In what follows, first, I will suggest that Althusser’s late materialism, and his Underground Current of the Materialism of the Encounter in particular, is traversed by a certain tension, which requires illumination, and I will try to correlate that strained problematic with his earlier, so-called “structuralist” position on materialism; second, in the light of that discussion, I would like to revisit the Althusserian notion of the epistemological break, hoping that this can contribute to the elucidation of both his materialism and the epistemological break, and help us understand the potential of Althusser’s epistemology to intervene decisively in the current state, and impasses, of main-stream “theory of science”.

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Let me begin with the late writings on aleatory materialism. Here, speaking for any constituted, singular entity, Althusser posits a divide between two ‘episodes’ that seem radically distinct, the one signaling the instant of a discontinuity and the other the duration of a continuity, two episodes that are rendered by two seemingly incompatible and irreconcilable “logics”: on the one hand, the instant of the primary constitution of the entity, of its emergence, and, on the other, the indeterminate time of its endurance and persistence as the constituted entity it is. Althusser calls aleatory encounter the first episode; let me term the second structural history.

I start from the latter, structural history, trying to justify the terminology I adopt. I hold that one can reconstruct from Althusser’s late texts on aleatory materialism a notion of history as an always “singular history”, as he terms it in at least one occasion [1997, 8], which is the counterpart of his professed “nominalism”: if there are only singularities, then each one of them has its own, distinct and independent, singular history. History, then, can refer only to structured singular individuals or “cases”: there is not a total or totalizing history, but only such “singular histories”, in the plural, to the extent that “every history is always a singular ‘case’”
A strong mutuality between *history*, *individuality* and *structure* is at issue here. There is history to the extent, and as long as, a singular individual, whose history is the history in question, is and remains constituted and coherent, while the constitution and coherence of that individual is conceived in terms of structure, that is, as “the primacy of the structure over its elements” [2006b, 191], which strongly recalls the earlier Althusserian elaborations on structural causality.

On the other hand, *between* individualities (and their singular histories) can happen only *encounters*, indeed *aleatory* encounters. I have to insist here: the sharp distinction between history and encounter seems, at some point of Althusser’s argument, to be involved in the very definition of the latter as *aleatory*. The encounter is aleatory to the exact extent that its coming about is beyond the scope of every structural determination. The encounter does not take place in the context of a structured reality, it takes place outside any structural relations, it takes place in the *void*, and as such it cannot be part or moment of any history: the encounter is outside history.

Nevertheless, the encounter can mark the beginning of a *new* singular history: the involved individualities *can* become the elements of a *new individuality*. In that case, the encounter would “take hold” or “crystallize” and a *new* entity and structure would emerge. The novelty of the entity and its structure consists in their *originality* and *unpredictability*: “nothing in the elements of the encounter prefigures, before the actual encounter, the contours and determinations of the being that will emerge from it” [2006b, 193]. The “taking hold” of the encounter is also non-structural, a-historical, in a word: aleatory. Only *after* the encounter and its taking hold, a structure (the new one) starts to exert its determination over its elements and a new history begins. There is a strong *discontinuity* (a ‘break’, one would say, or a *void*) between the history of the emerged entity and the histories of the entities that have become its elements. Thus, according to Althusser himself, an emergent individual (in the occasion, a mode of production), “comprises *elements that are independent of each other*, each resulting from its own specific history, in the absence of any organic, teleological relation between these diverse histories” [ibid. 199].

Let us stay here for a moment. I claim that this *sharp distinction between aleatory encounter and structural history* sketches a distinct philosophical position, inherent in a particular reading that the text allows. Let me term *pure aleatorism* that position, which gives sometimes the impression of being the thrust of the whole
argument, especially in the famous section concerning the emergence of the capitalist mode of production. In this context, the above distinction stands for a demarcation line between the logic of the accomplishment of the fact, the logic of the production of any singular entity, on the one hand, and the logic of the accomplished fact, the logic of the reproduction of the entity, on the other. That demarcation line is rather radical, demarcating in fact two fundamental tendencies within philosophy, namely the aleatory materialism, the only genuine one, from any philosophy of necessity, which would understand the constitution of an individual as “either the necessary result of given premises or [as] the provisional anticipation of an End” [ibid. 194].

Now, under that prism of ‘pure aleatorism,’ even Althusser’s own early structuralism should rather be construed as confusing those two ‘logics’, being thus reduced to one more of the many spurious materialisms “in the rational tradition, a materialism of necessity and teleology, that is to say, a transformed, disguised form of idealism.” [Ibid.168] Let me refer mainly to the passage of Reading Capital where Althusser, speaking of the causality and the whole, and trying to break the perennial dilemma between the (Cartesian) whole as a transitive-analytical effect and the (Leibnizian-Hegelian) whole as a transcendent-expressive cause, introduces the concept of the structure of the whole, being now a structured whole, and posits the whole’s structure as the immanent cause (in the Spinozist sense) of the whole and its elements [1977, 186–187]. Thus, Althusser takes here structural causality to be constitutive of the whole or complex entity (symptomatic of that is the fact that nowhere in the relevant texts can be found something equivalent to the above mentioned dichotomy of the constitution of an entity in the moment of the encounter and the “taking hold” of its constitutive elements, on the one hand, and the subsequent cohesion and homeostasis of the constituted entity, on the other). In particular, what (in the earlier ‘structuralism’) is already subsumed under the structure is the crucial instance of the “taking hold”: the primordial constitution of the “structured whole” -its ‘structuration’, if I could say- is already governed by the structure of the whole. As an index of that difference, Althusser’s early ‘structuralism’ presents itself as a particular version of holism (given that the effectivity of the structure on its elements is overtly identified with a special form of primacy of the whole over its parts), while aleatory materialism is explicitly conceived as a kind of atomism: as a “more or less atomistic [philosophy], the atom, in its ‘fall’, being the simplest figure of individuality”.

(2006b, 188)
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But things get complicated, and an internal tension manifests itself, in that very step in which Althusser, consistent with his own problematic, passes from structural history’s dependence on a momentary encounter, to a continuous primacy of the aleatory over the structural. Structure is not conditioned by the aleatory encounter just at the moment of its constitution, taking over on its own afterwards; rather, the structural history of a constituted individual is itself aleatory, regarding its turns and its duration. This obviously has to do with the subsequent encounters of the individual, which are somehow interiorized by its structure, “in a permanent process that,” according to Althusser himself, “puts the aleatory at the heart of its survival and reinforcement” [2006b, 199]. In that way though, while and by asserting the primacy of the aleatory over the structural, of contingency over necessity, Althusser puts somehow the aleatory under a virtual structural control: now, as far as a concrete constituted individual is concerned, its history consists in, and depends on, the power of its structure to accommodate its aleatory encounters and their repercussions, on its structure’s effectivity over the encountered individualities, in order to keep them or to transform them in its own elements.

All that reiterates the whole story of the aleatory encounter, but now from the perspective of the individual. This perspectivism gives aleatory something of the character of a venture and a hazard, of something that is at stake, of a struggle for the re-production, for the homeostasis and the persistence into being. And, by the same token, structure and its causality come close to the Spinozist conatus and the singular essence of an entity, its actual essence, which is nothing more than its striving to persevere in its being. [The structure somehow strives to handle the aleatory.] In other words, as Vittorio Morfino puts it, “the encounter has not taken place once and for all, but must continue to occur over and over again”, and any singular, complex entity, always according to Morfino, “can persist only through the continuous repetition of this ‘taking hold.’” [Morfino 2005] Thus, following aleatorism to its consequences, we have come to a conclusion, which seems to contradict its basic tenet: now, structural causality is indistinguishable from a lasting encounter, a continuous “taking-hold”. There is a tension, then, of a rather antinomical character, between ‘pure aleatorism’ and that second position, equally inherent in the text, which I propose to term ‘aleatory structuralism’, according to which structural history is permanently interwoven with the repetitive “taking hold” of the encounter, and hence
the two respective “logics” overlap. Following now this aleatory structuralism, my claim is that in the very instant of the primary “taking hold”, which decides that the encounter will not be a “brief” but indeed a “lasting encounter”, the resulting structure is present and active. In that very instant -but not before.

Before continuing, let me stress this “not before”: confining the whole issue in the instance of the “taking hold,” does fulfill the requirements of the aleatory as opposed to determinism, be it mechanistic or teleological. The emergent structure is not deducible in advance, either as a determined consequence of some initial conditions or as a transcendentally acting end.

So, the quasi-paradoxical claim is that the structure that ‘will’ result from the “taking hold” is active on it. This obviously has to do with the theme of the retroactive character of that instance, which permeates the whole text, and manifests itself at some highly problematic points of it, related to the controversial distinction between the “atoms” that enter the encounter and the elements of the resulting entity. As we know, although in a sense atoms and elements are identical, the encounter creating nothing of their reality or adding nothing in order to accomplish the emerging individual –as it should be in a consistent atomism-, the atoms, prior to the encounter, are abstract entities, leading a “phantom” existence, lacking any consistency, quality, property and even reality, while the elements of the resulting entity are real and concrete, with their qualities, properties and mutual affinities determined by the entity’s structure.

One could argue that this distinction should be understood in a sense of a retrospective perspectivism: the abstract atoms, before the encounter, would be such from the point of view of the emergent individual, to the exact measure that they are not yet elements of it, that is, to the extent that the new structure does not exert yet its effectivity on them. Outside that perspective, those ‘atoms’ are constituted, complex or structured individualities on their own right, concrete and qualified, with their own history and perspective. But the perspectivism in question is not just retrospective; it is, precisely, retroactive; it amounts to a causal retro-action of the emergent structure over the circumstances out of which it emerges, to an effectivity of the structure over the “taking hold” and the involved ‘atoms’, by which they are ipso facto transformed into the concrete, akin and complementary elements of the structure. Thus, as Althusser himself writes, “no determination of these elements can be assigned except by working backwards from the result to it’s becoming, in its retroaction. If we must
therefore say that there can be no result without its becoming (Hegel), we must also affirm that [I emphasize] there is nothing which has become except as determined by the result of this becoming –this retroaction itself (Canguilhem)” [2006b, 193]. The “taking-hold” of the encounter is an effect of its result, an effect of its own effect.

And if in fact, as Althusser puts it, in a sense “the whole that results from the ‘taking hold’ of the ‘encounter’ does not precede the ‘taking hold’ of its elements, but follows it”, [ibid. 197] then, in the light of this retroactive causality, where the ‘after’ has effects over the ‘before’, that is, the whole over the elements in encounter, a certain holism is at issue here, proper to aleatory structuralism, which is in tension with the atomism of pure aleatorism, and close to the early structural materialism and its constitutive effectivity of structure. I have argued elsewhere (Fourtounis, 2005) that this particular holism is correlative with the immanent character of structural causality, an immanent holism, opposed both to any transitive atomism and to any transcendent holism. [This is also reflected in the peculiar temporality of something that is present and active in the very moment of its birth, the peculiar “presence and absence” of the structure, as an immanent cause, in its effects (1977, 188).]

Let me suggest, now, before I pass to the second part of my exposition, that this aleatory structuralism permits a notion of structure in terms of diversity and divergence, of conflict and even of contradiction, contrary to any expressiveness, functionalism or organicism. And at the same time, it permits a notion of history with breaks, breaks that correspond to the encounters that an individual retroactively undergoes and handles, the notion of a discontinuous history, instead of the dilemma between momentary a-historical discontinuities and durable historical continuities. We can recognize here the recurrent issue of the repetitive constants or tendential laws that govern the history of a constituted individual, even of the radical instability that haunts its reproduction, which involve the aleatory change of the laws, the mutation of the structure as the prize paid for the preservation of its individuality [in a peculiar combination of discontinuity and continuity].

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In a series of texts of his ‘middle’ period, Althusser treats the issue of the epistemological break in terms that refer directly to the problematic of the encounter and the aleatory. Thus, in the Elements of Self-Criticism, a science emerges out of its prehistory, first in an ordinary, rather universal sense, “like everything that comes into the world, from atoms to living things and to men,” that is, out of a “complex and
multiple process, which normally operates blindly, in the dark: ... out of the
unpredictable, incredibly complex and paradoxical –but, in its contingency, necessary
–conjunction of ideological, political, scientific … philosophical and other ‘elements’,
which at some moment ‘discover’, but after the event, that they needed each other,
since they come together, without however recognizing one another, in the theoretical
shape of a new-born science”. (1976, 112-113). On the other hand, according to the
same text, “a science also emerges from its prehistory in its own special way” (an
epistemological way, we could add): that is, by “rejecting all or part of its prehistory,
calling it erroneous: an error.” (Ibid. 113) Of course, one can discern the seeming
paradox of something, namely a science, which is being constituted out of the
encounter of its future elements by ‘rejecting’ those very constitutive elements.

Leaving this paradox aside for the moment, the fact remains that the
epistemological break is clearly given here as an aleatory encounter. As such, it
necessarily represents a version of scientific discontinuity, in that, according to the
logic of the aleatory, the break-encounter will result to a new scientific structure,
which is neither reducible to, nor deducible from, any of the pre-existing, scientific or
other ‘cognitive’ structures that enter the encounter. The outcome is a novel, singular
scientific structure, a new type of scientificity.

Thus, the issue of the epistemological break, and accordingly of the scientific
discontinuity, can be considered in the light of the problematic of the aleatory
encounter and its internal tension. Let my say in advance that what is at stake here is
no less than the relation of the Althusserian conception of scientific discontinuity to a
general, still in currency, post-Kuhnian notion of incommensurability. The issue is not
just a historical one. Already some decades after E. Balibar, D. Lecourt and others
have set the bases for such an assessment [Balibar 1991, 1994, 1994b; Lecourt 1975],
I claim that this notion of discontinuity as incommensurability, in its transfigurations
and through the different theoretical attitudes towards it, still organizes the field of
what we could call “theory of science”, in general, which is now traversed by a new
(or not so new) divide: that between the History and Philosophy of Science, on the
one hand, and Social Science Studies, on the other. Endorsing it, opposing it,
modifying it, moderating or intensifying it, radicalizing it or even neglecting it, the
main stream theoretical approaches on science still take as granted that scientific
discontinuity can only be one version or another of Kuhnian incommensurability.

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Now, if we view the break-as-encounter under the light of what I have called *pure aleatorism*, then the relevant “taking-hold” should be outside the scope of any of the involved cognitive or discursive structures, and, especially and more importantly, *outside the scope of the new one*, which will emerge out of that encounter. But thus scientific discontinuity is already reduced to a version of incommensurability: this understanding of the break can very easily be subsumed to the notion of incommensurable Paradigms, each one characterized by its own normality, that is, of a succession, not necessarily linear, of distinct, irreducible normal sciences, that *are not connected by anything*: between them, there would always be an epistemological *void*. There is no paradigmatic transition of Paradigms, but only a revolutionary moment between essentially conservative regimes.

We could try to rephrase the above by saying that there is no rational and objective transition between structures of rationality and objectivity, that is, we could say that *a singular rationality begins irrationally*, but we know that what is being jeopardized here is precisely the assumption of science’s *rationality and objectivity*. In that way, the epistemological aspect of the break/encounter, that is, the rejection of the prehistory and its ‘elements’ as false, would be just *retrospective* and biased by the normality of the *constituted* normal science, a relativistic and anachronistic assignment of a negative epistemological value, which would denote nothing but the incompatibility with the prevailing normality.

Thus, the epistemological void between the before and the after of a constitutive encounter would give discontinuity the form of an epistemologically neutral transition (be it simple or complex) between self-enclosed cognitive structures. This transition then would be a-historical: the past and the future, the elements and the outcome of the encounter can and do have their histories, but the moment of the discontinuity itself does not belong to any. The break/encounter would be outside history; it would be an a-historical interface between histories, past and future.

Thus the epistemological void of the break would be correlative with its *historical* void: the break would take place between epistemologically and historically unrelated structures. We would have, thus, an epistemological a-historicity (or, better, a non-epistemological a-historicity), where the temporal order of the prior and the posterior would be *epistemologically* contingent; it could be, epistemologically speaking, the reverse. The relation of incommensurable structures is essentially
symmetrical, and it is that which makes impossible any epistemological history—and, for that matter, any historical epistemology. Strictly speaking, there cannot be a discontinuous history of a science; there is no way of asserting that two or more consecutive incommensurable structures can belong to the history of the same individual, nor of accounting for their actual order—except by reduction to the continuous history of another individual, of a completely different order, such as the scientific community. The essential character of incommensurability as a symmetrical relation (or non-relation) is inevitably the complementary counterpart of any sociologism, culturalism, anthropologism, ethnologism etc. of the post-Kuhnian Science Studies. It is this essential symmetry of incommensurability that is at the heart of the famous principle of symmetry, precisely, of any consistent sociology of science or any social-constructivist approach to science, which declares the epistemological equity of all cognitive endeavors and refuses to attribute any epistemological privilege to anyone of them.

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If, on the contrary, we view the break cum encounter in terms of what I have termed aleatory structuralism, then the break would be already, under the action of the scientific structure that it ‘will’ bring about, in the retroactive manner we just saw: as an effect of its own result. The structure now is effective on its very constitution. The emergent structure already exerts its causality, that is, it already determines its elements in their mutual “taking-hold”.

Thus, the discontinuous relation between the prior and the posterior structures is not symmetrical; we have here a one-way ‘incommensurability’ (if it still can be called thus): there is incommensurability in the vector from the prior structures, which enter the encounter, towards the posterior one, which will result out of it. The locus of the aleatory is precisely here: that is how the emergent structure is unpredictable and non-deducible from the standpoint of the previous; there is no rational, normal or structural way for the transition to the new starting from the old and according to its own norm—and that is what makes it new. But the transition has been structural, retroactively, where the involved structure was the posterior one. And, contrary to the previous scheme of a both-ways, symmetrical incommensurability, it is now possible to posit that the emergent structure is not just any discursive structure, but a new, unforeseen and unpredictable, singular structure of rationality and objectivity: namely, by positing that its emergence is already rational and objective according to
its proper rationality; that the beginning of the new rationality is already its own first and constitutional act.

Now the paradox of science’s rejection of its own constitutive elements can be resolved. Althusser himself offers a relevant hint, in a passage from Marx in his Limits, where he describes the equivalent of what he could later call the “taking hold” out of which Marxism emerged, as a transformation of the “encounter” between its ‘sources’ into a “‘revolutionary critique’ of its own elements.” [1978, 34] That is, the special way in which a science emerges from the aleatory encounter of the relevant ‘atoms’, which is by epistemologically “rejecting” them, is a critique that will transform those ‘atoms’ into its own proper elements. [This transformative critique is in fact the special way of the retroactive and constitutive determination the structure’s elements by the structure itself.] And if a critique can only be rational, then that constitutive critique is the only conceivable alternative both to relativism and to universal rationalism, be it positivist or ‘dialectical’: a new and singular scientific rationality brings about, and is being brought about by, a retroactive critique of its pre-history and its raw material, which is proper to itself.

Thus, true and false are not just relative and anachronistic denominations of the present and the past, reversible in principle, no more than they are intrinsic values of the past and present in themselves; there is not a question of a biased and relative distribution of epistemological values, but of a rational and objective constitution of the true as true through a falsification [literally] of the false. Differently put, scientific discontinuity is not a simple transition between self-subsistent events, indifferent in essence to their relation, and which either have their epistemological values absolutely, that is, in themselves, or are in fact cognitively equitable and receive their epistemological values only retrospectively, through the perspective of the posterior; true and false are the effects of the discontinuity, are the outcome of the break, in the retroactive manner that is proper to the aleatory encounter. In that way, the Spinozist “verum index sui et falsi” is not just retrospective, but genuinely retroactive: false and true are effects of the emergent true.

In a word, between the structure which results from the break/encounter and the structure(s) that enter to it, between the future and the past of the break, there is not the epistemological void: there is an epistemological break, precisely, in which something happens: the epistemological break is an event that connects what it separates. That retroactive, critical and asymmetrical, in a word epistemological,
break amounts to the fact that the priority of the prior and the posteriority of the posterior, as rationally and objectively false and true respectively, are necessary and not contingent –necessary in their contingency, says Althusser, which according to my view means retroactively necessary. [The same asymmetry here: there is contingency in the direction from the prior to the posterior -the aleatory itself; in the reverse direction, though -that is, retroactively- there is necessity.] Their order is not, even in principle, reversible.

That epistemological nature of a science’s discontinuity is bound with its proper historicity, in a knot that makes possible an epistemological history (and its counterpart, historical epistemology), as well as it makes possible to think of a science as an individual, with its own retroactive beginning and its own subsequent history, dotted with epistemological breaks, which change the structure preserving its individuality. Contrary to the notion of a continuous and cumulative normal science between revolutions, here we have the possibility of a discontinuous history Applying Morfino’s formulations, we could say that the break has not taken place once and for all, but must continue to occur over and over again, and that that the continuation -and thus, the history- of a singular science amounts to the continuous repetition of the break. A science is a lasting break. It is precisely that epistemological break that makes possible that two discontinuous scientific structures are not two distinct individuals, just juxtaposed in time, one in the past and the other in the present, but that the past one is the past of the present. That is how we can answer the riddle once posed by Canguilhem, related to the problem of a science’s history, namely: “is the science of the past the past of today’s science”? And it is precisely this knot, still unthinkable within mainstream ‘theory of science’, despite all its internal oppositions and divides, that signals the radical potential of the still implicit Althusserian epistemology: in a phrase, that scientific discontinuity is the privileged locus of scientific rationality and objectivity, and not the exact opposite, that is, the point of their failure.
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