

Lecture Course on Chapter Three of Bergson's *Creative Evolution*¹

Gilles Deleuze

Ecole Supérieure de Saint-Cloud

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In the first part of this work, Bergson aims to present philosophy, and to show the necessity of conceiving of it as *genetic philosophy*. He thus comes to grips with something essential in philosophy. In effect:

- a) philosophy has, prior to him, laid claim to be genetic;
- b) cosmology—in ancient metaphysics—is portrayed as genesis;
- c) Kantian inspired philosophy—representing modern metaphysics—is also portrayed as a genesis.

The third chapter of *Creative Evolution* is written counter to all these claims. In passing, it should be noted that for Bergson, to a certain extent, Kantianism acts as a “reference point.” To differing degrees, Kantianism claims to be a philosophy of genesis. To be precise, there is no genesis of the phenomenon, but in fact there is a genesis of the intelligibility of phenomena.

After Kant, with Maïmon and Fichte, the claim becomes explicit. In effect, they both say that it is necessary to pass from a transcendental philosophy to a genetic one.

But Bergson says that this genesis is badly enacted:

- either because it is a genesis of intelligence derived from matter;
- or because it is a genesis of matter derived from intelligence.

In both cases, it is not a true genesis because, taking as a point of departure one of the terms, the other is immediately given, for there is a fundamental *reciprocal* relationship between the two.

In such a case, how are we to conceive a real genesis?

Bergson says that genesis must be double, in the sense that it must account for matter *and* intelligence at the same time, and consequently for their reciprocity. *How does Bergson present the problem in the first two paragraphs of chapter three?*

He indicates first:

A. THE METHOD TO FOLLOW

1. What is to be “gained” from the *approach taken in the first chapter*? Bergson shows a *difference in kind* between the inorganic and the organized, between the inert and the living. In effect, one of the main functions of the method is to show differences in kind. How does Bergson understand this difference in kind? According to him, this does not arise from a special principle of life (many others have said this before him and, as such, were “anti-vitalists”), but from the fact that the living is a natural system—that is, one that has *duration*, while the inert is a system that is artificially—that is, approximately—closed. The former, on the contrary, is not closed, but *open*.

The theme of the first chapter thus highlights the fact that, in order to explain a difference in kind, it is not necessary to appeal to a special principle of the living. This does not resemble the second type of system, but “the whole of the universe.” The living is a small “whole.” Is this an idea inherited from Platonism? No, for Plato compares the Whole to the living, whereas the reverse is the case for Bergson.

No, since for Plato, it is a comparison that contains the idea of the Whole pre-existing the parts: totality implies interiority. For Bergson, it is the opposite: there is neither totality nor interiority within the Whole, for it would then be a closed system—*i.e.* inert—and consequently incomparable to the living, which is an open system.

The living is not a closed system (for Bergson, there is no finality, other than *external*); the living has a tendency to individualize itself, but without ever succeeding. It is this failure of individualization that characterizes the living.

Bergson thinks that in being guided by the comparison of the Whole to the living, one will find in the universe a principle of genesis that takes into account matter and its tendency to form closed systems. He has never linked life to interiority, to an *internal* finality. If there is finality, it can only be external, for the living system is never closed.

2. Same theme in the *second chapter*: difference in kind between instinct and intelligence. But there is another way of showing this. In fact:

a) the first chapter shows a difference in kind between the inorganic and the organized that consists of de-composing a composite [*mixte*];

b) in the second chapter, duration and the *élan vital* are of the same nature and therefore they cannot be de-composed. There is indeed a differentiation, but it is due to their nature: it is in the nature of the *élan vital* and duration to differentiate themselves.

II. 21 March 1960

How does Bergson pass from duration to the *élan vital*?

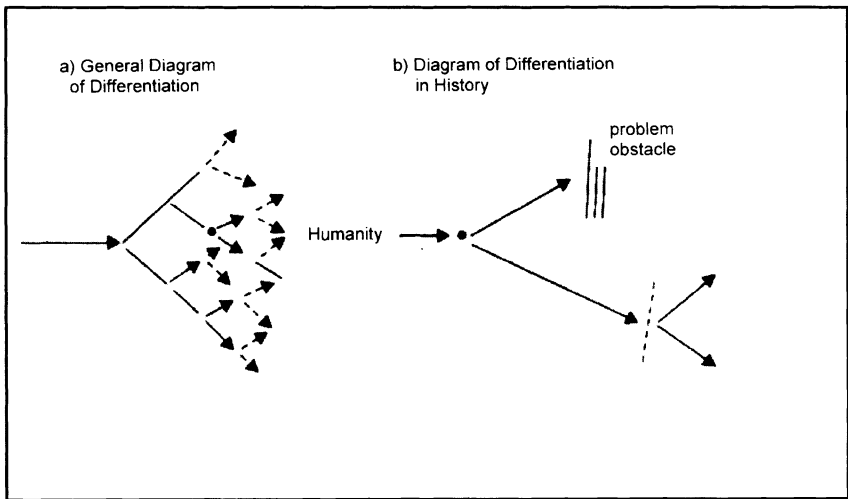
His philosophy is a philosophy of Life. He understood that this primary notion used by biologists is misunderstood by them. They speak of “differentiation.” Bergson posits that there is an evolution in the differentiation of species (later, he extends this to the embryo). This idea has not been understood because scientists do not understand duration, and it is duration that differentiates itself. In seeing that the philosophy of life needs to develop this concept, he realizes that all his philosophy must become a philosophy of life, and duration must become the *élan vital*.

The élan vital is duration that differentiates itself.

Scientists did not see that differentiation implies a virtual movement that actualizes itself—that is, a movement that creates at each instant two diverging lines [*directives*].

In the same way, in the domain of history, the “dialecticians” have substituted a simple opposition in place of a differentiation. They have “misconceived duration.” In *The Two Sources of Morality and Religion*, Bergson refrains from constructing a philosophy of history, for the movement that runs through history is that of differentiation itself.

The living is essentially a being that has problems and resolves them at each instant.



General Diagram of Differentiation

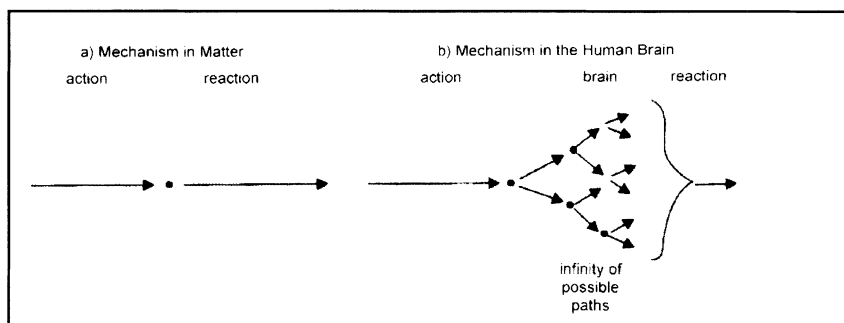
Is it valid for history? Yes, but with one particularity. Humanity pursues a path *as far as it can possibly go* as long as it does not encounter an insurmountable problem (cf. diagram b). When humanity encounters such a problem, it effects a true qualitative leap and takes another path that leads further than the previous one, which it pursues as far as it can go, and so on.

We have here a differentiation of life as the *élan vital*. It is “consciousness” or “universal life,” says Bergson. What does this mean? By right [*en droit*], life and consciousness are one and the same. “By right” because the duration-consciousness identity is explained in this way: we are dealing with duration when the past is gathered into the present and the future is always new. It is this duration that is the condition of freedom and choice, conceived in opposition to “relaxation,” where moments of time fall outside each other. In effect, in the latter case, there is no longer an organization of the three movements of time, but a pure repetition of the present. It is the very state of matter.

In *Matter and Memory*, Bergson recognized the value of certain of Freud’s ideas on freedom. For Bergson, freedom resides in the new, not in the repetition of the past. Bergson, like Freud, has this same idea. Both affirm that memory is a *function of the future*, for repetition consists in the forgetting of the past. More past = more future, and thus freedom. Memory is always a contraction of the past in the present.

This is why duration is identified *by right* with consciousness.

In effect, duration falls back upon itself and becomes matter, as if *right* could not pass into *fact*. Consciousness cancels itself out in matter through a movement that is the inverse of the differentiation of duration. This rule is general, *except for one localized point* in which matter is opposed to itself: the human brain. In this case, the mechanisms of matter cancel each other out.



General Diagram of Mechanism

In reality duration only becomes self-consciousness in the human brain. Thus, we can only hope to obtain a genesis of intelligence if we place ourselves in a universal consciousness. In effect, if we reunite the premises highlighted in the first and second chapters, we are led to identify the Whole with universal Consciousness.

This is the point of departure for the third chapter. The problem raised is effectively this: Can we place ourselves in this Whole that is universal consciousness and *vice versa*? If this is the case, then the genesis of Matter and Intelligence can be achieved.

The Third Chapter

Bergson affirms that philosophical genesis has not been understood before him. It has been done in two ways which, moreover, are not strictly identical, although both are worthless.

1) on the one hand, the genesis of matter is derived from intelligence. In fact, says Bergson, we have posited intelligence as a given;

2) on the other hand, the genesis of intelligence from matter. In this case, both terms are given *at the same time*. Why "at the same time"? Because there is such an affinity between matter and intelligence, that matter is split from itself in a way that only intelligence sees fit to segment it.

In summary:

- materiality is the power [*puissance*] of being segmented, cut up;
- intellectuality is the power [*puissance*] to segment, to cut up.

If we attempt the second genesis, we assume "divisibility" [*découpabilité*] in order to finally discover the "act of cutting up" [*découpage*]. This is what Bergson, in his critique, pursues in three phases.

1. Psychology

When psychology attempts to be genetic, it bestows action on matter. Psychology starts with the explanation, in animals, of action-reaction cycles. At this point intelligence can be engendered. No doubt the model gets complicated, but there is an infinity of possible paths. For Bergson, this is not a true genesis.

In effect, if we stick to this model, there is complication, but there are only differences of degree between the forms. Everything is given from this initial model. By effecting the slightest action on matter, intelligence has already been enabled with its power [*pouvoir*] to cut up [*découper*].

2. Materialist Cosmology

(Spencer in particular.) Bergson retains the following from his reading of *Spencer*: Spencer wants to construct a "philosophy of evolution." Of the first principles he says that "it is the purely physical interpretation

of all the phenomena of the universe." Genesis is then: "evolution is an integration of matter accompanied by a dissipation of movement during which matter passes from an incoherent homogeneity to a coherent homogeneity." Or more simply: it is the passage from an undifferentiated state to a more differentiated one, from homogenesis to heterogenesis.

Bergson's response to this is: "Is this theory true?" In fact the Spencerian trend was killed off by another one. The latter trend arose in the context of a problem posed by the second principle of thermodynamics: the degradation of energy. This problem was posed through its extension to the cosmic scale, and many did not hesitate to approach it in this manner (Lalande, Meyerson...).

– Lalande takes as primary idea that the dispersion of energy comports an equalization of temperatures, therefore a homogenization, which goes counter to Spencer's philosophy of evolution.

– Meyerson affirms that reason is the power to identify. In the second principle of thermodynamics, he sees a resistance to reason. Reason has a tendency to equalize, but by an irreversible becoming, through a qualitative transformation. Thus there is no identification, hence the resistance to reason. Starting with the same facts, one ends up with the opposite of Lalande.

Bergson ponders whether matter has a tendency to pass from the homogenous to the heterogeneous. In fact, in modern physics, matter presents systems that are more and more difficult to form, and to a certain extent, no longer signify anything.

If one grants Spencer the veracity of his thesis, no matter what, there is no genesis. He grants matter the power to be segmented in conformity with the manner by which Intelligence distinguishes systems in nature. In this way, he also has already taken intelligence as a given.

3. *Metaphysics*

It is Kantianism that is especially targeted here. Bergson develops two arguments in two distinct paragraphs.

a) Kant wants to trace a *genesis of the understanding*. Granted, not explicitly in the Critique, but towards the end of his life he felt this genesis was necessary. Indeed, after him, Maimon and Fichte wanted to fulfill this project. Kant aspired to find a principle from which the use of the categories, if not the understanding, can be comprehended. For example, the table of the twelve categories is a fact that cannot be deduced. Maimon and Fichte wished to correct Kant on this point and to link the categories to the first principle by a genetic deduction.

– Bergson says that the whole of intelligence is already present in this first principle.

b) Kantians are not satisfied with this claim: they also attempt to trace the *genesis of matter itself*, or at least the intelligibility of phenomena. This claim is explicit in Fichte and Maimon, who wished to enact the genesis of the phenomena themselves.

– Bergson, in his critique, tells us: Kant posits space as an *a priori* form. And so space can be subjugated to understanding. Is this a genesis of space? In positing space, Kant posits matter and intelligence. The true problem of Kantianism is in fact the following: in what way are receptivity and spontaneity in harmony? Kant assumes that this problem is resolved.

In his *Time and Free Will* Bergson presents himself as the anti-Kant. For Kant, says Bergson, we see things in the forms that emanate from us. We see ourselves in the guise of forms emanating from things. Intelligence is more spatial than we think, in the sense that we spatialize matter itself. Matter has to be pushed further in its own direction than it would go of its own accord.

The process is as follows. Matter takes a step: exteriorization. It gives intelligence an idea. Note that intelligence could have already had this idea, but *virtually*. In dreaming, for example, I relax. Matter takes relaxation further. That is why matter gives me an idea. With this idea I will be able to go further than matter itself. I form the idea of spaces, so I spatialize matter. Matter in its pure state is relaxation. Space is matter in its ideal form. Matter is less spatial than one thinks; space is more “intelligent” than one thinks.

Space expresses the fundamental correlation of matter and intelligence (dream-matter-space: two steps in the same direction, expressing an essential affinity that has the form of space).

Kant is the first to have defined time on the basis of inner sense. Time does not presuppose movement but, on the contrary, it is movement that presupposes time (the opposite of the Greeks). Hence its reality and not its contingency [*accidentalité*]. Movement presupposes time in the sense that time is defined by inner sense. In this way it is conceived as being homogeneous.

Genesis is then also the correlation between matter and intelligence—namely space, because the latter refers to the fact that matter takes one step further than intelligence, and that intelligence takes one more step than matter. We have here a “progressive adaptation,” and space is at each moment a form of this progressive adaptation.

How does Bergson proceed in order to operate his genesis?

B. THE BERGSONIAN SOLUTION

We have seen:

1. The *method consists* of reinserting ourselves in the Whole or universal consciousness. If we succeed, we have the feeling of being elevated to the genesis principle that would be different in *kind* from the engendered, and no longer different in *degree*.

2. *How does one reinsert oneself in the Whole?*

Philosophy has nothing to do with an assumption, a fulfilment of the human condition. Philosophy must “overcome” [*dépasser*] the human condition. “Philosophy will eventually expand the humanity in us, and thus allow humanity to transcend itself.” This overcoming consists in fact of reinserting ourselves in the Whole or universal consciousness.

By what means? – By taking a qualitative leap, by doing *violence* to the human condition in order to attain the principle of differences in kind.

All in all, Bergson’s undertaking is modest: Philosophy is a collective enterprise. Humanity as a species needs to transcend the human condition. Why? – Because philosophy is a question of perception. But perception must not be constructed. The guiding rule of thinkers before Bergson is to have believed that philosophy aims at the concept, that it is individual. Individual, because there is a natural conception for which thought is insufficient, and the role of philosophy is to fill in the gaps of this natural conception. In short, it is necessary to extend perception through the concept, which is an individual task, as must be the construction of the concept.

A mistake, says Bergson, because this extension is understood as a correction and, therefore, conveys the idea of a limitation from the start. For Bergson, it is a matter of extending without correcting. Philosophy proceeds by extension without correction—that is, it extends the human present. The human condition is the maximum of duration concentrated in the present, but there is no co-exclusivity to being—that is, there is not only the present. If there were only the present, man would perceive an eternal present.

James also tried to define philosophy as perception, but with the same flaws as other philosophers. Bergson operates his genesis by saying that the genesis of intelligence, matter and space is but a movement of relaxation through which the Whole, contracted to the maximum, itself becomes relaxed [*décontracte*].

And yet this direction is somewhat disquieting. In effect, if the essential theme has been until now, differences in kind, Bergson nevertheless affirms that Matter is produced by simple relaxation, "by simple interruption." Is Bergson not introducing here what he wants to deny—that is, differences of degree, of intensity, and the negative?

How can this be explained? How can this difficulty be resolved?

III. 28 March 1960

The Difficulty. Outline and Solution

Bergson distinguishes metaphysics, science and epistemology. Bergson claims that those before him had always held false ideas about metaphysics and epistemology. Both were constituted on the model of science.

At the end of the nineteenth century, philosophy was seen as a critique of metaphysics, with the goal of moving beyond metaphysics (for example, Nietzsche). For Nietzsche this means the critique of the idea of a second world. Metaphysics for Nietzsche is the affirmation of an intelligible world.

Bergson also participates in the spirit of the times. He says that metaphysics starts with Zeno's paradoxes. Duration is a philosophical concept to be conceived in relation to that of becoming. There is no world of being that is different from that of becoming.

At the same time, Bergson operates a critique of Kantianism that is portrayed as a critique of the theory of knowledge. In the text of *Creative Evolution* he reproaches Kantians for either conceiving of metaphysics itself, or the theory of knowledge itself, as being superimposed on the knowledge of matter. Knowledge of physics is based on laws; knowledge of Metaphysics is the science of causes; this is the customary conception. Bergson affirms, then, that whatever the distinction made, in each case the knowledge of causes is molded [*superpose*] on the physical knowledge of laws. Consequently, laws have dictated the points of departure.

In Kant, we have a critique of metaphysics: causes are not known, but what are known are the laws of what appears. Thus Kant refuses metaphysics and wants to replace it with critique, which is the knowledge of knowledge. In this way, philosophy merely serves to reflect on the knowledge of laws.

In both cases, the physical knowledge of laws are a given, and thereby metaphysics is superimposed as the science of causes, or as reflection on the knowledge of laws. All has been given.

1. *Is this analysis historically true?*

– Yes, for the eighteenth century, where philosophers are very sensitive to the fact that mechanism does not give rise to causes. Yes also, with regard to the critique of Kantianism.

– But is this so for the origins? In Plato there is no idea of superimposing metaphysics on an already elaborated science, which does not yet exist. Plato affirms that the sensible is not an object of knowledge, but of opinion, and only that which is intelligible is an object of knowledge, *i.e. being*.

But in reality, in another text in *The Creative Mind*, Bergson “corrects” this appreciation. In this text, Bergson says that the starting point of metaphysics is found in the paradoxes of Zeno.

The perception of time is contradictory in that it is in conformity with that of space. It is the originary act of metaphysics, in that it contains the affirmation of a world beyond; the sensible (*i.e.* movement) is not the object of knowledge. This metaphysical act also contains the original vice, in the sense that, since Zeno, duration has been viewed as being contradictory—that is, movement has been confused with the space travelled through.

Hence, what metaphysics and the theory of knowledge presuppose here is the pseudo-contradictory character of duration and of movement.

What does Bergson propose?

He says that a lot of effort is devoted to a critique of knowledge and to metaphysics, but in reality this contributes nothing, because both presuppose that everything is subordinated to the knowledge of matter.

It is necessary “to give everything to science.” Science is neither approximate nor symbolic—it is true in itself and cannot be justified by a science that could be superimposed on it. Science accesses “one half” of the Absolute, matter. For it is we who relax matter, absolutely.

Two “halves.” Is that also to say two Absolutes? No. There are only two *directions* [*sens*] and not two *worlds*: contraction and relaxation. The two halves are the two directions of being.

2. *The metaphysics-science relation*

Science: the metaphysics of matter.

Metaphysics: the science of duration.

The difficulty is that it is the same thing that relaxes and contracts. How is the passage to be made? By degrees, Bergson tells us. Science cedes its place to metaphysics and *vice versa*.

Is there a statute for the theory of knowledge?

Science becomes symbolic when it attempts to study duration. With infinitesimal analysis (the birth of science), science can symbolically frame Duration. Symbolic science is useful. The role of the theory of knowledge is to realize the unity of knowledge by interpreting symbolic knowledge (cf. *The Creative Mind*: philosophy qualitatively integrates symbolic knowledge).

Here we come to *the problem of the third chapter*, which is fundamental to Bergson's oeuvre.

Up to here, the chapter has developed around two themes:

— *a differential theme*: Differences in kind: intuition dissects composites according to true differences in kind, as in Plato's myth of the cook who knows how to cut up poultry by following the true articulations;

— *a genetic theme*: which connects to the above theme—between intelligence and matter there is a difference in kind, not of degree. It is necessary to arrive at a principle that differs from both—that is, to install oneself within the most contracted aspect in order to operate the genesis. The Whole is the maximum of contraction. Then one lets relaxation take over. In this way we witness the genesis of matter and intelligence. The problem that arises is then: if the difference between matter and duration is the same as that between contraction and relaxation, are differences not merely limited to differences of degree? In this way, is there not a contradiction with the first theme?

Between duration and matter, there are all the intensities possible, says Bergson. All this after Bergson's critique, in *Time and Free Will*, of intensive magnitudes, which are seen as "badly analyzed composites."

The terms that Bergson employs to express this are negative: "interruption, inversion...etc." Bergson is no doubt aware of this, and the note of this paragraph shows that he considered a possible convergence with Plotinus. He says extension is co-relative to distension.

But there is an essential difference from Plotinus: the most contracted is precisely duration, and not atemporality. Plotinus identifies relaxation with duration, whereas Bergson does the opposite. "Bergson is a great philosopher because his footnote does not answer the true question" (Defense, *dixit* [sic]).

How does Bergson revert to the idea that between matter and duration there are differences of degree?

The hypothesis that could be advanced is that Bergson's system resolves this difficulty. This would be to think that these differences of degree have nothing to do with the ones he criticized.

3. *The theory of order*

If two things go in the same direction, positivity is posited for each, with the idea of "the same direction." The Space of geometrical order achieves a "beautiful positivity": *we judge it* in this way because matter is subordinated to space, because matter goes in the same direction. In fact, the direction of relaxation is not positive, but negative. Two things are manifest in geometrical order:

- a) division into parts, which is more and more pronounced: materiality;
- b) more and more complex relations between the distinct elements: intellectuality.

In fact, it is the same operation that has been unfolded in both cases, because materiality and intellectuality go in the same direction. It is, therefore, not surprising that the two categories "gel." The reverse would be surprising (this being against Kant).

IV. 25 April 1960

Geometrical order expresses the complicity of matter and intelligence. Matter goes in the same direction as myself when acting as an intelligent being. This is why geometrical order is positive.

We also find geometrical order in the process of *induction* and *deduction*—that is, in all physics; because having accepted certain things, "I am no longer free" to determine that certain things could come to complete them. I am free not to conceive of the idea of a triangle, but if I do conceive this idea, I cannot then deny that the sum of its three angles is equal to two straight lines.

A law of nature can only ever be a mathematical function ($y = f(x)$), and not a relation of causality; furthermore, the datum of physics presupposes that this fact is determined by means of a few variables (at least two); we have $x = f(a, b, c)$. Therefore the induction is: if under specific conditions variables are weighed up, one is obliged to concede that certain things directly follow from them. That is, if one has b, c , one inevitably has x . Hence, a *closed system* is constituted— *i.e.* a system in which the phenomenon to be studied is only subject to a small number of conditions; such a system gives us a fact, but not a phenomenon of nature.

So, according to Bergson, it cannot be said that it is the power of the mind that triumphs in induction and deduction; induction is the movement that necessarily brings into existence something that is the function of certain variables, following the appearance of these variables. This alleged power of mind is a fall into matter. "It is Achilles running on

wet sand." Each time Achilles takes a step, he sees that the ground serves as the means by which he can run, but at the same time it is an obstacle to his running. What seems a means to be utilized is, from within, merely an obstacle to be overcome. Movement is prolonged by the distance covered, by the trail that it leaves; it is thus a fall into matter. Hence, what prolongs movement is that which is opposed to movement, that which is an obstacle to movement.

One must not think that Bergsonian intuition is something sentimental. Intuition is a method and has two advantages:

- 1) only intuition makes it possible for problems to be posed in terms of time; this is its positive aspect;
- 2) thanks to the method of intuition one can separate *true* problems from *false* problems: this is its *negative* aspect.

The problem of nothingness and the problem of order are false problems. They intersect. The problem of being and nothingness poses in ontological terms the problem that order and disorder pose in gnoseological terms. The one is Leibnizian, the other Kantian. For Bergson, a false problem is a problem that:

- 1) confuses difference in kind and difference in degree;
- 2) confuses the more and the less.

For example, sufficient reason is the reason of "nuance" and not of being. It is the reason of one thing rather than another and not the reason of being rather than nothingness. This runs counter to Leibniz.

In the same way, Bergson reproaches the dialectic for starting with the problem of the opposition between being and nothingness.

Thus, the difference between order and disorder is futile. In fact, they are two orders that differ in kind. The true problem, then, is not that of order and disorder, but that of the differentiation of order.

Bergson does not like saying that a possibility is realized, but prefers the formula: a virtuality is actualized.

Bergson has often been reproached for delving into Psychology.

On the one hand, there is a geometrical order—automatic, involuntary; on the other, a virtual order—voluntary, living (artistic).

The will offers an approximation of the most contracted aspect of duration. Life must not be confused with the forms by which life actualizes itself. If duration is to be portrayed in its real creative presence, it would be necessary to show that duration is to art, what art is to matter, and that duration is to will, what will is to the involuntary. Duration must not be confused with either will or with art.

– Geometrical order is presented as an association and a sum of elements. It operates a more and more pronounced division of parts. The relations between these parts are more and more complex.

– Vital order can never be said to be final, because finality is the same thing as mechanism, for finality also presupposes that all is given and thus, by the same token, it denies the reality of time. Mechanism places everything in the past, and finality places everything in the future. Both take as a starting point the past and the future. Finality, like mechanism, does not take into account the reality of time within time.

Vital order goes from the center to the periphery, whereas geometrical order goes from the periphery to the center. Automatic order is the order of *fabrication*, and vital order is the order of *explosion*. It proceeds by dissociation and bifurcation; it is at one with the movement of differentiation; the vital is a center that explodes by giving two directions.

Nevertheless, vital order and geometrical order are often confused with each other. Why is this so? – Because order implies repetition and resemblance. There is the repetition and resemblance of biology, and the repetition and resemblance of physics, which is inert.

– physical repetition: identity of the effect by reproduction of its elementary causes;

– vital repetition: identity of an effect, which has been established and re-established, despite the causal differences.

At the two extremities of the animal chain, a common structure can be observed: the ocular apparatus. And yet different causes have produced it.

Vitalism understood this, and in order to make sense of it, provides a small mind, which acts as a regulatory principle, guaranteeing the identicalness of the effect, despite the diversity of the causes. Bergson says that vitalism has one merit: it is capable of discerning which biological repetitions are different in kind.

Philosophers have always confused the two repetitions; those who have based everything on the repetition of physics are to be found in science since Galileo; those that have based everything on the repetition of the vital are to be found in Greek science.

Bergson was influenced by Aristotle. Aristotle understands repetition as permanence of a kind, which is biological repetition; modern science understands repetition as the permanence of laws: automatic repetition.

V. 2 May 1960

One of the two orders is purely negative: the geometric. This order is automatic, and appears automatically as soon as the vital order ceases, when it is interrupted.

So, it is here that we rediscover the essential problem of chapter three.

How to reconcile two orders that differ in kind, and at the same time to affirm that one is merely the interruption of the other?

The dual aspect of this problem is even reflected in the terms employed. "Disorder" is just the "substitution of one order by another." Disorder is the order that I did not expect, which is substituted for the order that I did expect. Geometrical order is merely the interruption of vital order.

But then, why is it that we do not have a clear awareness of this process of substitution? It is because to coincide with duration always necessitates a painful effort, which does not last a long time. This coincidence is a privileged moment of contraction. When it succeeds in this endeavor, philosophy has fulfilled its purpose. Then, one has truly exceeded the "human condition."

This going beyond the "human condition" expresses for us the act of being born into a ready-made world. Now, a world, by definition, always goes in the direction of the relaxed aspect of duration. By virtue of the human condition, which is relaxation, it is difficult for us to understand the meaning of "creation," a notion that is essential for philosophical reflection. Artistic creation itself can only serve as a substitute for what is really implied by the notion of creation, for we are born into a ready-made world. An approximation of the idea of creation is given when we delay the movement of relaxation of the world. Or, more precisely, of a world, for Bergson affirmed the plurality of worlds: each world corresponding to a particular relaxed moment of duration. What interests Bergson in a painting is less the color than the line, the movement retained by the line, what spatial design recoups from movement.

And so Bergson wants to bring about a new conception of the concept of creation. For this purpose he utilizes a contemporary problem, that of thermodynamics. Here again he illustrates the same idea.

For him, it is a matter of showing that it is life that delays the movement of relaxation.

1. The first principle of thermodynamics posits the conservation of energy. Bergson then adds that it is not a question of the conservation of the quantity of a certain thing (potential energy, for instance). The first principle simply means *compensation* between quantitative gains and losses, which in turn correspond to *diverse qualities*. In this way, Bergson divests the first principle of its cosmological meaning. Thus enabling him to ascribe a cosmological meaning to the second principle of thermodynamics.

2. The second principle is that of the degradation of energy. It affirms the total non-reciprocity between transformations of energy (heat-work,

for example). There is therefore an inequality. And this inequality corresponds to the law of dissymmetry discovered by Pierre Curie:

- 1) the appearance of a phenomenon is conditional on the existence of differences;
- 2) the phenomenon tends to cancel out the difference that conditions it;
- 3) all physical change produces an emission of heat;
- 4) the various degrees of heat tend to equalize themselves. Thus, we go towards the “heat-death” or “calorific death” of the universe by a process of levelling out.

Scientists set out to reveal this tendency of equalization (the phenomenon of entropy). From 1907 onward (the year of the publication of *Creative Evolution*), some scientists attempted to make it into a law.

This law of entropy is a law that some believe to be valid only in the perspective of a finite universe. Bergson himself does not uphold the claim of an infinite universe because:

- 1) there is a confusion between space and matter;
- 2) the plurality of worlds is in contradiction with infinity;
- 3) the main reason: the *élan-vital* itself is finite.

Others say that there is a movement that is the inverse of degradation, and that a re-concentration of energy can be witnessed.

Raukine subscribes to the cosmological value of the degradation principle, but he also upholds a compensatory movement of re-concentration. The energy emitted must be concentrated in centers abiding on the surface of the finite universe.

Bergson was certainly familiar with this hypothesis—allusions in the text attest to this belief.

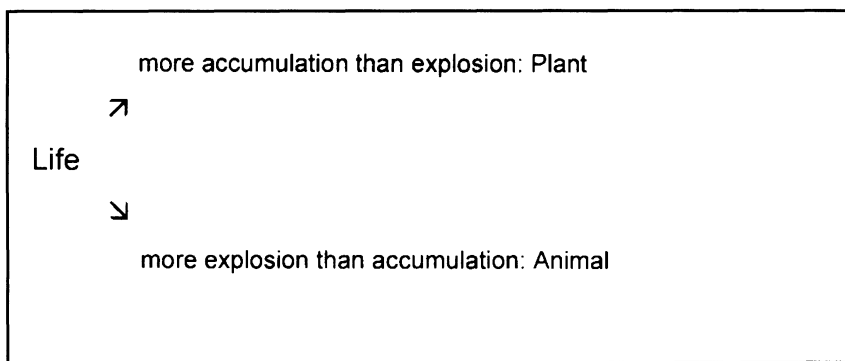
Arrhénius, in 1907, published *L'évolution de l'Univers*. He subscribes to the re-concentration principle, but he gives it an astronomical perspective. Arrhénius's proposal is based on the death cycle of suns. According to a law of probability, the impact of dead suns gives birth to meteorites and nebulas that create centers for the re-concentration of energy.

Bergson reproaches all these attempts for relying on space. The re-concentration principle always assumes a localized point of the universe (centers, impact points, etc). Bergson, for his part, does concede the re-concentration movement, but this movement, for Bergson, has to be found in the duration of the universe—that is to say, in the living. It is the living that *delays* the movement of the degradation of energy.

How is life able to operate this “delay”? Bergson distinguishes in life what is necessary from what is contingent. Life is defined by:

- 1) the containment of energy, of explosives;
- 2) that which detonates energy and explosives.

Life cannot fight against degradation, but it can delay degradation by accumulating. Life cannot fight, because time is necessary in order to accumulate, and time itself is already relaxation. In order to understand this process, it is necessary to bring into play the law of vital differentiation: in each direction taken by life, there is something of the other direction, for there is no life without both directions at the same time. Thus, the basic differentiation is as follows:



1. The plant accumulates solar energy with the aid of the chlorophyll function that allows it to decompose carbon.

2. The animal only needs to eat the plant. The animal releases energy thanks to its nervous system.

The nervous system is to the animal what the chlorophyll function is to the plant. What is *necessary* is that on any world, life is constituted by these two directions. What is *contingent* is the choice of explosives, the different means of accumulating them and of detonating them.

In this way, Life and Art set us in one direction without leading us to the end. From there, it is necessary to go back to the creative instance. For this to be the case, it is necessary to understand that the “created” always corresponds to a moment of relaxation, before duration tightens up again.

So “God has nothing of the ready-made.” The creator is a movement (contraction) and not a being. The same goes for the created. The resulting creatures belong to each moment of this relaxation.

How can this perspective be reconciled with the finitude of the *élan vital*?

Each moment of relaxation of the *élan vital* corresponds to a world. The *élan vital* can be conceived as a unity: the movement of making itself; and matter as the movement of unmaking itself. Diversity depends on the manner by which matter resists the *élan vital*, and by which the *élan vital* triumphs.

So, what is the origin of individuation? It is this resistance of a matter that is opposed to life.

VI. 9 May 1960

The problem that the third chapter poses concerns the entirety of Bergson's thought, and weighs on the whole of his philosophical system. Bergson's thinking develops on three simultaneous levels.

We find these levels in each of his works, but with different values, depending on the point of view.

1. *The Methodological Level*

The methodological level is that of the relation between intuition and duration. Experience, says Bergson, always presents nothing but composites [*mixtes*], not purity. It is the task of intuition to divide up the composites, to find the "purities." Intuition is a method of division—*i.e.* it must sift and discern the real differences in kind.

Experience gives no "purity" because, by remaining on the level of things as products, experience offers no difference in kind, only differences in degree. Only *tendencies* can differ in kind. The method of intuition specifically consists in uncovering these tendencies, these "directions."

A *critical aspect* corresponds to this level:

- against those who restrict themselves to differences of degree;
- against those who restrict themselves to clashes, to oppositions.

From this derives Bergson's critique of the general ideas of philosophical concepts (e.g. the concept of being). It is therefore a critique that is aimed both at science and at metaphysics.

2. *The Nature of Difference in Kind*

Once the difference in kind is established, Bergson comes to the further insight that the difference in kind is not between two directions or tendencies, but that it is unilateral. A difference in kind is only one of the two halves—*e.g.* duration, which changes and differentiates itself at each moment. Space, on the contrary, is that which does not allow qualitative heterogeneity, but only differences of degree. The same goes for *l'élan-vital*—matter.

This idea is confirmed by the use of the word "pure" in *Matter and Memory*. Bergson divides a composite into:

- *perception*: this is “pure”
- *affectivity*: this is the “impurity” that clouds the former.

There is, therefore, only one element that is “pure.” In opposition to this “purity” is the “bad half” — “impurity.”

Here again there is a dualism, as in Section 1, but it is nevertheless a different dualism. The dualism here is presented as that which interrupts; the good half is that which attempts to overcome the obstacle. The problem is to know how it succeeds in doing this.

- by differentiation: total success;
- or else it fails;
- or otherwise it only half succeeds (*élan-vital*, cf. the end of chapter three).

In effect, the *élan-vital* deposits its impurities on one point only — the life of man, his consciousness. Here, duration is called history. Elsewhere duration is life — *i.e.* a failure or semi-failure. History exists because the human brain, by its complexity, is a mechanism where the *élan-vital* surpasses mechanism itself.

3. *Overcoming Dualism*

What is the difference of degrees?

– Bergson says: “It is the lowest degree of differentiation,” *i.e.* the lowest degree of duration.

– Thus, duration is everything. We are dealing with a monism that retains all the powers of plurality. In this way, if we said in Section 2 that if the *élan-vital* differentiates itself, it is because matter is in opposition to it; now we are saying that differentiation has its origin in the very interiority of duration itself.

– The lines of differentiation are the degrees of Duration itself. Duration contains all these degrees, virtually. By the process of differentiation — a necessity interior to Duration itself — these degrees pass into action, they are actualized.

– There is, therefore, after this third level, no opposition between the three levels; the idea of a difference of degrees can be accepted, but within this monism, it can be admitted without entering into contradiction with the system.

Translated by Bryn Loban

Note

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