

Revisiting rhythmanalysis : How rhythm operates in the work of Gaston Bachelard and Henri Bergson

samedi 26 juillet 2025, par [Jonas Rutgeerts](#)

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We thank Jonas Rutgeerts for the permission to reproduce on Rhuthmos this brilliant article published originally in Parrhesia n° 31, 2019, pp. 85-102.

Introduction



In recent years scholars from different fields have taken up the notion of rhythm to analyse different temporal and spatial phenomena. [1] Despite this turn towards rhythm, however, the term has remained enigmatic. We experience rhythm in everything, but we don't seem to be able to generate a clear understanding of how rhythm operates. As Jacques Derrida mentioned "rhythm has always *haunted* our tradition, without ever reaching the centre of its concerns." [2] In this article I aim to explore the operational capacity of rhythm, by analysing the work of two philosophers who devoted a great deal of attention to the concept : Gaston Bachelard and Henri Bergson. Both agree that rhythm plays a crucial role in the constitution of singular temporal existence : for Bergson it emerges when the omnipresent force of duration expresses itself in and through a distinct phenomenon, for Bachelard, by contrast, rhythm should be considered as the temporal architecture that is constitutive for the durational existence of singular entities. Exploring both theories of rhythm will allow me to come to a better understanding of how rhythms operates and how it relates to our experience of time.

For most of the English-speaking world the concept of rhythm and the method of rhythmanalysis is

inherently connected to the theoretical oeuvre of French philosopher and social theorist Henri Lefebvre. The translation of his book *Rhythmanalysis : Space, Time and Everyday Life* in 2012 seems to herald rhythm's appearance on the theoretical stage. [3] The rhythmanalytical project, however, does not begin with Lefebvre's book, but can be traced back to the work of Gaston Bachelard and, more specific, to his book *La dialectique de la durée* (1936). [4] In the last chapter of this book, which bears the title 'Rhythmanalysis', Bachelard argues that one should never lose sight of the fact that "all exchanges take place through rhythms." [5] Building on the work of Portuguese philosopher Lúcio Alberto Pinheiro dos Santos, from whom Bachelard borrows the term rhythmanalysis, the philosopher here advocates for an active rhythmanalytical theory that never loses sight of the fact that rhythm constitutes "the basis of the dynamics of both life and the psyche" (Bachelard 1950, 128). [6]

Bachelard's conceptualization of rhythm fits in with a broader philosophy of time that the French philosopher was developing during his teaching period in Dijon between 1930 and 1940. This philosophical work resulted in two books, *L'intuition de l'instant* (1932) and *La dialectic de la durée* (1936), and two articles, "Instant Poétique et instant Métaphisique" (1931) and "La continuité et la multiplicité temporelles" (1937). [7] Bachelard framed this entire philosophy of time as a critique against Bergsonism and the Bergsonians, which he explicitly characterises as his "adversaries" (Bachelard 1950, 11). [8] Although Bachelard is sympathetic to Bergson's attempt to develop a theory of time that does not understand temporality as abstract clock time, he profoundly disagrees with the Bergsonian idea of duration. For Bachelard time should not be understood as a continuous flow, in which the past is prolonged into the present, but as fractured and constantly riven, the present constantly breaking away from its past. The conceptualization of rhythm fits in this argument against Bergsonian duration. By advancing rhythm as a "fundamental temporal notion" (Bachelard 1950, ix), Bachelard aims to replace Bergson's conceptualization of time as duration with a reading of time in which continuity is the result of a rhythmic interplay.

In recent years Bachelard's philosophy of time and the accompanying polemic with Bergson have received new attention in different books and edited volumes. [9] In spite of Bachelard's explicit critique, these works refuse to frame the discussion between Bergson and Bachelard in terms of a simple opposition. The idea behind this it that in his attempt to pick a fight with his contemporary, Bachelard not only failed to give an accurate account of the subtlety and complexity of the Bergsonian project, but also caricaturised his own philosophy. [10] Indeed, a close reading of both theoretical oeuvres shows more points of convergence than Bachelard seems willing to acknowledge. While I agree that it is important to look for the different affinities underlying the apparent difference between both philosophers, I would however also like to stress the fundamental difference between both philosophers. Although Bachelard takes up and re-reads a lot of concepts that were developed by Bergson, in the end his vision on time is radically different from that of Bergson. As Jean François Perraudin argues, this difference appears most clearly when we look at the "practical and therapeutic perspectives" of the theory, which indicates fundamentally different perspectives on how to relate to time. [11] By exploring how both philosophers develop the concept of rhythm in and through their oeuvre, I want to show the many micro-relations that emerge in-between Bergson's and Bachelard's analysis of time, while drawing attention to the profound differences in their attitude towards it.

Bergson and Bachelard : Continuity, discontinuity and rhythm

A reader of Bachelard does not even need to reach the first chapters of *L'intuition de L'instant* and *La dialectique de la durée* to realize the polemic character of both books. The titles already indicate Bachelard's aim to radically rethink key concepts of the Bergsonian philosophy. [12] In *L'intuition de l'instant* Bachelard connects intuition, described by Bergson as the "direct vision" via which we "experience the uninterrupted prolongation of the past in the present encroaching towards the future," [13] to the discontinuous instant. In doing so he not only brings together two concepts that are opposed in Bergson's philosophical system, but also blurs the Bergsonian distinction between the intellect, which deals with the instantaneous, and philosophical/artistic intuition, which deals with duration. In a similar fashion *La dialectique de la durée* provokes the Bergsonian system, as it transforms duration, which Bergson describes as an immediate given of consciousness, into a dialectical movement. Duration is here no longer the ontological primary source of life, but rather the product of a discontinuous alternation of something and nothing. [14]

Bachelard's critique on the Bergsonian project is primarily directed against Bergson's concept of continuity. Bachelard wishes to develop a "discontinuous Bergsonism" (Bachelard 1950, 8), ironically stating that "of Bergsonism we accept everything but continuity" (Bachelard 1950, 7). However, in spite of Bachelard's attempts to break the Bergsonian continuity, the discussion between the two philosophers cannot be reduced to a rigid polemic between homogenous continuity, illustrated by Bergson, and absolute discontinuity, illustrated by Bachelard, for two main reasons. Firstly, Bachelard's theory cannot simply be reduced to a plea for discontinuity, rather one of Bachelard's main goals in both *L'intuition de l'instant* and *La dialectique de la durée* is to understand how duration works. While in the beginning of *L'intuition de l'instant*, he firmly states that "time presents itself as solitary instant", [15] he later on wonders how this solitary instant can be related to "the becoming of being" (Bachelard 1932, 60), thus trying to understand the "continuity of the discontinuous" (Bachelard 1932, 68). [16] Secondly, Bachelard's characterisation - or caricaturisation - of Bergson's duration as homogeneous continuity, fails to appreciate the fact that Bergson himself continuously critiques the idea of one all-encompassing duration. Already in his first major book Bergson describes duration in terms of "qualitative multiplicity" and "absolute heterogeneity", stating that a conceptualization of duration as something homogenous would make freedom incomprehensible. [17] In the books that follow Bergson consistently talks about "durations with different elasticity", [18] or about a "continuity of durations". [19]

Rather than understanding the distinction between continuity and discontinuity as the end point of the discussion, and choosing one or the other, this distinction can serve as the point of departure for a discussion. For both Bachelard and Bergson concrete duration can only be understood as the outcome of a relation between continuity and discontinuity, or between a "dynamic force" and a "force of resistance". [20] To understand this relation, both Bergson and Bachelard seek recourse to the mechanisms of rhythm. [21] Connected to both flow and form, to free-flowing movement and the organization of movement according to a beat, rhythm is an apt tool to understand the interaction between the forces of continuity and those of discontinuity. Consequently, both philosophers use it to conceptualize the concrete temporal existence and to analyze the difference between singular temporalities. Advocating neither absolute discontinuity nor homogeneous continuity, both

philosophers try to understand the different temporalities that we experience as a complex rhythmic interplay between break and flow. According to Bergson, there is “no unique rhythm of duration”, but a multiplicity of “different rhythms”, which are each marked by a specific degree of tension, or relaxation that “fixes their respective places in the series of being” (Bergson 1939, 232). For Bachelard, on the other hand, it is “impossible not to recognize the need to base complex life on “a plurality of durations that have neither the same rhythm nor the same solidity in their sequence, nor the same power of continuity” (Bachelard, 1950, viii).

These similarities, however, cannot lead to a simple equation of both theories, or to an understanding of Bachelard’s project as a mere rearticulation of Bergson. Both philosophers coin rhythm as a key concept, but they conceptualize rhythm radically different. To understand this, I will have to take a closer look at the conceptualization of rhythm in the work of Bergson and Bachelard.

Rhythm in Bergson : melodies and vibrations

Although Bachelard suggests otherwise, Bergson devotes a lot of attention to the idea of rhythm. It is a key concept in *Matiere et mémoire* (1896) and already plays an important role in his first major work *Essai sur les données immédiates de la conscience* (1889). As is well known, the basic claim of *Essai* is that our inner experience of time is corrupted by space. Both common sense, science and philosophy have the tendency to reduce our inner experience of temporality to a sequence of now-moments, thus reducing time to a “homogeneous medium in which our conscious states are ranged alongside one another as in space, so as to form discrete multiplicity” (Bergson 1927, 67). However, “when our ego lets itself live, when it refrains from separating, its present states form its former states” (Bergson 1927, 75). This leads to a completely different experience of time, not as the repetition of instants, but as duration. That is, as “nothing but a succession of qualitative changes, which melt into and permeate one another, without precise outlines, without any tendency to externalise themselves in relation to one another, without any affiliation with number” (Bergson 1927, 77). To illustrate this experience of duration Bergson refers to the metaphor of melody, where the different notes interpenetrate each other to form one heterogeneous unity, an organic and dynamic whole “comparable to a living being” (Bergson 1927, 75). Similar to duration, we cannot understand a melody by breaking it down into discrete unit or notes. In order to understand it we should immerse ourselves into the movement of the music and let ourselves get carried away by its flow.

With the development of melody as one of the dominant metaphors for duration, rhythm also appears in Bergson’s discourse. Bergson sees a close relation between rhythm and melody, as both phenomena relate to a durational understanding of time. Take for example Bergson’s famous passage of the sounds of the bell :

The sounds of the bell certainly reach me one after the other ; but one of two alternatives must be true. Either I retain each of these successive sensations in order to combine it with the others and form a group which reminds me of *an air or rhythm* which I know : in that case I do not count the

sounds, I limit myself to gathering, so to speak, the qualitative impression produced by the whole series. Or else I intend explicitly to count them, and then I shall have to separate them, and this separation must take place within some homogeneous medium in which the sounds, stripped of their qualities, and in a manner emptied, leave traces of their presence, which are absolutely alike. (Bergson 1927, 64-65 ; *my emphasis*)

In this passage, Bergson explicitly links rhythm to melody and, consequently, to duration. When we “limit” ourselves to the qualitative impression produced by the whole series, we experience it as rhythmic. Despite this link, however, rhythm should not simply be equated with melody, or with duration. As we will see, rhythm merely suggests or points to melodic duration, but does not coincide with it.

Unlike many of his contemporaries, Bergson does not make a distinction between rhythm and measure. In the first half of twentieth century, it was common to distinguish artificial measure or meter, which was found in the stomping repetitions of the new mechanic labour, from natural rhythms, connected to the organic pulsation of the heart or the waves of the sea. [22] In *Essai*, however, Bergson defines rhythm as an aesthetic tool, refusing to connect it to nature : “Nature, like art, proceeds by suggestion, but does not command the resources of rhythm” (Bergson 1927, 12). Moreover, contrary to what we might expect from a philosopher with a clear predilection for gracious organic movement, Bergson states that the aesthetic power of rhythm resides exactly in its repetitive and predictable character. The “regularity of the rhythm” takes “complete possession of our thought and will” and gives us the feeling that we participate in the movement of the work of art (Bergson 1927, 9-10). Referring to poetry, Bergson describes this quality as follows :

The poet is he with whom feelings develop into images, and the images themselves into words, which translate them while obeying the laws of rhythm. In seeing these images pass before our eyes we in our turn experience the feeling which was, so to speak their emotional equivalent : *but we should never realize these images so strongly without the regular movement of the rhythm by which our soul is lulled into self-forgetfulness, and, as in a dream thinks and sees with the poet.* (Bergson 1927, p. 11 ; *my emphasis*) [23]

Through its regular movement rhythm makes us forget ourselves. In turn, this forgetting of the self allows us to immerse ourselves into the movement that is suggested by the phrase and to get carried away by its momentum. This can be connected to the previous example of the bell. It is no coincidence that Bergson uses an example that is markedly amelodic. [24] The monotone and staccato repetition of the strokes serves as the condition for a state of self-forgetfulness, which in turn allows for the experience of real duration. Rhythm thus functions as “instrument of suggestion”, or “vector of hypnosis” [25]. Its repetition, which in itself is quantitative, makes the listener forget her-/himself and lulls her in a state where she experiences the different strokes as one continuous melody. Rhythm, argues Bergson, functions as tool to evoke duration, it is “the quality of quantity” (Bergson 1927, p. 92)

In *Matière et mémoire* Bergson at the same time takes up this conceptualization of rhythm and changes it drastically. As in *Essai*, rhythm takes up an ambiguous position, being that in extensive

reality that points to intensive duration. Contrary to *Essai*, however, this 'pointing to' should no longer be understood in terms of suggestion, but in terms of expression. In *Matière et mémoire* rhythm is no longer reduced to an aesthetic tool. Rather, it becomes an ontological operation through which duration expresses itself in concrete entities. Bergson here trades the rigid bifurcation, where inextensive time and extensive space are radically separated categories, for a view in which time and space are extremes on a continuum, or opposite forces that are always co-present. As such, every real phenomenon is "something intermediate between divided *extension* [pure space] and pure *inextension* [or duration]" (Bergson 1939, 276). In this context, rhythm gets a new function. It no longer suggests pure duration, but expresses concrete duration. Rhythm is here conceived as the specific outcome of the concrete interplay between the forces of *extension* and *inextension* that takes place in each phenomenon and characterises it.

In *Matière et mémoire*, rhythm is the defining feature of the phenomena : not only does everything have its own rhythm, *rather, each entity is its rhythm*. To understand this, we need to take into account Bergson's understanding of durational movement as vibrational. As we have seen, duration is no longer a specific quality of our inner experience of time, but a force that permeates everything and makes everything move or "vibrate". What appears stable and solid on the macro-level, "resolves itself into numberless vibration" on the micro-level (Bergson 1939, 234). In other words, everything consists out of vibration. What makes something singular is simply its rate of vibration, or rhythm. Elements that testify to a more powerful presence of the force of *inextension*, like the mind, have a higher more fluid rhythm. Elements in which the *extensive* forces are more present, like material objects, have a slower, more solid, rhythm. By introducing these differences in rhythm, or rate of vibration, Bergson not only explains the difference between elements, but he also reveals the reason why we experience stability. According to Bergson, the rhythm of our consciousness is so high that it fails to experience the slow rhythm of material things. To illustrate this Bergson refers to the perception of colours.

May we not conceive, for instance, that the irreducibility of two perceived colours is due mainly to the narrow duration into which are contracted the billions of vibrations, which they execute in one of our moments ? If we could stretch out this duration, that is to say, *live at a slower rhythm*, should we not, as the rhythm slowed down, see these colours pale and lengthen into successive impressions, still coloured, no doubt, but nearer and nearer to coincidence with pure vibrations ? In cases where the rhythm of the movement is slow enough to tally with the habits of our consciousness - as in the case of the deep notes of the musical scale, for instance - do we not feel that the quality perceived analyses itself into repeated and successive vibrations, bound together by an inner continuity ? (Bergson 1939, 127-128 ; *my emphasis*)

The fact that we perceive a colour as a stable quality can be explained by the difference in rhythm between vibrations of the colour and of our consciousness. Take for example the perception of red light. According to Bergson, our psychological perception of one second of red light corresponds with 400 billion physical vibrations of waves. Through our perception we habitually contract these vibrations of the "infinitely diluted existence" of the colour into a few moments of our "more intense life", thus perceiving these waves as one stable quality.

Bergson thus paints a picture of a world where everything vibrates and where the difference between

phenomena is reduced to a differences in rhythm. The only reason why we experience stability is because we impose our intense rhythm of duration onto the slower rhythms, thus condensing a dynamic sequence of vibrations into one stable image. In short, “to perceive means to immobilize” (Bergson 1939, 233). In itself, Bergson does not perceive this stabilizing process as problematic. Quite the contrary, in order to analyse our environment and to act upon it we need to create stability, which means that we have to impose our rhythm on the things that surrounds us. However, although this imposition is important for utilitarian ends, we simply need to immobilize the phenomena that surround us in order to survive, it is also a reduction of reality. By forcing the rich polyrhythmic reality to follow one dominant rhythm, we “turn our back upon true knowledge” (Bergson 1939, 222). If we really want to comprehend life, we need to reverse this movement. Rather than imposing our rhythm on the external reality we need to dissolve, or dilate, our rhythm and enter into the rhythms of the durational reality that surrounds us. Bergson defines this method as *intuition*. In opposition to intelligence, which follows the above-described procedure, intuition allows us to relax our own rhythm and to experience the other rhythms of duration. Here we are “thinking backwards”, so that we can “expand our scope of perception”. [26] According to Bergson this method is native to the artist and the philosopher. Contrary to the scientist who imposes his rhythm on the material, the philosopher/artist tries to penetrate into the inner rhythms of the material that she is dealing with. As such, she is able to express life in all its durational, or vibrational complexity. In *Evolution Créatrice* (1941) Bergson elaborates this idea, as he describes the higher effort of intuition as a way to coincide with matter “adopting the same rhythm and the same movement”. [27] This effort helps the philosopher/artist to go against “the natural inclination of intelligence”, and to grasp reality from within. [28] Or, as Le Roy states in *Une philosophie nouvelle - Henri Bergson* (1912) the “absolute revelation is only given to the man who passes into the object, flings himself upon the stream, and lives within its rhythm.” [29]

Bachelard and rhythm : habits and dialectics

Already in the first sentence of *L'intuition de l'instant* Bachelard clarifies the stakes of his book, as he argues that : *Time has but one reality, the reality of the instant* (Bachelard 1932, 13). [30] Throughout the book Bachelard comes back to the idea that time can only exist as solitary instant, thus depriving past and future from any ontological reality. This ontological preference for the instant, however, confronts Bachelard with the challenge to understand why we experience time as something that is continuously unfolding. How can we have the impression of duration, when time should, both ontologically and intuitively, be understood as “a reality grafted on the instant and suspended between two nothingnesses” (Bachelard 1932, 13). Bachelard’s answer to this question is rhythm. According to Bachelard, the feeling of continuity between past, present and future is created by rhythms, which transform independent moments into “groupings of instants” or patterns (Bachelard 1932, 90). This continuity, however, is not grounded in reality. Past and future are merely dimensions of the present, which is the only reality of time. The past is thus reduced to the retention or echo of what was, and the future to the anticipation of, or intent towards what is about to come. Or, as Bachelard states, “the past is as empty as the future” and “the future is as dead as the past” (Bachelard 1932, 48).

Durational continuity is thus not a “direct force”, but the product of rhythms that establish themselves - and always have to re-establish themselves - in the present. Bachelard stresses that

these rhythms are not predicated on a “pre-established harmony”, but that they are habitual : “past and future are essentially no more than habits” (Bachelard 1932, 51). The philosopher’s conceptualization of habit, however, differs from our common sense understanding of the term. Traditionally we understand habits as patterns that we establish throughout repetition. We have the habit to say ‘sorry’ when we bump into somebody in the streets, or to stop when the traffic light turns red. Habits are here understood as actions that we do. For Bachelard, however, habits are “fundamental” (Bachelard 1932, 70). We don’t perform them, but they constitute us. Habitual rhythms construct durational continuity, thus creating a sense of self or an identity. [31] Or, more prosaically phrased :

Global identity is thus composed of more or less accurate repetitions [redites], more or less detailed reflections. The individual will no doubt make an effort to trace its today upon its yesterday, and this copy will be aided by the dynamic of rhythms. [...] *Life carries our image from mirror to mirror.* (Bachelard 1932, 71 ; *my emphasis*)

Our individual existence and identity are nothing but a habitual rhythm that needs to be re-actualized in every moment : “We should neither speak of the unity of the self nor of the identity of the self beyond synthesis of the instant” (Bachelard 1932, 71). The individual self, in so far as it persists through time, is nothing but “the integral sum of rhythms”

In other words, we don’t constitute habitual rhythms, but habitual rhythms constitute us. In condensing different instants into a continuous temporal pattern, they also tie together the individual identity and make that identity persist in and through time. This persistence, moreover, should not be understood as a simple repetition, but as a progression. This leads to a second fundamental difference between our common sense understanding of rhythm and Bachelard’s conceptualization of the term. According to Bachelard habit should not be understood in terms of a status quo, something that does not develop through time, but as something that constantly renews itself and changes. Bachelard gives the example of playing the piano. If we want to develop our piano playing, we have to practice every day, incorporating new elements in our technique. A habitual rhythm is thus always a “synthesis of novelty and routine”(Bachelard 1932, 65). In order to be efficient, a habit has to learn. It has to deal with novelty or difference, and to adapt its rhythm in order to incorporate this new element. If it isn’t able to do this, the rhythm will no longer be useful and, consequently, no longer be reiterated in the instant. In other words, “what persist is always what regenerates itself” (Bachelard 1932, 83). The past only stays when it is re-actualised in the present and it is only re-articulated in the present when it serves the progression of this present. Paraphrasing Nietzsche, Bachelard here talks about an “eternal reprise”, rather than an “eternal return” (Bachelard 1932, 81-82). [32]

In *La dialectique de la durée* Bachelard returns to the idea that durational continuity is “constructed with rhythms” rather than being based on pre-established “temporal base” (Bachelard 1950, ix). He picks up Bergson’s metaphor of the melody to underscore this idea. According to Bachelard “[w]e must in fact learn the continuity of a melody” (Bachelard 1950, 114). Melodic continuity is thus never experienced instantly. Instead, it is “the recognition of a theme that makes us aware of the melodic continuity”. We have to learn the continuity of a melody. We have to repeat and memorise its theme, before we can experience it as a durational continuity. In line with what we said before,

this learning, however, cannot simply be equated with active learning, rather it resembles the way in which our perception is always conditioned by the patterns that we – consciously or unconsciously – *inhabit*. We don't have to study each individual tune in order to like it, but for us to acknowledge it as a melody, it has to be part of our habit. In other words, if we would have been born in a different time or place, we would not recognize its melodic continuity. In other words, melodic durations are always established belatedly (*après coup*) when we have trained the ear too recognize certain pattern.

In *La dialectique de la durée* Bachelard not only takes up his earlier conceptualization of rhythm, he also develops it. In this book Bachelard relates rhythm to the idea of dialectics. Rhythm is no longer simply sequential, connecting different moments into a continuous refrain, but develops itself dialectically. [33] This dialectics operate in a double fashion. Firstly, dialectics refers to a “fundamental heterogeneity that lies at the very heart of lived, active, creative duration” (Bachelard 1950, 8). According to Bachelard, duration is constituted by the dual operation of two states : creation and destruction, work and repose, affirmation and negation. This duality is crucial if we want to understand the possibility of change or the introduction of newness in time. For something to appear as new it should always break away from what came before. As such, every change is preceded by a moment of negation. Rather than being a concatenation of instants, rhythm thus appears as the alternation of – or interaction between – two opposite possibilities : “either in this instant nothing is happening, or else in the instant, something is happening. [34] Secondly, dialectics also refers to the fact that every rhythm is dialectally conditioned by other rhythms. Rhythms are always “relative”. They interrupt, build on, take their cues from or syncopate one another. Rhythms are thus always “*overlaid and interdependant*” (Bachelard 1950, 123). They constantly interlock and superimpose so as to create a larger harmony of time.

This multiplicity, or density, also explains why we experience time as continuous and things as stable through time. Continuity cannot be found on the level of the individual rhythms, which are always the result of a dialectics between something and nothing, but is experienced at the higher level, where the different discontinuous rhythms are superimposed, and the different states have neutralized each other. Bachelard here refers to another musical metaphor : the orchestra. According to Bachelard the durational continuity of the music is not experienced at the level of the individual musicians, as these musicians are not continuously playing. Rather, it is experienced at the level of the orchestra, where the different instruments, which each play their own discontinuous line, come together to perform an overall harmony. In sum, the overall continuity of time is not connected to “one fundamental rhythm to which all the instruments refer”, but rather to the summation of the different rhythms of the different instruments that “support each other and carry each other along” (Bachelard 1950, 123). There is not one fundamental rhythm to which the instruments obey, but rather different independent rhythms that have to be brought together to form a continuous harmony. [35] Time should thus not be understood as a single thread, but as a tapestry, in which different threads are woven together to form a rich temporal texture.

Conclusion : Bachelard and the creation of new rhythmic textures

Despite the fact that Bachelard throws down the gauntlet to Bergson, there are still clear resemblances between the conceptualization of rhythm in both philosophical systems. Both Bachelard and Bergson coin rhythm as a crucial instrument to understand concrete duration. Rhythm is the pacemaker of our temporal existence. As such, rhythm is not only constitutive for the self, as it creates the temporality in which this self can live and persist through time, but also it is the tool via which we impose our time on the world that surround us and make it our home. In Bergson's case this happens because through our perception, we impose the fast rhythm of our thinking onto the slow rhythm of material things, thus immobilizing them and making it possible for us to use them. In the case of Bachelard it is through our habits that we create a sustainable habitus for ourselves and find our place in the symphony of life.

Nevertheless, both philosophers have a fundamentally different vision on how we should relate to these rhythms. For Bergson, rhythm is an expression of the durational force that permeates everything and gives everything a specific (im)pulse. Consequently, rhythm is not only a tool via which we impose our will on our surrounding world, but also a way to connect to gain 'true knowledge' about that world, experiencing it "from within" (Bergson 1939 72). When we disengage ourselves from the particular rhythm of our consciousness and tune into the rhythms of duration we will manage to come into contact with the primary forces of life that are lurking underneath the superficial temporality of everyday life. For Bachelard, on the other hand, rhythms should not be understood as the expression of duration, but as that what produces duration. As such, the rhythms of becoming do not express anything natural or immediate. Quite the contrary, rhythms are always constructed. They are habits that, although primary to and constitutive for the individual self, fail to express any deeper truth about that self or the reality it relates to. For this reason, Bachelard is not interested in the search for the originary or primal rhythms of duration, but in the creation of radically new rhythmic constellations. Bachelard is fascinated by the moments of abrupt irruptions, when old rhythms are negated and new temporal structures are created : "Flat horizontality suddenly vanishes. Time no longer flows. It spouts [jaillit]." (Bachelard 1932, 106)

Bachelard finds this attempt to construct new rhythmic constellations in two figures that he holds in the highest esteem : the scientist and the poet. [36] The scientist is the one who says no to tradition, as he abandons the values and interests that guide our practical life. She "must first destroy in order to make room for her constructions" (Bachelard 1950, 14). As Bachelard states in *Rationalisme Applique* (1966), her method - the "antithesis of the *habitus*" - imposes a "chronotechnique" that "expels lived duration", thus producing a "suspended time" in which new "significant events" or new rhythmic constellations can emerge. [37] Similarly, the poet has the task to shatter the "simple continuity of shackled time" in order to make new temporalities arise (Bachelard 1932, 58). "Being a poet means multiplying the temporal dialectic and refusing the easy continuity of sensation and deduction" (Bachelard 1950, 124). Contrary to Bergson, for whom poetry should create a regular meter that lulls the listener/reader into a state self-forgetfulness, Bachelard's argues that "the rhythmic of poetry gradually breaks away from ideas of measurement and is arithmetised by grouping together notable instants rather than by measuring uniform durations" (Bergson 1950, 124). Here the reader/listener does not regain contact with the original rhythms of duration, but is confronted with the possibilities of new rhythms, new temporalities that emerge out of the poetic experimentation. [38] As Bachelard mentions in *Poetics of Space*, the poem here gives us a "veritable cure of rhythm analysis" : "to charm or to disturb - always to awaken - the sleeping being lost in its automatism." [39]

Contrary to Bergson, Bachelard is not interested in the actual time in which we live, but in the possible times that we can think of, or imagine. Rhythms should not be traced back to their temporal origins. Rather, they should be broken up and deconstructed so that new significant rhythms can emerge. Or, as Bachelard argues in the article *Surrationalism*, which was published in the same year as *Dialectique de la durée*, we should advocate a new model of thinking : “To turn the rationalism from the past towards the future, from recollection towards the tentative, from the elementary towards the complex, from the logic towards the surlogic these are the indispensable tasks of a spiritual revolution.” [40] It is within this context that we can best understand Bachelard’s rhythm analytical project : not so much as an analytical method, than as a pedagogical project. [41] Understanding how life operates rhythmically will allow us to “regain mastery of the dialectics of duration” and to create new temporal structures (Bachelard 1950, 154). Consequently, the ongoing task of rhythm analysis is to “look anywhere and everywhere in order to discover new opportunities for creating rhythms” (Bachelard 1950, 148).

Notes

[1] See a.o. Michel Alhadeff-Jones, *Time and the Rhythms of Emancipatory Education : Rethinking the temporal complexity of self and society*. London & New York : Routledge, 2017 ; Tim Edensor, *Geographies of Rhythm : Nature, Place, Mobilities and Bodies*. London & New York : Routledge, 2010 ; Steve Goodman, *Sonic Warfare : Sound, Affect, and the Ecology of Fear*. Cambridge & London : The MIT Press, 2010 ; Julian Henrique, Milla Tiainen and Väliaho Pasi, “Rhythm Returns : Movement and Cultural Theory.” *Body&Society*, no. 20 (2014) : 3-29.

[2] Jacques Derrida, “Introduction.” *Typography : Mimesis, Philosophy, Politics*. Philippe Lacoue-Labarthe, Christopher Fynsk, Jacques Derrida. London : Harvard Univeristy Press, 1989, p. 33

[3] See : Paola Crespi, “Rhythm analysis in Gymnastics and Dance : Rudolf Bode and Rudolf Laban.” *Body & Society*, no. 20 (2014) : 30-50.

[4] Lefebvre explicitly acknowledges his indebtedness to Bachelard when he traced the emergence of the rhythm analytical project. Remarkably, he refers to *Psychoanalysis of fire* (1938) rather than to *Dialectique de la Durée*, published two years earlier, in which the idea of rhythm analysis is developed in a more profound and extensive way (see : Henri Lefebvre, *Éléments de rythmanalyse*. Paris : Éditions Syllepse, 1992, 9).

[5] Gaston Bachelard, *La Dialectique de la duree*. Paris : Presses Universitaire de France, 1950, 137. We will continue to refer to this book within the text as (Bachelard 1950)

[6] The Portuguese professor in literature and psychology Lúcio Alberto Pinheiro dos Santos allegedly coined the term rhythm analysis in 1931, when he wrote *La Rythmanalyse*. However, up until today the theoretical relevance of this work remains unclear, as the book was never published and the original manuscript is lost. The only in-depth reference to the text can be found in Gaston Bachelard *Dialectics of Duration*. Moreover, as Bachelard neither intends “to give an over-all view of these nor to describe all the many lines of development”, it is virtually impossible to make claims about dos Santos’s own theory.

[7] Bachelard’s work on temporality took up a special position in his thinking. As is well known, Bachelard advocates a separation between scientific rationality (the diurnal, the animus) and poetic reverie (the nocturnal, the anima). This plea resulted in an oeuvre that is divided between works on epistemology and science, on the one hand, and works on aesthetics and poetical imagination, on the other hand. His writings on time, however, do not adhere to this strict

division. They are neither epistemological, nor aesthetical, but venture into ontological domains. Drawing on both scientific findings (relativity theory, set theory, quantum physics) and aesthetic sources (literature, poetry, musical theory) Bachelard here tries to grasp the reality of time. As Gaspare Polizzi argues, however, this “absence of a dichotomy between rationality and reverie” should not be understood as a limitation, but as a “node of potential problems for the future expression of Bachelard’s thinking” (See : Caspare Polizzi, “Rythme et Durée : la philosophie du temps chez Bergson et Bachelard.” In *Bachelard & Bergson : Continuité et discontinuité*, by Frédéric Worms and Jean-Jacques Wunenburger, 53-72. Paris : Presses Universitaire de France, p. 71)

[8] Bachelard has a habit of developing his philosophy in and through a polemical debate with other philosopher. In *Formation of the Scientific Mind* (1967) he even advocates to replace Kant’s “architectonic reason” with a “polemical reason” (10). A few years earlier Bachelard fostered a comparable polemic with philosopher and chemist Émile Meyerson in *La valeur inductive de la relativité* (1929). Using a similar rhetorical strategy as in his books on Bergson, Bachelard’s here inverts the title of Meyerson’s book *La Déduction relativiste*, which was published 1925 (cf. infra).

[9] See a.o. Eileen Rizo-Patron, *Adventures in Phenomenology : Gaston Bachelard*. New York : Suny, 2017 ; Frédéric Worms and Jaen-Jacques Wunenburger. *Bachelard et Bergson : continuité et discontinuité*. Paris : Presses Universitaires de France, 2008 ; Roch C. Smith, *Gaston Bachelard : Philosopher of Science and Imagination*. Albany : Suny Press, 2016.

[10] This misrepresentation of the Bergsonian framework should not be understood as negligence, but as a rhetorical tool that Bachelard uses to make his own theory more clear. Several passages suggest that Bachelard has read Bergson carefully. As Gouhier mentions, rather than a lack of understanding, “Bachelard needs to alter Bergson in order to be Bachelard” (Herni Gouhier, “Discussion.” In *Bachelard : Colloque de Cerisy (1970)*. Paris : Hermann Éditeurs, 1974, 359)

[11] Jean François Perraudin, “A non-Bergsonian Bachelard.” *Continental Philosophy Review*, no. 41 (2008) : 465.

[12] Cristina Chimisso, “Introduction.” In *Dialectics of Duration*, by Gaston Bachelard, Manchester : Clinamen Press, 2000, 1.

[13] Henri Bergson, *La Pensée et le mouvant : Essais et conférences*. Paris : Libraire Félix Alcan, 1934, 35.

[14] However, these titles also how Bachelard was not simply rejecting the Bergsonian project but rather rethinks it. As Frédéric Worms points out, *Dialectique de la Durée* and *L’intuition de L’instant* establish a relation with the Bergsonian project based on a chiasm rather than on a simple opposition. This entails that Bachelard preserves the “principle stakes” : “there is still intuition, there is still duration, one does not get rid of the categories, nor of the questions” (Frédéric Worms, “La rupture de Bachelard avec Bergson comme point d’unité de la philosophie du xxe siècle en France .” In *Bachelard et Bergson : Continuité et discontinuité ?*, by Frédéric Worms and Jean-Jacques Wunenburger. Paris : Cairn, 2008, 40).

[15] Bachelard Gaston, *L’intuition de L’instant* :. Paris : Livre de Poche, 1932, 13. We will continue to refer to this book within the text as (Bachelard 1932)

[16] Similarly, *La dialectique de la durée* argues for the need to understand “being” in terms of

“becoming” (Bachelard 1950, 16).

[17] Henri Bergson, *Essai sur les données immédiates de la conscience*. Paris : Les Presses universitaires de France, 1927, 127. We will continue to refer to this book within the text as (Bergson 1927).

[18] Henri Bergson, *Matière et mémoire. Essai sur la relation du corps à l'esprit*. Paris : Presses universitaires de France, 1939, 232-233. We will continue to refer to this book within the text as (Bergson 1939)

[19] Bergson, *La Pensée et le mouvant*, 237.

[20] Jean-Jacques Wunenburger, “Force et résistance, le rythme de la vie.” In *Bachelards & Bergson : continuité et discontinuité ?*, by Frédéric Worms and Jean-Jacques Wunenburger, 27-37. Paris : Presses Universitaires de France, 2008, 29.

[21] This conceptualization of rhythm as central concept does not come out of thin air. Quite the contrary, around the turn of the twentieth century rhythm was “one of European’s most fetishized keywords” (Lubkoll, Christine. “Rhythmus : Zum Komplex von Lebensphilosophie und ästhetischer Moderne.” In *Das Imaginäre des Fin de siècle : Ein Symposium for Gerhard Neumann*, by christine Lubkoll (ed.), Freiburg : Rombach, 2002). It occupied a central position in the in the theoretical writings of philosophers, natural scientists, psychologist and social theorist and was often framed as a mechanism that underscores all movement (see also : Golston, Micheal. “‘im anfang war der rhythmus’ : rhythmic incubation in discourses of mind body and race from 1850-1944.” *Standfort Humanities Review*, 5, 1996)

[22] Michael Cowan, *Technology’ pulse : Essays on Rhythm in German Modernism*. London : Institute of Germanic & Romance Studies, 2012.

[23] In *Le Rire* (1910) we can find a similar passage, when Bergson states that the power of rhythm and assonance in poetry is to “rocks [bercer] our imagination, taking it back from the same to the same in a regular swing, and thus gently preparing it to receive the suggested vision (Henri Bergson, *Le Rire : Essai sur la signification du comique*. Paris : Felix Alcan, 1910, 62-63).

[24] Christophe Corbier shows how most of the images that Bergson uses to illustrate the intuition of duration are distinctly amelodic : the strokes of the bell, the oscillation of a pendulum, the blows of the hammer (Christophe Corbier, “Bachelard, Bergson, Emmanuel : Mélodie, rythme et durée.” *Archives de Philosophie* 75, no. 2 (2012) : 296).

[25] Corbier, “Bachelard, Bergson, Emmanuel”, 298.

[26] Francis C. T. Moore, *Bergson : Thinking Backwards*. Cambridge : Cambridge University Press, 1996, 95-96.

[27] Bergson, *Évolution Créatrice*, 357.

[28] Bergson, *Évolution Créatrice*, 29-30.

[29] Edouard Le Roy, “Une Philosophie nouvelle - Henri Bergson.” *Périodique : Revue des Deux Mondes* 7, no. 6 (1912) : 571.

[30] Bachelard ascribes this statement to Gaston Roupnel. Throughout the whole book Bachelard will come back to the “Roupnelian theory”. We can see that Bachelard here adopts a similar rhetorical strategy as in the last chapter of *Dialectique de la durée*. Again Bachelard claims to explain and defend the theory of somebody who, although this time it is a published author, most of his readers will not know, thus creating an interesting confusion between first- and second-hand knowledge.

[31] Bachelard was neither the only nor the first philosopher to give the concept of habit an important place in his thinking and to see it as a creative act. Quite the contrary, by conceiving habit as something that is crucial for both the internal organisation of the living being and its relation with the environment Bachelard seems to inscribe himself into a discourse that emerged in nineteenth- and early twentieth-century that was advanced by philosophers like Albert Lemoine, Félix Ravaisson and – as we have seen – Bergson. Contrary to early modernist philosopher like Emmanuel Kant and Rene Descartes, who understood habit as an obstacle for freedom because it reduces human action to the order of the mechanical, these philosophers tried to give a more positive account of habit, understanding it as a creative act that is able to establish stability in an ever changing world (Elisabeth Grosz, “Habit Today : Ravaisson, Bergson, Deleuze and Us.” *Body & Society* 2/3 (2013) : 217-239 ; Mark Sinclair, “Habit and time in the nineteenth-century French philosophy : Albert Lemoine between Bergson and Ravaisson.” *British Journal for the History of Philosophy* 1, no. 26 (2018) : 131-153). Gilles Deleuze is one of the more recent authors to have build on this line of thinking. In *Difference and Repetition* he connects habit to the passive synthesis of the present, arguing that habit is constitutive for our experience of the living present (Gilles Deleuze, *Différence et répétition*. Paris : Presses Universitaires de France, 1968).

[32] Bachelard continues to connect the idea of constant renewal with the idea of progression. Habits are not only dynamic, constantly changing as they synthesize the memory of the old and the emergence of the new, but they are also progressive. Throughout its repetition, rhythms are gradually becoming more rational, more righteous and more beautiful. (Bachelard 1932, 94-95). Although, the rhythmic patterns that emerge are in themselves completely accidental, only the patterns that propel us into a better future will be preserved. All the other habitual patterns will eventually disappear. In other words, progression is not driven by a force that pushes it in a certain direction, but by a project that pulls us : “What compels us to preserve in being is then not so much a set of forces as it is a set of reasons” (Bachelard 1932, 74).

[33] Although Bachelard refers only a few times to science in *Dialectic*, we can see a close relation between Bachelard’s philosophy of time and his philosophy of science when he talks about the dialectics of time. For Bachelard the dialectical method is inherently to the scientific approach to knowledge production, where new scientific experiments always comes aims to negate, or falsify existing theories in order to come to new knowledge (see : Gaston Bachelard, *La Philosophie du non : Essai d’une philosophie du nouvel esprit scientifique*. Paris : Les Presses universitaires de France, 1966.).

[34] Bachelard here again enters into a polemical debate with Bergson. In *Creative evolution* Bergson argues that negation does not really exist, as it is simply “an affirmation of the second degree” (Bergson, *Évolution Créatrice*, 288). Negation simply indicates the operation where “I add ‘not’ to an affirmation” (Bergson, *Évolution Créatrice*, 289). This ‘not’ should not be understood in terms of absence or emptiness, but in terms of difference. Stating ‘X is not there’, is actually the same as saying ‘something different that X is there’. For Bachelard, by contrast, negation is not an affirmation of the second degree, but rather an essential part of the dialectical movement of time.

[35] For this reason we should make a distinction between rhythm and measure. Measure does not express the fundamental rhythm of the piece. It divides the whole piece into standard units of time, marked by the bar, but these units are simply pragmatic and secondary tools that enable the weaving of different rhythmic patterns into a complex harmony. Metronomes can indicate the measure, but they can never really describe the “fabric of time” (Bachelard 1950, 118). They are nothing but “crude instruments”, “the magnifying glasses with which weavers count the threads [*compte-fils*] and not the looms themselves” (Bachelard 1950, 117).

[36] Perraudin argues that Bachelard sees the figure of the artist and the as “heroic types” as they animate the history of human progress. “These heroes benefit other individuals through their own dynamisms” (Perraudin, *A non-Bergsonian Bachelard*, 471).

[37] Gaston Bachelard, *Le Rationalisme Appliqué*. Paris : Les Presses universitaires de France, 1966, 26.

[38] As an example of this type of poetry, Bachelard refers to the surrealists. With their clear preference for poems that do not follow a pre-defined metrical pattern and their associative rhythmic strategies. (See : Bachelard 1950, 125-126)

[39] Bachelard, Gaston. *La poétique de l'espace*. Paris : Presses Universitaires de France, 1957, p. 17

[40] Gaston Bachelard, *L'engagement rationaliste. Préface de Georges Canguilhem*. Paris : Les Presses universitaires de France, 1972, 7.

[41] Chimisso, “Introduction”, 10.