Jimena Canales This Philosopher Helped Ensure There Was No Nobel for Relativity¹

Henri Bergson's debate with Albert Einstein reached and swayed the 1921 Nobel committee.

On April 6, 1922, Einstein met a man he would never forget. He was one of the most celebrated philosophers of the century, widely known for espousing a theory of time that explained what clocks did not: memories, premonitions, expectations, and anticipations. Thanks to him, we now know that to act on the future one needs to start by changing the past. Why does one thing not always lead to the next? The meeting had been planned as a cordial and scholarly event. It was anything but that. The physicist and the philosopher clashed, each defending opposing, even irreconcilable, ways of understanding time. At the Société française de philosophie—one of the most venerable institutions in France—they confronted each other under the eyes of a select group of intellectuals. The "dialogue between the greatest philosopher and the greatest physicist of the 20th century" was dutifully written down.¹ It was a script fit for the theater. The meeting, and the words they uttered, would be discussed for the rest of the century.

The philosopher's name was Henri Bergson. In the early decades of the century, his fame, prestige, and influence surpassed that of the physicist—who, in contrast, is so well known today. Bergson was compared to Socrates, Copernicus, Kant, Simón Bolívar, and even Don Juan. The philosopher John Dewey claimed that "no philosophic problem will ever exhibit just the same face and aspect that it presented before Professor Bergson." William James, the Harvard professor and famed psychologist, described Bergson's *Creative Evolution* (1907) as "a true miracle," marking the "beginning of a new era." For James, *Matter and Memory* (1896) created "a sort of Copernican revolution as much as Berkeley's *Principles* or Kant's *Critique* did." The philosopher Jean Wahl once said that "if one had to name the four great philosophers one could say: Socrates, Plato—taking them together—Descartes, Kant, and Bergson." The philosopher and historian of philosophy Étienne Gilson categorically claimed that the first third of the 20th century was "the age of Bergson." He was simultaneously considered "the greatest thinker in the world" and "the most dangerous man in the world." Many of his followers embarked on "mystical pilgrimages" to his summer home in Saint-Cergue, Switzerland.

Bergson's reputation was at risk after he confronted the younger man. But so was Einstein's. The criticisms leveled against the physicist were immediately damaging. When the Nobel Prize was awarded to Einstein a few months later, it was not given for the theory that had made the physicist famous: relativity. Instead, it was given "for his discovery of the law of the photoelectric effect"—an area of science that hardly jolted the public's imagination to the degree that relativity did. The reasons behind the decision to focus on work other than relativity were directly traced to what Bergson said that day in Paris.

The chairman for the Nobel Committee for Physics explained that although "most discussion centers on his theory of relativity," it did not merit the prize. Why not? The reasons were surely varied and complex, but the culprit mentioned that evening was clear: "It will be no secret that the famous philosopher Bergson in Paris has challenged this theory." Bergson had shown that relativity "pertains to epistemology" rather than to physics—and so it "has therefore been the subject of lively debate in philosophical circles."²

¹ This essay was published in *Nautilus*, <u>accessible here</u>.

The explanation that day surely reminded Einstein of the previous spring's events in Paris. Clearly, he had provoked a controversy. These were the consequences. He had been unable to convince many thinkers of the value of his definition of time, especially when his theory was compared against that of the eminent philosopher. In his acceptance speech, Einstein remained stubborn. He delivered a lecture that was not about the photoelectric effect, for which he had been officially granted the prize, but about relativity—the work that had made him a star worldwide but which was now in question.

The invocation of Bergson's name by the presenter of the Nobel Prize was a spectacular triumph for the philosopher who had lived his life and made an illustrious career by showing how time should not be understood exclusively through the lens of science. It had to be understood, he persistently and consistently insisted, philosophically. Why did two of the greatest minds of modern times disagree so starkly, dividing intellectual communities for years to come?

On that "truly historic" day when the two met, Bergson was unwillingly dragged into a discussion he had explicitly intended to avoid.³ The philosopher was by then much more senior than Einstein. He spoke for about half an hour. He had been prodded by an impertinent colleague, who had been in turn pressured to speak by the event organizer. "We are more Einsteinian than you, Monsieur Einstein," he said. His objections would be heard far and wide. "Bergson was supposed by all of us to be dead," explained the writer and artist Wyndham Lewis, "but Relativity, oddly enough at first sight, has resuscitated him."⁴

The physicist responded in less than a minute—including in his answer one damning and frequently cited sentence: "*Il n'y a donc pas un temps des philosophes*." Einstein's reply—stating that the time of the philosophers did not exist—was incendiary.

What Einstein said next that evening was even more controversial: "There remains only a psychological time that differs from the physicist's." At that very moment, Einstein laid down the gauntlet by considering as valid only two ways of understanding time: physical and psychological. These two ways of examining time, although scandalous in the particular context that Einstein uttered them, had a long history. With Einstein, they would have an even longer one—becoming two dominant prisms inflecting most investigations into the nature of time during the 20th century.

The simple, dualistic perspective on time advocated by Einstein appalled Bergson. The philosopher responded by writing a whole book dedicated to confronting Einstein. His theory is "a metaphysics grafted upon science, it is not science," he wrote. Einstein's and Bergson's contributions appeared to their contemporaries forcefully at odds, representing two competing strands of modern times. Bergson was associated with metaphysics, antirationalism, and vitalism, the idea that life permeates everything. Einstein with their opposites: with physics, rationality, and the idea that the universe (and our knowledge of it) could stand just as well without us. Einstein has since been crowned as the man whose work took "sensorial perception and analytical principles as sources of knowledge," nothing more and nothing less.

The theory of relativity broke with classical physics in three main respects: first, it redefined concepts of time and space by claiming that they were no longer universal; second, it showed that time and space were completely related; and third, the theory did away with the concept of the ether, a substance that allegedly filled empty space and that scientists hoped would provide a stable background to both the universe and their theories of classical mechanics.

In combination, these three insights were related to a startlingly new effect, time dilation, which profoundly shocked scientists and the general public. In colloquial terms, scientists often described it by saying that time slowed down at fast velocities and, even more dramatically, that it completely stopped

at the speed of light. If two clocks were set at the same time with respect to each other, and if one of them separated from the other traveling at a constant speed, they would mark different times, depending on their respective velocities. Although observers traveling with the clocks would be unable to notice any changes in their own system, one of them was slow in comparison to the other. Researchers calculated a striking difference between "time1" as measured by a stationary clock when compared to "time2" as measured by a clock in motion. Which of these referred to time? According to Einstein, both—that is, all frames of references should be treated as equal. Both quantities referred equally to time. Had Einstein found a way to stop time?

IT'S ALL RELATIVE: The 1921 Nobel committee awarded Einstein the Prize for "his services to Theoretical Physics, and especially for his discovery of the law of the photoelectric effect." Relativity was mentioned as a theory that had been challenged by Bergson. Albert Einstein Archives / Princeton University Press

Relativity scientists argued that our common conception of "simultaneity" needed to be upgraded: Two events that seemed to occur simultaneously according to one observer were not necessarily simultaneous for another one. This effect was connected to other aspects of the theory: that the speed of light (in vacuo and in the absence of a gravitational field) was constant. The velocity of most physical objects could successively be increased by piggy-backing on other fast-moving objects.

For example, a train traveling at a certain speed could be made to travel faster if placed on top of another fast train. While the first train could be traveling at, say, 50 mph, the one on top would go at 100 mph, the next one at 150 mph, and so on. Not so with light waves. The speed of light, in Einstein's account of special relativity, was not only constant; it was an unsurpassable velocity. This simple fact led scientists not only to abandon the concept of absolute simultaneity, it also led them to a host of additional paradoxical effects, including time dilation.

Bergson found Einstein's definition of time in terms of clocks completely aberrant. The philosopher did not understand why one would opt to describe the timing of a significant event, such as the arrival of a train, in terms of how that event matched against a watch. He did not understand why Einstein tried to establish this particular procedure as a privileged way to determine simultaneity. Bergson searched for a more basic definition of simultaneity, one that would not stop at the watch but that would explain why clocks were used in the first place. If this, much more basic, conception of simultaneity did not exist, then "clocks would not serve any purpose." "Nobody would fabricate them, or at least nobody would buy them," he argued. Yes, clocks were bought "to know what time it is," admitted Bergson. But "knowing what time it is" presupposed that the correspondence between the clock and an "event that is happening" was meaningful for the person involved so that it commanded their attention. That certain correspondences between events could be significant for us, while most others were not, explained our basic sense of simultaneity and the widespread use of clocks. Clocks, by themselves, could not explain either simultaneity or time, he argued.

If a sense of simultaneity more basic than that revealed by matching an event against a clock hand did not exist, clocks would serve no meaningful purpose:

They would be bits of machinery with which we would amuse ourselves by comparing them with one another; they would not be employed in classifying events; in short, they would exist for their own sake and not serve us. They would lose their *raison d'être* for the theoretician of relativity as for everybody else, for he too calls them in only to designate the time of an event.

The entire force of Einstein's work, argued Bergson, was due to how it functioned as a "sign" that appealed to a natural and intuitive concept of simultaneity. "It is only because" Einstein's conception

"helps us recognize this natural simultaneity, because it is its sign, and because it can be converted into intuitive simultaneity, that you call it simultaneity," he explained.⁵ Einstein's work was so revolutionary and so shocking only because our natural, intuitive notion of simultaneity remained strong. By negating it, it could not help but refer back to it, just like a sign referred to its object.

Bergson had been thinking about clocks for years. He agreed that clocks helped note simultaneities, but he did not think that our understanding of time could be based solely on them. He had already thought about this option, back in 1889, and had quickly discounted it: "When our eyes follow on the face of a clock, the movement of the needle that corresponds to the oscillations of the pendulum, I do not measure duration, as one would think; I simply count simultaneities, which is quite different."⁶ Something different, something novel, something important, something outside of the watch itself needed to be included in our understanding of time. Only that could explain why we attributed to clocks such power: Why we bought them, why we used them, and why we invented them in the first place.

Our perception of the world was not, as commonly thought of, merely contemplative and disinterested, rather it was already shaped by our memories. Both were defined by our sense of what we could act on. Bergson warned his readers that unless they acknowledged the active role played by memories, they would inevitably come back to haunt them: "But if the difference between perception and memory is abolished ... we become unable to really distinguish the past from the present, that is, from that which is acting." The distinction between the past, the present, and the future was determined physically, physiologically, and psychologically.

Einstein's theory of time, argued the philosopher, was particularly dangerous because of how it treated "duration as a deficiency." It prevented us from realizing that "the future is in reality open, unpredictable, and indeterminate." It eliminated real time; that is, "what is most positive in the world."

But in most cases, physical and psychological conceptions of time did not have to differ too much. Most people could estimate time in a manner that accorded pretty well with that of a clock, determining very precisely the time for breakfast, lunch, and dinnertime. Most people could also judge if two events were simultaneous in a way that accorded pretty well with simultaneity as measured by instruments. But the opposite was true when dealing with very fast events. In these cases (such as during the finish of a horse race), the deficiency of perceptions of simultaneity when compared to simultaneity as determined by an instrument was clear; these determinations differed significantly from those determined with instrumental aides. In a universe marked by events occurring close to the speed of light, the difference between the two was extreme.

According to Einstein, philosophy had been used to explain the relation between psychology and physics. "The time of the philosopher, I believe, is a psychological and physical time at the same time," he explained in Paris. But relativity, by focusing on very fast phenomena, had shown just how off-the-mark psychological perceptions of time really were.

Psychological conceptions of time, Einstein insisted, were not only simply in error, they just did not correspond to anything concrete. "These are nothing more than mental constructs, logical entities." Because of the enormous speed of light, humans had "instinctively" generalized their conception of simultaneity and mistakenly applied it to the rest of the universe. Einstein's theory corrected this mistaken generalization. Instead of believing in an overlapping area between psychological and physical conceptions of time (where both were important although one was admittedly less accurate than the other), he argued that they were really two distinct concepts: a mental assessment (the psychological one) that was wholly inadequate when compared to the "objective" concept: physical time.

Bergson and Einstein accepted that an essential difference existed between psychological and physical conceptions of time, yet they made different deductions from this. For Einstein, this led him to conclude that "the time of the philosophers does not exist, there remains only a psychological time that differs from the physicist's."⁷ For Bergson this lesson—that psychological and physical assessments of time were different—made, on the contrary, the philosopher's task even more interesting, especially because no one, not even physicists, could avoid the problem of relating time back to human affairs.

In the years that followed, Bergson was largely perceived to have lost the debate against the younger physicist. The scientist's views on time came to dominate most learned discussions on the topic, keeping in abeyance not only Bergson's but many other artistic and literary approaches, by relegating them to a position of secondary, auxiliary importance. For many, Bergson's defeat represented a victory of "rationality" against "intuition." It marked a moment when intellectuals were no longer able to keep up with revolutions in science due to its increasing complexity. Thus began "the story of the setback, after a period of unprecedented success, of Bergson's philosophy of absolute time—unquestionably under the impact of relativity." Most important, then began the period when the relevance of philosophy declined in the face of the rising influence of science.

Biographers who write about Einstein's life and work rarely mention Bergson. One exception, a book written by a colleague, paints a picture of eventual rapprochement between the two men.⁸ But other evidence shows just how divisive their encounter was. A few years before their deaths, Bergson wrote about Einstein, and Einstein mentioned Bergson one last time. They underlined—once again—just how wrong the perspective of the other remained. While the debate was for the most part removed from Einstein's legacy, it was periodically brought up by many of Bergson's followers. The simple act of reviving the discussion that took place that day in April 1922 was not a matter that could be taken lightly. Not only is the incident itself divisive—its relevance for history is still contested.

Mark Sinclair Bergson: Time is not space²

Henri Bergson's bold and sweeping conception of a panpsychic world charged with élan vital

Few philosophers have been as influential and celebrated in their own lifetimes as Henri Bergson (1859–1941). In the years before the First World War, his lectures at the *Collège de France* were society events reported on the front pages;press photographs of the time show groups of his often predominantly female audience craning their necks in doorways and at windows of packed lecture halls. *Le tout Paris* had developed a penchant for metaphysics, and Bergson, the philosopher of time, memory and life, had become an intellectual celebrity. For a while, it seemed that everything new and radical in contemporary culture owed something to him. Cubists, futurists and anarcho-syndicalists, among others in the cultural and political avant-garde, appropriated his ideas.

Bergson's fame was international. A lecture tour of 1911 gave rise to a "Bergson boom" in Britain; a bemused Bertrand Russell admitted that his lectures "were reported in the daily newspapers – everyone has gone made about him for some reason". Two years later, the enthusiasm spread to the US: his talk, delivered in French, on "Spiritualité et liberté" at Columbia University is supposed to have caused the first ever traffic jam on Broadway.

Bergson did not court this celebrity, and before his vocal support for the French cause in 1914 he had led a quiet, conventional academic life. Though Jewish, he had remained silent about the Dreyfus affair. The academic focus of his life had been shaped at the age of eleven: he stayed in Paris as a boarder at the Springer Institute, where he seems to have lost any real attachment to his religious origins, in order to attend the Lycée Fontanes (now the Lycée Condorcet) when his English mother and Polish father moved the rest of the family to England. He took French nationality at the age of eighteen, gained entry to the Ecole Normale Supérieure and then passed the *agrégation* (the competitive examination qualifying successful candidates for positions in the national education system) in philosophy, coming second in the year.

Bergson's reputation was based on three major philosophical works. His primary doctoral thesis of 1888, submitted after several years spent teaching at *lycées* in Angers and Clermont-Ferrand, developed the "spiritualist" tradition in nineteenth-century French philosophy by offering an innovative account of the experience of the passage of time and, on that basis, a novel defence of a notion of free will. The thesis bears the title *Essai sur les données immédiates de la conscience*, which was extended in the 1910 English translation as *Time and Free Will: An essay on the immediate data of consciousness*.

If all philosophers have only one idea, one fundamental and guiding thought, as Bergson later remarked, his was expressed already in his doctoral thesis. When pressed on what it was by his audience at the *Collège de France*, Bergson responded: "I have said that time is not space". He must have answered with a wry smile, for sound common sense, despite being unable to say much about what time is, easily recognizes that it is different to space: I cannot go back and forth in time as I can in space. Time seems to flow in a given direction, whereas it is possible to go up or down, left or right, forwards or backwards in space.

² This essay was published in the *Times Literary Supplement*, <u>accessible here</u>.

But Bergson's distinction is less obvious, and draws on the fact that ordinarily we think about time *in spatial terms*. If I conceive time as a timeline, as a series of instants composed of a present surrounded by past and future instants, I view time through the prism of space (which makes the past and the future, in a sense, present). Even the bare idea of an instantaneous now, exclusive of other instants, has meaning only against the background of space. With these instants we can mark out the beginning and end of a measurable period of time, but the units with which we measure it – seconds, minutes, hours – derive from space in that they represent portions of the earth's motion around the sun; measuring how long it takes, say, to run a marathon is thus to compare two spatial movements. In spatializing time in these ways, we treat time as an object of vision, if only in the mind's eye, and, at bottom, as already having elapsed (this applies to units of time as well as timelines: if sixty minutes have not elapsed we do not have an hour) rather than as elapsing.

The experience of the passage of time, which slips through our fingers as soon as we try to figuratively represent and quantify it, is what Bergson terms *la durée réelle*, real duration. In order to grasp something of it, it is necessary to campaign against the spatializing tendencies of thought. This campaign, and the purified experience we can gain through it, is what Bergson will later name *intuition*. But what can intuition reveal to us? Bergson's insight is, indeed, essentially negative at first ("I have said that time is not space"): duration is not quantitative, but purely qualitative; it is a principle not of simultaneity, but of pure succession (noting that pure succession cannot be a series of instants). In contrast to homogeneous space, whose every part, indifferent to its contents, is alike any other, duration is a principle of difference and heterogeneity; and instead of a separation of instants, real duration presents a fusion or interpenetration of the past and future in the present.

We have the most direct experience of this melting of the past and present into the future in listening to music or, late in the day, to a clock sounding on the hour when we do not attempt to determine what time it is, i.e. when we do not count exactly how many times the bell has been struck. In these cases, experience, when we know how to reflect adequately on it, presents us with a "multiplicity" that is, Bergson claims, qualitative rather than quantitative, in that it is not originally composed of separate, countable units. The passage of music involves change and difference, certainly, but this multiplicity is pre-quantitative in that it is not originally the difference of particular determinate sounds to others. Given that time as ordinarily understood is infinitely divisible, the search for such atomic sounds will be endless, and will reduce the experience of music to a "dust" of instants in which neither melody nor duration can be found.

Ideas about duration and the stream of consciousness as irreducible to the spatial categories of thought were in the air before 1888, but in developing them Bergson presents an original conception of personal identity and human freedom. The self is not a fixed substance that persists unchanged through time (as René Descartes thought); it is not a fiction of the imagination collated after the sequential facts of empirical experience (David Hume); and nor is it an unknowable *noumenal* principle that stands outside psychological experience in order to make it possible (Immanuel Kant). Instead, on Bergson's account, the profound self is nothing but the flow and enduring process of my past melting into my present open to my future. Consequently, Bergson can challenge the parameters of traditional metaphysical debate concerning free will: the free act, which he takes to occur only in the most solemn circumstances, only when clear and isolated motives for the act cannot be discovered prior to the act, is as little absolutely determined by a supposed causal chain of previous states of consciousness as it is an absolutely undetermined, extra-empirical "liberty of indifference". The free act is rather an expression of, and gives shape to, the entire past history of this profound, durational self. The French existentialists, half a century later, would have nothing to teach Bergson on this score.

Insofar as it discussed the past history of the self, *Time and Free Will* already presupposed an idea of memory, which was the theme of Bergson's next, longer book, *Matière et mémoire* (1896; *Matter and Memory*). Here the primary, implicit memory that is duration is contrasted with episodic memory. Bergson develops the work (he refers to it in a journal article earlier in the year) of the English neurologist Hughlings Jackson, who denied that recent research justified the thesis that episodic memories are grounded on neurological traces. Of course, the brain, and particularly the left-side of the frontal lobe, is necessary for remembering, but the brain-trace hypothesis, as Bergson shows, results from the seventeenth-century philosophical thesis of psycho-physical parallelism (of a one-to-one correspondence between mind-state and brain-state) rather than from empirical findings. Over a century of well-funded research into the physiological basis of memory, it is important to note, has failed to prove Jackson and Bergson wrong. In order to account for episodic memory, Bergson posited an essentially spiritual "pure memory" or "pure past", which, though "virtual" rather than "actual", continuously returns into the present in making sense of perceptual experience. In this way, Bergson's reflection on memory leads into a philosophy of perception that challenges traditional idealist and realist theories.

Bergson's first two works were not enough to open doors at the Sorbonne, where he was rejected twice for a lectureship. Instead, in 1900 he was nominated to a chair at the *Collège de France*, which, though prestigious, is a slightly marginal institution in French academic life. It is without degree-awarding powers and thus Bergson was unable to have his own students, but it did allow him to attract a general public to his lectures, which were remarkably limpid even though they were delivered without notes (the recently published notes are the work of professional stenographers commissioned by Charles Péguy).

1907 saw Bergson's third major work, L'Evolution créatrice (Creative Evolution), which immediately made him famous. Written at a time later characterized by Julian Huxley as the "eclipse of Darwinism", Bergson extended his ideas about the psychological experience of time to biological life in its evolution. In arguing that the driving, developmental force of biological life as a whole, the "*élan vital*", involves duration and is essentially psychological, Bergson criticized the mechanism in the neo-Darwinism of his time. In denying that life advances towards a consciously apprehended goal, he also qualified biological finalism; life advances more like the fine artist than the artisan (or the "divine watchmaker") with a blueprint of the work to be realized. Biological life, on Bergson's Romantic account, is not an "engineering problem", as contemporary Darwinists like to intone, but akin to genius as the impetus in fine art. In criticizing finalism, Bergson accommodates, in fact, Darwin's idea of the tree of life – of branching after branching on the basis of a single trunk – but with an array of pyrotechnic metaphors: life advances like an explosion, firework or bomb, in the form of a sheath or bouquet.

In extending real duration to life beyond the human mind, *Creative Evolution* decisively rejected the apparent dualism of *Time and Free Will*, according to which duration characterized mind in opposition to material things, which are without duration in space. *Creative Evolution* developed, in fact, the still hesitant conclusions of *Matter and Memory* concerning the different degrees or "tensions" of duration existing throughout the world, even in the inorganic realm. Given that duration, as the stretch between any two temporal instants that we isolate within it, is a form of primary memory, and thus mind, this thesis involved a version of a spiritualist, panpsychic metaphysics – a metaphysical position that is increasingly fashionable in contemporary English-language philosophy – according to which degrees of mind are to be found in all that exists, even in apparently inert matter.

Commentators have wondered about the ethical implications of Bergson's metaphysics. To what ethical expression could and should his "vitalist" metaphysics lead? Bergson had seemed to worry that he had nothing concrete to say in this regard, nothing that could match the achievements of his previous books. The whole of the 1920s passed without Bergson, in increasingly frail health, publishing anything on the issue. But in 1932 he finally published *Les Deux sources de la morale et de la religion (The Two Sources of Morality and Religion)*, which contrasts two sources or modes of morality that are the prior condition of any rational moral rules. *Closed* morality, which is a function of materiality, habit, social pressure and a body politic opposed to others, contrasts with *open* morality, which, as an expansion of the *élan vital*, is an expression of mystical genius and universal love. In the same sense, Bergson contrasts closed religion with an open religion of creative mystical heroes .

In 1940, Bergson's own comportment was extraordinary. He rejected the Vichy government's offer of exceptions from anti-Semitic regulations. Early the next year, he died from a respiratory infection that he contracted while queueing outside in the rain in order to register as a Jew. In his will, Bergson asked for a Catholic priest to say prayers at his funeral. "My reflections", he wrote, "have brought me closer and closer to Catholicism in which I see the completion of Judaism. I would have converted had I not seen coming for many years the terrible wave of anti-Semitism about to break upon the world. I have preferred to remain with those who tomorrow will be the persecuted."

Bergson's fame reached its zenith with the awarding of the 1927 Nobel Prize in Literature for his philosophical work, but the rapid decline of his glory in the 1930s was also remarkable. He was criticized by some, including Russell before the war, as an "irrationalist", and the advent of analytic philosophy had much to do with the decline of the "Bergson boom". He was perceived by many to have lost his argument with Albert Einstein in the 1920s concerning the nature of time and the status of his theory of relativity. He was also denounced by influential internationalist and Marxist thinkers for having sanctified the French cause in his war writings – characterizing France as the nation of the *élan vital* in opposition to Germany, which instantiated dead mechanism. To a new generation of French philosophers looking across the Rhine to G. W. F. Hegel, Edmund Husserl and Martin Heidegger for a "concrete" and, later, "existentialist" philosophy able to account for world-history, nothingness, anxiety and death, Bergson seemed to belong to a different epoch, to the belle-époque. And yet Heidegger's *Sein und Zeit* (1927; *Being and Time*) and French existentialism would have been impossible without Bergson's breakthrough concerning the experience of duration.

Bergson was never wholly forgotten, and after his death Emmanuel Levinas, Vladimir Jankélévitch and then Gilles Deleuze were influential advocates and interpreters of his ideas. In English, A. N. Whitehead's process philosophy borrowed from Bergson's thinking in several respects. More recently, an intensive new wave of French Bergson scholarship has given rise to a twenty-volume critical edition of his work and to the publication of his Collège de Francelecture courses. Slowly, with a century's distance, philosophers writing in English are once again recognizing the significance of his work. Sometime soon, surely, it will no longer be possible for English-language books and anthologies on the philosophy of time to omit any reference to Bergson.

Mark Sinclair is Reader in Philosophy at the University of Roehampton and the author of Bergson, 2019