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# The Conditions of the New

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## I. Introduction

What are the conditions of the *new* that one finds laid out in Gilles Deleuze's philosophy?<sup>1</sup> Deleuze frequently said that the question of the conditions for the production of *novelty*, as Whitehead called it, or *creativity*, as Bergson called it, was one of the fundamental questions of contemporary thought.<sup>2</sup> It entails a profound shift in philosophy away from the eternal to the new, that is, from the universal to the singular. For Deleuze, the conditions of the new can be found only in a principle of *difference* – or more strongly, in a *metaphysics* of difference.<sup>3</sup> The reason: if identity (A is A) were the primary principle, that is, if identities were already pre-given, then there would in principle be no production of the new (no new differences).

Yet the question of the new is a surprisingly complex problem. On the one hand, the 'new' seems to be one of the most obvious phenomena in the world: every dawn brings forth a new day, and every day brings with it a wealth of the new: new experiences, new events, new encounters. If the new means 'what did not exist earlier' then everything is new. On the other hand, one can say, with almost equal assurance, with the writer of Ecclesiastes (1: 9–10), that there is nothing new under the sun: the dawn of today was just like the dawn of yesterday, and simply brings with it more of the same. The new seems to come in well-worn and predictable patterns. Talk of the new, in other words, immediately threatens to be pulled back into talk of the old. As the French saying puts it, 'Plus ça change, plus c'est la meme chose' ('The more things change, the more they stay the same'). These complexities are due to the fact that the problem of the new is easily confused with a host of related but nonetheless distinguishable problems, including questions of transformation and change, causality and determinism, and the possibility of emergence (emergent qualities).

### 1. *Transformation and change*

One could, for instance, pose the question of the new in terms of the question of transformation or change. When artists create a painting or a piece of sculpture, they are simply rearranging matter that already exists in the world in a new way. Such a view of novelty would be merely *combinatorial*. Melodies are made out of notes, paintings are made out of pigments, and sculptures are hewn out of stone. This would be a simplified caricature of the hylomorphic schema. Creation is the imposition of a new form (*morphe*) on a given material or matter (*hyle*), even if matter contains a certain potentiality for the form. Here, novelty is found on the side of the form, and matter is the passive receiver or receptacle of this newness. In this case, novelty would be little more than the rearrangement of matter in the universe into ever new forms. The question of whether such novelty would eventually be exhausted would rest on metaphysical speculation about the finitude or infinity of matter (and time) in the universe, which is ultimately pure – and hence empty – speculation.

### 2. *Causality and Determination*

The question of novelty is also linked to the question of causality. If everything has a cause, and if effects pre-exist in their causes, then *only old things can come out of change*. If there is nothing in the effect that was not already in the cause (or, to put it in logical terms, if there is nothing in the consequent that was not in the antecedent), then causal processes can give rise to objects that are new in number, but not new in *kind* – there can be *quantitative* or numerical novelty, as in mass produced objects, but not *qualitative* novelty. Yet, as Mario Bunge has argued in his classic book *Causality*, this view, though consistent (and popular), is extreme, since it rests on a simplified and linear view of causality. Effects can be (and usually are) determined by multiple causes (heat can be produced by friction, combustion, nuclear chain reactions, microwaves, and so on), and causes can have multiple effects (penicillin may cure my infection but kill someone allergic to it).<sup>4</sup> Causality, in other words, must be distinguished from the more general question of *determination*, since determination can be not only causal, but also statistical or probabilistic (determination of a result by the joint action of independent entities), structural or wholistic (determination of parts by the whole), teleological (determination by ends or goals), dialectical (determination by internal strife or synthesis of opposites), as well as dynamic

or causal. Deleuze's proposal will be to see all such forms of determination as derivable from a metaphysical principle of difference: 'Difference is the state in which one can speak of determination *as such*' (Deleuze 1994: 28).

### 3. *Emergence*

The question of the new must also be distinguished from the question of emergence, even though the two issues are closely related. Emergence is a phenomenon of widespread interest in contemporary science and philosophy. It is an issue that initially arose in a physicalist ontology, which holds that all existents are physical entities, and hence that all sciences, in principle, should be reducible to physics. The problem is that physicalism (at least in its radically reductionist versions) cannot take into account phenomena such as organisms, artifacts, and societies, which have supra-physical (or emergent) properties that their (physical) components lack, such as the emergence of new species and new individuals, the emergence of new institutions, and so on.<sup>5</sup> If radical novelty can be distinguished from emergence, however, it is because emergence implies the production of new quality at ever higher 'levels' of complexity in a system, whereas the concept of the new in Deleuze – as well as Whitehead and Bergson – implies conditions in which *novelty becomes a fundamental concept at the most basic ontological level*.

## II. Three Types of Conditions: The Logically Possible, Possible Experience, Real Experience

The problem of the new must thus be distinguished from the problems of change, causality, or emergence, and should instead be repositioned as a fundamental ontological concept (Being = Difference = the New). The properly Deleuzian question would therefore be: what are the ontological *conditions* under which something new can appear in the world? But this raises a second set of issues: what exactly does it mean to speak of the *conditions* of the new? From this viewpoint, one could perhaps distinguish between three types of conditions with which philosophers have tended to concern themselves: (1) the conditions that demarcate what is logically possible; (2) the conditions that determine the limits of possible *experience* (Kant); and (3) the conditions of real experience. For Deleuze, the problem of the new is coextensive with the attempt to determine the conditions of *real* experience (since the real *is* the new). What then is the difference between these three types of conditions?

### 1. *The Logically Possible*

First, one could say that thought, *on its own*, is only capable of thinking the possible, and that it does so in the name of certain principles which one can call *logical principles*. Logical principles are principles that determine what is possible and what is not possible. Classical logic identified three such principles: (1) the principle of identity (which says that ‘A is A’, or ‘A thing is what it is’), (2) the principle of non-contradiction, which says that ‘A is not non-A’ (‘A thing is not what it is not’), and (3) the principle of the excluded middle, which says that between A or not-A, there is no middle term). Taken together, these three principles determine what is impossible, that is to say, what is *unthinkable*: something that would not be what it is (which would contradict the principle of identity); something that would be what it is not (which would contradict the principle of non-contradiction); and something that would be both what it is and what it is not (which would contradict the principle of the excluded middle). By means of these three principles, thought is able to think the world of what is possible (or what traditional philosophy called the world of ‘essences’). But this is why logic does not take us very far: it leaves us within the domain of the possible.

### 2. *Possible Experience*

Kant went a step further than this when he tried to demarcate, not simply the domain of the possible, but the domain of possible *experience*. This domain of possible experience is no longer the object of formal logic, but what Kant called *transcendental* logic. The transcendental conditions for demarcating possible experience are found in the *categories*. If logical principles demarcate the domain of the possible, categories demarcate the domain of possible experience. Causality is a category for Kant since we cannot conceive of an object of our possible experience that has not been caused by something else. This transcendental logic allowed Kant to distinguish between what was immanent within and transcendent to this domain of experience. Empirical concepts are immanent to experience (and hence testable by hypothesis and experiment), whereas the object of *transcendent* concepts (or what Kant called, following Plato, *Ideas*) go beyond any possible experience. The three great transcendent Ideas that Kant identified in the ‘Transcendental Dialectic’ were God, the World, and the Soul. Such Ideas are *thinkable* (they are not logically inconsistent, given the principles of formal logic), but they are not *knowable*, since there could never

be an object in experience that would correspond to them – they lie outside the domain of possible experience.

### 3. *Real Experience*

But the post-Kantian philosophers, starting with Salomon Maimon, attempted to push the Kantian project one step further: from the conditions of *possible* experience to the conditions of *real* experience. Maimon aimed two fundamental criticisms against Kant. First, Kant assumes that there are a priori ‘facts’ of reason (the ‘fact’ of knowledge in the *Critique of Pure Reason*, the ‘fact’ of morality in the *Critique of Practical Reason*), and then seeks the ‘condition of possibility’ of these facts in the transcendental. Maimon argues that Kant cannot simply assume these supposed ‘facts’ but has to show how they were *engendered* immanently from reason alone as the necessary modes of its manifestation. A method of *genesis* has to replace the simple method of *conditioning*. Second, to accomplish this task, the genetic method would require the positing of a principle of difference. Whereas identity is the condition of possibility of thought in general, he claimed, *it is difference that constitutes the genetic condition of real thought*.<sup>6</sup> These two exigencies laid down by Maimon – the search for *the genetic elements of real experience* (and not merely the conditions of possible experience), and the positing of a *principle of difference* as the fulfilment of this condition – reappear like a leitmotif in almost every one of Deleuze’s books up through 1969, even if Maimon’s name is not always explicitly mentioned. Indeed, one might say that these are the two primary components of Deleuze’s *transcendental empiricism*. ‘Without this [Maimonian] reversal,’ Deleuze writes, ‘the Copernican Revolution amounts to nothing’ (Deleuze 1994: 162).

## III. The Conditions of Real Experience: Five Requirements

Thus, in speaking about conditions, we can trace out a trajectory from what constitutes the *logically possible* (determined by logical principles), what constitutes *possible experience* (determined by the categories), and our current problem: what constitutes the genetic and differential conditions of *real experience*?<sup>7</sup> Insofar as Deleuze’s project constitutes a search for conditions (or a search for sufficient reason), Deleuze’s philosophy can be said to be a transcendental philosophy. Obviously the question of knowing how to determine the transcendental field is very complex. Throughout his work, Deleuze explores the various requirements that must be met in determining the conditions of real experience. Five of

them seem particularly relevant to our concerns (though they by no means exhaust the ways of approaching the problem).

First, as we have already seen, for a condition to be a condition of real experience, and not merely possible experience, it must form ‘an intrinsic genesis, not an extrinsic conditioning’ (Deleuze 1994: 154). The genetic method means that the conditions of real experience must be able to account for novelty or the new – which means that the *future* must become the fundamental dimension of time, not the past.

Second, the condition cannot be in the image of the conditioned, that is, the structures of the transcendental field cannot simply be traced off the empirical. This was one of the fundamental critiques that the post-Kantians addressed to Kant. Kant had simply conceived of the transcendental in the image of the empirical. But as Deleuze writes, ‘the task of a philosophy that does not wish to fall into the traps of consciousness and the cogito is to purge the transcendental field of all resemblance’ (Deleuze 1990: 123). What this means, in part, is this: in traditional philosophy, the relationship between the possible and the real is one of resemblance. We think of the possible as a field of possible options, only one of which can be ‘realised’ in the real, with all the other possibilities being thwarted and not passing into existence. Two principles govern this relation: the real *resembles* the possible, and the real is a *limitation* of the possible. This is why Deleuze will substitute for the possible-real opposition what he calls virtual-actual complementarity: the virtual is constituted through and through by difference (and not identity); and when it is actualised, it therefore differs from itself, such that every process of actualisation is, by its very nature, the production of the new, that is, the production of a new difference. This is why Deleuze can say that the transcendental must be conceived of as a field in which ‘the different is related to the different *through* difference itself’ (Deleuze 1994: 299, translation modified).

Third, to be a condition of real experience, the condition can be no broader than what it conditions – otherwise it would not be a condition of *real* experience, capable of accounting for the *genesis* of the real. This is why there can be no categories (at least in the Aristotelian or Kantian sense) in Deleuze’s philosophy, since (as he puts), the categories cast a net so wide that they let all the fish (that is, the real) swim through it. But his requirement – that conditions not be broader than the conditioned – means that the conditions must be determined *along with* what they condition, and thus must change as the conditioned changes. In other words, the conditions themselves must be plastic and mobile, ‘no less capable of dissolving and destroying individuals than of constituting them temporarily’<sup>8</sup> (Deleuze 1994: 38).

Fourth, in order to remain faithful to these exigencies, Deleuze continues, ‘we must have something unconditioned’ that would be capable of ‘determining both the condition and the conditioned’ (Deleuze 1990b: 123, 122) and which alone would be capable of ensuring a *real* genesis<sup>9</sup> (Deleuze 1990b: 19). It is the nature of this unconditioned element that lies at the basis of Deleuze’s dispute with the general movement of the post-Kantian tradition. Is this unconditioned the ‘totality’ (Kant, Hegel), which necessarily appeals to a principle of identity (the subject), or is it ‘differential’ (which is Deleuze’s position, modifying a position hinted at by Leibniz)?

This is why Deleuze aligns himself with the work of Spinoza and Leibniz, the arch-rationalists, despite his own self-description as an empiricist. Indeed, Deleuze’s appeal to the interrelated concepts of the foundation [*fondation*], the ground [*fond, fondement*], and the ungrounded [*sans-fond*] reflect his complex relation to the traditions of pre- and post-Kantianism. Both Spinoza and Leibniz, in their shared anti-Cartesian reaction, complained that Descartes had not gone far enough in his attempt to secure a foundation for knowledge. Erecting a foundation is a futile enterprise if the ground itself is not firm and secure. Before laying the foundation, in other words, one must prepare the ground; that is, one must inquire into the *sufficient reason* of the foundation.<sup>10</sup> Indeed, Deleuze describes *Difference and Repetition* in its entirety as an inquiry into sufficient reason, but with this additional caveat: in following the path of sufficient reason, Deleuze argues, one always reaches a ‘bend’ or ‘twist’ in sufficient reason, which ‘relates what it grounds to that which is truly groundless’, the unconditioned (Deleuze 1994: 154). It is like a catastrophe or an earthquake that fundamentally alters the ground, and destroys the foundations that are set in it. All three of these aspects – foundation, ground, and the ungrounded – are essential to Deleuze’s project. ‘Sufficient reason or the ground,’ he writes, ‘is strangely bent: on the one hand, it leans towards what it grounds, towards the forms of representation; on the other hand, it turns and plunges into a groundlessness beyond the ground which resists all forms and cannot be represented’ (Deleuze 1994: 274–5). For instance, in Deleuze’s theory of repetition (temporal synthesis), the present plays the role of the foundation, the pure past is the ground, but the future the ungrounded or unconditioned, that is, the condition of the new.

Fifth, and finally, the nature of the genesis that is at play here must therefore be understood as what Deleuze calls a *static* genesis (that is, a genesis that takes place between the virtual and its actualization), and not a *dynamic* genesis (that is, a historical or developmental genesis

that takes place between actual terms, moving from one actual term to another).

These five themes recur in almost all of Deleuze's early writings as elaborations of the two post-Kantian demands that Deleuze appropriates from Salomon Maimon (the search for *the genetic elements of real experience* and the positing of a *principle of difference* as the fulfilment of this demand).

#### IV. The Model of Calculus

However, it is one thing to lay out a general project like this; it is another thing to find a 'method', so to speak, capable of providing a way of *thinking* these conditions of the real. If logical principles determine the conditions of the possible, and the categories determine the conditions of possible experience, where can one go to search for the conditions of real experience (that is, the conditions for novelty itself)? Deleuze in fact appeals to several non-philosophical models in his work. One of them is artistic creation, and in a sense Deleuze's transcendental empiricism can be read in large part as a reworking of Kant's transcendental aesthetic. Another model is molecular biology, which defines individual terms of a genetic structure that constitutes the real conditions of its external and visible properties and thus constitutes a profound break with the traditional approach of 'natural history'. But the model I would like to focus on here is the mathematical model of the differential calculus. Many of the concepts that Deleuze develops in *Difference and Repetition* to define the conditions of the real are derived from the calculus – the differential relation, singularities, multiplicities or manifolds, the virtual, the problematic, and so on.

There are a number of reasons why Deleuze would turn to the model of the calculus. Philosophy, of course, has always had a complex relationship with mathematics. But the particular *branch* of mathematics privileged by philosophers often says much about the nature of their philosophy. Since the late nineteenth and early twentieth centuries, for instance, philosophers have tended to focus on axiomatic set theory, since they were preoccupied with the question of the foundations of mathematics, with its twin programmes of formalisation and discretisation. Plato, by contrast, famously appealed to Euclidean geometry as a model for Ideas because it defined forms (or essences) that were static, unchanging, and self-identical. Deleuze could be said to appeal to calculus for the exact opposite reason: it is calculus that provides him with a mathematical model of a principle of difference. Calculus is the primary mathematical tool we have



at our disposal to explore the nature of reality, the nature of the real – the *conditions of the real*. When physicists want to examine the nature of a physical system, or an engineer wants to analyse the pressure on a weight-bearing load, they model the system using the symbolism of the calculus. What spawned the ‘scientific revolution’ of the last three centuries was what Ian Stewart called ‘the differential equation paradigm’: ‘the way to understand Nature is through differential equations’ (Stewart 1989: 32–3). As Bertrand Russell put it in *An Outline of Philosophy*, ‘scientific laws [or laws of nature] can *only* be expressed in differential equations’<sup>11</sup> (cited in Bunge 1979: 74–5, emphasis added). In this sense, one might say that the calculus is existentialism in mathematics, ‘a kind of union of mathematics and the existent’.<sup>12</sup>

This is why Leibniz remains such an important figure for Deleuze. In the history of philosophy, he suggests, there were two great attempts to elucidate the conditions of the real, albeit in two different directions: Hegel (the infinitely large) and Leibniz (the infinitely small).<sup>13</sup> Deleuze’s strategy, with regard to the history of philosophy, seems to have been to take up Maimon’s critiques of Kant and to resolve them, not in the manner of the post-Kantians, such as Fichte and Hegel, but rather by following Maimon’s own suggestions and returning to the pre-Kantian thought of Hume, Spinoza, and Leibniz. Of these three, it is Leibniz – who invented the calculus, along with Newton – that plays a decisive role, at least with regard to the question of the real that concerns us here. Leibniz already had an implicit response to the two post-Kantian demands formulated by Maimon. ‘All the elements to create a genesis as demanded by the post-Kantians,’ Deleuze noted in one of his seminars, ‘all the elements are there virtually in Leibniz.’<sup>14</sup>

Calculus takes us into a complex and heavily-mined territory, with its own complex history.<sup>15</sup> Moreover, calculus is not the only mathematical domain to which Deleuze appeals: group theory, topology, and non-Euclidean geometry, among others, also make frequent appearances throughout Deleuze’s texts. It is not that Deleuze is setting out to develop a philosophy of mathematics, nor even to construct a metaphysics of calculus. Deleuze appeals to calculus primarily to develop a *philosophical* concept of difference, to propose a concept of difference-in-itself for pure thought. ‘We tried to constitute a philosophical concept from the mathematical function of differentiation,’ Deleuze wrote in the preface to *Difference and Repetition*. ‘We are well aware, unfortunately, that we have spoken about science in a manner which was not scientific’ (Deleuze 1994: xvi, xxi). In what follows, then, I would simply like to explicate, in a schematic manner, a number of the concepts that Deleuze extracts

from calculus for his philosophical purposes. This analysis would constitute a segment of a broader consideration of Deleuze's philosophy of difference.<sup>16</sup>

## V. The Differential Relation, Singularities, Multiplicities

Let me turn first to the nature of the differential relation, and the way in which this type of relation differs from logical relations, or real or imaginary relations in mathematics. In 1701, Leibniz wrote a short, three-page text entitled 'Justification of the Infinitesimal Calculus by That of Ordinary Algebra', in which he tries to illustrate the nature of the differential relation using an example from ordinary algebra. His example is as follows (Figure 1). Leibniz draws two right triangles – CAE and CXY – that meet at their apex, at point C. Since the two triangles CAE and CXY are similar, it follows that the ratio  $e/c$  (in the top triangle) is equal to  $y/(x - c)$  (in the bottom triangle). Now, Leibniz asks us, what happens if we move the straight line EY increasingly to the right, so that it approaches point A, always preserving the same angle at the variable point C. The length of the straight lines  $c$  and  $e$  will diminish steadily, yet the ratio of  $e$  to  $c$  will remain constant. What happens when the straight line EY passes through A itself? It is obvious that the points C and E will fall directly on A, and that the straight lines  $c$  and  $e$  will vanish, they will become equal to zero. And yet, Leibniz says, even though  $c$  and  $e$  are equal

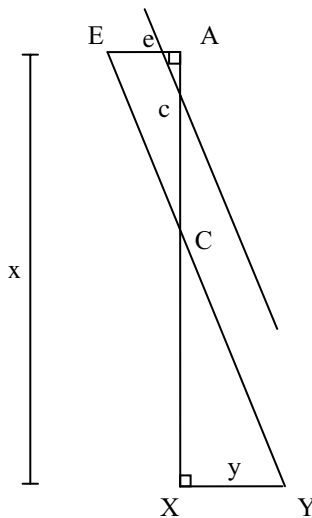


Figure 1<sup>17</sup>

to zero, they still maintain an algebraic relation to each other, equal to  $y/x$ . In other words, speaking intuitively, when the line EY passes through A, it is not the case that the triangle CEA has vanished; rather it continues to subsist ‘virtually,’ since the relation  $c/e$  continues to exist even when the terms have vanished. Rather than saying the triangle CEA has disappeared, Leibniz says, we should say that it has become unassignable and yet perfectly determined. In this case,  $e = 0$  and  $c = 0$  but the relation  $e/c$  is not equal to zero, since it is a perfectly determinable relation equal to  $y/x$ . Unassignable, yet perfectly determined. This is why the differential relation is such a great mathematical discovery, even in a simple algebraic example such as this one: the miracle is that the differential relation  $dx/dy$  is not equal to zero, but rather has a perfectly expressible finite quantity, which is the differential derived from the relation of  $x$  to  $y$ .

Deleuze derives an important consequence from this analysis of the differential relation. The differential relation can be said to be a pure relation, insofar as it is a relation that persists even when its terms disappear: it thus provides him with an example of what he calls the concept of ‘difference-in-itself’. Difference is a relation, and normally – that is to say, empirically – it is a relation between two things with a prior identity (‘ $x$  is different from  $y$ ’). With the notion of the differential relation, Deleuze takes the notion of difference to a properly *transcendental* level. The differential relation is not only external to its terms (Bertrand Russell’s empiricist dictum), but it also determines its terms. Difference here becomes *constitutive* of identity, that is, it becomes productive and genetic, thus fulfilling Maimon’s demand: a genetic philosophy finding its ground in a principle of difference.

In a certain sense, one could say that this principle of difference is the starting point of Deleuze’s philosophy, from which he will deduce a number of related concepts that constitute the conditions of real experience.<sup>18</sup> When a differential relation reciprocally determines two (or more) virtual elements, it produces what is called a *singularity*, a singular point. This is the first concept Deleuze deduces from the differential relation. In logic, the notion of the ‘singular’ has long been understood in relation to the ‘universal’. In mathematics, however, the term is used in a different manner: a singular point (or singularity) is distinguished from ordinary or regular points, particularly when speaking about points on a determinate figure. A square, for instance, has four singular points, its four extreme corners, and an infinite number of ordinary points that compose each side of the square. Similarly, a cube is determined by eight singular points. Simple curves, like the arc of a circle, are determined by singularities that are no longer extrema, but maximum or minimum points (this

led to what Leibniz called the calculus of maxima and minima). The singularities of complex curves are far more complex. They constitute those points in the neighbourhood of which the differential relation changes sign, and the curve bifurcates, and either increases or decreases.

Such an assemblage of ordinary and singular points constitutes what Deleuze calls a *multiplicity* – a third concept. One could say of any *determination* in general – that is, of any individual – that it is a combination of the singular and the ordinary, of the remarkable and the regular. The singularities are precisely those points where something ‘happens’ within the multiplicity (an event), or in relation to another multiplicity, causing it to change nature and produce something new. For instance, to take the example of a physical system, the water in my kettle is a multiplicity, and a singularity in the system is one that occurs when the water boils (or freezes), thereby changing the nature of the physical multiplicity (changing its phase space). Similarly, the point where someone breaks down in tears, or boils over in anger, is a singular point in someone’s psychic multiplicity, surrounded by a swarm of ordinary points. Every determinate *thing* is a combination of the singular and the ordinary, a multiplicity that is constantly changing, in perpetual flux.

One can see here that, at the very least, Deleuze is breaking with a long tradition which defined things in terms of an essence or a substance – that is, in terms of an identity. Deleuze replaces the traditional concept of substance with the concept of multiplicity, and replaces the concept of essence with the concept of the event.<sup>19</sup> The nature of a thing cannot be determined simply by the Socratic question ‘What is . . .?’ (the question of essence, which in Deleuze’s view set philosophy on the wrong track from the start), but only through such questions such as ‘How?’ ‘Where?’ ‘When?’ ‘How many?’ ‘From what viewpoint?’ and so on – precisely the questions Plato rejected as inadequate responses to the question of essence.<sup>20</sup> For Deleuze, the question ‘What is singular and what is ordinary?’ is one of the fundamental questions posed in Deleuze’s ontology, since, in a general sense, one could say that ‘everything is ordinary!’ as much as one can say that ‘everything is singular!’ In a psychic multiplicity, a new-found friend might suddenly boil over in anger at me, and I would ask myself what I could possibly have done to provoke such a singularity; but then someone might lean over to me and say, ‘Don’t worry, he does this all the time, it’s nothing singular, it has nothing to do with you, it’s the most *ordinary* thing in the world, we’re all used to it.’ Assessing what is singular and what is ordinary in any given multiplicity is a complex task. It is why Nietzsche could characterise the philosopher as kind of physician, who assesses phenomena as if they were symptoms

that reflected a deeper interrelation of forces within the multiplicity at hand, whether that multiplicity was a person, or a culture, or a meta-physical system – or a perception.

## VI. The Example of Perception: Leibniz's Theory of Unconscious Perceptions

Here I would like to open a parenthesis in order to provide an example of how Deleuze makes use of these concepts in a concrete domain, namely, the domain of perception. Leibniz has noted, famously, that we often perceive things of which we are not consciously aware, such as a faucet dripping at night. Leibniz therefore suggested that our conscious perceptions are not derived from the objects around us as such, but rather from the minute and unconscious perceptions of which they are composed, and which our conscious perception integrates. We can apprehend the noise of the ocean or the murmur of a group of people, for instance, but not necessarily the sound of each wave or the voice of each person that composes them. A conscious perception is produced when at least two of these minute and virtual perceptions – two waves, or two voices – enter into a differential relation that determines a singularity, which 'excels' over the others, and becomes conscious. Every one of our conscious perceptions constitutes a constantly shifting threshold. The multiplicity of minute or virtual perceptions are like the obscure dust of the world, its background noise, or what Maimon liked to call the 'differentials of consciousness'. At the limit, Leibniz would say, we perceive the entire universe, but obscurely. The differential relation is the mechanism that extracts from these minute perceptions our zone of finite clarity on the world. 'Far from having perception presuppose an object capable of affecting us, and conditions under which we would be affectable, it is the reciprocal determination of differentials ( $dy/dx$ ) that entails *both* the complete determination of the object as perception, and the determinability of space-time as a condition' (Deleuze 1993: 89, translation modified). This is what Deleuze means when he says that conditions of real experience must be determined at the same time as what they are conditioning. Space and time here are not the pre-given conditions of perception, but are themselves constituted in a plurality of space and times *along with* perception.

We can also see how the Cartesian notion of 'clear and distinct' ideas finds an entirely new set of coordinates in Deleuze's work. My conscious perception of the noise of the sea, for example, may be *clear*, but it is by nature *confused*, because the minute perceptions of which it is composed are not themselves clear, but remain obscure. Conversely,

the minute, unconscious perceptions are themselves distinct but obscure (not clear): *distinct*, insofar as all the drops of water remain distinct as the genetic elements of perception, with their differential relations, the variations of these relations, and the singular points that they determine; but obscure, insofar as they are not yet ‘distinguished’ or actualised in a conscious perception, and can only be apprehended by thought, or at best, in fleeting states close to those of drowsiness, or vertigo, or dizzy spells. Leibniz in this way determines the conditions of real experience by starting with the obscure and the virtual: a clear perception emerges from the obscure by a genetic process (the differential mechanism). These obscure and minute perceptions do not indicate the presence of an infinite understanding in us (as Kant himself has suggested with regard to Maimon), but rather the presence of an unconscious in thought – a differential unconscious, which is quite different from the oppositional unconscious developed in Freud.

## VII. The Problematic and the Virtual

With this example in mind, drawn from the field of perception, we can return, in our deduction of concepts, to two final notions: the problematic and the virtual. These concepts correspond to the question: ‘What is the status of the multiplicity constituted by these minute and unconscious perceptions?’ Deleuze will say that they are objects of Ideas in a modified Kantian sense, because even though they are not given directly in phenomenal experience, they can nonetheless be *thought* as its conditions. They are, as it were, the noumenon closest to the phenomenon. To move from conditions to the conditioned is to move from *a problem to its solution* or, what amounts to the same thing, from the *virtual to the actual*. It remains for us to examine the parallel structure of these two remaining concepts.

We sometimes think of philosophy as a search for solutions to perennial problems, and the terms ‘true’ and ‘false’ are used to qualify these solutions. But in fact the effort of the greatest philosophers was directed at the nature of the problems themselves, and the attempt to determine what a true problem was as opposed to a false one. In the ‘Transcendental Dialectic’ of the first Critique, for instance, Kant tells that the concept of the World (or the universe, the totality of what is) is an illusion, because it is generated from a false problem, derived from the category of causality. The problem of causality stems from the fact that an event A causes event B, B causes C, C causes D, and so on, and that this causal network stretches indefinitely in all directions. If we could

grasp the totality of these series, we would have the World. But in fact, we *cannot* grasp this infinite totality. The true object of the Idea of the world is precisely this *problem*, this causal nexus. When, rather than grasping it as a problem, we instead think of it as an object (the World), and start posing questions about this object ('Is it bounded or endless?' 'Is it eternal or did it have a beginning?'), we are in the domain of a transcendental illusion, prey to a false problem. This is why Kant said that Ideas such as the Soul, the World, and God are objectively *problematic* structures. The object of the Idea is a problem, it is the objective existence of a problem that is separated from its solutions, and it is, as Kant said, 'a problem incapable of solution' (Kant 1999: A327/B384).

Deleuze has something similar (though not identical) in mind when he says that the conditions of real experience have an *objectively* problematic structure. What does it mean to speak of a problem that has an objective existence (and is not simply a subjective obstacle to be overcome on the path to knowledge)? Here again, calculus can help us. It is not by chance that it was calculus itself that (soon after its invention) seemed to lend credence to the classical view of determinism, that is, a clockwork universe without any novelty, in which the future was completely determined by the past. Differential equations allowed mathematicians to predict, for instance, the exact dates of the return of Halley's Comet (Lalande), or the next solar eclipse, or the fact that there was another planet perturbing the orbit of the planet Neptune, which led to the discovery of Pluto (Le Verrier). The success in solving such astronomical problems led to extravagant claims like those of Laplace: eventually *every* future event will be explainable by the use of differential equations.

Today, this belief in determinism, as supported by calculus, has been undermined. The reason is simple: setting up differential equations is one thing, solving them is quite another. Until the development of computers, the equations that *could* be solved tended to be *linear* equations, with *convergent* series, equations that 'describe simple, idealized situations where causes are proportional to effects, and forces are proportional to responses' (Strogatz 2003: 181). Thus, early on in the history of calculus, as Ian Stewart has written, 'a process of self-selection set in, whereby equations that could not be solved were automatically of less interest than those that could' (Stewart 1989: 73–4). The equations that could *not* be solved tended to be non-linear equations, which described fields whose infinite series *diverge* – and most differential equations have turned out to be non-linear equations.

In the late 1800s, Henri Poincaré worked out a way to study such equations. Even though an exact solution was not attainable, Poincaré

discovered that he could recognise the general patterns the solutions would have to take for the equations he was working with – such centres, foci, saddle points, and nodes or knots. Today, through the use of computers, much more complicated solution patterns have been discovered, such as the well-known Lorenz attractor. Put simply, the solution to the equation will be found in one of the points in the attractor, but one cannot say in advance which point it will be since the series defined by the equation diverge. This is why we cannot predict the weather more accurately – not because we do not have all the variables, but because the weather system itself is *objectively problematic*. At every moment in its actuality, it is objectively unassignable which trajectory of the attractor the weather system will follow, since its problematic structure is constituted positively by an infinite set of *divergent series*, which is nonetheless entirely determined by the attractor itself.

This brings us, finally, to the concept of the virtual, which is one of Deleuze's most well-known concepts. The concept has little to do with the notion of 'virtual reality'; rather, it concerns the *modal* status of such problematic structures. On this score we might be tempted to say that they are the locus of *possibilities* waiting to be realised. But in fact Deleuze is strongly critical of the concept of possibility in this context, since it is unable to think the new or to make us understand anything of the mechanism of differentiation. The reason is this: we tend to think of the possible as somehow 'pre-existing' the real, like the infinite set of possible worlds that exist in God's understanding before the act of creation (Leibniz). The process of realisation, Deleuze suggests, is subject to two rules: a rule of resemblance and a rule of limitation. On the one hand, the real is supposed to *resemble* the possible that it realises, which means that everything is already given in the identity of the concept, and simply has existence or reality added to it when it is 'realised'.<sup>21</sup> On the other hand, since not every possible is realised, the process of realisation involves a *limitation* or exclusion by which some possibilities are thwarted, while others 'pass' into the real. With the concept of possibility, in short, *everything is already given*; everything has already been conceived, if only in the mind of God (the theological presuppositions of the concept of possibility are not difficult to discern).<sup>22</sup> Instead of grasping existence in its novelty, Deleuze writes, 'the whole of existence is here related to a pre-formed element, from which everything is supposed to emerge by a simple "realisation"' (Deleuze 1990a: 20).

This is why Deleuze proposes that in describing the modal status of problematic multiplicities we should replace the concept of the possible with the concept of the virtual, and substitute the virtual-actual relation



for the possible-real relation. This is much more than a matter of words or semantics. The virtual, as Deleuze formulates it, is not subject to a process of realisation, but rather a process of actualisation, and the rules of actualisation are not resemblance and limitation, but rather *difference* (the differential relation) or *divergence* (divergent series) – in other words, creation and novelty. ‘Problematic’ and ‘virtuality’ are strictly correlative concepts in Deleuze’s work: a problem has an objectively determined structure (a virtuality), that exists apart from its solutions (which are actual).<sup>23</sup> At every moment, my existence (like that of a weather system) is objectively *problematic*, which means that it has the structure of a problem, constituted by divergent series, and the exact trajectory that ‘I’ will follow is not predictable in advance. This is why Deleuze would say that every actuality is always surrounded by a halo of virtualities, which are not mere logical possibilities, but physical realities (even if they remain virtual), precisely because they are what constitute the problematic structure of my existence. In a moment from now, I will have actualised certain of those virtualities: I will have spoken in a certain manner, or gestured in a certain manner. In doing so, I will not have realised a possibility (in which the real resembles an already-conceptualised possibility), but will have actualised a virtuality – that is, I will have produced a difference. In other words, when the virtual is actualised, it *differentiates* itself, it produces the new (the actual does not resemble the virtual in the way that the real resembles the possible). Moreover, when I actualise a virtuality, or resolve a problem, that does not mean that the problematic structure has disappeared. The next moment, so to speak, still has a problematic structure, but one that is now modified by the actualisation that has just taken place. This is what Deleuze means when he says that conditions and the conditioned are determined at one and the same time, and that conditions can never be larger than what they condition – thus fulfilling the Maimonian demands for the conditions of real experience. It is precisely for this reason that we can say, even speaking of ourselves, that every event is *new*, even though the new is never produced *ex nihilo* and always seems to fit into a pattern (this pattern is precisely what we call, in psychic systems, our ‘character’).

### VIII. Conclusion

With this we break off the deduction, somewhat arbitrarily, since our aim was not to explicate all of Deleuze’s concepts, but to follow a rather specific trajectory through Deleuze’s thinking about the problem of new.

First, there is the demarcation of the problem of the conditions of *real experience*, as opposed to what is logically possible or the conditions of possible experience. Second, derived from the work of Salomon Maimon, there is the twofold demarcation of what it means to talk about conditions of real experience (or the new): one must seek the *genetic* elements of real experience, and one must posit a principle of *difference* as the fulfilment of this demand. Finally, Deleuze finds in the model of calculus various concepts of difference (the differential relation, singularities, multiplicities, and so on) that serve to define a transcendental field that is both virtual and problematic, and which serves to define the conditions of real experience. For Deleuze, Being itself always presents itself under a problematic form, which means that it is constituted, in its actuality, by constantly *diverging* series, that is, by the production of the new. The resuscitation of a positive conception of divergent series, following the advent of non-Euclidian geometries and the new algebras, itself represents a kind of Copernican revolution in contemporary mathematics.<sup>24</sup> Deleuze's philosophy of difference – in part derived from these mathematical advances – represents a Copernican revolution of its own in philosophy, insofar as it makes the problem of the new (difference) not simply a question to be addressed in a remote region of metaphysics, but rather the primary determination of Being itself.

## References

- Beistegui, Miguel de (2004) *Truth and Genesis: Philosophy and Differential Ontology*, Bloomington and Indianapolis: Indiana University Press.
- Bunge, Mario (1979 [third revised edition]) *Causality and Modern Science*, New York: Dover Books.
- Bunge, Mario (2001) *Philosophy in Crisis: The Need for Reconstruction*, Amherst, NY: Prometheus Books.
- De Landa, Manuel (2002) *Intensive Science and Virtual Philosophy*, London and New York: Continuum.
- Deleuze, Gilles (1986) *The Movement-Image*, trans. Hugh Tomlinson and Barbara Habberjam, Minneapolis: University of Minnesota Press.
- Deleuze, Gilles (1987) *Dialogues*, trans. Hugh Tomlinson and Barbara Habberjam, New York: Columbia University Press.
- Deleuze, Gilles (1990a) *Bergsonism*, trans. Hugh Tomlinson and Barbara Habberjam, New York: Zone Books.
- Deleuze, Gilles (1990b) *Logic of Sense*, trans. Mark Lester, with Charles Stivale; Constantin V. Boundas (ed.), New York: Columbia University Press.
- Deleuze, Gilles (1993) *The Fold: Leibniz and the Baroque*, trans. Tom Conley, Minneapolis: University of Minnesota Press.
- Deleuze, Gilles (1994) *Difference and Repetition*, trans. Paul Patton, New York: Columbia University Press.
- Guerout, Martial (1930) *L'Evolution et la structure de la Doctrine de la Science chez Fichte*, Paris: Les Belles Lettres.

- Kant, Immanuel (1999) *Critique of Pure Reason*, trans. Paul Guyer and Allen E. Woods, Cambridge: Cambridge University Press.
- Kline, Morris (1972) *Mathematical Thought From Ancient to Modern Times*, 3 vols, Oxford: Oxford University Press.
- Leibniz, Gottfried Wilhelm (1966 [second edition]) 'Justification of the Infinitesimal Calculus by That of Ordinary Algebra', *Philosophical Papers and Letters*, Leroy E. Loemker (ed.), Chicago: University of Chicago Press, pp. 545–6.
- Smith, Daniel W. (2003) 'Mathematics and the Theory of Multiplicities: Deleuze and Badiou Revisited', *Southern Journal of Philosophy*, 41:3, pp. 411–49.
- Stewart, Ian (1989 [second edition]) *Does God Place Dice? The Mathematics of Chaos*, London: Blackwell.
- Strogatz, Steven (2003) *Sync: The Emerging Science of Spontaneous Order*, New York: Hyperion Books.
- Villani, Arnaud (1999) *La guêpe et l'orchidée: Essai sur Gilles Deleuze*, Paris: Belin.
- Whitehead, Alfred North (1967) *Adventures of Ideas*, New York: Free Press.

## Notes

1. This paper is a modified version of a talk given at the annual meeting of the British Society for Phenomenology, 'The Problem of the New', St. Hilda's College, Oxford University, 8–10 April 2005.
2. See, for instance, the following: 'The aim is not to rediscover the eternal or the universal, but to find the conditions under which something new is produced (*creativity*)' (Deleuze 1987: vii); Bergson 'transformed philosophy by posing the question of the "new" instead of that of eternity (how are the production and appearance of something new possible)' (Deleuze 1986: 3); 'The new – in other words, difference – calls forth forces in thought that are not the forces of recognition, today or tomorrow, but the powers of a completely other model, from an unrecognized and unrecognizable *terra incognita*' (Deleuze 1994: 136). Nonetheless, it is true that the *new* is merely an operative concept in Deleuze's philosophy; which he himself thematises under the rubric of *difference*.
3. On these issues, Deleuze did not hesitate to identify himself as a metaphysician, in the traditional sense. 'I feel myself to be a pure metaphysician. Bergson says that modern science hasn't found its metaphysics, the metaphysics it would need. It is this metaphysics that interests me.' From an interview with Deleuze cited in Villani 1999: 130.
4. See Bunge 1979, especially pp. 17–19 on 'The Spectrum of Categories of Determination'.
5. See the discussion in Bunge 2001, especially on 49 and 222.
6. These claims need to be qualified, since they simply summarise the two themes that Deleuze retains from Maimon. But as Martial Gueroult has shown in his magisterial work *L'Évolution et la structure de la Doctrine de la Science chez Fichte*, Maimon himself in fact hesitated between two ways of solving the problem of genesis: 'Maimon oscillates between two solutions: first, to turn difference into a pure principle like identity . . . In a certain fashion this is the path Schelling will choose in the philosophy of Nature . . . This conception everywhere has the same consequences . . .: the suppression of the immanence in the knowing subject of the constitutive elements of knowledge; the finite subject Ego [*Moi*] is posterior to the realities of which it has knowledge . . . But another solution presents itself: identity being absolutely pure, and diversity always being a given (*a priori* and *a posteriori*), identity can be posited as the property of the thinking subject, and difference as an absence of identity resulting from the

- limitation of the subject' (Gueroult 1930: I, 126). The latter will be the path followed by Fichte (the positing of the 'I = I' as a thetic principle of identity); the former position (which we summarise here) will be the path retrieved and pursued by Deleuze.
7. In a Deleuzian context, it might be preferable to speak about the conditions of the *real*, rather than *real experience*, since the latter seems to imply a link to a (transcendental) subjectivity. But one can retain the phrase, if one instead links it to the notion of pure experience in the Jamesian sense – that is, an experience without a subject or an object.
  8. 'The search for a ground forms the essential step of a "critique" which should inspire in us new ways of thinking . . . [But] as long as the ground remains larger than the grounded, this critique serves only to justify traditional ways of thinking' (Deleuze 1994: 54).
  9. In order to assure a real genesis, the genesis requires an element of its own, 'distinct from the form of the conditioned', something unconditioned, an 'ideational material or "stratum"' (Deleuze 1990b: 19).
  10. Leibniz and Spinoza will both claim, for example, that Descartes' *clear and distinct* ideas only find their sufficient reason in *adequate* ideas. On the relation of the foundation to the ground, Deleuze writes: 'The foundation concerns the soil: it shows how something is established upon this soil, how it occupies and possesses it; whereas the ground . . . measures the possessor and the soil against one another according to a title of ownership' (Deleuze 1994: 79).
  11. Deleuze cites a similar statement by Hermann Weyl, who noted that 'a law of nature is necessarily a differential equation' (Deleuze 1993: 47).
  12. See Deleuze, seminar of 22 April 1980, online at [www.webdeleuze.com](http://www.webdeleuze.com): 'It is because it [calculus] is a well-founded fiction in relation to mathematical truth that it is consequently *a basic and real means of exploration of the reality of existence*.' See also the seminar of 29 April 1980: 'Everyone agrees on the irreducibility of differential signs to any mathematical reality, that is to say, to geometrical, arithmetical, and algebraic reality. The difference arises when some people think, as a consequence, that differential calculus is only a convention – a rather suspect one – and others, on the contrary, think that its artificial character in relation to mathematical reality allows it to be adequate to certain aspects of physical reality.'
  13. See Deleuze 1994: 42–50, where he analyses and compares the projects of Hegel and Leibniz on this score: 'differential calculus no less than the dialectic is a matter of "power" and of the power of the limit' (43).
  14. Deleuze, seminar of 20 May 1980, online at [www.webdeleuze.com](http://www.webdeleuze.com).
  15. For a discussion of this history, with regard to Deleuze's use of calculus, see Smith 2003.
  16. Strictly speaking, the list of concepts that follows, as Deleuze points out, is not a list of categories, nor could it be (without changing the concept of a category): they are 'complexes of space and time . . . irreducible to the universality of the concept and to the particularity of the now here' (Deleuze 1994: 285).
  17. This figure is taken from Leibniz 1966: 545.
  18. By contrast, in *The Fold* (Deleuze 1993), Deleuze begins his deduction of concepts with the differential concept of *inflection*.
  19. Miguel de Beistegui, in his magisterial *Truth and Genesis: Philosophy and Differential Ontology* (2004), has analysed in detail the shift from substance to multiplicity brought about by Deleuze's differential ontology.
  20. Alfred North Whitehead makes a similar point in *Adventures of Ideas*: 'We can never get away from the questions: – How much, – In what proportions? – and In what pattern of arrangement with other things? . . . .Arsenic deals out either

- health or death, according to its proportions amid a pattern of circumstances' (Whitehead 1967: 153).
21. Furthermore, the means by which the possible is realised in existence remains unclear: existence always occurs 'as a brute eruption, a pure act or leap that always occurs behind our backs' (Deleuze 1994: 211).
  22. See Deleuze 1990b: 105: 'the error of all determinations of the transcendental as consciousness is to conceive of the transcendental in the image and resemblance of what it is supposed to found.' If the real is supposed to resemble the possible, is it not because we have retrospectively or retroactively 'projected' a fictitious image of the real back into the possible? In fact, it is not the real that resembles the possible; it is the possible that resembles the real. See Deleuze 1990a, chapter 5, for further discussion.
  23. For this reason, Deleuze's work has been seen to anticipate certain developments in complexity theory and chaos theory. Manuel Delanda in particular has emphasised this link in Delanda 2002. For a general presentation of the mathematics of chaos theory, see Stewart 1989.
  24. On this topic, see Kline 1972: 1096–7: 'After the dawn of rigorous mathematics with Cauchy, most mathematicians followed his dictates and rejected divergent series as unsound'; but with the advent of non-Euclidean geometry and the new algebras, 'mathematicians slowly began to appreciate that . . . Cauchy's definition of convergence could no longer be regarded as a higher necessity informed by some superhuman power.'