

## THE PROBLEM OF NOVELTY IN C.S. PEIRCE'S AND A.N. WHITEHEAD'S THOUGHT

At this moment scientists and skeptics are the leading dogmatists.  
Advance in detail is admitted; fundamental novelty is barred.  
This dogmatic common sense is the death of philosophic adventure.  
The Universe is vast.  
A.N. WHITEHEAD<sup>1</sup>

### *a) Why is novelty required?*

The topic I would like to discuss today concerns the problem of novelty in C.S. Peirce's and A.N. Whitehead's thought. The reasons why I chose this subject of novelty are twofold.

First, I think that today this is really topical if you look upon the recent and ever-increasing discoveries in the field of biology (especially evolutionary biology, molecular biology, genetics and epigenetics). In general, the phenomenon of evolution, from its very beginning, has always issued a challenge to philosophy because it points out that we do not face a fixed immortal nature, but instead a dynamic world where everything is interconnected and ever-changing. Consequently, the more physical and biological sciences improve their understanding of these kinds of changes, the more philosophy needs to answer questions like: "Can we actually speak of novelty? How is it possible for something new to appear? In which way can we conceive those changes and developments, testified by very many scientific results?".

Secondly, the problem of novelty is closely linked to the way we understand the phenomenon of knowledge. In other words, the meaning of novelty, and the likelihood for something "new" to happen, depends on your idea of knowledge, and vice-versa. Moreover, in some respects the core problem of knowledge is the same as novelty: "How can I know something that I didn't know before?". Similarly: "How can I know something new?" and more broadly: "What happens when I know something?".

To put it another way, I am going to talk about novelty because of its relevance (a) to the current development of sciences on the one hand, and (b) to the meaning of knowledge on the other. And I am going to deal with this subject using the thoughts of Peirce and Whitehead. As Lowe clarified, there is no historical relationship between these two authors<sup>2</sup>, even if Whitehead had a high esteem for Peirce's work, in so far as he compared Peirce to Aristotle. However, they have many

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<sup>1</sup> L. PRICE, *Dialogues of Alfred North Whitehead* (Boston: David R. Godine Publisher, 2001: 5).

<sup>2</sup> V. LOWE, "Peirce and Whitehead as Metaphysicians", in E.C. MOORE AND R. ROBIN (eds.), *Studies in the Philosophy of Charles Sanders Peirce*, 2nd series (Amherst: The Massachusetts University Press, 1964: 431).

biographical and philosophical features in common: they were both mathematicians and logicians, then they both turned to metaphysics, always paying attention to the phenomenological side of the subject. Moreover, they both sketched out an evolutionary cosmology, taking into account the problem of novelty, or creativity. For this reason they are often regarded as process philosophers, even if their basic assumptions show some sharp divergences.

For sure I can not give a particular analysis of all their affinities and divergences; this would take a long time, and luckily this is not my main purpose now. Instead, with this paper, I would like to bring to light the prominent contribution they give to the understanding and explanation of the problem of novelty, as I have introduced it at the beginning.

Thus I am going to show how Whitehead and Peirce face up to this problem, not from a strictly cosmological point of view, but from a “phenomenological-experiential” point of view. Certainly, in order to understand the problem of novelty, a cosmological exploration would be useful, if not necessary because of its relevance in the philosophers’ thoughts. Let us just consider the role played by the concept of creativity in Whitehead’s *Process and Reality* or Peirce’s evolutionary theory, developed from the interaction between chance and continuity, tychism and synechism. For example, if we focus on Whitehead, he states that «Creativity is the principle of novelty»<sup>3</sup> (PR: 21) and that the «Universe is a creative advance into novelty» (PR: 222). Also if we move on to Peirce, his theory of abduction or, in another perspective, his agapism surely will clarify the importance this topic had for him<sup>4</sup>. There are also several critical studies attempting to point out some differences and resemblances on this topic (above all let me recall the discussion between Rosenthal and Ford on the *Transaction of the Charles S. Peirce Society*<sup>5</sup>, and van Haeften’s more recent work), while less attention has been paid to the account of novelty from a phenomenological approach, even if this is relevant for both the authors.

Therefore, before understanding the cosmological schemes, and in order to understand them correctly, a preliminary enquiry on the meaning of novelty itself, and about the way novelty is testified by experience would be required. This is the reason why I chose to make a comparison

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<sup>3</sup> A.N. WHITEHEAD, *Process and Reality* [Corrected edition, ed. D.R. Griffin/D.W. Sherburne] (New York: Free Press, 1978: 21). From now on PR, followed by page number.

<sup>4</sup> Cf. for example D.R. ANDERSON, *Creativity and the Philosophy of C.S. Peirce* (Dordrecht/Boston/Lancaster: Martinus Nijhoff Publisher Group: 1987); A.W. BURKS, “Learning, Logic, and Creativity in Evolution” in *Studies in the Logic of Charles Sanders Peirce* (Bloomington: Indiana University Press, 1987: 497-534).

<sup>5</sup> Cf. in particular S.B. ROSENTHAL, “Continuity, Contingency, and Time: The Divergent Intuitions of Whitehead and Pragmatism”, in *Transaction of the Charles S. Peirce Society*, n. 22 (Fall 1996): 542-567; L.S. FORD, “On Epochal Becoming: Rosenthal on Whitehead” and S.B. ROSENTHAL, “Whitehead and the Ongoing Problem of Temporality: A Response to Lewis Ford”, in *Transaction of the Charles S. Peirce Society*, n. 23 (Fall 1997): 973-979; 981-984; C. VAN HAEFTEN, “Extension and Epoch: Continuity and Discontinuity in the Philosophy of A.N. Whitehead”, in *Transaction of the Charles S. Peirce Society*, n. 37 (Winter 2001): 59-79.

from this point of view and why now I'm going to compare, in particular, Whitehead's *The Concept of Nature*<sup>6</sup> (1920) with Peirce's *Harvard Lectures* (1903)<sup>7</sup>.

***b) How do we encounter novelty? A phenomenological point of view***

1. (*What does "phenomenology" mean?*)

As I have just mentioned, in order to understand how their cosmological thoughts figure out what novelty is, we need to understand what novelty means. For this reason, it is now necessary to clarify if we might actually have some evidence of it in our experience, by adopting a phenomenological approach.

But what does 'phenomenological approach' refer to? As Peirce said, phenomenology is «the initial great department of philosophy», in all likelihood because «to make the ultimate analysis of all experiences [is] the first task to which philosophy has to apply itself» (CP: 1.280). It «just contemplates phenomena as they are, simply opens its eyes and describes what it sees; [...] [that is to say] simply describing the object, as phenomenon, and stating what it finds in all phenomena alike» (CP: 5.37)». Therefore, using this method (a) first we are required to "simply open our eyes and describe what we see". But this is not what men usually do, because the difference between description and interpretation is very slight. Indeed, to describe what we see we need – according to Peirce – a «rare faculty, the faculty of seeing what stares one in the face, just as it presents itself, unreplaced by any interpretation, unsophisticated by any allowance for this or for that supposed modifying circumstance. This is the faculty of the artist who sees for example the apparent colours of nature as they appear» (CP: 5.42). (b) Secondly, with 'phenomenon' we do not have to think about something directly experienced, but about everything we *might* experience, in every way it *might* be experienced. As Peirce states: «I will not restrict it [phenomenology] to the observation and analysis of experience but extend it to describing all the features that are common to whatever is experienced or might conceivably be experienced or become an object of study in any way direct or indirect». Surely these quotes help us to make clear what kind of method and object are involved in a phenomenological research, but the task of phenomenology is still widely unexplored. And so, what is phenomenology looking for? (c) According to the author, a phenomenological enquiry detects, describes and analyses those essential characters which belong to every phenomenon. In

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<sup>6</sup> A.N. WHITEHEAD, *The Concept of Nature* (Cambridge: Cambridge University Press, 1920), from now on CN, followed by page number.

<sup>7</sup> Cf. C.S. PEIRCE, *Essential Peirce: Selected Philosophical Writings*, vol. 2 (Bloomington: Indiana University Press 1893-1913: 133-241), and also C.S. PEIRCE, *Collected Papers* vol. 1-6 (Cambridge: Harvard University Press, 1931), from now on EPII and CP, followed by page number.

other words its aim is to individuate and explain those features that *all* phenomena reveal as the proper and basic ones. To sum up with Peirce's own words:

What we have to do, as students of phenomenology, is simply to open our mental eyes and look well at the phenomenon and *say what are the characteristics that are never wanting in it*, whether the phenomenon be something that outward experience forces upon our attention, or whether it be the wildest of dreams, or whether it be the most abstract and general of the conclusions of science. (EPII: 147)

## 2. (*The experience of surprise and Secondness, according to Peirce*)

Moreover, these essential characteristics are capable of being described in terms of Peirce's three categories. As the author himself stresses: phenomenology «simply contemplates the Universal Phenomenon and discerns its *ubiquitous elements*, Firstness, Secondness, and Thirdness, together perhaps with other series of categories» (CP: 5.121) and this is the reason why Peirce pointed out eventually that «the business of phenomenology is to draw up a catalogue of categories and prove its sufficiency and freedom from redundancies, to make out the characteristics of each category, and to show the relations of each to the others» (CP: 5.43). In other words, the ubiquitous elements of every phenomenon *are* the categories themselves. From the perspective of Peirce's Phenomenology, category the First is referred to «a Quality of feeling», category the Second to «Reaction» and category the Third to «Representation». Otherwise expressed, these three categories are actually – let me underline it once more - *elements* of the Phenomenon (Cf. EPII: 160).

A long time would be required to put forth an explanation of these three categories as elements of phenomena, but here I'm only going to focus on Secondness, because in my opinion it helps us to understand whether or not we might speak of novelty in relation to our experience.

As I have just said, generally speaking, Secondness points to 'Reaction'. In other words, «The type of an idea of Secondness is the experience of effort, [...]. The experience of effort cannot exist without the experience of resistance. Effort only is effort by virtue of its being opposed; and no third element enters» (CP: 8.330<sup>8</sup>). Making a comparison with Hegel's *Die Phaenomenologie des Geistes*, Peirce describes Reaction also in terms of *Struggle*. Describing a psychological instance, the author states:

Imagine yourself making a strong muscular effort, say that of pressing with all your might against a half-open door. Obviously, there is a sense of resistance. There could not be effort without an equal resistance any more than there could be a resistance without an equal effort that it resists. [...] In general, we call the one that succeeds by means of his effort the *agent* and the one that fails the *patient*. But as far as the element of

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<sup>8</sup> 1904, Letter to Lady Welby.

Struggle is concerned, there is no difference between being an agent and being a patient. It is the result that decides; but what it is that is deemed to be the result for the purpose of this distinction is a detail in which we need not enter. (EPII: 150)

But what does it mean that «Reaction» is an essential element of every phenomenon? To answer this question we need to tackle Peirce's analyses concerning the experience of shock and surprise. Indeed, as Cooke showed<sup>9</sup>, surprise and shock could also be experienced as Secondness insofar as this Category suggests exactly a Reaction, or – as we have seen – a Struggle, given by the contemporary presence of resistance and effort. Otherwise expressed, we can also affirm that both these experiences enable us to better understand what Secondness is. As Peirce himself suggests: «The phenomenon of surprise, in itself, is highly instructive in reference to this category because of the emphasis it puts upon [...] a double consciousness at once of an ego and a non-ego, directly acting upon each other. Understand me well» (CP: 5.52-53). Why? First of all, let me recall how Peirce introduces the experience of surprise in his phenomenological explanation of categories. The philosopher puts in:

The question is what the phenomenon is. We make no vain pretense of going beneath phenomena. We merely ask, what is the content of the Percept? Everybody should be competent to answer that of himself. Examine the Percept in the particularly marked case in which it comes as a surprise. Your mind was filled [with] an imaginary object that was expected. At the moment when it was expected the vividness of the representation is exalted, and suddenly, when it should come, something quite different comes instead. I ask you whether at that instant of surprise there is not a double consciousness, on the one hand of an Ego, which is simply the expected idea suddenly broken off, on the other hand of the Non-Ego, which is the strange intruder, in his abrupt entrance. (CP 5.52-53)

In this paragraph Peirce underlines that we can easily recognize what is Secondness, that is to say what is that “struggle” between an Ego and a Non-Ego, especially when a surprise takes place. And it's not just that. According to Peirce, the worth of experience *per se* consists of this shock of surprise. As he said, «Experience is our only teacher. [...]. But precisely how does this action of experience take place? It takes place by a series of surprises» (EPII: 152-53). Moreover, this phenomenon of surprise shows clearly that «strange intruder» that we can compare with what I have called “novelty” at the beginning of paper lecture.

In other words, the phenomenon of surprise, which makes Secondness clearer, at the same time testifies the existence of what we called novelty and tells us what this “novelty” is. That is:

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<sup>9</sup> Cf. E.F. COOKE, “Phenomenology of Error and Surprise: Peirce, Davidson, and McDowell”, in *Transactions of the Charles S. Peirce Society*, vol. 47, (Winter 2011): 67.

- first and foremost, novelty is an essential feature belonging to every kind of phenomenon,
- secondly, novelty is something which brings about a surprise or a shock.

A shock is given by the opposition between an Ego and a Non-Ego. It is produced by this element of opposition in our experience, it is an unavoidable change that compels us to alter and adapt our expectation according to it. Another name to describe this essential character of the phenomenon is “event”, which is not a feeling and not even an inference, or a law. But it is more properly that «hard fact» (CP: 1.524) whom Secondness refers to. Peirce claims:

We perceive objects brought before us; but that which we especially experience – the kind of thing to which the word "experience" is more particularly applied – is an event. [...] The cognition of the change is of a more intellectual kind. That I experience rather than perceive. It is [the] special field of experience to acquaint us with events, with changes of perception. Now that which particularly characterizes sudden changes of perception is a shock. [...] the concept of experience is broader than that of perception, and includes much that is not, strictly speaking, an object of perception. It is the compulsion, the absolute constraint upon us to think otherwise than we have been thinking that constitutes experience. Now constraint and compulsion cannot exist without resistance, and resistance is effort opposing change. Therefore there must be an element of effort in experience; and it is this which gives it its peculiar character. (CP: 1.336)

In other words, the experience of surprise and shock brings us closer to that «sense of externality» (CP: 1.332) which qualifies Secondness itself, and which consequently qualifies that happening of «novelty» which we can call – with Peirce’s own words – “event”.

Moreover, these events which we experience are associated with a chain of changes, described as reactions, *struggles* between effort and resistance.

### 3. (*The concept of event, according to Whitehead*)

After this excursion into Peirce’s view of novelty, let us now get us closer to Whitehead’s thought. As I have just stressed, Peirce uses the word “event” to clarify the proper object of experience. Now, this concept of event is without doubt at the core of all whiteheadian philosophy.

Borrowing from the common critical understanding of Whitehead’s different works as a whole<sup>10</sup> (a whole conceived not as plain but a multi-faceted and changing one), I am going to analyse, by comparison with the Peirce’s *Harvard Lectures*, some extracts from Whitehead’s pre-speculative and epistemological works, especially *The Concept of Nature* (1920).

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<sup>10</sup> V. LOWE, *Understanding Whitehead*, (Baltimore: The John Hopkins Press, 1962: 122).

Indeed, although in *Process and Reality* (1929) the concept of “event” actually made way for the concept of “actual entity”, up to *Science and the Modern World* (1925)<sup>11</sup> it represented one of the tenets of Whitehead’s philosophy. Precisely by using this concept, the author is looking for a new explanation of experience and knowledge, far from any substantialistic or materialistic approach. According to Whitehead the latter modes of thought might only give back an «intellectual rendering» (CN: 71) of experience and knowledge. In other words, their explanations do not fit with any sort of experience but – as Whitehead reported – these theories «had the luck to get themselves formulated at the dawn of scientific thought» (CN: 71). For this reason, joined with the scientific advancing, they were absolutely successful in the past, and are still now quietly adopted by people and tacitly assumed by common sense. The first and foremost assumption which Whitehead refuses is the Aristotelian logical compound of subject-predicate and the resulting concept of matter as substance. In his opinion indeed, it is an «arbitrary postulate of thought» (CN: 59) because, chiefly when we talk about nature, we never perceive something individual and unchangeable like substances, but rather we should speak of nature as a total, complex and inexhaustible *fact* within many different factors (not predicates) in it. Whitehead claims:

Nature is known to us in our experience as a complex of passing events. In this complex we discern definite mutual relations between component events, which we may call their relative positions, and these positions we express partly in terms of space and partly in terms of time. (CN: 166)

As we have just read, we have no knowledge of nature as a sum of separated substances, but as a complex of “passing events”. We see here again the concept of event – introduced before by quoting Peirce. But what does Whitehead mean by «event»?

1) First, Whitehead introduces the concept of event intentionally in opposition to and instead of the concept of substance. As he puts in:

‘Substance’, which is a correlative term to ‘predication’, shares in the ambiguity. If we are to look for substance anywhere, I should find it in events which are in some sense the ultimate substance of nature. (CN: 19)

Then, what does it mean that events are the ultimate substance of nature? Moreover: what is he trying to figure out with this concept?

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<sup>11</sup> A.N. WHITEHEAD, *Science and the Modern World* (Cambridge: Cambridge University Press, 1925). From now on SMW, followed by page number.

Let me start by answering the former question. Whitehead points to events as «ultimate substance of nature», or even better as «ultimate facts of nature» (CN:167) because in his opinion «we perceive one unit factor in nature; and this factor is that something is going on then and there» (CN: 75). That is to say that an event is «the most concrete fact capable of separate discrimination» (CN: 189). But this essential unity, now enlightened, leaves us still wondering about the main feature of an *event*. And so let us move on to the latter question.

(2) What does Whitehead aim at by using the concept of event? The author states: «whatever passes is an event» (CN: 124). More plainly – continues Whitehead – «Wherever and whenever something is going on, there is an event. Furthermore 'wherever and whenever' in themselves presuppose an event, for space and time in themselves are abstractions from events» (CN: 78). In other words, every event might be associated with «something passing, something going on». But, again, what does it mean that an event is something passing?

Let me read another quote by Whitehead, better explaining what he means: «Our knowledge of nature is an experience of activity (or passage). The things previously observed are active entities, the 'events'» (CN: 134). Thus, secondly, and in addition to the revolt against the concept of substance, the “event” is linked with the way nature is experienced. Namely, Whitehead says that this experience of nature consists of “activity”, or “passage” and the events are actually pointed out as these “active entities”, of which the experience itself is made up.

Before keeping on the explanation of Whitehead’s thought, let me just touch on the resemblance with Peirce’s statements. As I have already told with reference to shock and surprise, Whitehead’s definition of event is linked with an experience of change as well. But while Whitehead puts here more stress on the *active* character of this un-substantial entity that he calls event, Peirce’s analyses stressed more the contrast being between resistance and effort.

To sum up, as a second feature we have seen how the concept of event shows a passage<sup>12</sup>, a change which reveals that peculiar activity which belongs to every kind of phenomenon<sup>13</sup> we can experience.

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<sup>12</sup> To give a more comprehensive analysis of this understanding of event as passage, we need also to consider the second edition of the *Principles of Natural Knowledge* [A.N. WHITEHEAD, *An Enquiry concerning the Principles of Natural Knowledge* (Cambridge: Cambridge University Press, 1919 and II ed. 1924)]. From now on PNK. Before this book, indeed, Whitehead talks about event as passage but also as extension. He clarifies only after the publishing of *The Concept of Nature* that the essential idea of event is the idea of passage, or process. Cf. especially PNK (II): 202 [«This book [*The Concept of Nature*] is dominated by the idea [cf. § 14.I, p. 61] that the relation of extension has a unique preeminence and that everything can be got out of it. During the development of the theme, it gradually became evident that this is not the case, and cogredience [cf. 16.4] had to be introduced. But the true doctrine, that ‘process’ is the fundamental idea, was not in my mind with sufficient emphasis. Extension is derivative from process, and required by it»].

If we wanted to reach a thorough understanding of the idea of event, in the way it is explained by Whitehead, for sure we would take into account also other features, namely: a) unity (which is indicated as the main character of every event), b) relation (among events themselves), and above all c) their peculiar relationship with *objects*. But this detailed enquiry would bring me too far from the purpose of this paper. For this reason I'm not going to show these three characters, even if they are not less important than the others. In accordance with the foregoing, let me try now to figure out how the topic of "event", in so far as it has been depicted, can help us to face the problem of novelty.

As I have mentioned above, the concept of event requires us to think about our experience not in terms of a sum of different substances but as a complex of happenings. And conceiving all experience as made up of happenings compels us to recognize that everything is passing, is changing. Thus novelty consists of these changes, these passages. But this is not only due to the events' development in time, neither or their transience, but also to their *happening per se*. Properly speaking, we need to admit a kind of active character to these events (that is to say to everything) that lies exactly in their happening-beings. As the author states in *Science and the Modern World*:

These unities, which I call events, are the emergence into actuality of something. How are we to characterise the something which thus emerges? The name 'event' given to such a unity, draws attention to the inherent *transitoriness*, combined with the *actual unity*. But this abstract word cannot be sufficient to characterize what the fact of the reality of an event is in itself. (SMW: 95)

On the whole, we can sum up that novelty is conceived by Whitehead as

- a) the being in changing, in a processual way<sup>14</sup>,
- b) the character of the active happening or «occurrence» (CN: 74) of every event,
- c) the *ultimate* and *basic* fact of everything, in so far as every experience could be grasped as an event.

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<sup>13</sup> Strictly speaking, the topic of *The Concept of Nature* concerns properly nature, but we might spread to every kind of phenomenon these peculiar analyses by taking into account the development of Whitehead's thought in the following works, above all *Science and the Modern World*. In this work the concept of "event", indeed, is still widely used, and in a broader meaning.

<sup>14</sup> Cf. also the analyses of *Science and the Modern World*, e.g. p. 177: «This general concept, of an event as a process whose outcome is a unity of experience, points to the analysis of an event into (i) substantial activity, (ii) conditioned potentialities which are there for synthesis, and (iii) the achieved outcome of the synthesis».

To elucidate this last statement, let us consider one more quote, where Whitehead stresses the point that I have just remarked upon. Facing the difficulties involved in understanding the event-character of every experience, Whitehead argues:

We are accustomed to associate an event with a certain melodramatic quality. If a man is run over, that is an event comprised within certain spatio-temporal limits. We are not accustomed to consider the endurance of the Great Pyramid throughout any definite day as an event. But the natural fact which is the Great Pyramid throughout a day, meaning thereby all nature within it, is an event of the same character as the man's accident. (CN: 74)

Let me now make a synthetic comparison between the outcomes of both Peirce and Whitehead. For sure they are both interested in the problem of novelty, since they try to give an account of it, also from a phenomenological-experiential point of view. Certainly they manage to talk about novelty from two distinct perspectives, dealing with a sharply different range of problems and this is the reason why the former speaks of event in terms of Secondness while the latter speaks of it as the ultimate fact of nature. But all the same, they reached some similar conclusions, namely:

- a) they identify novelty with an unforeseeable passage, change or event. For both the event's happening discloses the presence of: an activity (according to Whitehead) and a contrast between resistance and effort (according to Peirce).
- b) they recognize and extend this character of irruption and happening to all the phenomena.

Generally speaking and above all the differences, these results are meaningful because they show us how we can experience novelty and what novelty stands for, according to Peirce and Whitehead. To conclude I would reconnect these results with the problem of novelty regarded by the cosmological point of view. In other words, how might these results further clarify the two different cosmological constructions?

### ***Conclusion***

As I said at the beginning of the paper, many have compared Whitehead and Peirce from a cosmological and metaphysical point of view, and the core problem has been found, as van Haeften claimed, to lie in the «conception of the relation between continuity and discontinuity»<sup>15</sup>. After the path followed today, we can now easily understand that novelty too could be regarded as the result of the interaction between continuity and discontinuity. But, borrowing from van Haeften's

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<sup>15</sup> VAN HAEFTEN (2001: 59).

interpretation, I want to stress a problem that in my opinion should be considered more strictly. If both authors tried in different ways to figure out the universe as a continuity in becoming (Cf. PR: 35), how will they explain this becoming, rather than the continuity? What does this *becoming* of continuity mean? In other words, why can we speak properly of novelty and not only of a metamorphic universe? Of course, I don't mean that the latter is their purpose, but I only suggest the need of a further exploration of this "becoming". How this becoming can be conceived as the field of the emergence of novelty and not only a variation on the old? My attempt to give a deeper explanation of the meaning and the experience of "event" was exactly in order to clarify this point, by analysing this changing as an event in itself, insofar as an event always brings about a novelty.