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**Article:**

Herring, E (2017) *The Physicist and the Philosopher: Einstein, Bergson and the Debate that Changed our Understanding of Time*. *Annals of Science*, 74 (1). pp. 86-87. ISSN 0003-3790

<https://doi.org/10.1080/00033790.2016.1231342>

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<http://www.tandfonline.com/10.1080/00033790.2016.1231342>.

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J. CANALES. *The Physicist and the Philosopher. Einstein, Bergson and the Debate that Changed our Understanding of Time*. Princeton and Oxford: Princeton University Press, 2015. viii + 479 pp. \$35.00; £24.95. ISBN 9780691165349

In March 1924, French author André Gide opened his journal and jotted down a few thoughts about the theories of his compatriot, the then world-famous philosopher, Henri Bergson. He predicted that, because Bergson was so representative of his own time period, future historians would exaggerate the influence he had on his contemporaries<sup>1</sup>. It is hard to imagine nowadays that Bergson was once one of the most famous intellectual figures in the world, discussed in philosophical, literary, religious, political and scientific communities, but also outside of intellectual circles. His lectures at the Collège de France were so crowded that people had to resort to climbing up the side of the building of the prestigious Parisian institution and a conference he gave, in French, at Columbia University in 1913 caused one of the first ever traffic jams on Broadway. Bergson engaged with the scientific theories of his time, ranging from psychology to biology and physics. However, as Jimena Canales demonstrates in *The Physicist and the Philosopher*, if there is any truth to Gide's prediction it is not to be found in the history of science where little attention has been paid to the reception of Bergson's theories within scientific communities.

Scholars interested in Einstein's life and work have rarely given much importance to the event at the centre of Canales's book: his meeting with Bergson at the Société française de philosophie in Paris on April 6, 1922. After declining several times, Einstein finally accepted an invitation to deliver a talk about his theory of relativity before the crème de la crème of French philosophers. During the questions following the talk, Bergson was unwillingly drawn into the discussion. The philosopher insisted that Einstein's theory did not tell the whole story about time and

that there was still room for a philosophical discourse beyond physics. Science proposed a convenient symbolism for representing time but never revealed its true nature. Einstein's response was short but scathing: "The time of philosophers does not exist". According to Einstein, his theory was an objective account of time. Subjective appreciations of time also existed but were the concern of psychologists, not physicists. There was no room however for Bergson's metaphysical time, "duration".

Einstein went down in history as having won the debate. However, as is almost always the case, meticulous research like the kind demonstrated by Canales reveals that the received narrative doesn't do justice to the complexity of the situation. The four parts of the book zoom in and out, from the individuals to their environment, and back and forth in time. Canales opens with Einstein and Bergson's first meeting and closes on some of their final words at the end of their lives with both men reflecting on the significance of their dispute. The second and third parts deal respectively with the different thinkers involved ("The Men") and their environment ("The Things"). Canales first covers the propagation of the debate beyond the Société française de philosophie and beyond the borders of France with intellectuals, religious figures and scientists taking sides. The debate spread to the political matters of the day (the animosity between Bergson and Einstein found its way into their involvement in the League of Nations), as well as international efforts to come up with a universal measurement of time. In the third part Canales shows that these debates were grounded in a particular environment, populated with new means of communication and transportation, recording devices and clocks. She examines the ways in which these "things" inserted themselves into the debate via the representations and conceptions of time they inspired.

At the heart of this complex picture, there was a key epistemological problem, the veritable object of the dispute: both Einstein and Bergson agreed on the “matters of fact” (contrary to what his critics suggested, Bergson did not contest Einstein’s results), but who had the authority to decide the true nature of time, the physicist or the philosopher? The notion that Einstein “won” the debate is, ultimately, tied to the victory of a conception of knowledge according to which “science” has more authority than all other fields of research combined. Back in 1922, Bergson’s arguments still posed a serious threat to Einstein’s theory. For instance, Canales notes that the philosopher’s objections were cited by the President of the Nobel committee as reason enough to refuse to award Einstein the Nobel Prize for his work on relativity (he was rewarded for his research on the law of the photoelectric effect instead). To the modern reader the idea that a philosopher could be seen as having authority over a physicist (Albert Einstein, no less), will no doubt come as a surprise. In *The Physicist and the Philosopher*, Canales attempts to unveil the dynamics leading towards our current state of affairs in which the authority of “science” is deemed superior and separate from all other areas of knowledge. This precludes the historian from taking sides in the debate and requires instead the study of the formation and solidification of certain intellectual categories at particular moments in time.

Indeed, Canales never sides with either of the two men at the centre of her book. She succeeds in providing an intelligible and fair account of the positions of both Einstein and Bergson without caving in to the usual simplifications and misrepresentations of their ideas. However, her attentive reading of Bergson has, unconsciously perhaps, seeped into the very core of her argument. Bergson theorised about the evolutionary origins of the human intelligence to allow us to go beyond its

limitations using a form of philosophical intuition. Similarly, in *The Physicist and the Philosopher*, by historicising the dichotomies we now take as given (such as science vs “the rest”, objectivity vs subjectivity) and by complicating the seemingly straightforward narrative of the debate between Einstein and Bergson, Canales allows us to see beyond the restrictive concepts which limit our understanding of the past and present. Bergson was talking about the mobile nature of reality which scientific analyses failed to seize. Canales is referring to our modes of apprehending the history of ideas.

However, this perceived influence of Bergson over Canales is perhaps the sign that André Gide’s prophetic skills went beyond anything he could have imagined. Maybe Bergson’s influence on our contemporaries is still, as Gide warned us, easily exaggerated because he is so representative of the current spirit of the times. Or perhaps some of Bergson’s intuitions really did stand the test of time and live on today in some of the works of 21<sup>st</sup> Century intellectuals. Canales belongs to a generation of scholars who have grown suspicious of all too definite dichotomies which lead to contradictions, intellectual dead ends and fail to build an accurate depiction of reality. Bergson would have approved.

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<sup>1</sup> André Gide, *Journal, 1889-1939*, (Paris 1939), 782-783