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The Scientific Moment of the Bergsonian Method

Katariina Lipsanen

On this new ground philosophy ought then to follow science, in order to superpose on scientific truth a knowledge of another kind, which may be called metaphysical. Thus combined, all our knowledge, both scientific and metaphysical, is heightened (Bergson 2001, 218).

- 1 In this article, I delve into the role of scientific knowledge within Henri Bergson's (1859-1941) philosophical methodology. I aim to explore how scientific knowledge collaborates with philosophy and how it can be integrated into a philosopher's work. This study builds upon the extensive research conducted on Bergson's utilization, critique, and presentation of various scientific theories – a perspective especially studied related to his work *Creative Evolution* (cf. François 2010; Worms and Fagot-Largeault 2008; Worms 2007). Jean Gayon (2007) has notably provided an excellent analysis of the interplay between philosophy and the sciences in Bergson's philosophical framework, as well as an in-depth examination of Bergson's concept of “positive metaphysics” (*métaphysique positive*).
- 2 In this study, I adopt a more methodological approach to investigate the significance of science in Bergson's philosophical framework. This research forms a part of a broader endeavor to reconstruct Bergson's philosophical methodology and make it accessible to contemporary philosophers. My study has been significantly informed by previous studies on Bergson's methodology and the role of intuition. Notably, the works of David Lapoujade in “Powers of Time” (2018) and research conducted by Dimitri Tellier (2008) and Camille Riquier (2010) have been central to my work.
- 3 Within the scope of this study, I aim to address several central research questions: What is the role of scientific knowledge in Bergson's methodology, how does Bergson utilize scientific knowledge, and are the scientific facts taken as given or does Bergson's philosophy contribute to shaping these facts themselves? Since Bergson's methodology

appears to gain more clarity and structure in his later works, my primary focus lies on these later writings.¹ Consequently, to address these research questions, I primarily analyze Bergson's works such as *The Creative Mind* and *Mind-Energy*, alongside other relevant lectures contained in *Mélanges*.

Bergson's criticism of philosophy's previous relationship with science

- 4 Bergson held a strong critique of the prevailing relationship between philosophy and science during his era, particularly as advocated by the positivist movement (cf. Bergson 1972, 885-886; Verdeau 2007, 368-374). He criticizes these views in *Creative Evolution* and *The Creative Mind* wherein he presents his own perspective on how the interplay between these two domains should be understood. It is essential to recognize that when Bergson refers to science, he encompasses not only the natural sciences but also various branches of the social sciences, and his critique can be interpreted as encompassing all sciences in a general sense.² For Bergson, philosophy does not fall within the category of sciences; it stands apart as something fundamentally distinct. This distinction is underscored by his frequent comparisons of philosophy with science (Bergson 1972, 885-887; 2013a, 33-45, 70-73; 2013c, 29-30, 94; 195-201).
- 5 In his critique within *Creative Evolution*, Bergson observes that sciences are often perceived as the direct study of reality itself. They delve into subjects such as matter, life, or the mind, forming factual knowledge in these domains. Philosophy, in this view, takes these established facts as a starting point and tries to surpass them, seeking their underlying causes or pushing the boundaries of the original scientific inquiries. Having these facts, philosophers can assess the limitations of human cognition or attempt to establish a metaphysical framework. However, the primary focus of philosophy is not the content of knowledge *per se*; rather, it operates at a more abstract and general level, distilling insights from the wealth of scientific data (Bergson 2013c, 195).
- 6 Bergson argues against this conception. His primary concern lies in the realization that the sciences do not merely furnish philosophy with straightforward and isolated facts. Rather, these facts inherently presuppose a particular kind of metaphysical framework. Moreover, any potential criticism directed at these established facts must operate within the confines set by these very facts. In essence, as succinctly put by Jean Gayon, philosophy finds itself unable to offer a genuine epistemology or metaphysics since the tasks assigned to the philosopher are effectively completed even before the philosopher embarks on their work (Gayon 2007, 177). Consequently, the philosopher's actual role in this scenario boils down to rendering the pre-existing principles more explicit and precise (Bergson 2013c, 196). This, according to Gayon, encapsulates Bergson's perspective on the state of philosophy of science in his time and serves as the rationale behind Bergson's abandonment of his initial interest in this philosophical domain (Gayon 2007, 178).
- 7 In *The Creative Mind*, Bergson similarly critiques the notion that philosophy could advance scientific knowledge further (Bergson 2013a, 134-135). He scrutinizes the idea that philosophy's role is to amalgamate the results and knowledge derived from science, with the ultimate aim of achieving universal knowledge. Bergson is not solely concerned with the restricted scope of the philosopher's role; he goes as far as

asserting that this perspective denigrates science and renders philosophy an entirely unreliable discipline. The rationale behind this assertion lies in the question: If the philosopher's sole task is synthesis and generalization, why do we require philosophy to complete this intellectual journey for science (Bergson 2013a, 135-137)? Essentially, it implies that philosophy could outperform science in its own domain—a proposition that Bergson finds problematic (Bergson 1972, 886). After all, aren't scientists, with their specialized knowledge, perfectly capable of generalizing their findings and integrating them into the existing scientific corpus? Bergson contends that this effort of synthesis, in essence, mirrors the undertakings of science as a whole, and therefore, there is no compelling reason for reserving this task exclusively for philosophy. By suggesting that philosophy continues where science leaves off, Bergson insinuates that ambiguity, uncertainty, and unreliability become philosophy's domain. If science can reasonably generalize and pursue its inquiries, then what remains for philosophy, within this role, is essentially pure speculation (Bergson 2013a, 135-136).

- 8 Bergson contends that these perspectives err by separating philosophy from concrete facts and elevating it above the sciences, relegating it to the role of a mere “court of cassation” concerned only with laws and their correct application but devoid of any influence over how things actually are (Bergson 2013c, 196).
- 9 The abstract role ascribed to philosophy is not Bergson’s sole concern. He also notes in *The Creative Mind* that science has been falsely extended to the field of metaphysics claiming to have drawn their facts from science (Bergson 2013a, 71). Here, Bergson appears to be alluding to positivism once more. The issue is not in drawing facts from science itself; Bergson underscores the extensive efforts he undertook to immerse himself in scientific research for *Matter and Memory*. This was done not only to critique the flawed “scientistic” metaphysics underlying questions of body and soul but also, and perhaps more importantly, to establish his own metaphysical framework (Bergson 2013a, 72-73). The problem seems to lie in the blurred boundaries between the responsibilities of philosophy and science. A clear understanding of these two domains, their methodologies, and the potential for collaboration between them is necessary to address this issue.

Science and philosophy for Bergson

- 10 Bergson’s solution to the question of the roles of philosophy and science lies in establishing that the proper matter of knowledge is shared by both – they both contribute positively to our understanding. These two realms, instead of being hierarchical, offer complementary perspectives on the world, making them equals (Bergson 2013a, 42-43).
- 11 For Bergson, philosophy adopts a particular vantage point rooted in his ontology: everything in reality consists of two fundamental forces or activities, namely, *matter* and *spirit*³ (*esprit*) (Bergson 2013a, 33-34; 44; 216, footnote 2). It’s crucial to note that “spirit” doesn’t solely refer to the human mind and spirit; it encompasses all forms of activity characterized by change, endurance, and development. Spirit encompasses those aspects of the world that undergo change or engage in creative processes (Bergson 1972, 887). From this perspective, philosophy studies the world as a realm of constant change and evolution (Bergson 2013a, 33; 1972, 887).

- 12 In contrast, science investigates reality from a different viewpoint, specifically, the perspective of matter, particularly inert matter (Bergson 2013a, 34; 44). The scientific domain is measurable, seeks to establish laws, and regards matter as static and homogenous, i.e., unchanging (Bergson 2013c, 156-157; 162-164). Through the cooperative efforts of these two domains, we can attain a more comprehensive comprehension of the world: "It is reality itself, in the profoundest meaning of the word, that we reach by the combined and progressive development of science and of philosophy" (Bergson 2001, 218).
- 13 According to Bergson, human beings are inherently inclined to perceive the world primarily from the standpoint of matter, not the spirit (Bergson 2013a, 84-85). On the contrary, human intelligence views everything as inert (Bergson 2013c, 154; 177). To shift away from this habitual mode of thinking and embrace the alternative perspective, a special method is required – intuition. Science on the other hand, being the highest manifestation of intelligence, comes naturally to human beings (Bergson 2013a, 35; 2013c, 196).
- 14 Bergson's evolutionary analysis of human knowledge in *Creative Evolution* suggests that human intelligence has evolved to excel in a specific form of analysis, molded by its utility. This intelligence is essentially modeled after matter because its primary objective is to manipulate and utilize matter, including the creation of tools (Bergson 2013c, 138-140; 2013a, 34-35). The concept of "homo faber"⁴ succinctly captures the idea that humans possess an innate drive to craft tools and exert control over matter (Bergson 2013c, 140).
- 15 Considering these fundamentally different approaches, it becomes evident that philosophy and science each have their unique roles to fulfill, and their collaboration is intended to expand our comprehension of the world. The relationship between these two domains is mutually advantageous; not only does science contribute to philosophy, but Bergson also indicates that his own endeavors aim to rectify and propose suitable metaphysical foundations for the sciences (cf. Bergson 2013a, 70-73; 79-81).
- 16 However, philosophy cannot merely generalize or amalgamate scientific knowledge. As Gayon has pointed out, there exists a moment of confrontation, particularly from the philosophical perspective (Gayon 2007, 183-185). This simply means that the philosopher acknowledges that the manner in which science approaches its subject matter is not suitable for philosophy. This does not imply that the scientist is incorrect, but rather that the scientific conceptualizations carry significant and problematic implications for philosophical inquiries (Gayon 2007, 184-185).
- 17 Consequently, philosophy must adopt an "empirical" approach. In Bergson's own words, science and philosophy "differ in object and in method," yet they both share the aspect of experience (Bergson 2013a, 44). Bergson's version of "empiricism" maintains that all knowledge originates from experience, although this experience encompasses not only external sensory perceptions – upon which science primarily relies – but also inner experiences, which constitute the domain of philosophy (Bergson 2013a, 196-197; 2013b, 236). Bergson asserts that philosophical intuition necessitates knowledge drawn from various regions of experience (Bergson 1922, 4). This encompasses philosophy's inner experience and, at the very least, the external experiential domain of science. Bergson's somewhat vague phrasing leaves room for the inclusion of other types of experiences, but in this context, the focus is primarily on the domain of science.⁵

- 18 There are numerous instances in Bergson's writings that either imply or explicitly assert the role of scientific knowledge in his methodology. For instance, in *The Creative Mind*, Bergson outlines his project as follows:

Science and metaphysics then meet in intuition. A truly intuitive philosophy would realize the union so greatly desired, of metaphysics and science. At the same time that it constituted metaphysics in positive science, – I mean progressive and indefinitely perfectible, – it would lead the positive sciences, properly speaking, to become conscious of their true bearing, which is often very superior to what they suppose (Bergson 2007, 162).

- 19 Camille Riquier has also highlighted that Bergson's methodology necessitates knowledge beyond what intuition alone provides. Although the changing nature of reality can be apprehended through our inner duration, intuition in isolation may remain ambiguous. In *Creative Evolution*, for instance, the scientific examination of the lines of evolution lends a tangible form to our intuition (Riquier 2010, 139-140). In Bergson's methodology, philosophy is substantiated by science.

- 20 But how does this collaboration function? In one of his lectures in 1916, Bergson delineates the philosophical method as comprising two distinct moments:

For the philosophical method as I understand it, includes two moments and implies two successive operations of the spirit. The second one of these two moments, the final operation, is what I call *intuition* – a very difficult and laborious effort that breaks free from preconceived ideas and ready-made intellectual habits to replace itself sympathetically into the interior of reality. But before this intuition which is the proper philosophical operation, a scientific study is necessary (Bergson 1972, 1197).⁶

- 21 The initial phase of Bergson's methodology is, in a way, of a scientific nature.⁷ Bergson further emphasizes that philosophers must be prepared to adopt the role of a student and immerse themselves in an entirely new field, should the philosophical problem demand it (Bergson 1972, 1196). Now, let's explore the nature of this scientific phase and its connection to intuition, the so-called proper philosophical operation.

- 22 Here crucial is the concept of *lines of facts* (*lignes de faits*) initially introduced in *Mind-Energy* and subsequently referenced in *Two Sources of Moral and Religion*. This concept is rooted in Bergson's belief that philosophy should base its investigations on the contours of reality. It represents a deliberate effort to ground philosophy in concrete, tangible aspects of existence, moving beyond the realm of abstract ideas. In *The Creative Mind*, Bergson elaborates on this particular approach:

Faithful to my method, I tried to get the problem stated in less general terms and even, if possible, to give it a concrete form, to shape it to certain facts upon which direct observation could be based (Bergson 2007, 57).

- 23 Bergson elaborates on his approach, as exemplified in *Matter and Memory*, where he sought to uncover "pure facts" by studying various forms of aphasia and related research. His aim was to stay away from working with purely abstract principles and get a hold of the actuality of how the object of the study truly works. (Bergson 2013a, 79.) According to Bergson, when we gather these factual insights about our subject, they seem to guide us in specific directions. As we familiarize ourselves with scientific studies, our goal is to identify these directions and formulate the lines of facts. While none of these directions directly lead to the truth, we start to gain probability for these directions. The lines, even though they might be different, start to converge in a similar direction and point toward the truth (Bergson 1922, 4-5; 2013b, 263-264).

- 24 I interpret this formulation of lines of facts as conceptually overlapping with the scientific moment, although they are not entirely identical, as we will later illustrate. It is evident that both approaches involve gathering extensive information about the subject of study to attain a more concrete understanding. They both provide a general direction for the purely philosophical study. In Bergson's own words, the next step involves extending these lines of facts, and this extension is only achievable through intuition.

Case study on the scientific moment: The Huxley Lecture

- 25 To gain insight into this matter, we ought to delve into Bergson's Huxley Lecture, titled "Life and Consciousness." This lecture serves as an excellent tool for illustrating Bergson's approach and to have a more detailed picture of the scientific moment. Nevertheless, it falls short of demonstrating the depth with which Bergson typically references various scientific studies in his broader essays. For a more profound exploration of this aspect, we could turn to the analysis of his principal works, such as *Creative Evolution*. Nonetheless, this lecture does offer us a more accessible gateway into Bergson's methodological perspective within his body of work.
- 26 Bergson's Huxley lecture delves into the interplay between consciousness and life, with a central query revolving around the purpose of consciousness and why certain living beings possess it. The study's point of departure centers on the being we are most intimately acquainted with ourselves and our consciousness. As Bergson states, in our case consciousness works through the brain (Bergson 1922, 8). His primary focus, then, lies squarely on the functioning of the brain. As previously outlined, Bergson meticulously examines how the brain collaborates with other components of the nervous system, thereby affording his philosophical analysis a foundation that is both more tangible and firmly grounded. It is important to emphasize that this brief segment of Bergson's analysis does not purport to encapsulate his entire understanding of consciousness or the mind, nor does it encompass his overall methodology. Rather, it serves as an illustration of how Bergson extrapolates general directions from scientific knowledge to inform his philosophical inquiries.
- 27 To begin our analysis, let's commence by examining how Bergson initiates the formulation of a lines of facts in this case:

Let us then cast a glance at the human brain and see how it functions. The brain is part of a nervous system which includes, together with the brain proper, the spinal cord, the nerves, etc. In the spinal cord there are mechanisms set up, each of which contains, ready to start, a definite complicated action which the body can carry out at will [...]. Each of these mechanisms can be set working directly by an external cause: the body, then, at once responds to the stimulus received by executing a number of interco-ordinated movements. But in some cases the stimulus, instead of obtaining immediately a more or less complicated reaction from the body by addressing itself directly to the spinal cord, mounts first to the brain, then redescends and calls the mechanism of the spinal cord into play after having made the brain intervene. Why is this indirect path taken? What purpose is served by the intervention of the brain? (Bergson 1920, 11-12).

- 28 Bergson guides us through a series of fundamental observations regarding the operations of the nervous system. In particular, he highlights the presence of

mechanisms within the nervous system, particularly the spinal cord, wherein a stimulus elicits an automatic response. For instance, when we come into contact with a hot object, we instinctively withdraw our hand without thinking about it. However, there are instances in which the stimulus, instead of going directly to the spinal cord, initially ascends to the brain before subsequently descending to the spinal cord. The brain, for reasons yet to be expounded, interjects itself into a process that could otherwise have been executed without its intervention. Bergson continues:

We may easily guess, if we consider the general structure of the nervous system. The brain is in a general relation to all the mechanisms in the spinal cord and not only to some particular one among them; also it receives every kind of stimulus, not only certain special kinds. It is therefore a crossway, where the nervous impulse arriving by any sensory path can be directed into any motor path. Or, if you prefer, it is a commutator, which allows the current received from one point of the organism to be switched in the direction of any motor contrivance (Bergson 1920, 11-12).

- 29 Here Bergson emphasizes that the brain's involvement is not tied to a specific mechanisms or stimuli. Consequently, we eliminate one potential function from consideration: the brain does not intervene due to the inherent uniqueness of the intended reaction. Furthermore, the brain does not serve as the ultimate destination; rather, it functions as an intermediary or, in Bergson's words, a crossway. The brain, therefore, does not replace the spinal cord but contributes an additional layer to the overall process. Ultimately, we arrive at the direction in which we can formulate our conclusions from these accumulated observations:

When the stimulus, then, instead of following the direct path, goes off to the brain, it is evidently in order that it may set in action a motor mechanism which has been chosen, instead of one which is automatic. The spinal cord contains a great number of ready-formed responses to the question which the circumstances address to it; the intervention of the brain secures that the most appropriate among them shall be given. The brain is an organ of choice (Bergson 1920, 11-12).

- 30 Bergson's explanation points out that as we delve into the intricacies of the nervous system and the brain, we discover that the brain's intervention arises from a necessity for choice. The stimuli we encounter often emanate from situations lacking a clear-cut and instinctive response. The Huxley lecture demonstrates quite well the gradual convergence of facts. At every passage cited, we begin to discern that the brain's function is to render the process non-automatic; it is not tethered to a specific action but rather adds to it in some manner. All of this points to the presence of choice. Thus, we have assembled a body of facts, or "pure facts," indicating that the brain serves as an organ of choice. This seems to point toward the notion that consciousness is intricately intertwined with the faculty of choice and more generally freedom.
- 31 This line of reasoning exemplifies Bergson's utilization of scientific knowledge. It is evident, however, that it does not suffice to construct a substantial argument concerning consciousness in general. It predominantly focuses on human consciousness and, even within that realm, narrows its perspective to the operations of the brain. Nonetheless, even within this restricted scope, one might ponder whether this revelation could not be achieved by a scientist. A scientist certainly could assert that the brain's function within this operation is one of decision-making. Yet, it is the gradual pursuit of uncovering the essence of consciousness through such lines of inquiry that constitutes the philosopher's endeavor.

32 Moreover, philosophy encompasses more than the mere accumulation and synthesis of scientific facts (Bergson 2013a, 134). What is still missing from our analysis is the different regions of experience. What lends distinctiveness to this scientific moment is its philosophical dimension. Bergson's concept of "pure facts" appears not to be solely confined to the data provided by scientific studies; rather, it comprises lines of facts that can be discovered with the scientific findings but also with philosophical effort. I argue that the scientific moment and lines of facts already require intuition.

Scientific facts and intuition

33 Finally, I intend to explore the relationship between intuition and the "scientific moment" within this method. It has become evident that the formulation of facts is not exclusively a scientific procedure. The comprehensive process, as well as the interaction between scientific knowledge and intuition, can be elucidated through Bergson's concepts of *images*⁸ and the *dynamic schema* (*schéma dynamique*). An evident resemblance exists between Bergson's depiction of lines of facts and his portrayal of images as presented in *The Creative Mind*:

No image will replace the intuition of duration, but many different images, taken from quite different orders of things, will be able, through the convergence of their action, to direct the consciousness to precise point where there is a certain intuition to seize on (Bergson 2007, 139).

34 The process described by Bergson in this context appears to align with his presentation in the Huxley lecture. Images, much like a line of facts, offer us with singular views or aspects of the object. A diverse array of these images converges, indicating the path toward the truth. The conceptualization of lines of facts as images proves to be valuable because it interconnects with the previously mentioned concept of *the dynamic schema*, illustrating the connection between the initial and subsequent "phases" of Bergson's methodology.

35 In Bergson's framework, the dynamic schema serves as the counterpart to images: the latter provides a static view of the object, while the former offers a dynamically evolving conceptualization (Bergson 1972, 548). The dynamic schema encapsulates the philosophical process; it is not merely about revealing the pre-existing objective truth but rather involves the continual reconstruction of our comprehension of the object (Bergson 1972, 537). The images we encounter do not merely contribute to the schema by their summation; rather, they possess a collective significance beyond their individual components (Bergson 1972, 526). Gathering lines of facts, such as "the brain is an organ of choice," is insufficient on its own. However, each of these lines contributes to the evolution of our understanding of the object as we follow them. Consequently, the lines of facts gradually alter and guide our philosophical comprehension.

36 The second moment, intuition, involves the profound task of actively reconstructing our comprehension. This is a significant endeavor, as depicted in *Creative Evolution*, where intuition is characterized as a form of "leap," a distinct effort separate from intelligence and the scientific moment (Bergson 2013c, 194). The extension of the lines of facts to identify their intersections requires deliberate effort; it does not occur automatically:

But we cannot reiterate too often that philosophic certainty admits of degrees, that it calls for intuition as well as for reason, and that if intuition, backed up by science, is to be extended, such extension can be made only by mystical intuition (Bergson 1935, 244-245).

- 37 This concept can be illustrated using the metaphor of a function graph, where a line of facts can be likened to a tangent line. With knowledge of one tangent, we can attempt to reconstruct the entire function without having full knowledge of it. Adding another tangent makes the overall picture more precise. It is noteworthy that Bergson characterizes intelligence, with its highest form being science, as the process of delineating what the object is not: tangents effectively narrow down the range of possibilities based on existing knowledge (Bergson 2013a, 35; 2013c, 196). However, intriguingly, Bergson also posits that intuition shares a similar quality. Confronted with certain scientific facts, intuition may suggest to the philosopher that something is not quite right yet (Bergson 2013a, 120-121).
- 38 From this, it can be deduced that intuition plays a role in shaping the formulation of lines of facts as well. The demarcation between the scientific moment and intuition is not as distinct as it might seem. While the scientific moment is identifiable as a unique part of the method, it is not entirely devoid of philosophical intuition. Intuition serves as the connection to the spirit, the changing nature of reality which guides our search for truth.
- 39 Returning to the metaphor of a function graph to draw a connection to the “properly philosophical moment” of intuition, envisioning the existence of multiple tangents, even an infinite number, still does not provide a perfect representation of the function; we must actively construct the graph ourselves. As expressed by David Lapoujade: “science can attain movement, but without being able to extract the mobility that is its essence” (Lapoujade 2018, 43). While I do not intend to provide an exhaustive methodological analysis of intuition here, building upon our previous discussion, we can conceive of intuition as follows: after identifying some general directions for our thought, we should attempt to view the object of our study from the perspective of the spirit, recognizing it as something in a state of constant change.
- 40 In brief, intuition finds its foundation in our immediate experience of our own temporal and evolving nature. We, as individuals, are finite and constantly undergoing change (Bergson 2013a, 182-183). This is something we can know immediately through internal experience of ourselves, through our experience of our own duration. Bergson seeks to extend this immediate internal experience to other things in philosophy as well (Bergson 2013a, 27-29). Philosophy and intuition aim to attain knowledge about external entities akin to how we comprehend ourselves. The challenging aspect, of course, lies in understanding how we can acquire knowledge about the nature of life, for instance, in the same manner that we understand ourselves.
- 41 It appears that our nature as temporal and evolving beings serves as a reflective lens through which we can comprehend other entities undergoing change. In essence, through intuition, we gain insight into the world as an evolving entity by drawing upon the intimate experience of change that is inherent to our own nature. In summary, for Bergson, intuition is fundamentally concerned with comprehending things in the world through their changing nature and observing them from within. We endeavor to grasp the object as a dynamic entity and sympathize with its duration, drawing upon all the knowledge we have accumulated about it.⁹

Conclusion

- 42 We can now revisit Bergson's initial critique. When we conceive of the philosophical method as encompassing these two distinct moments, can we truly assert that Bergson's approach to science is fundamentally dissimilar? Are facts exclusively in the hands of scientists? I argue that Bergson's approach diverges from this stance, and it posits that facts are not confined solely to the domain of science.
- 43 The entire process of constructing lines of facts constitutes an integral facet of the philosophical method. It might be argued in opposition that, nevertheless, these facts are extracted from scientific sources. In response to this assertion, I would argue that while philosophers do acquire knowledge and incorporate certain facts from scientific disciplines, this activity transcends a mere scientific operation. Formulating lines of facts entails more than just scientific knowledge. There exists a middle ground between philosophy operating in isolation, devoid of any contribution from the sciences, and philosophy reduced to the mere summarization or generalization of scientific findings.
- 44 While the first moment of the method is typically characterized as scientific and the second as entirely philosophical, I contend that the first moment possesses an inherent intuitive element. I argue that the convergence, or more accurately, the identification of the convergence of lines of facts occurs through a gradual reconstruction of our understanding, a process facilitated by intuition. The "pure facts" sought by Bergson are not merely the facts supplied by the sciences; they encompass convergences and trends that emerge from an examination of these scientific facts. This endeavor to trace these convergences is inherently philosophical, even though it is grounded in scientific discoveries.
- 45 Moreover, the lines and directions that we can discern through scientific facts alone are insufficient for the philosophical method. The knowledge acquired during the scientific moment must be expanded through the faculty of intuition, thus giving rise to the distinctly philosophical moment. However, the existence of this philosophical moment does not imply that the first moment lacks philosophical or intuitive qualities in any regard. In reality, these two moments seem to be intricately interlinked. I assume this is why Bergson never referred to them as phases but rather as moments – there are no distinct phases to delineate. The intuitive effort to reconstruct our understanding constitutes a significant component of the philosophical method, and it is underpinned by scientific inquiry.
- 46 In summary, although Bergson's methodology distinguishes a distinct moment for the exploration of scientific knowledge, its relationship with the properly philosophical moment differs significantly from the views Bergson criticized. Bergson's objective is to steer philosophers away from generalizations and encourage them to engage with the concrete, uncovering actual tendencies in reality. Scientific knowledge assumes a crucial role as the foundational framework for philosophical inquiry, and Bergson's method incorporates it by constructing lines of facts under the guidance of intuition. This article serves as an introductory exploration of how the integration of scientific knowledge is achievable within philosophical studies. A more comprehensive analysis of the connection between intuition and the scientific moment, as well as a deeper

exploration of the intuitive aspects of the scientific moment, should be undertaken to develop a comprehensive model of Bergson's method.

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ENDNOTES

1. For example, Arnaud François observes that intuition, which constitutes the elementary aspect of Bergson's method, acquires its technical significance in the year 1903 (Bergson 2013a, 323, footnote 2).
2. When Bergson discusses the connection of his philosophy to science, he frequently references fields such as psychology and sociology, in addition to certain natural sciences (cf. Bergson 1972, 1197; 2013a, 70).
3. According to Frédéric Worms this conceptualization of matter and spirit as opposite acts or forces is first established in *Creative Evolution* (Worms 2000, 42). Bergson's conceptualization in earlier works such as *Matter and Memory* differs from these (cf. Worms 2000, 25-26; 42).
4. Christina Chimisso has interestingly noted Bachelard's critique of Bergson's way of presenting the nature of science with *homo faber*. According to Chimisso, Bachelard's main criticism concerns the idea of science being born out of a need and he argues that contrary to Bergson's view science has nothing to do with *homo faber* (Chimisso 2022, 830-831).
5. Some instances suggest that, perhaps, in addition to science, religion could also contribute to philosophy. However, it is specifically the role of science that Bergson often emphasizes. In *Two Sources of Moral and Religion*, Bergson adds that religion or mysticism can contribute to philosophical intuition. This, however, differs from scientific contributions since mysticism can specifically contribute to the act of intuition. There is something that philosophy can learn from mystic intuition (Bergson 2013b, 272-274). Another possible field of experience to consider is art.
6. Car la méthode philosophique, telle que je me la représente, comprend deux moments et implique deux démarches successives de l'esprit. Le second de ces deux moments, la démarche finale, c'est ce que j'appelle *intuition* – un effort très difficile et pénible par lequel on rompt avec les idées préconçues et les habitudes intellectuelles toutes faites, pour se replacer sympathiquement à l'intérieur de la réalité. Mais avant cette intuition qui est l'opération proprement philosophique, une étude scientifique de l'entourage de la question est nécessaire.
7. The same idea is also proposed in *The Creative Mind* (Bergson 2013a, 72).
8. I will exclusively introduce the concept of images here, as described by Bergson in a specific instance in *The Creative Mind*. For a more in-depth examination and the utilization of this concept in other contexts see Worms (1997 and 2000, 29-31).
9. Sympathy is a key concept in explaining this process more in depth. For an excellent description of the methodological nature of sympathy and its relationship to intuition see Lapoujade (2018, 39-58).

ABSTRACTS

This paper explores the role of scientific knowledge from the perspective of Henri Bergson's philosophical method. For Bergson, scientific knowledge plays a key part in philosophy. He presents his philosophical method as having two moments, the first of which is scientific. The scientific moment means exploring existing scientific studies on the subject matter at hand, before engaging in what Bergson calls a "properly philosophical" moment. Following Bergson's criticism of positivism, we can ask: Are the facts left purely in the hands of the sciences? Are they simply taken as given without any contribution from philosophy? And how is the scientific moment connected to the second and truly philosophical moment of the methodology? I argue that the role of scientific knowledge can be best captured with the help of Bergson's concept of lines of facts (*lignes de faits*). The scientific moment forms the necessary positive basis of any philosophical study, and the "lines of facts" illustrate the philosophical contribution to the scientific facts that form it.

Cet article explore le rôle des connaissances scientifiques du point de vue de la méthode philosophique de Henri Bergson. Pour Bergson, la connaissance scientifique joue un rôle clé dans la philosophie. Il présente sa méthode philosophique comme ayant deux moments, dont le premier est scientifique. Le moment scientifique signifie l'exploration des études scientifiques antérieures sur le sujet en question, avant de s'engager dans ce que Bergson appelle le moment « proprement philosophique ». Suivant la critique bergsonienne du positivisme, nous pouvons nous demander : les faits sont-ils confiés uniquement aux sciences ? Sont-ils simplement pris pour acquis sans aucune contribution de la part de la philosophie ? Et comment le moment scientifique est-il lié au moment proprement philosophique de la méthodologie ? Je soutiens que le rôle de la connaissance scientifique peut être mieux illustré à l'aide du concept bergsonien de lignes de faits. Le moment scientifique forme la base positive nécessaire de toute étude philosophique, et les « lignes de faits » démontrent la contribution philosophique aux faits scientifiques qui le forment.

INDEX

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