivism.<sup>12</sup>

Nonetheless, during the ten years in which he taught in secondary education, Canguilhem *had* to teach psychology, given that this “sub-discipline” was part of the high school and college curricula. The number of high school lessons he dedicated to psychology, and more particularly to the difference between physiology, psychology and philosophy, is impressive. A large part of the high school lectures given by Canguilhem until 1935–6, as well as a thick yet unpublished textbook he finished writing in 1932, start with a definition of psychology. Canguilhem’s strategy consisted in separating introspective (or eclectic) psychology – considered a pathetic pseudoscience – from physiology, which was considered useful. This included making physiological psychology depend on an epistemological framework provided by philosophy, namely reflexive or transcendental analysis. On the third page of the textbook, Canguilhem (1929–1932, 3) sarcastically writes:

Psychology [...] can be considered a science if [...] one makes the soul a subtle object, but nevertheless an object. If, on the contrary, one understands that the object of psychology is, without any pun, the subject, one understands, at the same time, that psychology is necessarily a reflexive inquiry. It then becomes difficult to distinguish between psychology and philosophy. Psychology would be the study of the soul considered in union with the human body, in other words, the knowledge of the subject insofar as it is linked to conditions of a lower order, from which it is the task of reflection to progressively free itself, but which constitutes a starting point that none is allowed to neglect.

Concerning the physiological bases of psychology, Canguilhem praised Descartes’ mechanistic idea of the reflex movements – considered a “reasonable theory” at the time – and its development in authors such as Broussais, Claude Bernard, Jacques Loeb (1859–1924), Ivan Pavlov (1849–1936), Vladimir Bekhterev (1857–1927) and Henri Piéron (1881–1964).<sup>13</sup> Nonetheless he stigmatized these approaches when they tried to explain human behaviour without considering will, which was exclusive to human beings. The “error of psychological method,” he wrote in his manual, “is undoubtedly only the consequence of a more serious moral error. To treat the study of man objectively is very explicitly to hold and treat man as a means, asking him to renounce his essential quality of subject”. Finally, he added that that this type of approach was acceptable only if interpreted in the framework of transcendental philosophy, what Canguilhem (1929–1932, 15–16) calls here “reflection.”

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<sup>12</sup>For this, see Braunstein, 1999.

<sup>13</sup>Canguilhem would go on to criticize this approach in his Ph.D. dissertation on the notion of reflex (Canguilhem, 1994).

Canguilhem neatly separated human beings from other animals which, according to him:

1. Do not use instruments, but act using their organs.
2. Rely on instinct and not on intelligence.
3. Do not possess anything comparable to human language.
4. Mechanically react to the environment, without being able to shape it, since they are deprived of teleological behaviour.

As I have explained elsewhere (Bianco, 2013), during the 1930s, Canguilhem rejected all vitalist or proto-vitalist doctrines claiming the originality of life.<sup>14</sup> He thus concluded that “in short, nothing obliges us to attribute to the animals, perception, memory and reasoning, and this because all these apparently separate functions are in fact united by their relation to the same principle, reflection, implied in even the lowest forms of human knowledge of the world” (Canguilhem, 1929–1932, 28), and therefore, not in animals.

The mechanistic view of the organism, and more particularly of the human body, was enough for Canguilhem. In the manual he wrote, laconically, that “it is useless to insist on notions which any physiology manual can explain” (1929–1932, 11).

## 4 Medicine

What about medicine? What was its relationship with philosophy? Medicine was considered a peculiar body of knowledge taught in one of the four faculties of the French University; the other three being: the Faculty of Law, the Faculty of Science and the “Faculty of Letters,” (*Faculté des Lettres*) where philosophy, along with literature, geography, and history was taught). It could be stated that medicine was, since the Napoleonic reform of 1808, philosophy’s big Other. The transformation of French philosophy into a separate discipline from the beginning of the nineteenth century onward,<sup>15</sup> was mainly triggered by the debates philosophers had with physicians, mostly physiologists, pathologists and alienists. At the turn of the nineteenth century, the Ideologists, who played a major role in the Revolution, had combined the analysis of ideas with physiology and pathology. To stop the possible reconstitution of the legacy of Ideology, Napoleon created two neatly separated faculties: the Faculty of Sciences and the Faculty of Letters. Starting from the 1820s, the philosopher Victor Cousin (1792–1867) and his men played a major role in avoiding all the

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<sup>14</sup>See Canguilhem (1929–1932, 25): “Generally speaking, any vitalist doctrine that maintains the originality of life and instinct does so only by negations, by exposing the difficulties and limits that any positive method of explanation encounters. But, in addition to the fact that faculties and limits are necessarily relative facts which must not be transformed into principles, one can consider unacceptable an attitude which amounts to attributing as a proper character to the object of one’s research the very fact that nothing can be said about it”.

<sup>15</sup>For this see Bianco and Wolfe (2023b).

possible influences that some physicians – the first figure in this tradition being Victor Broussais – were having on the development of philosophical doctrines. These doctrines denied human agency and the existence of a unitary mind. For half a century, starting from 1820 until 1870 at the earliest, *philosophical psychology* opposed the fragmentation of the mind proposed by brain neurology and alienism, in order to defend the unity and agency of the human mind. I cannot go into the main episodes of the long series of controversies here,<sup>16</sup> but we should note that during the nineteenth century, the philosophers’ attitude towards the medical “matter” was not objective. Rather, it was militant and aimed at defending the epistemic pillars of the philosophical field; namely the unity of mind, the absence of determinism and the existence of free will, if not of divine providence. It is from this perspective that the academic philosophers reacted to the physiological theory of the localization of faculties in the brain, the development of alienism, the theory of evolution and even to Claude Bernard’s ground-breaking *Introduction to Experimental Medicine* (1865).

During the nineteenth century, the idea of an “historical epistemology” of medicine was simply unthinkable, and even the histories of medicine, which started appearing at the beginning of the century, were produced by physicians. To better respond to the potential threat coming from the physicians – who viewed the philosophers trained inside the Faculty of Letters as scientifically ignorant – philosophers had to learn some basic medical notions. This ended up in the emergence of a new discipline: psychology. This is the reason why, during the 1880s, the reforms of the curricula in philosophy, embodied in manuals, aimed at including basic notions of physiology, brain-anatomy, and psychopathology. Théodule Ribot (1839–1816), the godfather of French experimental psychology, who had occupied a chair in “experimental psychology” since 1885, possessed only a second-hand knowledge of medicine. However, he invited the younger philosophers to engage in medical training. These men started their curriculum with an *agrégation* in philosophy,<sup>17</sup> then a training in medicine, ending in a Ph.D. dissertation in medicine, and then, eventually, a second Ph.D. dissertation in philosophy.<sup>18</sup>

In 1893, Pierre Janet (1859–1947) was the first *agrégé* in philosophy to earn a doctorate in medicine. Just one year later, in 1894, his friend Georges Dumas (1866–1946) became a philosopher-physician as well. During the following 40 years, only seven other scholars were able to complete their medical training after a philosophical training. They were Charles Blondel (1876–1939), who became a doctor in medicine in 1906, Henri Wallon (1879–1962) in 1908, Henri Piéron (1881–1964) in 1912, André Ombredane (1898–1958) in 1924 and, finally, Daniel Lagache (1903–1973) in 1934. Lagache, one of Canguilhem’s school fellows at the *Ecole Normale*, created the first independent curriculum in psychology, in 1947.

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<sup>16</sup>for this, see Bianco and Wolfe (2023b).

<sup>17</sup>The *agrégation* is the selective test a graduate in philosophy had to pass if she wanted to teach this discipline in secondary and higher education.

<sup>18</sup>For this, see Bianco, 2019.

Therefore, Canguilhem was not an exception in his interest in medicine, given that he was one of the ten French “philosophers” who earned a doctorate in Medicine before WW2. Nonetheless, two main differences neatly separate the case of Canguilhem from the other philosophers with a doctorate in medicine. The first difference had to do with the great gap separating Canguilhem’s philosophical training (suspended after 1927, when he received his *agrégation* in philosophy) and his medical training, which started almost a decade later. The second difference, which must be explored here, deals with the reasons behind the decision to undertake medical training.

Now, another detail must be stressed. Because of the effort that a long training in medicine required, the graduates in philosophy who were embarking on it had to first possess the material and economic means to do so. They then had to understand that this endeavour would lead to certain results in terms of their careers. For example, Théodule Ribot and Henri Bergson, who both wanted to pursue said training (Bianco, 2019), were either too economically unstable or were teaching in towns in which there was no medical school. On the other hand, Dumas came from a family of physicians, and Janet had a physician brother and was already well inserted into the medical field thanks to his powerful uncle Paul. Even Lagache came from an extremely wealthy family. Other philosophers who started by studying psychology at university, such as Sartre and Merleau-Ponty were, in a way, either too ambitious, too quickly inserted into the philosophical field, or simply too involved in other projects to undergo seven years of medical training.

Canguilhem was from a middle-class *milieu*, but he could not pursue medical training while teaching so many hours in high schools, located in small towns such as Albi or Valenciennes. It was only once he got appointed to his job teaching preparatory classes in Toulouse, a town where there was a Medical School, that he was able to start his training. But had he already planned to do this over the past decade? We cannot be certain. Nonetheless, in a review of *Orientation des idées médicales* [*The Orientation of Medical Ideas*], a work by the physician and psychoanalyst René Allendy (1889–1942) from 1929, Canguilhem (2011, 248–51) declared preferring this work to Bernard’s *Introduction*. He praised Allendy’s ideas on synthetic medicine, addressing the concreteness of the “individual”. Canguilhem’s claimed resonate with parts of Alain’s work. For instance, in *Elements of Philosophy* (Alain, 1941, 113), a work originally published in 1916 and that had a tremendous influence on Canguilhem, Alain claims that “the great problem for a doctor is to discover the concrete, namely the singular patient he has in front his eyes”. In his books Alain frequently considers the philosopher to be a physician, who must be aware of the basic notions of pathology and physiology. However, he must remain prudent, since he could influence the patients (i.e., the students and the citizens) by announcing a pathology and provoking a reaction that could worsen it. I have cited most of these passages – all relying on a mechanistic physiology inspired by Broussais – elsewhere (Bianco, 2013), so it is not worth revisiting it here.

Before concluding, I would like to mention two elements which may have motivated the choice of medicine. The first element is regarding WW1. Because of his ties with Alain – who fought against the war, became a militant pacifist, and authored

the important book *Mars ou la guerre jugée* (1921) [*Mars or War Judged*] – and with other pacifist figures, Canguilhem was extremely sensible to the absurdities of the war and its effects on the human body and psyche. Two physicians who operated during WWI turned into novelists and their descriptions of shattered bodies and of the heroic mission of the military doctors reached the wider public, Georges Duhamel (1888–1966), author of the excruciating *Civilisation* (1918), who won the Goncourt prize, and Louis-Ferdinand Céline (1894–1961), author of *Journey to the End of the Night* (1932).

We now come to the second motivating factor in pursuing a medical career, which is theoretical. In 1933, Canguilhem was neatly separating intelligent, willing human beings from other non-sentient living beings, while asserting that, concerning the functioning of the body, the law of reflex proposed by Descartes and the few explanations contained in any manual of physiology addressed to medical students would be enough. In a series of lectures he gave in Valenciennes in 1934–35, in the part concerning the relation between, on the one hand, philosophy and psychology, and on the other, sociology and biology, entitled “Dépendance et indépendance de la conscience” [“Consciousness’ dependency and independency”] Canguilhem (1934–38) began to hesitate. The old references were substituted by new ones. The new authors invoked in the lectures questioned the difference between intelligence and instinct, teleological behaviour and simple reaction, man and animal. For example, he quoted *Nature* (1934) by the physician Charles Nicolle (1866–1936), *Problems of Instinct and Intelligence in Insects* (1931) by the physician and ethologist Richard W. Hingston (1887–1966), and *The Genesis of Instincts* (1917) by the founder of animal psychology Pierre Hachet-Souplet (1869–1947). These works each criticized the conception of instinct as a simple mechanical adaptation and introduced the hypothesis of the existence of animal intelligence. The research of Herbert Spencer Jennings (*Life and Death: Heredity and Evolution in Unicellular Organisms*, 1930) on the behaviour of protozoa and on the use of the “trial and error” method, were also invoked to prove the existence of a rudimentary intelligence in even the simplest organisms. Canguilhem also mentioned the research of entomologists like Charles Ferton (1856–1921), Jean-Henri Fabre (1823–1915) and Morton William Wheeler (1865–1937), especially his book *Ants: Their Structure, Development and Behavior* (1910). He also referred to zoologists such as Jacques Delamain (1874–1956), the author of *The Days and Nights of Birds* (1932) and Louis Roule (1861–1942), author of *The Life of Rivers* (1930) – who considered ant-hills, swarms, spider webs and bird and fish nests to be instruments constructed in order to satisfy needs and, therefore, achieve goals.

At that moment, the French psychologist Paul Guillaume (1878–1962) had introduced the work of the *gestaltist* Wolfgang Köhler (1887–1967) concerning intelligence in primates. He achieved this by translating Köhler’s ground-breaking *The Mentality of Apes* (1917) in 1927. Between 1930 and 1937, in the *Journal de psychologie normale et pathologique*, Guillaume co-authored a series of essays concerning the usage of instruments by monkeys (1987) with Ignace Meyerson (1888–1983). These essays contradicted the idea that only humans can create and use tools.

Through these multiple sources, two certitudes – proper to Alain’s Cartesian and Kantian philosophy – become inadmissible: that of the absolute exceptionality of man, and that of the reduction of animal life to tropisms and reflexes. The idea that, in order to understand the function of the human body “whatever manual of physiology” would suffice, was no longer acceptable. At this moment Canguilhem realized that medical training was thus necessary, and that this training would imply the encounter with new, unknown material; first in Clermont, then in Strasbourg. Canguilhem would go on to reject mechanistic physiology, the principle of Broussais and its usage in understanding society. This path would lead him to the formulation of a holistic theory of the organism influenced by medical vitalism and by *Gestalt* theory. In the years following *The Normal and the Pathological*, biological philosophy would provide the ground for the development of an historical “continental” philosophy of the life-sciences.

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