

The life and the crystal. Paths into the virtual in Bergson, Simondon and Deleuze

by GIULIO PIATTI

Abstract

In his analysis of memory, Henri Bergson introduces the key concept of 'virtuality', understood as a non-actual reality, an unpredictable and pre-human *élan vital*. Several years later, the virtual will play a key role in the way that Gilles Deleuze tries to conceive the notion of a 'plane of immanence', that is, a whole that guides an inexhaustible process of actualisation. Deleuze, however, refers not only to Bergson but to Gilbert Simondon and to his concept of 'preindividual field', which corresponds to a metastable state, full of potential energy, from which a structured process can arise.

This article undertakes an analysis of the different theoretical pathways leading to the concept of the virtual in Bergson, Simondon and Deleuze. It will investigate the transformations of this concept by focusing on the memory of the present individuated by Bergson, then applied to the cinema of the time-image by Deleuze, and on the figure of the crystal as an emblematic materialisation of the virtual, deeply present in the philosophy of both Deleuze and Simondon. The intention is to show – apart from the inevitable differences – the significant continuity between these three authors, who share a common attempt to build an affirmative ontology of life. Combined Bergsonian and Simondonian influences lead in Deleuze to a metaphysics of becoming, where virtuality is always on the point of actualising itself in percepts, affects and concepts.

Bergsonian virtuality: from the memory to the universe

After presenting his theory of perception, in the second and third chapter of *Matter and memory*, Henri Bergson introduces the key concept of «pure memory» (2007: 92). Since, in everyday life, perception and memory appear always as indistinguishable, bergsonian methodology, a truly superior kind of empiricism (Deleuze 1991: 133), attempts to dissociate the two lines of tendencies as they appear in usual experience, in order to better show their coalescent nature in the phenomena in which they appear as mixed (Bergson 2007: 103). In other words, between matter and memory there is, according to Bergson, a difference in kind, not in degree: «each time we think in terms of more or less we have already disregarded the differences in kind between two orders, or between beings, between existents» (Deleuze 1991: 20)¹.

As a matter of fact, memory, according to Bergson, is double: on the one hand, there is an impersonal pure memory that registers every event of our life; and, on the other hand, there is also a «habit-memory», situated in the sensorimotor mechanisms of the

¹ Bergson will eventually demonstrate, in the fourth chapter of *Matter and Memory*, that the difference in kind between matter and memory becomes, in the end, a virtual co-existence of the two components: matter is not an inert state, while memory is not just a spiritual entity (Bergson 2007: 233-298).

body. Technically speaking, only pure memory is memory as it truly is: in order to define it, Bergson uses the term «virtual» (2007: 163), meaning a non-actual state. Pure memory, which is not situated in any kind of physical space (not in the brain nor somewhere else), is something that simply exists without being effective and it collects all of the memories lived by a person. In this way, such pure virtual is an atopic reservoir of memories which corresponds to something that, following Proust, is «real without being actual, ideal without being abstract» (Deleuze 1991: 96): independent from the same subject who has memories, it exists as an ontological totality, on a virtual level, ready to be actualised for the needs of perception.

It is indeed a mechanism of actualisation that creates a connection between the pure memory and the habit-memory: with this mechanism, a single memory is extracted from the deep continuity of the virtual and eventually transformed in image, able to fit in present perception. In order to do so, the attention of the subject must, on one side, depart from the everyday life of perception by going deep in the totality of the virtual, in search of a specific memory; but on the other it is also the present situation of perception that attracts itself the virtual, which is then stimulated to become actual. Therefore, a circuit is generated from present to past, from actual to virtual, in order to actualise a memory in a specific perceptive situation.

Therefore, it is clear that here Bergson is not merely putting forward a theory of memory, but is also implying, at the same time, some metaphysical tenets on the nature of time (Ansell Pearson 2001). Besides the operations of perception and memory, there are in fact two ontological dimensions of time: an actual one, the present, and a virtual one, the past. What is, then, the genesis of the virtual? In order to fully grasp it, Bergson affirms the simultaneous genesis of perception and memory: «I hold that *the formation of memory is never posterior to the formation of perception; it is contemporaneous with it*. Step by step, as perception is created, the memory of it is projected beside it, as the shadow falls beside *the body*» (Bergson 1975: 157). When we perceive something, at the same time we “remember” it and, in this way, a parallel virtual experience of the present is created, that is capable of recalling, afterwards, a specific memory. For this reason, actual and virtual are contemporary. Bergson admits the paradox of a memory that originates only in the present, but he affirms nevertheless that this is the only way to explain the genesis of two different ontological dimensions of time. In the state of perception during everyday life, the memory of the present is obviously censored by consciousness: useless and potentially confusing, it appears only in case of pathological conditions, giving origin to the phenomenon of *déjà-vu*, which Bergson synthetizes in the effective formula «I quite realize that I don't know it, but I foresee that I'm going to have known it» (ivi: 168).

We will see afterwards how Deleuze will take up these Bergsonian ideas: what is now important is to note how Bergson progressively expands the notion of the virtual from the strict field of memory to an ontological device able to catch the genesis of reality

itself. What is virtual, especially in *Creative Evolution*, is not merely the “past” anymore, but, more extensively, a non-actual dimension always on the verge of actualising itself. Virtuality is then conceived as an energy – an *élan vital* – that precedes every actual entity, a truly metaphysical force that continues to guide the evolution of reality, actualising itself in multiple ways (Bergson 2005: 94-108). In other terms, an unpredictable process of creation that Bergson explicitly opposes to the concept of “possible” which is nothing more than a human and intellectual mechanism that retroactively refers to the unpredictable emergence of reality by inserting it in an abstract field of pre-existence (Bergson 1975: 107-125). If, as we have said before, bergsonism is a superior empiricism, purpose of this method is then to overcome the human-actual experience, in order to explore this virtual genesis of the real: « [...] there is a last enterprise that might be undertaken. It would be to seek experience at its source, or rather above that decisive turn where, taking a bias in the direction of our utility, it becomes properly human experience» (Bergson 2007: 241).

Gilbert Simondon: preindividual field and individuation

Scholar of both Georges Canguilhem and Maurice Merleau-Ponty, whose relationships with bergsonism are explicit and documented², Gilbert Simondon seems to reactivate, in the late ‘50s, Bergson’s “empiricist” methodology. Despite the strong criticism he makes against Bergson’s energetism – on which we should return later – Simondon’s problem is a truly bergsonian one: how to overcome a static study of individuality? Is there something that precedes actual individuals?

The answer to this question is found in one of his key-terms – «individuation» – a concept that already appears in the very title of his monumental Ph.D. thesis, *L’individuation à la lumière des notions de forme et information*. According to Simondon, throughout the history of philosophy from Plato to Kant, the very concept of being has been affected by a substantialist bias that has always privileged constituted individuals, putting aside, at the same time, their *ontogenesis*, that is to say the genetic process that drives the constitution of an individual. In order to overcome this prejudice, Simondon tries to initiate a reflection on individuation, which is, in fact, a metaphysics of pure being before any kind of logic (Simondon 2013: 36). In this way, the Aristotelian

² After being a strong opponent to bergsonism in the early 30’s, Canguilhem taught, in 1942, a course on the third chapter of *The creative evolution* (Canguilhem & Deleuze 2006: 53-96). According to Canguilhem, one of the most important aspects of Bergson’s oeuvre is his non-reductive conception of the living, who will have a strong influence on future french epistemology. Merleau-Ponty, on the other hand, as a young phenomenologist was in the beginning highly critical of Bergson’s conception of consciousness, along the same lines of Sartre. However, starting from the late ‘40s, he will adopt a new perspective much closer to the bergsonian conception of an impersonal field. Related to this, it is noteworthy that in 1956 the infamous French phenomenologist will edit a book entitled *Les philosophes célèbres* where he will ask a young Gilles Deleuze to write the voice *Bergson (1859-1941)*.

principium individuationis now corresponds to a preindividual being (ivi: 25) that is neither subjective or objective, but it rather coincides with a meta-stable state – that is to say a state full of potential energy about to actualise the whole reality. Individuation therefore does not pertain to a restricted domain, but is physical, vital, psychosocial as well as technic.

It is not difficult to realize that there are strong affinities between Simondon's concept of individuation and the bergsonian virtuality: both are pre-individual entities that at the same time constitute the genetic condition of possibility of actual reality. However, it must be noted that Simondon's intuition of a meta-stable adds a novel theoretical feature that is not present in the virtual *élan vital*: what is virtual is no longer a deep and quiet state, but rather a field of energy in irremediable conflict, a potential dynamism.

In this way, by reconsidering his bergsonian heritage, Simondon reveals the very heart of bergsonism: that of a philosophy of invention and creation. If, according to Bergson, «stating the problem is not simply uncovering, it is inventing» (1946: 57); then, from this point of view, individuation is a «transductive» invention (Simondon 2013: 32)³. That is, a way of inventing that does not stem from deduction nor induction and which, therefore, is unpredictable in its result, in a way that Simondon thought similar to binocular vision: this, according to the French philosopher, truly corresponds to an invention of a new dimension that is capable of creating a compatibility between two previously “disparated” retinoic images (left and right) (ivi: 22). The potential energy of a system in meta-stable state is then resolved by an authentic act of creation.

Seeing the virtual: Deleuze, Simondon and the crystal

In order to expound his theory of individuation, Simondon often uses the example of the process of crystallization: once a seed crystal is implanted in an amorphous substance in metastable state, it triggers a process of individuation where the crystal individuates itself as an energetic system through a continuous amplification. Here, the Aristotelian hylomorphic scheme is simply inapplicable: individuation can't be defined absolutely as the union of two separate entities, matter *plus* form, but as a unique and possibly endless energetic process, because the crystal is by definition incomplete: «un cristal est doué d'un pouvoir indéfini de croissance; un cristal peut avoir sa croissance arrêtée, mais jamais achevée, et il peut toujours continuer à croître si on le remet dans un milieu métastable qu'il puisse structurer» (ivi: 86-87).

³ «Nous entendons par transduction une opération, physique, biologique, mentale, sociale, par laquelle une activité se propage de proche en proche à l'intérieur d'un domaine, en fondant cette propagation sur une structuration du domaine opérée de place en place: chaque région de structure constituée sert à la région suivante de principe de constitution, si bien qu'une modification s'étend ainsi progressivement en même temps que cette opération structurante» (Simondon 2013 : 32).

Broadly speaking, the process of crystallization analysed by Simondon is not only a perfect model to understand physical individuation, but it also offers a paradigm for individuation as such: beyond the hesitations showed by Simondon over the status of crystals (Barthélémy 2005: 153), one can argue that every individual individualises itself as a crystal. Its unaccomplished nature, in which every stratum could indefinitely grow on the previous one, offers an explanatory scheme even for organic entities and their vital milieu (Simondon 2013: 227-228); crystal individuation, in the same way as the vital one, takes place in time. Again, even on this point Simondon appears as a truly bergsonian philosopher: in the process of crystallization one can see the limit between present, past and future (ivi: 90), the moment in which they split up, as, according to Bergson, in the case of the memory of the present.

Deeply influenced by both Bergson and Simondon, Gilles Deleuze, in the *Time-image*, completes the picture between the simondonian process of crystallization and Bergson's idea of virtual: Deleuze affirms that the bergsonian memory of the present – the moment when present and past forms and splits up – is in fact a crystal circuit, made visible, in particular, in the cinema of time-image (Deleuze 1989: 68-71)⁴. In this small circuit, where present and past coexist, one can see directly the virtual, a fragment of time in its purest form. This small circuit is the interior limit of a crystal and, at the same time, the structure of every following phase of individuation: examples made by Deleuze include the role of the mirror in cinema (mainly in *The Lady of Shanghai* by Orson Welles) and Fellini or Visconti's movies, among others (ivi: 72-97). Here, however, Deleuze is only speaking indirectly about movies, as he does for the most part in both of his books on cinema: as a matter of fact, his primary interest is to investigate the metaphysical and cosmological nature of movement and time. If the coalescence of virtual and actual inside the crystal is real, this means that time is no more conceivable as a line, but rather as a simultaneity of two ontological dimensions: «the past does not follow the present that it is no longer, it coexists with the present it was. The present is the actual image, and its contemporaneous past is the virtual image, the image in a mirror» (ivi: 79).

Simondon's study on the process of crystallization offers Deleuze the model whereby he can think the genesis of the real, out of metaphor. If according to Bergson pure memory is unattainable and can only be expressed in a vague manner (1975: 165), in the crystal circuit one can see precisely this pure virtual state in its coalescence with the actual one. This circuit expresses the deep nature of time, his genesis and, more in general, a structure that, starting from the interior limit of the crystal, can then arrive to the size of the universe itself:

The crystal-image has these two aspects: internal limit of all the relative circuits, but also outer-most, variable and reshapable envelope, at the edges of the world, beyond

⁴ The idea of a crystal-image in cinema came to Deleuze through Guattari's notion of crystal of time, conceived as a "ritornello" (Guattari 2010), which will be developed further in *A Thousand Plateaus* (Deleuze & Guattari 1987: 310-350).

even moments of world. The little crystalline seed and the vast crystallizable universe: everything is included in the capacity for expansion of the collection constituted by the seed and the universe. (Deleuze 1989: 80-81)

Becoming, multiplicity and immanence. Toward a metaphysics of the virtual

It is undeniable that between Bergson, Simondon and Deleuze there are significant differences. Simondon often refers to Bergson only to criticize his conception of time, thought solely in terms of a continuum, an indivisible *durée* that is continuously flowing. For Simondon, on the contrary, continuity is only one of the possible schemes to understand time (Simondon 2013: 227). Individuation instead entails a complex mix between concrete continuous time and discontinuous quantic shifts. Like in quantum mechanics, the passage from a metastable state to an actual individual is an abrupt transition, which implies the invention of a new dimension, equivalent to a truly creational shift.

It is also possible to grasp a profound difference of tone between Simondon and Deleuze's philosophy: where the former maintains a descriptive approach to the concept of individuation, the latter often reutilizes simondonian concepts by forcing them in a prescriptive and political framework: broadly speaking, Deleuze's interest seems "wider" than Simondon's, whose research never leaves the theme of individuation.

Also, the differences between Bergson and Deleuze are not insignificant: as a matter of fact, the latter explicitly admits that he manipulated the concepts of his master in a very unorthodox way⁵. Related to this point, the crystal-image is paradigmatic: if, for Bergson, the memory of the present is positively censored by consciousness, for Deleuze this censorship must be overcome, in order to catch the nature of the virtual. We can say that Bergson's pragmatist approach – an aspect of his work that perhaps is more present than his superior empiricism – is precisely what Deleuze and Simondon reject of bergsonism: in order to reach the genesis of the real, they twist the anthropological limits in which Bergson's analysis seems to be enclosed.

Nevertheless, it is clear that Bergson, Simondon and Deleuze fight on the same grounds; it is then possible to say that they constitute a theoretical heritage that shares the common belief of an extremely precise idea of becoming. As a matter of fact, traditionally, being has always been considered as the heart of every theoretical reflection and becoming, consequently, was mainly considered merely as a momentary

⁵ «I suppose the main way I coped with it at the time was to see the history of philosophy as a sort of buggery or (it comes to the same thing) immaculate conception. I saw myself as taking an author from behind and giving him a child that would be his own offspring, yet monstrous. It was really important for it to be his own child, because the author had to actually say all I had him saying. But the child was bound to be monstrous too, because it resulted from all sorts of shifting, slipping, dislocations, and hidden emissions that I really enjoyed. I think my book on Bergson's a good example» (Deleuze 1995: 6).

state, a perturbation that ends necessarily in the stability of being (e.g. the theory of local movement by Aristotle). Behind every substantialism, there is always a supremacy of being over becoming. What emerges instead in the analysis of the process of crystallization put forth by Simondon is another possible model: « [...] *le devenir ne s'oppose pas à l'être; il est relation constitutive de l'être en tant qu'individu*» (Simondon 2013: 91). Along the same lines, in Bergson, the terms *durée* and *élan vital* refer, as we said before, to a positive becoming. For this reason, Deleuze does not intend to reject ontology per se, but, in following Bergson and Simondon, instead rethinks it from the lens of becoming, giving consistence to intervals, changes, transformations, in-betweens. Speaking about the absence of recognition of nomadic art, Deleuze significantly states: «again, there is a refusal to accept that the intermediary between the East and the North had its own absolute specificity, that the intermediary, the interval, played exactly this substantial role» (Deleuze, Guattari 1987: 496). From a Deleuzian perspective, there is no more opposition between being and becoming.

Moreover, the analysis of a substantial becoming in Deleuze is followed by a new theory of multiplicity. Despite Simondon's critique, the example of the memory of the present in Bergson shows how Bergsonian concept of time is non-linear, but rather multiple, much more Einsteinian than Newtonian. As Deleuze and Guattari state in *A thousand plateaus*, one can find in bergsonism an authentic theory of multiplicity: time is not then an indivisible line, but is that which cannot be divided without changing in nature at each division (ivi: 483). There is no homogeneity in time, but, as the memory of present suggests, a split between different dimensions⁶, similar to Simondon's quantic conception of creation. This is precisely what Deleuze has been attempting to investigate since the '60s, namely a theory of multiplicity capable of avoiding dualisms: «Arrive at the magic formula we all seek – Pluralism = Monism – via all the dualisms that are the enemy, an entirely necessary enemy, the furniture we are forever rearranging» (ivi: 20-21). Here Deleuze refines in a smooth formula what is implicit in Simondon and Bergson: the bet of a new articulation between univocity of the being (Deleuze 1994: 36) – a virtual and preindividual field, a totality – and all sort of becoming multiplicities – individuals, actualisations – that is able to avoid the danger of posing infinite and abstract dualisms.

It is precisely in this new articulation between one and multiple that Deleuze becomes the proper heir and perpetrator of both Bergson and Simondon's philosophy. How to think together multiplicity *and* univocity? Deleuze reprises here the Bergsonian intuition of virtuality by inventing at the same time a new concept, namely the plane of immanence⁷. What was the virtual in Bergson, what was the preindividual being in Simondon, now becomes, in Deleuze, the plane of immanence. It is an impersonal and

⁶ *Durée* seems here really close to Riemann's conception of space (Deleuze 1991: 39).

⁷ The origin of this concept is actually not only bergsonian, but it is developed itself through a complex heritage that starts from Spinoza and arrives, via Nietzsche, to bergsonism (Deleuze & Guattari 1994: 34-60).

transcendental field that coincides with the constitution of possibility of every multiplicity. In other words, a virtual state that precedes actualisations, where philosophy, art and science become indiscernible, sharing the same voice of being in all of their differences (Deleuze & Guattari 1994: 218). The Kantian problem of the transcendental, which traditionally regulated the conditions of possibility of a subject in order to know an object, escapes now from this dualistic scheme and naturalizes itself, entering directly in the plane of immanence: the whole reality therefore becomes transcendental, keeping in itself its genetic conditions of possibility. There, inside this deep virtuality, lies the event (Deleuze 1990: 148-153) – the imperceptible (Deleuze, Guattari 1987: 193) – that Deleuze, a truly adventurous transcendental empiricist, has always attempted to grasp.

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