

Bachelard's theory of time: Missing link between science and art

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Introduction

Gaston Bachelard (1884-1962) is famous as a philosopher who strove to understand the nature of art and science equally, and made original remarks in both fields. However, little attention has been given to his theory of time. In this paper, I will aim to elucidate them in two points.

Firstly, I will seek to describe what Bachelard's theory of time is. Exploring his theory, Bachelard criticized Bergson's theory of time. Why did he dissent from Bergson? And in what respects did their thoughts differ from each other? By considering these questions, we will find the extent to which his theory of time relates closely to science.

Secondly, I will study the relationships between his theory of time and his theory of art. It has been said that his theory of time led him to a new reflection on poetry, because this is where he started to refer to art. But why is art discussed in his theory of time? How did this discussion influence his conception of poetry? Answering these questions will enable us to work out the common grounds and difference between his theory of time and his conception of art.

By considering these two points, we will see that his theory of time is not just in a whim of a moment but is indispensable for understanding his theory as a whole.

1. Theory of time

The intuition of the instant (L'intuition de l'instant), which was written in 1932, is his first book about time. Four years later, he wrote his second book, *The dialectic of duration (La dialectique de la durée)*. In this chapter, we will begin our study of the theory of time by examining these two books.

In *The intuition of the instant*, he picked up two thinkers who reflected on the question of time and compared them to each other. One is Henri Bergson who noticed that duration is the essence of time in *An essay on the immediate data of consciousness*. The other is Gaston Roupnel who was a colleague of Bachelard at the University of Dijon and who insisted that the instant is the true nature of time in *Siloë*.

Bachelard describes Bergson's philosophy as a <philosophy of duration>, and that of Roupnel as a <philosophy of instant>, and <of these two philosophies, the latter is the one which corresponds with the more immediate date of consciousness>. He thus agreed with

Roupenel.

Why the instant is an intrinsic quality of time? Bachelard maintained that the only time when creation could happen is an instant, and explained it as follows.

In fact, if the instant was a false division, the past and the future would certainly be difficult to distinguish because they are always artificially separated. We must then consider duration within an indestructible unity. From these considerations we can thus see that all consequences of the bergsonian philosophy means in all our acts, in our smallest gesture, we can seize the complete picture that begins to take shape. . . .

However, if we felt the sudden mutation where the creative acts are occurred, how is it possible not to understand that the new era is always opened up by abruptness? Thus every evolution, if it is important, is punctured by the creative instants [1].

Duration is time that continues, in which past and future could be divided <artificially>. If the continuity is an essential quality of time, any moment has to relate to another moment. In duration, even though something that seems to be new happens, such a thing always has some connections with the past. That is, in Bachelard's phrase, <in our smallest gesture, we can seize the complete picture>. And can we think of such things as being really original? Thus in duration true creation is impossible. The time when something new could happen is the instant that is severed from the past, which is the era of <sudden mutation>. Such a creative instant can then be called the essence of time.

For Bergson, it would probably be difficult to agree with these remarks [2]. Duration in Bergson's theory is characterized by its conception of creativity, thus it is impossible to accept Bachelard's refutation. Concerning creativity, why did their views differ from each others? So as to understand this, we need to examine Bachelard's theory of science.

One of the main themes in Bachelard's scientific philosophy is <epistemological break>. This notion means that true creativity in the history of science is possible only when the history is discontinued and the past theory is negated at a particular time. The theory of time parallels this theme. As if in the theory of science the interrupted history makes the new theory, in the theory of time the interrupted continuity or interrupted duration makes the creative instant, hence Bachelard rejecting the idea of creativity within the duration.

Moreover it must be noted that Bergson's theory of time points to the defect of science. Duration is described as <qualitative multiplicity> and having <no likeness to numbers>. This means that duration cannot be conceived in terms of numbers, which is the foundation of science. Numbers can be divided at any point but duration is undividable continuity. Thus science cannot give access to any understanding of duration, which is the essence of the time [3].

We can now understand why Bachelard, who is a scientific philosopher, argues against Bergson. It is interesting to notice here that Bachelard criticized his theory in respect of creativity. He conceived that ordinary time seems to be continued. However it is not creative time. Just like science gives a new angle of vision of the world by converting everything into numbers, new things can come into being when the ordinary continued time is broken.

Thus, we can understand how the theory of time was closely related to the theory of

science. And because of this, Bachelard could not agree with Bergson's formulation of duration. For him, the creation could be associated with the instant alone.

2. Art in the theory of time

In his theory of time, Bachelard, formerly known as a philosopher of science, discussed for the first time about art. Why is art discussed in his theory of time? The answer is that two philosophers picked up by Bachelard in his theory of time, i.e. Bergson and Roupnel, referred to art. Hence we need to start by studying what they both said about art.

Roupnel was interested in the links that interconnect art and the notion of instant. He wrote the following.

As everybody knows, art restores to the human thought the freshness of the original sensations from which it is produced. Art rejuvenates the sense and the strength of means of expression [4].

Siloë is a book that discusses time by considering the evolution of organisms and stressing the role played by mutation. He insisted that renewing mutation is vital for human life and that the art can give rise to one of them. Thus in Roupnel's theory, art is indispensable for us because of the relationship between mutation and instant.

On the other hand, Bergson took art as an example to show what duration is about in *An essay on the immediate data of consciousness*. He explained duration by referring to art, especially music. For example, he said the following.

Or I shall perceive (the ringing sound and the vanishing sound) one in the other, each permeating the other and organizing themselves like the note of a tune, so as to form what we shall call a continuous or qualitative multiplicity with no resemblance to number. I shall thus get the image of pure duration [5].

Bergson took a pendulum as an example to compare duration with melody. When we feel sleepy while listening to the sound of a pendulum, we cannot figure out which single sound makes us sleepy. When the last and the previous sounds <perceive one in the other> and <organize themselves like the note of a tune>, the series of sound becomes somniferous. Melody follows the same principle according to Bergson. In music single sounds by themselves are not what captivate our attention. When several sounds make a unity, in other words a melody, they appeal to us. Bergson argued that this is what duration is about. To sum up, melody teaches us what duration is like.

As we have seen, Roupnel and Bergson referred to art when reflecting on time. But there is a difference in content between Bergson and Roupnel. Bergson took art as an example of duration whereas Roupnel related art to the instant. From which philosopher Bachelard took his inspiration? The answer is from both.

We must now go to Bachelard's arguments and we will see how having been influenced by the two philosophers led to some ambiguity in his own philosophy.

Basically, Bachelard followed Bergson's example, which we can trace in the following

statement :

We only have to closely examine any image of continuity in order to see hatches of discontinuity. These hatches seem to be a continued shade, but that is a result of blurred heterogeneity. It is an argument that we have already presented many times. Here we will see it freshly through a particular metaphor, that is, by analyzing the layer of music and poem [6].

Bachelard argued that in <metaphors> a chain of instants appears to us as if it were duration itself. These metaphors unite instants and create a false duration. In these metaphors, there are music and poetry. They create <a layer> of instants, as an orchestra unites separated sounds from various instruments in order to make a whole symphony, or as a poet brings various images into one poem. This is how Bachelard brought art so close to the idea of duration.

However there is a similarity between Bachelard and Roupnel too. We can see this in the following paragraph :

Is not the poetry then an accidental, detailed or distracting thing for being? Can it be the very principle of the creative evolution? It is here a series of questions that we are not qualified to go deep into [7].

We can see that in these sentences the relationship between the instant and the poem is evoked, bearing in mind Bachelard's theory of time according to which the true principle of evolution is attributed to the instant. He writes that <we are not qualified to go deep into> this and as such the issue at stake is not closely inquired into - which does not mean that this relationship should be neglected. This means that poetry that makes us feel duration is, on the other hand, connected to the instant. Thus, his theory of time seems to contain an ambiguity, especially when it comes to poems. This ambiguity stems from the works of the two philosophers to which Bachelard referred and which had subsequently a great influence on his theory of art.

3. Influence on poetics

3-1. Art at the beginning of poetics

Two years after from *The dialectic of duration*, for the first time Bachelard published a book on poetry, *The psychoanalysis of fire (La psychanalyse du feu)*. In this book poetry is discussed from different standpoints, but there are some similarities between what he says about art and his theory of time. What are these similarities? What are the differences? In this section we shall study his arguments about poetics by looking at *The psychoanalysis of fire*.

The psychoanalysis of fire is usually held as a book about art, but in fact its main theme is science. Art in this book initially appears to be an obstacle to scientific thinking. As such, the arguments about art are different from the ones developed in his theory of time. We can however find a similarity. In order to bring this similarity to light, we will now focus on the

notion of constancy of images. In the theory of time, art is one of metaphors that make the instant look like duration. As one of these metaphors, Bachelard mentioned the power of custom, which makes us feel duration by repeating the same things many times [8], while in *The psychoanalysis of fire*, the imagination makes images out of the same principle. They both repeat similar things many times.

We shall easily be able to observe the observer and so arrive at the principles underlying this value-laden or rather this hypnotized form of observation that is involved in gazing into a fire. Finally, this slightly hypnotized condition, which is surprisingly constant in all fire watchers, is lightly conducive to psychoanalytical investigation [9].

<The value-laden form of observation> means that the imagination enters into the scientific sphere as a thinking subject, and Bachelard sees this imagination as <constant>. In other words, the reveries that the pensive man has when gazing into the fire have the same unforeseen characters. The reason for this is that reveries relate to unconsciousness, in particular the kind of collective unconscious that Jung had in mind. The constancy that reveries have is similar to the customs that make us feel time as duration.

The link between the arguments in the theory of time and those developed in the poetics can be confirmed by his reflection on art. As far as art has to do with constancy, and given the fact that the creation of new things is presumably for Bachelard of great importance, art ends up with a negative evaluation. In fact, in the theory of time, art makes us confuse the true character of time, and in *The psychoanalysis of fire* art makes an obstacle to scientific thinking. As previously mentioned, the contents of the arguments are very different, but in both cases art is evaluated negatively. The reason is that the element of constancy in art is confronted to the creative element.

However the poetics does not wholly imitate the theory of time. The arguments change gradually. Thus we must study these differences. In the theory of time, sometimes the art is evaluated positively, albeit on rare occasions. In the poetics a positive evaluation takes shape more significantly. For example, Bachelard states the following :

In any case, we must above all break the impulses of a reflex expression and psychoanalyze the familiar images in order to arrive at the metaphors, particularly the metaphors of metaphors. . . . We subscribe to this view; rather than the will, rather than the *élan vital*, Imagination is the true source of psychic production [10].

In the theory of the time, <metaphors> deceive us, but the expression <the metaphor of metaphor> does not have a bad connotation. This means that art has close relationships with human nature. To arrive at this metaphor, we must avoid clichés such as <reflex expression> and <familiar images>, which are repeated images, i.e. constant images. When these images are excluded, imagination can be <the true source of psychic production>. We should notice here two points. One is that the creativity of art is discussed more expansively in the poetics. In the theory of the time, the discussion about creation in art is only initiated. It remains only in the form of questions of which Bachelard says that they should not be inquired into more closely. Comparatively, in the paragraphs quoted above, creativity in art becomes more

appreciated for its own value. If we can avoid ordinary images, it can be the source of creativity. The second point that needs to be confirmed here is that the constancy of images still has a negative connotation. Art becomes creative on the condition that the constancy of images is avoided. Thus creativity is the opposite to constancy and constant images keep being disparaged [11].

3-2. Change in the way of thinking art

After *The psychoanalysis of fire*, Bachelard's poetics became more established and his evaluation of art changed. With these changes, the relationship between creativity and constancy was being discussed differently. In this section, we will study these differences by examining his article titled <poetical instants and metaphysical instants (instants poétiques et instants métaphysiques)>, his poetics *Water and dreams (L'eau et les rêves)* and the notion of <material imagination>.

<Poetical instants and metaphysical instants> discusses, as its titles suggests, time through poetry. In this article, poetry is clearly related for the first time to instants.

Poetry is an instant metaphysic. In a short poem, it must give us a vision of the universe and the secret of being and objects altogether. If it only follows the time of life, it is less than life [12].

Poetry is a matter of instant and it breaks the ordinary flow of time, in other words duration. We can see here that poetry clearly relates to the notion of instant and is highly appreciated as a thing that can teach us some secret. We may think this change occurs abruptly, but it follows naturally the discussion about art in the theory of time that already evoked some degree of ambiguity and in *The psychoanalysis of the fire* whereby the creativity of poetry becomes more important.

And this change leads to another change, regarding a relationship between the creativity of art and the constancy of images. To consider this, we need to focus on his conception of <material imagination> [13].

In his statements about poetry, imagination <liberates us from fundamental images and distorts them [14]>. To pay attentions to the power of creating new images shows that the creativity of art is of great significance. It is on the material imagination that he focuses. This is the ability to create images through material factors such as the weight or the tactical sense. Bachelard said that this imagination was indispensable for art and that philosophers overlooked it [15].

It is important to notice that the material imagination produces constant images, just like the imagination as discussed in *The psychoanalysis of the fire*. The images made by the material imagination are apparently full of variety, but in secret have unchangeable characteristics. This is easy to understand if we compare the material imagination with the formal imagination. The formal imagination, which creates images through formal factors such as appearance, <gets its impetus from novelty> and takes <pleasure in the picturesque, the varied and the unexpected>. By contrast, the material imagination makes us notice <the constancy and lovely

monotony of the matter>.

Both the imagination from his previous theory and the material imagination make constant images, but there are some differences between them. Bachelard said that when the material imagination makes images, even if they seem to be various, we can always classify them into four categories, that is to say the four elements that are the earth, the wind, the water and the fire. It is important to see here that, to group all image into four categories means that this classification, to put it the other way around, does not restrict the freedom of images significantly. Otherwise, we could not find such a variety of images.

In *The psychoanalysis of the fire* the idea of constant images refers in particular to clichés like <familiar images> or <reflex expressions>. In comparison, the constant images made by the material imagination are not well-worn images, and as such we can reinterpret this constancy – formerly related to the negative evaluation of art. For example, Bachelard declares that :

In order that a reverie is continued with such a constancy as to make a work written and that it is not just the vacancy of fleeting time, it must find its own material and the material element must give its own substance, its own rule and its special poetic to a reverie [16].

In the above passage, we can see that the constancy of reveries means the special rules of the material. It gives to images a reason to make them. The fact that images have constant factors does not lead to mediocrity but to the vivacity of images [17]. Moreover Bachelard said that everyone can understand new images because of constancy. Even though we meet images that at first appear to us to be strange, we can understand them through the constancy which they secretly have. Thus the constancy of images does not obstruct the creation of new images but helps them. The material imagination can create new images because of their constancy.

Thus the constancy of images, which formerly meant mediocrity and barren duration, is still a major dimension of art in Bachelard's poetics although it is reinterpreted. Images follow a special rule that makes possible to create new images through material imagination. Taking the theory of time as a standpoint, Bachelard stressed the creativity of art in a way that was not fully discussed before, which made him develop an original theory of art.

Conclusion

In this article, we considered Bachelard's theory of time and highlighted how it relates to the theories of science and art. In the theory of time he stressed that the essence of time is the instant and that creation can happen in the instant alone. In the first chapter, we examined this stance shares a common basis with the theory of science. In both theories, creation can become possible when continuity is broken.

Moreover, the theory of time influenced the theory of art. Bachelard, influenced by Bergson, mainly argued that poetry makes a chain of instants appear as if it were duration, which is opposite to usual conceptions of creativity. But under the influence of Roupnel, he also suggested that poetry gives us the chance to experience what an instant is, and that it consists in creativity. Thus, in his theory of time, especially when applied to the experience of

poetry, there seems to be an ambiguity. In 1939 he wrote his first books on poetics, *The psychoanalysis of fire*, followed by *Water and dreams* (1943), in which he elaborated a new conception of <material imagination> that was based on the Elements. He thought that the images of material imagination were constant and that this constancy was nothing but duration. Further, he considered this constancy to be a positive property, holding that it gave images creativity – something that was assigned only to instances in his previous writings. Therefore, it becomes clear that Bachelard's poetics is undoubtedly based on ambiguous reflections about poetry in his theory of time.

Finally, as mentioned above, Bachelard's theory of time bears a close relationship with his theories of science and art. This is the missing link that we have tried to disclose and which is indispensable to fully understand his theory.

Notes

- [1] Gaston Bachelard, *L'intuition de l'instant*, Paris, Stock, 1932, p.18. All quotations from Bachelard in this paper are translated from Frech by the present writer.
- [2] In fact, Bergson said to Jacques Chevalier that Bachelard's theory of time is a disappointment to him (Jacques Chevalier, *Entretiens avec Bergson*, Librairie Plon, 1959, p.256).
- [3] More precisely, Bachelard also criticized Bergson by referring to relativism. Bachelard said that the duration of time is relative to the speed of measuring points. Compare with this, the instant is immutable and because of this it corresponds to the essence of time. With no doubt, Bergson would not agree with this. For him science can deal with duration on condition that the essential factors of duration are avoided (Henri Bergson, *Ceuvres*, P.U.F., 1991, p.77). We can see again from these arguments that science is key to the theory of time.
- [4] Gaston Roupnel, *Siloë*, Paris, Stock, 1927, p.195. All quotation from Roupnel in this paper are translated from French by the present writer.
- [5] Henri Bergson, *Time and Free will*, Trans. F.L.Pogson, Dover Publications, 2001, p.105
- [6] Gaston Bachelard, *La dialectique de la durée*, Paris, Boivin, 1936, Réédité in 1963, P.U.F., p.113
- [7] *Ibid.*, p.11
- [8] About the custom which makes instants the duration, Bachelard said that <duration, custom and progress make an interesting trinity> (Gaston Bachelard, *L'intuition de l'instant*, Paris, Stock, 1932, p.89).
- [9] Gaston Bachelard, *La psychanalyse du feu*, Paris, P.U.F., 1937, pp.14-5
- [10] *Ibid.*, pp.186-7
- [11] Though similar images are not always wall-worn images, Bachelard thought that similarity is an unavoidable factor for images and that to some degree it is compatible with creativity. <There is no *real flower* that does not have this geometrical pattern. Similarly, there can be no poetic flowering without a certain synthesis of poetic images. One should not, however, see in this thesis a desire to limit optic liberty, to impose one logic or one reality (which is the same thing) on the poet's creation> (Gaston Bachelard, *La psychanalyse du feu*, Paris, P.U.F., 1937, pp.185-6). However his argument according to which the similarity of images is compatible with creativity does not mean that the similarity of images *helps* creativity, like following arguments.
- [12] Gaston Bachelard, «instant poétique et instant métaphysique», in: *L'intuition de l'instant*, Paris, Stock, 1932, p.103
- [13] Bachelard already mentioned the idea of material imagination in *the psychoanalysis of fire*, but there are some differences compared with the arguments from *Water and dreams*. For example, in

the former Bachelard referred to salt and alcohols as *Elements*.

- [14] Gaston Bachelard, *L'air et les songes. Essai sur l'imagination du mouvement*, Paris, Corti, 1944, p.7
- [15] <When I began meditating on the concept of the beauty of matter, I was immediately struck by the neglect of the *material cause* in aesthetic philosophy.> (ibid., p.2)
- [16] Gaston Bachelard, *L'eau et les rêves. Essai sur l'imagination de la matière*, Paris, Corti, 1943, p.5
- [17] Thus the material imagination that makes constant images has more power to create new images than formal imagination. Bachelard wrote the following: <Though forms and concept harden rapidly, material imagination still remains an active power. It alone can revitalize traditional images endlessly; it is the one that constantly breathes new life into certain old mythological forms.> (ibid., p.183)