# The Historical Lifeworld of Event Ontology

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**Abstract.** We develop a new understanding of the historical horizon of event ontology. Within the general area of the philosophy of nature, event ontology is a still emerging field of investigation in search for the ultimate materialist ontology of the world. While event ontology itself will not be explicated in full mathematical details here, our focus is on its conceptual interrelation with the dominant current of Idealism in Western thought approached by us as a problem in the history of ideas. Our presentation is designed to be accessible to a wider audience. We especially highlight the deep connection between event ontology and postmodernism in general, and the post-war French philosophers Althusser, Foucault, Deleuze, and Guattari in particular, who are viewed as main sources for current and future programs of abstract materialism.

## 1. Introduction

### 1.1. Motivations, Problem Formulation, and Objectives

The philosophy of nature is usually treated as a distinct topic in general philosophy, separate from existing conventional areas such as metaphysics and epistemology. However, there exists a venerable tradition that goes back to ancient Greece, China, and India, in which Nature was seen as the totality of everything that can be, including ethics, social being, and even religion. In relatively recent times, this approach was revived and taken up by several thinkers, chief among them are Bergson [1], Jakob von Uexküll [2], Russell [3, 4], Whitehead [5], Simondon [6,7], Deleuze and Guattari [8]. In particular, we would like to concentrate here on a particular approach to the philosophy of nature known as *event philosophy*. Furthermore, a specific additional narrowing of the scope will be equating event philosophy with event *ontology*. Events are not to be confused with the Epicurean atoms [9]. In fact, the idea of the event as an "ontological atom" appeared several times throughout history, often under very different names, e.g., "monads," "aktions," "actants," "Machian sensations," and so on. Within its most ambitious formulation (Leibniz's monads [10], Schelling's Aktion [11]), event philosophy aspires to show that events are the ultimate (nonperceptual) basic building blocks of the Real, underlying even atoms and molecules [12, 13].

The goal of this article is to introduce a relatively comprehensive and original view on the historical background to event ontology within Western philosophy.[1] Our methodological approach is influenced by the concept of *lifeworld* (Dilthey [14], Husserl [15], Habermas [16].),

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[1] In this paper, we crudely define *Western philosophy* as the philosophical output produced in Greek, Latin, Arabic, and the modern European languages. The most important trait unifying all of this quite large and essentially heterogeneous literature is that it is ultimately founded on Greek philosophy in particular, and Hellenistic canonical texts in general. The non-Western philosophical traditions of ancient China and India are very naturalistic but they are not treated here due to limitations of space.
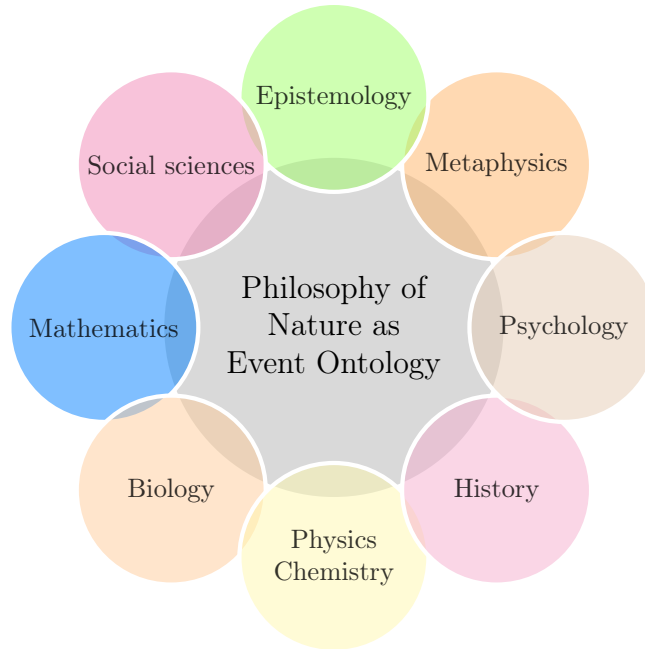
Figure 1: Event ontology in its full cross-disciplinary reach to other knowledge fields.

but particularly in its hermeneutical and ontological dimensions due to Heidegger [17, 18] and Gadamer [19, 20]. Even though Althusser does not use the term, the idea of a *historical lifeworld*, serving as the ontological horizon or universe of intercommunications, exchange, and mutual inspiration shared by either a group of people, cultures, or minds, finds its most striking application in the world of *ideas* and thought systems. Indeed, Althusser work [21–24] is unique in the unified manner by which *both* the history of ideas and the history of civilizations are treated within the same theoretical framework. We have sought to use this Althusserian approach in our research into the historical background to event ontology by focusing on the effective lifeworld of ideas, rather than presenting a historiography of previous texts and writers.

Furthermore, the inherently multidisciplinary nature of event ontology (see Figure 1) has forced us to adopt an approach in which no distinction between continental and analytical philosophies is made. We cut through all traditions and treat them equally since some of the most important contributions to event ontology had come from both camps. While historically speaking the earliest sufficiently sophisticated system of events, or fragments of such systems, are due to Leibniz and Schelling, our understanding of the lifeworld of ideas pertaining to event ontology is heavily indebted to Russell, Heidegger, Deleuze, and Guattari, whose views loom large in what follows. However, no complete and comprehensive technical examination of their ideas is possible in a single article, but we try to provide extensive remarks and references to the original literature. The main objective here remains to sketch the overall distinctive features of the historical horizon of event ontology.

What are some of these main features? Our principal theses can be summarized as follows (more details and references are provided in the main text after the Introduction):

(i) Event ontology is a response to the failure of Idealism.

(ii) Event ontology must perform a (Heideggerian) "destructive construction" of Idealism in order to justify its own program.

Figure 2: The creation of social ontology within the program of the philosophy of nature goes through event ontology as an intermediate step.

(iii) Even ontology expands into social ontology (Figure 2.) This is best seen in our work below through the fundamental role played by *subjectivity* and the production of subjects (subjectification process) in the historical lifeworld of event ontology.

In order to establish objective (i), the concept of the *ideological apparatus of perception/introspection* is introduced and the focus is laid on Kantianism, especially the latter's incarnation in modern mathematics. For objective (ii), we try to introduce new ideas on the philosophy of events while interrogating, critiquing, and interpreting previous concepts. In other words, and inspired by Heidegger, we believe that the history of ideas itself must be constructive, and, as Gadamer used to say, understanding is already an interpretation and hence requires exerting new ideas [20]. Regarding objective (iii), this will be achieved by directly integrating postmodernist theories of social ontology right at the beginning of our investigation. As the reader will be quick to note, the names Althusser, Foucault, Deleuze, Guattari will show up very early and remain relevant to the end.

Yet from the more technical side, objective (iii) requires a careful approach to the quite complex and still open problem of the production of subjectivity in nature. We believe that all the social sciences might receive their foundations eventually from within the philosophy of nature. When that happens, a naturalistic understanding of subjectivity is essential to combat Idealism. In our account we provide extensive comments and insights on this topic. We openly admit that our approach to subjectivity has been heavily influenced by the ideas of the French philosopher Felix Guattari (more so than Foucault and Russell), especially through his collaboration with Deleuze to write *Capitalism and Schizophrenia* [8, 25]. We try to show how postmodernism in general, and Guattarianism in particular, represents some of the most fascinating avenues along which earlier formal constructions of events by writers such as Russell and Whitehead (using mathematical philosophy) may be expanded and strengthened.

### 1.2. Topics Omitted in this Investigation

To keep the present article at a manageable size, and due to the very cross-disciplinary and wide scope of this work, we have been forced to make several painful omissions of topics whose satisfactory treatment would otherwise make the text prohibitively large. The most important are:

 (i) Non-Western philosophical traditions (e.g., ancient Chinese and Indian philosophies of nature) are note discussed.

 (ii) We focus mostly on modern Western philosophy, especially the period started by Descartes. Pre-modern Western philosophy (mostly written in Latin and Arabic) is not treated here in depth. However, we believe such treatment is necessary in the future in order to understand the historical roots of Leibniz and Schelling's ontologies of monads and aktions, respectively. For instance, more research is needed on the difference between the modern definition of events and medieval corpuscles.

(iii) We use mostly primary literature. In general, the adopted methodology is to read the original major texts, and then construct the relevant historical lifeworld based on interpretation of this reading.[2] The extremely large and excellent relevant secondary

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[2]Schopenhauer and Heidegger, for example, strongly advocated such method. Wittgenstein is a famous example of the extreme opposite.

literature has been left out of the main narrative. Any attempt to deal even with a part of the secondary literature would require a book-length treatment.

(iv) The works of the distinguished philosopher and historian Michel Serres have not been extensively discussed in this paper even though, we believe, Serres represents one of the most important major contemporary figures with respect to the philosophy of nature, especially in his three books [26–28]. While some references to his work and concepts are inserted into the main text below, we found that including a more extensive discussion of Serres will require a considerably more space so we opted for the current omission.

(v) We don't consider in this paper the detailed mathematical treatment of how events are constructed and used to solve concrete problems in the philosophy of nature. However, see [3–5, 12, 13, 29] for some previous attempts.

The author hopes that future publications will address some or all of the above omissions. For the present purpose, the complexity and the very multidisciplinary nature of the topic requires avoiding to deal with the entire subject at one time in order to make the presentation accessible to a wider audience in philosophy, history, science, and the humanities.

### 1.3. Outline of the Structure and Content of this Article

Due to the complexity of the argument developed below, we first sketch a quick outline of the various sections and subsections included in the main text. The reader may benefit by first going through the Conclusions Section 8 then using the following summaries as a guideline.

After the Introduction, Section 2 provides a quick overview (and interpretation) of three key figures in the development of event ontology: Ernst Mach, Bertrand Russell, and Alfred N. Whitehead. While not an event ontologist himself, the remarkable scholar and historian of ideas Ernst Cassirer will be briefly discussed at the historical juncture of moving from the late nineteenth-century Machian formulation to the twentieth-century theories of Russell and Whitehead.

In Section 3, we look into the main historical current of Idealism and argue that, at least relative to event ontology, it represents the most important intellectual direction of modern Western thought. We formally capture the essence of Idealism through the concept of the ideological apparatus of perception/introspection. This will be accomplished by a series of carefully written subsections. First, a general view that goes back to Plato and Augustine is given in Section 3.1, followed by a more specialized treatment of Descartes and the central figure of Kant in Section 3.2. One of our contributions is integrating, at an early stage of the presentation, the philosophical and historical evolution of modern mathematics with the historico-philosophical critique of Idealism, a step initiated in Section 3.3. There, the startlingly successful role played by Hermann Weyl in launching the program of geometrizing nature – a key legacy of Idealism – is highlighted and interpreted in terms of the evolution of event ontology.

Section 4 is the most technical in the paper. Its purpose is to provide a more detailed substantiation of the arguments and proposals given in the previous Section 3. Here, we examine the very concepts of mind, consciousness, language, and cognition as the key structural components of Idealism and how event ontology attempts to reverse the traditional narrative. This will be conducted in different stages, each consigned to a separate subsection with distinct flavor. First, in Section 4.1 we examine the fundamental question of the relation between language and the world. The inherently indecisive nature of this question and all previous attempts at proposing final answers will lead us into the content of Section 4.2, which openly deals with how Idealism ontologized human consciousness. (Event ontology will then attempt to replace this ontologization by a new one based on events.) The genesis of the object in Idealism is formally treated in Section 4.3, followed by our reinterpretation of the essence of the Idealism of Kant and Weyl's group-theoretic ontology in Section 4.4, where some methods borrowed from Husserl and Heidegger are used. We then briefly address

in Section 4.5 the issue of time in dynamics and becoming due to its fundamental connection with event ontology when the latter is viewed as a theory of dynamic spaces. The highly unusual role played by Fichte in our narrative is highlighted in Section 4.6. Schopenhauer's ontology of the cosmic Will in nature is addressed in Section 4.7 due to its relevance to the inherent dynamism of events in event ontology.

In order to prepare for the transition to the modern, post-war period of event ontology, Section 5 contains a brief sketch of what we conceive as the first signs of the emergence of social ontology out of the sociology of Karl Marx and Richard Wagner's art-based social approach to reality and nature. We hope that the future development of a naturalistic social ontology should complete the program of event ontology as a universal "theory of everything." This short section also presents an opportunity to prepare the reader for our next (and final) section before the conclusion, which is about postmodernism.

The postmodern phase is briefly considered in Section 7. The aim here is to explore the transition from event ontology proper, i.e., as a critique and alternative to Idealism, to social ontology. The French postmodernists who have already figured up prominently in the previous parts are quickly reexamined in Section 7.1. The key problem of subjectivity is outlined in Section 7.2 from the ontological viewpoint, i.e., not merely the sociological perspective. The production of subjectivity (ontogenesis, individuation, subjectivization) is then treated in some details in Section 7.3 under the rubric of *subjectification*.

The main conclusion is finally given in Section 8. In our view, the problem of the production of subjectivity in event ontology remains open and constitutes one of the most interesting research subjects in the philosophy of nature to address in future works.

## 2. Some Background to Event Philosophy

The revered traditional program of perception-based philosophy (Idealism) has failed, and event philosophy is a response to this failure. As a matter of fact, we quite often find the two terms 'events' and 'perception' juxtaposed in many accounts of event-based philosophies. This is particularly true with three main sources we will work with this here, the philosopher-scientist-mathematicians:

(i) Ernst Mach.

(ii) Alfred North Whitehead.

(iii) Bertrand Russell.

The three figures above may be grouped together in what we propose to call the *Mach-Whitehead-Russell Event Philosophy Program*. This approach will be discussed frequently in the present work, but attention should be brought, as early as possible, to the fact that the most fundamental contribution to event philosophy came from post-Mach-Whitehead-Russell thinkers. We mention here Heidegger's *Contributions to Philosophy* [30], written in the late 1930s but first published posthumously in 1989; Simondon's two-volume book on *Individuation*, published (in partial form) in the late 1950s [6, 7]; Deleuze's *The Logic of Sense* [31], first published in 1969; and lastly the magisterial treatise on the philosophy of nature, *A Thousand Plateaus*, published in 1980 by Deleuze and Guattari [8]. These works will be repeatedly used at different locations throughout the remainder of this paper.

### 2.1. Ernst Mach

The overall corpus of Mach's writings may be viewed as a highly original and deep contribution to the philosophy of nature by one of the most distinguished thinkers of the 19th century, where we find that history, physics, biology, and psychology are all treated on equal basis and integrated within a coherent worldview. The exact scope of Mach's contributions is still debatable. Although his influence on the history of science, research on perception, and

physics are now widely recognized in the secondary literature, the interpretation of Mach's real intentions and aims, especially the philosophical ones, remains a thorny problem.

Examples abounds. In classical physics, the famous *Mach Principle* [32] is a striking case of a general philosophical insight that had motivated much of the Einstein's program of general relativity. Yet, as has been recently pointed out by Julian Barbour, it remains controversial whether the celebrated 1916 Einstein's theory of general relativity [33] did actually achieve Mach's aims [34, 35]. On another hand, Mach seems to be one of the earliest adherents to the philosophical view called *neutral monism*, which was latter advocated by William James [36] and is very closely related to Russell's [3, 4, 12] and Whitehead's [5, 13] event ontology. This metaphysical view came from a writer who is publicly held as a stubborn opponent of all kinds of metaphysical thinking. Similarly, Mach is usually taken as an enemy (one of the last) of the doctrine of atomism in nature. Such widely held images contribute to the false picture of Mach as a positivist or empiricist who strongly believed in something like Hume's psychological impressions, the so-called "sensations" in his major work *The Analysis of Sensation* [37]. However, reading this particular book by Mach gives a very different perspective on Mach the philosopher than the above mentioned canonical Mach the positivist still prevalent in much of the secondary literature. It appears that the man was more of an *ontologist* than he himself was aware of; and in the main thrust of the early chapters one finds a consistent, unequivocal endorsement of a *metaphysical* worldview that aspires to fully engage the multifarious flux of natural phenomena by tracing them back into fundamental "building blocks" he calls *elements*.

The Machian elements are neither material nor mental; in fact, they are not even intellectual constructions. Instead, they serve as the direct substrate of the ultimate nature of things both "out there" and "inside us." In fact, Mach himself does not take for granted the existence of an unequivocal dividing line separating a "self" from its "world," but understands nature as a unified, total *organic whole* emerging from the collective interactions of *multitudes of elements*. There is no difference between the elements of biology and the elements we encounter in physics, and they are both continuous with a third range of elements encountered in perception and physiology (the science combining physics and biology.) The scientist-ontologist is *equally* interested in the three elemental types, but for methodological reasons it is often expedient to differentiate his fundamental inquiry into Nature into various pseudo-distinct disciplines. It is unfortunate that Mach made a mistake by deciding to label these fundamental *elements* by the highly misleading term 'sensations.' Although he warned against taking them naively as "psychological impressions," as in fact *is* implied by a direct interpretation of the term, that is, physiological phenomena happening in living organisms, this very misunderstanding was nevertheless attributed to him by a majority of Mach's readers and commentators, with the notable exceptions few like James and Russell.

Another fundamental contribution by the *Analysis of Sensations* [37] was the recognition, though not in a very formal manner, of the ontological status of *relations*. This *relationalist* line of thought can be considered an extension of earlier positions developed by the same author in his great and influential book on classical mechanics [38], where he severely criticised the Newtonian conception of absolute space and advocated a more complex picture of reality in which the latter is viewed as a totality of relations (Machian relationalism) [34]. For Mach, the main generators of drama in nature are not the basic "elemental stuff" of being, but *relations* between elements, what he called less colorfully *functional interdependence* [37], while also noting that it is precisely *this* kind of interconnection that happens to be representable by the language of mathematics.

A *complete* relational system of nature, however, was never developed by Mach neither in physics nor in biology, and probably part of the legacy of the twenty-first century will be in finding ways to carry out this Leibnizian program in a rigorous fashion. Russell's papers on the mathematics of relations [39] can be considered one of the earliest and most ambitious attempts in this direction within mathematical philosophy. Heidegger [40,41], Deleuze [42,43], and Gilbert Simondon [6,7] took a gigantic step forward in this direction, but much remains to

be done in constructing a fully-fledged relationalist event ontology. The Einstein-Weyl style of doing relativity theory cannot be considered fully relational, but rather, following remarks by Einstein himself, a "theory of invariants," which is quite correct [44]. The dynamics in relativistic spacetime is essentially woven into the fabric of an *invariant* line element (the generalized interval or proper time). In this way, what appears at first sight as a relational component in the theory, the focus on measurement of one system with respect to another and banishing absolute space and time, is really a refashioning of the old absolute in new form, the invariant metric of the space. In the case of special relativity, we have the speed of light as a universal invariant of spacetime. In general relativity, the situation is more complicated (and less clear) where the line element is invariant for the entire spacetime manifold but the metric depends on the distribution of matter/energy and the boundary conditions [45, 46]. In any case, it is not clear why or how implementing a fully-fledged relationalism in relativity physics should proceed after the model of the Kantian theory of invariants that so much dominated the mathematical scene in the nineteenth century. Russell, in *The Analysis of Matter* [3], appears to be among the very few who voiced similar objections regarding the ontological status of the line element in the Einstein's theory endorsed by Weyl, but he did so politely, quietly, without a real desire to go head on against the public.

## 2.2. A Digression on Ernst Cassirer

A metaphysical concept of *relation* was advocated by the distinguished historian of culture and ideas Ernst Cassirer, principally in his early short masterpiece, the 1910 text *Substance and Function* [47]. Throughout his life, Cassirer had been fully informed about much of the scientific, philosophical, and mathematical background of the problem of the event, though he is not directly associated with event ontology as such. Writing in his signature fascinating prose (lucid, overflowing, and historically rich), the essence of *relational* dynamics – whose roots were already implicit in Mach and Bergson – is unfolded by Cassirer through a breathtaking narrative that remains unmatched to date. Cassirer was one of those rare intellectuals perfectly at home with both the humanities and the hard sciences, not to mention the arts and culture. In this sense, as a historian of ideas working in the first half of the twentieth century, he is probably second to none

In a less powerful follow up, he directly dealt with Einstein's theory[3] though he was not fully successful in disclosing the hidden problem of relativity from the metaphysical viewpoint. In response to quantum mechanics, Cassirer wrote a classic account of the role of determinism [48]. This is a very remarkable historico-philosophical work that deserves more attention. It predates Karl Popper's more famous investigations of the same subject, again developed in Cassirer's characteristic historical prose style, where some of the major philosophical problems of quantum theory were settled in a way that can be considered by some as satisfactory and somehow conclusive. The work of Cassirer does not seem to have attracted the attention it deserves in the Anglo-American world, especially the philosophy of science.[4] It is probably worth mentioning that Heidegger was critical of Cassirer's treatment of the concept of relation in *Substance and Function* although, as far as I know, there was no detailed engagement with the Cassirer's work itself in Heidegger's published works.[5]

When it comes to engagement with the natural sciences, Cassirer's objectives had been to integrate the recent development in classical and quantum physics with the German movement of neo-Kantianism, which was at its peak in the early decades of the twentieth century [59]. However, this relation between neo-Kantianism as a general movement on one

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[3]This short text was published in one volume with *Substance and Function*, see [47].

[4]Cassirer remains relatively popular in both the Anglo-American and continental secondary literature, e.g., see [49–51]. What I intended to say here is that compared with other philosophers of science such as Poincare [52, 53], Pierre Duhem [54, 55], Popper [56, 57], and Kuhn [58], he is underrated.

[5]On the relation between Heidegger and Cassirer, see [59].

hand, and the shift toward dynamical relationalism, essential for our understanding of event ontology, is not visible or even comprehensible without the unique vantage point of Cassirer. For example, Cassirer's intellectual biography of Kant [60] clearly lays down its emphasis on the *organic* phase of Kant's thought, best captured by the Second half of the *Critique of Judgment* [61]. That signifies the importance of theme of the *philosophy of nature* in Cassirer's thought, something he may not share with all other figures of the neo-Kantian movement, the latter being more concerned with the problem of knowledge. But even Cassirer's treatment of the canonical subjects of neo-Kantianism in specialized texts such as [62] is more akin to an "epistemology of nature" than a conventional "theory of knowledge" as practiced in the prevailing logical and deductive/inductive analytical traditions.

Yet, in the majority of Cassirer's works, a real turn toward the *ontology* of nature started very late, probably close to the end of his life in 1945. The most important text would be the unpublished fourth volume of his historico-philosophical *magnum opus*, the three-volume study *The Philosophy of Symbolic Forms* [63–65]. Indeed, this posthumously published text [63] contains one of the earliest *metaphysical* engagements in the philosophical literature with the works of the biologist and the philosopher of nature Jakob von Uexküll [2, 66], a key figure in event philosophy.[6] Cassirer's prose seems here to be less sure about the final formulation of the problem, vacillating instead between an undeveloped theory of "symbolic organism" (semantic biology) and a fully fledged program of Uexküllian metaphysics of nature. In our story, Cassirer importance is that he prepared thr ground for later generations of philosophers of nature by supplying us with extensive historico-philosophical literature tying up various trains of thoughts and synthesizing the rudiments of a relational framework for doing ontology, in spite of the fact that he himself did not develop the *formal* aspects of the event ontology program of nature philosophy.

## 2.3. Bertrand Russell and Alfred North Whitehead: A Nonstandard Story

The extraordinary career of the mathematician-philosopher Alfred North Whitehead is unthinkable without the long relationship that connected him with Bertrand Russell since the 1890s till the beginning of the coolness and breakdown of their collaboration around the breaking out of the First World War [68, 69]. Although commentators appear to prefer the standard version of the story, where the young Russell is often projected as the brilliant student with remarkable formal skills while Whitehead is the mature mentor, the deeply motivated thinker who installed metaphysical substance into the mathematical philosophy of the young Russell [68], careful reading of what Russel had actually thought and written reveals a quite different view on the subject. Not only that, in retrospect, Russell appears to have *excelled* his teacher Whitehead in mathematics itself, but, even more surprisingly, the Russellian intuitive grasp and formulation of the fundamental problems of perception, cognition, nature, and their complex interrelations in epistemology, is superior to Whitehead's at several levels.

Nevertheless, that does not suggest that Russell went as far as *Process and Reality* [5], a book whose enormous cosmological scope is certainly beyond the manageable range of Russell's professed research interests.[7] The truth is that the psychological makeups of the two thinkers are quite different: One (Russell) is skeptical about speculative systems and "Bergsonian mysticism," while the other is impatient, at unrest when it comes purely formal considerations, and not histant at committing himself to giant leaps of thought that may transcend what is currently conceivable within the strictly mathematical framework. The former had probably inherited his dislike of "speculation" from the painful experience of

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[6]An earlier, more fundamental treatment of Uexküll's thought within philosophy can be found in Heidegger's lecture courses of the late 1920s, most importantly [67].

[7]In any case, Russell does not seem to have spent much time working on the problems of dynamics, evolution, and development, especially from the biological viewpoint, in spite of the strong influence of Leibniz and his respect of Bergson.

becoming Hegelian and then anti-Hegelian [70]. Distrust of German idealist metaphysical speculation may have left a permanent mark on Russell, who throughout his long career had expressed little enthusiasm for philosophers like Nietzsche or even a mathematically-inclined philosopher like Husserl [69, 71]. On the other hand, Whitehead's forays into speculative thinking and his rapid self-imposed distancing from the formal mathematical research that characterized his earlier works (before 1920) can be understood in light of his very complex relation with Russell. Very briefly, to a certain extent the magisterial work *Principia Mathematica* [72–74][8] convinced Whitehead, the older coauthor, that the long-held faith in the limitless potential of mathematics as the most powerful formal device in our possession that is capable of expressing the deep structure of reality is nearing its saturation point. This conclusion, which was not shared by all other mathematicians, need not be exactly Russell's interpretation of his own work, although he also changed directions after the war experience [68, 69]. In any case, it is conceivable that Whitehead not only *did* wish to distance himself from Russell's growing fame in order to reestablish a new direction of his own, but, even more, it is imaginable that the Whiteheadian texts of the 1920s may – at least partially – be understood as a reaction *against* Russell's groundbreaking mathematical and linguistic philosophy as it developed in the period 1900-1914.[9]

We are currently interested in the intellectual *historical* background to event ontology, especially as manifested by the work developed *after* Mach through the writings of Whitehead and Russell.[10] In a very rough sketch, it is possible to refer to Russell's well-known 1914 book *Our Knowledge of the External World* [12] as one of the earliest accounts of the ontology of events implicit in Mach and James but this time presented in a rigorous fashion. As indicated in the Introduction to the work, Russell appears to have an access to a manuscript by Whitehead which he used as a background for writing the chapter on causality and the event structure of the world. From the autobiographical writings of Russell, we know that such reference was the beginning of the breakdown of the relation between the two, especially if we remember the political context of their essential differences regarding the First World War. It is not important to "prove" the historical correctness of the incident or support the story from multiple sources. This is not the strategy of the present work which aims at providing a positive, constructive contribution to the problem.

Our approach is based on actually reading Russell's 1914 text and then comparing it to the first book-length account of event ontology published by Whitehead in 1919 [29]. The latter work is not as well written as the other Whitehead books published afterwards throughout the 1920s and beyond. In fact, while *An Enquiry Concerning the Principles of Natural Knowledge* [29] contains some of the fundamental technical ideas pertinent to event ontology, the formulation itself is not as explicit and detailed as it should be. While reading it, one gets the impression that Whitehead had not yet cracked the essence of his technical investigation of the possibility of constructing a comprehensive ontology of the world. This shortcoming would be partially alleviated by the publications of the next few years. Meanwhile, I cannot resist drawing certain quick conclusions as follows.

First of all, not only Russell's treatment of the problem – either in 1914 or in his later major work – was technically superior to Whitehead's, but it also appears as if the younger philosopher had knowingly avoided aspects of weakness in the unpublished earlier formulation by his teacher. To be more specific, Russell had carefully created a deeper metaphysical appreciation of the problem surpassing that of Whitehead. The full technical details of

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[8]These three massive books, published in 1910, 1912, and 1913, were completely written by Russell who often conversed with Whitehead on topics related to the foundations of mathematics. The order of the names (the older mentor Whitehead as first author) is largely symbolic.

[9]This view is not common or even seriously discussed in the secondary literature on Russell and Whitehead. However, it will be entertained in our work and supported by multiple reflections, although no extensive textual commentaries will be given.

[10]The full explication of how we understand the impact of Russell on modern philosophy is not discussed in details below but pointers and indicators are given throughout.

what events are and how they construct a world will be given in a different paper. For our purposes here, it is enough to mention that there is a high probability that Whitehead's quick publication of the rather hastily assembled book [29] might have been a reaction to Russell's *new* formulation of event ontology. As the story goes by, Whitehead published a *second*, much more organized and polished text, the great *Concept of Nature* [13], arguably his true masterpiece, in 1920. Furthermore, in light of Whitehead's growing public engagement with the meteoric rise of Einstein's fame in the early 1920s, he published a third book, this time on relativity [75], in the year 1922. The three books collectively may be taken to constitute some sort of a "trilogy on event ontology." In a hindsight, they represent some of the most remarkable contributions to the philosophy of nature in all time. Under the shadow of these three books, Russell went ahead and developed his *own* peculiar grand synthesis of mathematical philosophy and the philosophy of nature in the major book *The Analysis of Matter* [3], written in the period 1925-1926 but published in 1927. But by that time Whitehead had already moved away from strict event ontology and adopted a more Bergsonian approach in his other books [5, 76, 77]. Here we discover that Russellian mathematical philosophy is no longer the main object and apparatus of investigation; instead, biology, life, development – and some few Aristotelian themes – take center stage, becoming the main players in the Whitehead Universe.

It is not an easy matter to find in either Russell or Whitehead (or even Mach and James) a very convincing concise statement to the effect of why there should be anything like an event structure of the world. There seems to be no reason to assume the necessity of giving such statement in an account that aspires to present a fundamental ontological view of the world. Metaphysics is a movement of thought that emerges from the inner depths of the thinker's soul, only to freely wander around regardless to the pressures and demands of the intellectual sphere inside which the philosopher happens to find himself living at that juncture of time. As such, starting from Leibniz and going through Mach, James, Russell, Whitehead, Deleuze, there has always been an acute dissatisfaction with the inadequacy of the formal language adopted in the wake of Descartes's and Galileo's inception of modern science and mathematical physics. Since the early days of the Cartesian *Cogito* [78–80], conventional academic philosophy went ahead to build an increasingly idealistic account of reality. Although Spinoza and Leibniz both represent a refreshingly early anti-Cartesian reaction in mainland Europe, the truth is that everywhere in the Western world the unfolding of intellectual history disclosed a strong inclination toward the common sense philosophy of perception and introspection that can be found in Descartes's *Meditations* [79]. Indeed, John Locke's *Essay* [81], Berkeley's *Dialogues* [82], and Hume's *Treatise* [83] are all different ways of responding to Descartes's formulation of the problem. In the particular form we find in Hume, there is an unmistakable focus on psychology and knowledge, the problems of cognition and experience, and a shift away from the study of nature as such. The most complete and influential solution of the problem of perception and introspection was given by Kant in his monumental book *Critique of Pure Reason* [84]. Since then, it is safe to say that traditional and academic philosophy in the West has been circling around in a Kantian playground. The last great Kantian was Husserl, who worked laboriously for over 40 years to rebuild Western philosophy on rigorous basis [85–89] and unify it with nature [15] through the straitjacket of transcendental phenomenology [90–92]. His attempt was a philosophical failure, as Heidegger was the first to realize [93, 94], but the conventional community remains more or less Kantian *par excellence*.

## 3. Idealism: The Ideological Apparatus of Perception and Introspection

### 3.1. The (Dark) Legacy of Idealism in Western Philosophy

Idealism is inextricably linked to the decisive effect of the *ideology of perception and introspection*, that is, the unique manner in which Western thinking – since Augustine [95]

– has been viewing the cosmos and reflecting on the nature of the world. The invention of the Cartesian subject finds its roots not merely in Descartes's *Meditations* [79], the official founding text of modern Western philosophy, but goes back to the way in which a Hellenic elite, living in the western edge of the Near East, decided to reinvent the enigmatic teachings of Jesus but this time in the form of a highly-institutionalized Church dogma now called Western Christianity, and serviced by a systematic philosophical apparatus called theology [96–98]. The quite idiosyncratic manner effectuating this transformation reflects in turn the slow dissolution of the original impulse of Greek philosophy after Aristotle and Epicures and the remarkable philosophical experimentation of the Stoics, Neoplatonism, Skeptics, and early saints and martyrs operating within the new rising Christian creeds. The problem of morality – how to live and die – was very acute in the first few centuries of the Roman Empire [99–103] and had left its overcasting shadow on the entire cultural and spiritual landscape in existence at that time and beyond. The general tendency was then to turn away from the "outside" world and withdraw into the hidden strata of the "soul," the "deeper self" just discovered and elaborated by Augustine [95] in his own reworking of Plotinus [104].

The irony is that the Cartesian subject had been lying dormant within Christianity for well over a thousand years till the rise of capitalism and the bourgeois class which found its philosophical culmination in the person of Descartes [105, 106]. The latter, however, was never in deep opposition to the fundamentals of Western Christianity as is now incorrectly portrayed by some currents in mainstream academic philosophy. Most of Descartes' ontological concepts, and even some of his important scientific apparatuses, were taken over directly from the Schools [41, 107] but refashioned and refurbished in a unique manner faithful to the novelises of the rising new social groups conducting philosophy: the bourgeoisie or the middle classes [108–110]. In reality, Descartes replaced the Christian God (personal deity) by the Cartesian Subject (personal ego), in line with the political and economic changes that stormed Europe since the Renaissance and the beginning of the collapse of the Medieval Universe [111–115]. The ideology of perception and introspection initiated by the Cartesian Meditations has been humming in full – though latent – power for thousands of years.

The very important question on whether the Greeks themselves had entertained a conception of the Cartesian Ego is a complex one that has never been settled. It is well known that in almost all of his writings published so far dealing with the subject, Heidegger had consistently dismissed the orthodox idealistic Hegelian interpretation of history that posits a Subject or metaphysical ego-consciousness in operation everywhere in philosophy and nature, even in the pre-Socratic era (although some influential writers such as Adorno doubt that the "authentic" Hegelian Subject is actually a Cartesian Subject [116–118].) Accordingly, Heidegger believes that the concept of Ego Subject was completely alien to the Greek way of thinking [41,119–128]. This interpretation is based on the peculiar Heideggerian understanding of the ancient language and the Greek lifeworld, which is, in the main, very unorthodox and quite original [19,129]. In most of his presentations of passages from Greek philosophers, Heidegger had the habit of changing the translation of the original text in a way that not infrequently would clash directly with the accepted academic standards, which Heidegger did not bother about anyway. In spite of Heidegger's sweeping interpretations of ancient philosophy, if one forgets – just for the moment – about both the pre-Socratics and Aristotle in order to focus instead on *Plato*'s texts, it is not difficult to find numerous passages, remarks, expressions scattered throughout the dialogues, all strongly supporting the possibility of an embryonic conception of human ego and consciousness. Even the modern techniques of introspection (Fichte [130], Kierkegaard [131–133]) and dream analysis [134] may find some uncanny resemblances with the innovative Platonic dialectic method of dealing with mythological and poetic material and reconstructing reality based on remembrance of things past, something akin to a hermeneutical reconstruction of "history" [20,135,136]. In any case, the view that Idealism and Platonism are closely related is of course a signature of the

Nietzsche's position that directly influenced postmodernism as we will see later. For example, Deleuze, in his first major work, openly stated that his project is to "invert Platonism" [43]. Heidegger's position, of course, was considerably more complex and sophisticated, but also ambiguous by not openly committing Plato to the Idealist "enemy camp" though for all practical purposes Heidegger had never been as close to Plato as he had been to Aristotle [93, 94].

## 3.2. The Destructive Cartesian Revolution of Kant

The overarching structure of the Cartesian subject reformulated "critically" as Kantianism was very much the standard philosophical dogma in the last phase of modernism that ended with the National Socialist Revolution that brought Hitler to power in 1933. As the well-known story goes, following the nineteenth-century dissolution of German Idealism in its Hegelian form, there had been a shift in Europe toward science and technology, mass culture and open market societies [105]. The new rising industrial class founded a rehabilitated, streamlined version of "materialism" whose intellectual background was most convenient and appropriate to the new mutations of mercantilism, capitalism, and industrialization.

In such "positivistic" atmosphere, it was old Kant who came back to life in the gown of neo-Kantianism. Philosophy became *epistemology*, and the foundational undertakings by Kant in the field of metaphysics were quietly ignored. The main problem that faced the philosophical community at the time was how to ground thinking in scientific principles, to move scholastic and idealistic writings from the circle of speculations to the light of empirical certainty as revealed in the axiomatic deductive methodologies of modern science. Note that although the scientific method is usually dated to the works of Renaissance, Descartes, and Galileo, the truth is that *science* as a social activity accepted by the prevailing order independently of philosophy is really a very recent event, dating no earlier than to the 1830s. This coincides with the *decline* of the philosophy of nature, not its rise, a paradoxical result. Indeed, the main representative of the philosophy of nature in the period 1800-1830, most importantly Schelling [11, 137] and Alexander von Humboldt [138, 139], where followed by the first "modern scientists," intellectual and multidisciplinary figures such as Helmholtz [140, 141] and William Thomson (Lord Kelvin) [142]. It is debatable whether polymaths like Helmholtz and Thomson should be considered philosophers of nature. Also, Humboldt and Schelling were as good scientist as they could be. The transition from the cross-disciplinary approach to nature known as the philosophy of nature to the specialist fields of modern science is, therefore, very odd.

Nevertheless, with such a chronological peculiarity, the emergence of modern science *not* as philosophy of nature, but as a methodologically independent field of "disciplinary objective research," we may find some explanation of why Kant was taken back into the scene. The idea is that the entire First Critique [84] may be evaluated as a vindication of Newtonian mathematical physics but within the particular perspective of the theory of knowledge.[11] The starting point of Kant is *perception* (he uses the technical term 'intuition'), exactly as in the tradition of Descartes, Locke, Berkeley, and Hume [78–80, 83]. Spinoza and Leibniz, the two major figures of the seventeenth-century counter-Cartesian movement, do *not* figure up prominently in Kant's thought; in fact, the two are, after all, marginal figures in both Kantianism and German Idealism.[12] This last observation is important since it indicates how deep and long the entire Kantian project has been immersed into the ideology of perception

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[11]Kant's approach to the ontology of nature is less famous. The principal text is [143].

[12]This is still the case in spite of the positive position that Spinoza and Leibniz occupy in Schelling's and Hegel's own reconstruction of the history of modern philosophy [144–146]. In such texts, they generally claim to be followers of Spinoza (the philosophy of nature proper.) Schelling, of course, is much closer to Leibniz (and Spinoza) than Hegel, just consider his main work on the philosophy of nature [11], which is essentially a Leibnizian treatise in and through. Nevertheless, German idealism in general is deeply entangled with Plato, Descartes, and most importantly Kant, whose writings tend to overshadow others.

and introspection, the latter effectively in dominant position since at least Augustine and the Christian theological picture of a personal deity.

Now, one may ask why should the starting point in Kant's analysis be sense perception, a choice that reflects an implicit belief in the human mind as the most important source of knowledge in existence.[13]. Although modern *science* as a professional social field was still waiting for the next century to materialize, Kant clearly foresaw something fundamental here: It is with *nature* that thinking should be paired, not spiritual transcendence or mystic speculations. But the entire scope of this new grounding of thinking foundered from its very beginning: perception itself is not a brute scientific fact as the seventeenth century imagined itself discovering for the first time. Sensation is inseparable from a subject or ego that performs the act of feeling and receiving sense data. The act itself is a manner of *interpretation*, and hence couched in ideology from the very start. It took the combined titanic efforts of Marx and Nietzsche to teach the Western world this simple but subtle truth, and in recent time we find the best statement of the problem of ideology formulated – in a way that goes much beyond what Marx himself anticipated – by Althusser [21, 149]. Later, we will see how the Cartesian Subject itself is *produced* or constructed by the natural process of *ontogenesis* (Simondon speaks of *individuation* [6]). In this case, the Subject is only *one* of many individuals created in the ontological process and there is nothing particularly important or terribly significant about human consciousness.[14]

We agree with Kant that philosophy should be allied with nature but disagree on almost everything else: There is no Archimedean point centred at the human subject; and metaphysics must be constructed on "objective" grounds that don't leave any place for "subjective valuations," the latter are almost always entangled with ideology.[15] The main outline of the new ontology should not preserve a large space to perception and the problems of cognition.[16] Instead, we find the main task of philosophy, i.e., metaphysics, to be the understanding of the entire structure of reality, where reality means *nature in the large*, including both inanimate and animate matter, human and nonhuman societies [2, 5, 6].

The reaction to Kant in the nineteenth century was not as critical and destructive as some classical accounts project the problem. For example, in his popular writings, Hans Reichenbach triumphantly announces that general relativity had overcome the Kantian a priori in space by demonstrating that non-Euclidean geometry is not only physically possible, but even the only true actual real structure of our experience of space [150, 151].[17] Along the same direction, similar conclusions were held by Weyl in various writings, most notably [157]. Although such interpretation of Kant – widely circulating after the discovery of non-Euclidean geometry in the first half of the nineteenth century [158] – is not really tenable from the philosophical viewpoint (it involves a distortion of the original impulses of Kantianism), this point will not be pursued presently.

The other line of thought that will be picked up instead is the following: The crux of modern mathematical physics, in both its pre-Kantian (Descartes, Galileo, Huygens, Newton) and post-Kantian (Thompson, Maxwell, Einstein, Heisenberg) phases, remains essentially centered around the predominance of the *human subject* as the main agent performing the "duty" of what has become known as "scientific research" (a social field that already comes equipped with a whole battery of power relations) by "interrogating nature" through asking questions in the form of *experiments* and receiving answers by *measurement*. From

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[13]Well, this is the age of Enlightenment, see Cassirer's classic account of the period [147] Moreover, Kant's use of terms like 'legalization' and 'grounding in law' somehow betrays his hidden agenda, which is essentially a bourgeoisie Enlightenment project [109] aiming at establishing new foundations of philosophy closely allied to the natural science rather than religion [148].

[14]See also Heidegger's *Letter on Humanism* [128].

[15]In the extended Althusserian sense especially developed in his unpublished manuscripts [149].

[16]These two in particular are best dealt with in the *applied* fields of psychology and physiology.

[17]Reichenbach's mature views on spacetime are considerably more sophisticated, see [152, 153]. For a more recent careful investigation of the relation between Kant and the actual geometry of spacetime and the laws of nature, see [154–156].

the beginning, then, there has always been a *mind* to whom knowledge of nature must be referred, an inquiring Gaze endeavouring to disclose the underlying order in reality "hidden" (to whom?) beneath the thick surface of phenomena. The binary splitting of being in Kant into intuition and concept[18] is the new, innovative reformulation of the vexing Cartesian duality of mind and body. The ultimate goal of the entire project of Kantian Critical philosophy had been to push philosophy away from "objective metaphysics" by placing the former at a relational critical altitude that rigorously views the task of thinking from the vantagepoint of the knowing Cartesian subject. In this sense, after Kant, traditional Metaphysics – the Schools and Wolff's system – are deemed "dogmatic" precisely because the metaphysical attitude, following Aristotle, had been trying to establish a *supra*-subjective stand of which Nature is more fundamental than the Subject (Leibniz [10], Spinoza [159].) The most successful implementation of Kant's vision has been in modern mathematics and theoretical physics, a topic we now turn to.

### 3.3. Modern Mathematics as the Highest Form of Idealism: Hermann Weyl and the Geometrization of Nature

The rise of the commercial and bourgeoisie class, coupled with the impact of the Newtonian revolution, both signaled the need to reestablish the intellectual framework of the Western world on new grounds [160], which provided the background to the Enlightenment [147] and the celebrated movement of the second Copernican revolution of Kant [60, 161]. Within such parameters, the exact details of the Kantian *a priori* itself are not significant for our purpose here (the macrohistory of philosophy.) Whether space can be best modeled as Euclidean or not is indeed irrelevant to the true content of the Kantian message. Actually, as developed by Reichenbach himself in a way that remains unsurpassed up to date,[19] all geometries are essentially equivalent when it comes to the description of reality.[20] This represents a culmination of a train of thought, which started with Helmholtz [141, 162, 163], going through Poincare [52, 164], and ending up with Einstein's modern formulation of the problem in his general relativity, later taken up again by Eddington [165–167] and Penrose [45, 46, 168–170].

But it is the other way around: Euclidean geometry itself is *not* an idealized system; instead, it is the *formalized* outcome of the interaction between humans and nature. The formalization of a vast body of geometric knowledge enacted by Euclid represents nothing but a distilling of the very special *historical* manner in which our perception has been evolving since the emergence of *Homo sapiens* as a distinct species [171], i.e., the evolution of our geometric understanding of nature in and through our dealings with daily-life events and surroundings [172], as reached by the present state of civilization through Nature's historico-political development [27]. In one way or another, all non-Euclidean geometries presuppose a Euclidean core (the structure of perception) because the human mind, in its interaction with nature, reaches an "equilibrium of knowledge" between abstract mental categories and actual sense data precisely through the "optimim" model of Euclidean geometry [173]. Recognition of the deep nature of the interrelation between cognition and mathematics was available to Leibniz [10], who, paradoxically, appears to be still ahead of present-day thinking on the subject. One might even conjecture that Leibniz *avoided* Kant's mistake of positing a transcendental intuition of space, time, and causality, precisely because of his better understanding of the nature of cognition as a product of a strictly developmental process [174]. In this context, it is interesting to note that the biologist and philosopher of nature Konrad Lorenz, who was somehow "embarrassed" by Idealism and Kant's concept of the *a priori* in geometry, had proposed in several of his writings that Kant's philosophy of the transcendental intuition [84] should be reinterpreted on *phylogenetic* bases [175, 176], i.e., that epistemology

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[18]Forget for now about *reason*, a very problematic ideological construction that has little to do with formal ontology, at least for the time being

[19]The most important work is [152].

[20]See further analysis of Poincare's geometric conventionalism [52] in [156].

(Kant's core) *evolves* in a Darwinian fashion as humankind itself changes while interacting with nature. Karl Popper also proposed similar ideas [177].

After presenting various passages and analyses relevant to our topic, Lawrenz summarizes the status of the problem in the following way:

> We are limited, as has been said, by the fact that we are denizens of a a particular dimension, and by the further fact that our senses evolved for the primary purpose of detecting features in the environment that are important for us, but whose detailed or fine structure composition is (on the whole) irrelevant to this context. Precise shapes, straight lines and smooth curves are therefore the products of a kind of transformation mechanism with which our mind is imbued and which it performs virtually automatically. By the same token, we are endowed with cognitive capability which provides us with the means of self-reflective analysis of those very phenomena and thus, in imagination, to decompose (reduce) them in the effort to reveal what is normally denied to us, i.e., the aforementioned fine structure. As knowledge is apt to be 'useful' in the improvement of living condition. But philosophically regarded, this same faculty enables us to represent corporeal reality in a quasi-*dimensionless* setting, as aspects of reality which transcend those which our immediate access denies us.[21]

The context of the above quote is Lawrenz's penetrating analysis of Leibniz's philosophy of nature. Incidentally, Hermann Weyl, who generously quotes Leibniz in his major book on the philosophy of nature [179], does *not* seem able to grasp the arbitrariness and lack of ideality in geometry revealed by the above discussion. Like almost all other modern mathematicians, Weyl follows Plato in elevating geometry into a transcendental realm of fantastic idealistic perfection without paying the least attention to how frivolous the role played by human consciousness in nature. Therefore, in place of attempting to build a *non*-human mathematics, i.e., discovering mathematical structures that go beyond the Cartesian knowing subject and its straitjacket of perception, Weyl went ahead and announced the following major axiom guiding the student of nature: "The objective image of the world may not admit of any diversities which cannot manifest themselves in some diversity of perceptions; an existence which as a matter of principle is entirely inaccessible to perception is not admitted."[22] In other terms, what cannot be distinguished in perception does not exist: *Being in mathematical physics is reduced to perceptual differentials.*

Weyl, and together with him modern mathematical physics, is fanatically idealistic in general, and devoutly Kantian in particular. This strange revelation may strike the nonphilosophic reader as blatantly wrong since in popular accounts science is often presented as a staunchly materialistic affair. There is actually no contradiction here. Idealism and mainstream materialism are *both* expressions of the same concept, the *Cartesian ego-consciousness*. In fact, they are both the product of the Cartesian project's concomitant power relation: the ideology of perception and introspection, which founds – and maintains – the Cartesian Subject in both the individual's psyche and the various social strata of the public sphere. Idealism and the main currents of materialism are post-dualistic movements responding in their own ways to the notorious dilemma of the mind/body problem bequeathed on us by Plato's, Augustine's, and Descartes' legacies, but while remaining completely within the particular framework delimited by the *epistemological* parameters of the knowing subject.

Present day materialism should not be confused with the pre-Socratic naturalism of the Ionian school [180], the former being essentially a modern invention, even if traces of the concept of consciousness can be found in Neoplatonism and Augustine. The key aspect of our problematic here is the strange coexistence of *both* a superficial materialist ideology in science, most aggressively in biology, and a latent deeply idealistic foundational attitude under the surface, more transparent in theoretical physics and pure mathematics than other

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[21]Lawrenz [178], page 212.
[22]Weyl [179], page 117.

disciplines. Examples abound. The measurement theory of orthodox quantum mechanics (Bohr's Copenhagen interpretation [181] and its offspring [182]) is a very explicit *Kantian* formulation of the laws of nature.[23]

In pure mathematics, the almost universally-accepted (or at least most popular) "philosophical worldview" is naive Platonism, which, by the way, is – for all practical purposes – the same as Platonism [186]. Working mathematicians simply believe in the factual existence of mathematical objects in a third Platonic world (besides mind and nature) where they enjoy a superior form of existence. To my best knowledge, the most powerful advocate of Idealism in contemporary mathematics is Roger Penrose, see especially his vivid depiction of Platonism in [46]. This concept of plain Platonism as a foundation for mathematics received a devastating criticism in the masterful essays of Albert Lautman [187], who was also inspired by Heidegger's ontology.

Even though it is not an easy matter to accuse Plato of being a common-variety idealistic philosopher (we agree with Heidegger that there is nothing further from truth than treating Plato as a Cartesian Idealist [125, 127]), there is no doubt that his popular writings (the dialogues) provided the foundational material in the West to nurture both Christianity and idealism, with their common root to be located in the structure of ego-consciousness. In one of his most direct passages, Weyl unconcealed the latent idealism lurking behind the bulk of the mathematico-philosophical insights scattered throughout his vast writings:

> Postulation of the external world does not guarantee that it will constitute itself out of the phenomena through the cognitive work of reason as it attempts to create the concordance. For this to take place it is necessary that the world be governed throughout by simple elementary laws. Thus the mere positing of the external world does not really explain what it was meant to explain, the question of the reason of the world mingles inseparably with the question of the reason of its lawful mathematical harmony. The latter clearly points toward another direction of transcendency than that of transcendental world; towards the origin rather than the product. Thus the ultimate answer lies beyond all knowledge, in God alone; emanating from him, the light of consciousness, its own origin hidden from it, grasps itself in self-penetration, divided and suspended between subject and object, between meaning and being.[24]

It will be seen that the idea of God adopted by Weyl above is not the same as the more sophisticated ontotheological concepts developed by Whitehead [5] or Zubiri [188]. Weyl's is the naive idealistic version (usually attributed to Hegel and the German Idealism of Schilling) in which self-reflection and the "return to the self," self-consciousness, present the essential structure of the Absolute or Divine in nature. In the Western tradition, God is basically a cosmic form of the human subject [189–191].

## 4. Nature, Language, and Consciousness

### 4.1. Is Language Isomorphic to the World?

How did consciousness, ego, and the subject emerge from under the long shadow of pre-seventeenth-century era? While no fully satisfactory answer to such enormously complex question can be given here, our narrative will deploy some aspects of human psychology

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[23]We don't have space to argue this in details given the enormous size of the literature on the epistemological foundations of quantum physics. Note that the Kantian origin of the Copenhagen's interpretation is sometimes underplayed even in the technical expositions of the philosophy of science. But modern quantum theory was developed in Göttingen [183], Hilbert's playground and center of global influence, which is very Kantian in spirit and orientation [184]. For example, John von Neumann, the main architect of the measurement theory [185], is a student of Hilbert and shares with him the common German tradition of Kantianism.

[24]Weyl [179], page 125.

[192–194], in conjunction with basic elements of ideology [21, 149], in order to construct an approximate philosophical sketch of the background to event ontology (the main subject of this paper.)

We don't know yet how the brain works in details, and no clear demarcation between mind and its material biological substrate can be drawn as yet [195,196]. What has dominated speculation and thinking about the subject is an extraordinary boldness of imagination on the part of philosophers, backed by meticulous and shrewd direct observation of the Other (perception) and the Self (introspection.) The masters of the latter method, Augustine [95], Descartes [78–80], and Fichte [197, 198], knew very well that the structure of the outside world does *not* seem to be isomorphic to the dizzying, infinitely multiplying constellations of inner states we call feelings, affections, moods, ideas, images, etc. Nevertheless, they went ahead and postulated that such isomorphism *could* be found in principle. In a nutshell, what that amounts to is the quasi-religious belief that *inner thinking is capable of disclosing the deep structure of reality.*

Such a powerful credo can be located in ancient philosophy, in fact as early as Plato's dialogues, where contemplating nature or discovering new findings about the external world through purely logico-mathematical analysis was endorsed as a research method. In a certain way, Plato had inherited the pre-Socratic naturalistic tradition, adopting it to his needs, although without avoiding criticizing his illustrious predecessors, sometimes introducing essential modifications of their teachings. Starting with the Academy, it became generally accepted that *language*, a generic term that includes speech, logic and mathematics, reflects the structure of the outside world. 'Language' and 'form' are the main terminological ingredients of relevance to the philosopher's inquiry into the fundamental constitution of nature: he who knows how to speak, analyze, deduce, and compute, is master of his environment and society.

The vocation of man as an *intellectual* quest was determined by Plato at the inceptual moment of the post-Hellenic era. Later, it was totally absorbed into the modern Western world during the anti-Aristotelian reaction of the Renaissance, which decided to return to Plato [107], and the rise of the Baroque in seventeenth-century Europe [199]. This can be seen very clearly in Galileo's fine writings and his carefully composed scientific propaganda: The book of nature is written in precise mathematical words, the language of the world is (Euclidean) geometry, thinking is guided by observation (the role of perception) [200, 201]. On the other hand, Descartes had not only developed the actual mathematical language by algebrizing geometry (the invention of analytic geometry in his great 1637 book *Geometry* [202]), but even more went ahead and developed scientific *methodology* as such with *explicit* focus on the extremely delicate manner in which minds interact with nature via the senses, for example in *Discourse on Method* [202] and the *Meditations* [79]. Although Galileo's dialogues [200,201] are full of brilliant elaborations of the mechanism of the senses, especially *phenomenological seeing*, it is *Descartes* who should take credits for founding modern scientific *epistemology* and *methodology*.[25]

While each member of the philosopher-scientist pair Descartes and Galileo had written in a very accessible and lucid prose style that remains unmatched in the history of letters, the question now is this: Did this modern Cartesian common-sense philosophy provide a single convincing justification of the quasi-religious credo that *language reflects the structure of the world*? The answer is plain *no*.

For what is language as such? Consider the examples of the Greek language and mathematics. The latter was handed down to Plato after centuries of development, first in Mesopotamia and Egypt, then India and Hellenic world [204] (formal logic in particular was to be developed shortly later by Plato's pupil Aristotle.) The Greek language was influenced by

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[25]It appears that this is also Heidegger's view. To my best knowledge, throughout his voluminous historical reflections on philosophy, Heidegger tend to concentrate on the figure of Descartes, not Galileo, as the main founder of modernism and scientific methodology, see, for example, [41, 119, 120, 203].

Egyptian and West Semitic cultures [205]. Both forms of language – Greek and mathematics – can be considered, at that time, to be in a sufficiently advanced state of maturation: They both had reached by Plato's time sufficient stability in structure allowing for clear and unambiguous expressions to circulate for use in widespread communication between very different types of subjects. This observation, that *effective* communication of thoughts, feelings, and findings using Greek and mathematics was already an established fact by the time of Plato and the Academy, is an indication that the *social* character of the language discourse had been already firmly established in the Greek lifeworld, and that *ideology* did succeed in consolidating the linguistic sphere of communication, which first influenced Greek philosophy itself (conducted using Greek and mathematics), then subsequently Idealism.

However, the point to be made here is not political but *ontological*. The *form* of a language existing (and operational) in any social group is that complex developmental outcome brought to the horizon of historical visibility through the *ideological apparatus* of consciousness/unconsciousness, whether collective (pre-Augustine, pre-Descartes), or personal (post-Christianity, post-seventeenth century). But if this consciousness (and its logical expansion into unconsciousness) is not to be equated with the totality of nature, then why should a "mere product of ideology" be taken as continuous with being *per se*?

The answer is this: Thinking and being are *not* the same unless idealism is to be accepted as the *de facto* ontology of the world. (Destroying such a globalized version of Idealism is one of the first tasks of event ontology and the philosophy of nature.) The interpretation of the Parmenidean saying ('thinking and being are the same' [206]) should always be treated with utmost care since we don't know how the Greeks understood concepts such as *Logos*, *Nous*, *thinking* [126, 207, 208]. Our modern background always intrudes, mixing in an unwarranted, semiautomatic biased and one-sided interpretations, for example while reading Platonic texts addressing introspection and the description of the thinking process [127, 209]. To be sure, 'thinking' as a *cosmic* expression of evolution and progress is itself thinkable [5, 210, 211], but equating thinking and being on the basis of a thinking *subject* is an altogether different matter. In a certain sense, the German Idealism of Schilling [212] and Hegel [213] foundered on exactly this step: Although they railed against what they had taken as a personalistic bias in Fichte's system of transcendentalism [144, 214], the actual model of their attempt to build an ontological *non*-subjective Subject turned out eventually to be nothing but the *psychological* data of ego-consciousness. Something similar happens all the time in philosophy: you meet a profound thinker who deliberately strive to avoid the narrow constraints of the limited human empirical subject only to fall back into the same trap toward the end (Hegel [213], Husserl [90], Sartre [215], Merleau-Ponty [216, 217], Gadamer [20], just to mention some key figures.)

### 4.2. Idealism's Ontologization of Consciousness

We seem to be facing the following dilemma: should the historical narrative start with language or the ontology of consciousness? But if the former is produced by the ideological apparatus of the latter, isn't it possible to bypass all talk about the ego or the subject and focus instead on logic, mathematics, and grammar? The last alternative appears to have been the choice of many philosophers, most notably Heidegger who consistently attributes subject ontology to the Cartesian *Meditations* [79]. Among the notable writers who opted for a choice based on elevating consciousness to a cosmic level the most famous are Schilling and Hegel, who actually were pioneers of inventing the *historical* method of doing philosophy. In the aftermath of the dissolution of German Idealism, the cosmology of consciousness became unpopular and even suspected of mysticism and speculative nonsense, Hegelianism in particular described as wild and mad dogmatic edifice that has no roots in reality.[26]

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[26]It is within this background that one may understand the celebrated movement of *modernism* and the later so-called *Linguistic Turn*, the two are actually inseparable and deeply connected internally at the "production phase" of *ideology* as will be explained in more details later.

Therefore, even though most writers agree that the Greeks did not know a modern ego-consciousness in the form of free individual subject, they converge on a parallel story about the intellect, *Logos*, *nous*, mind, and so on, all are terms addressing complex notions grappling with (yet unclear) understanding of order, chaos, motion, creation, annihilation, light, reason, eternity, and similarly. According to this second story, the Greek world *did* have a formal structure encapsulated in its speech and mathematics.[27] These formal elements provided the first elaboration of a theory of being in the pre-Socratic schools and constituted the sum total of knowledge that was handed down to Plato and his followers. They are not typically viewed as part of any epistemological setting since – here – the concept of knowing subject is not assumed to be to have existed yet. This is probably one of the motivations behind Heidegger's infatuation with early Greek philosophy, for he sees here 'thinking about being in its purest form' just before the subsequent contamination of metaphysics with the ego or subject of Augustine and Descartes, followed by the later resurgence of transcendental philosophy. However, it remains questionable whether any formal element can really be taken as "pure" without full phenomenological elucidation. The way Heidegger selected Greek elements and subjected them to meticulous – and in many occasions almost otherworldly – analysis cannot simply be considered the normal mode of exposition in the history of philosophy. The truth is this: most commentators deal with the formal in the Greek lifeworld (let us call it here the ancient *Logos*) in a manner emphasizing the *lawful* structure of the discourse. What is formal is that which can be subsumed under a law. Obedience to strict order or rule following are here the essences of the common understanding of *Logos*. In the good will of a scholar writing about the Greek lifeworld lurks the desire to see something different from our modern world with its quantum physics, symbolic logic and computing machines, leading to the desire to envelope the ancient formal with meanings and system of valuations beyond what we can see in ourselves now. But the ultimate outcome is that the scholarly account almost always ends up rediscovering how close we are after all to Greek concepts. The concepts of number and geometrical form, harmony and propositions, measurement and prediction, had been all in circulation in the Pythagorean and post-Pythagorean Platonic eras. The modes of expressions are different, no doubt, but this is mainly because the social and technological nature of the ancient and modern world dictates problems of contrasting values. At the end, eventually, the ancient formal turns out to be the background of the modern formal. The continuity, in our view, is a direct result of the fact that the *same* ontological genesis was at stake in both cases: the ideological apparatus working under a hidden (ancient) and explicit (modern) ontology of consciousness producing the language device or machine. The birth of the formal in the ancient world is one of the earliest signs of the victorious breakthrough of ego-consciousness in the human being.

The ordering of our public knowledge of speech in the form of *grammar* is the start of the decline of language and its departure from the ethereal Heideggerian state, the "house of being" [218, 219]. The formalization of the mathematical by the Hilbert program [220, 221] is similarly the signal of the end of the highest form mathematics has attained at the hands of Cantor [222, 223], Klein [224, 225], and Russell [226]. The writing of a state constitution is the sure sign that an autonomous collective body, the Jasperian *mass* [227], has taken hold of the human group. Formalization and the imposition of rules is a degeneration and fall from the edenic heights of immediate being into the tyranny of reflection and intermediate knowledge, mediated interventions by others and the building up of nested circles and convoluted tracks culminating in the trap of self existence, auto-genesis of form, transcendental God, and all other formulas for living and thinking that have been in full currency throughout the last ten thousands years of the history of human civilization [228, 229]. To quote Deleuze, the "royal way" goes through axiomatization [8]; and in our view, this is precisely the dreaded domination of our lifeworld by authoritarian systems of rules created by the capitalist ideological apparatus in order to serve a weakened, *de*-centered whole: a blind, free-floating

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[27]And maybe the embryonic methodology of natural science which however had to wait Aristotle for its full initial clear articulation.

mass of robotized labor force, exactly as prophesied (in the political and cultural spheres) by Marx [230], Nietzsche [231], and Simmel [232].

The law is a rule to be followed always for the sake of *other*. The concept of law and the idea of the other are organically connected. This is why the emergence of the paradigm of natural law in the pious seventeenth century had always been related to the problem of the existence of God [199]. The century of science now introduced a new meaning for Deity in contrast to the falling Medieval world. God is the absolute other to whom the lawfulness of the rules of nature must be contrasted. This very mechanism of law and other is an advanced stage of the growth of ego-consciousness and represents the solidification of new forms of power and control in the intellectual and cultural space. It is then not incidental to notice that Descartes started a very conspicuous movement in mathematics: algebraization [202]. The first outcome, analytic geometry, was a great success, but Galileo did something very similar when he converted temporality into time measurement [200, 201]. Algebra is 'the science of rules and their manipulations' [233] so by disclosing a hidden algebraic structure the modern mind rejoices in frenzied intoxication since he has stumbled on the ultimate method for controlling the object under his gaze. The arithmetization of space (geometry) and dynamics (time measurement) is the outcome of the combined efforts several creative minds living in the first half of the seventeenth century, with the main credits going to writers such as Viete [233], Fermat, Gassendi, Descartes [202], and Galileo [200, 201]. In the twentieth century, modern mathematics has drifted into the Cartesian-Galilean arithmetization/measurement project under the influence of Weyl and his followers, and it is safe to say that the hallmark of the post-World War period ("American Mathematics") is the increasing tendency to *dominate* mathematical knowledge by algebrizing everything possible.[28] The idea of *law* revisited by Kant in his critical philosophy is the direct and explicit formulation of such tendency. By grounding both *concepts* and *acts* in *a priori* laws and imperatives, the *other*, as an ontological category, was displaced from the seventeenth century's God into the new rising alternative: the modern *bourgeoisie* man and his philosophical dressing as a Cartesian-Kantian subject [109, 118, 148, 160]. Thus, underneath the most formalistic consideration, there always lies hidden a dominant pole silently enshrouding the whole abstract space of abstract calculations, injecting "meaning" and semantic values into what would be otherwise empty manipulations of discursive conceptual and symbolic elements. This silent dominant pole, whether Foucault's Gaze [237, 238], Deleuze and Guattari's Black Hole [8], or the Jasperian *mass* [227], is nothing but a lingering shadow of the Despotic Signifier of ego-consciousness [191] supplying the body social with its lawful order, complete with its complimentary necessary *other*, hence regulating the formal (social) game in a way not much different from its earliest manifestations in recorded history [25] and the later ancient Greek world [208].

We have found that the Platonic project of constructing our understanding of the world on the basis of language (mainly, Greek and mathematics) represents – in a quite convoluted way that is not fully understood yet – one of the earliest forms of the ontology of consciousness, which swept through the disintegrating Hellenic world after Aristotle and later metamorpisized into Western Christianity then modern philosophy (Descartes, Hume, Kant, Hegel.) How such conclusion can be be made fully explicit in terms of the formal elements of speech and mathematics is beyond the scope of this paper but will be addressed in future more specialized publications. It is nothing less than a complete reconsideration of syntax, semantics, mathematics, logic, effectively launching a new critique of the foundations of formal ontology in the wake of Heidegger's contributions to the problem.

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[28]This is the new term for 'axiomatizing'. Category theory as the last attempt so far to implement the Hilbert program [234]. Saunders Mac Lane, co-founder of the theory, was much influenced by the Göttingen school in general, and Hilbert and Weyl in particular [235]. In his book on classical groups [236], Weyl advocates that algebra should be understood as a discourse extending measurement via numbers into measurement via new algebraic structures (still modeled on the abstract properties of numbers.) It is admirable that Weyl always thinks about mathematics in connection with the study of nature, but we cannot accept his philosophical presupposition of idealism.

But our main endeavour here is *not* a relapse back to yet another form of critical philosophy like Kantianism [60, 84] or the Frankfort School [160]. The fruitfulness of all manners of negative dialectics can be verified in, we believe, is the failure of Adorno's metaphysical project [116], the opportunism of Habermas [239], and the hidden ideological bias of Kant and neo-Kantianism [108, 109].[29] After following the very different approach to the problem of ideology taken up by Foucault in the shadow of Althusser, there is also the chance of examining the extraordinary career of the Deleuzeo-Guattarian social ontology of *Capitalism and Schizophrenia* [8, 25, 190, 191]. Such themes will be integrated in details into our future positive contribution to fundamental ontology and also the critique of formal ontology initiated by Heidegger. For the time being, our main intention here is to illuminate this general orientation by selecting *event* ontology as the vantage point of the whole historico-philosophical inquiry.

However, even after – or in spite of – our recognition of the *ontological* role played by *ideology* in the formation of language, the actual details of how consciousness emerged into the scene remains as an unsolvable enigma as before. Since the so-called inert matter, inorganic substance, inanimate entities are what are typically taken to constitute the "neutral" mode of existence in the world, the disturbing fact that something radically different like mind or soul lies side by side with the "passive" dimension of being-there deeply troubled the Greeks long before the invention of the notorious solution known as Cartesian dualism. Aristotle's *De anima* [240], probably one of the greatest philosophical texts of all time, is essentially an attempt to solve the problem in a radically new way. The outcome of this mesmerizing book was that, strictly speaking, consciousness is nothing, not in the sense of being an 'epiphenomenon', to use a currently popular expression, but literally "nothing special" because it is *already* infused with the deepest structure of being itself: *potentiality*, i.e., the very latent possibility for the actualization of potentials *as such*. This answer (which tacitly equates perception with consciousness) did not make Nature much easier to comprehend than before, but it fired up the imagination of some of the best minds throughout history such as Plotinus [104], Avicena [241], Averroes [242–244], Leibniz [10], and Heidegger [18, 30]. But before entering the battlefield of proper ontology, which will occupy us for the rest of this paper and future ones, it is probably convenient to stop for a while and reflect on how the question of the emergence of consciousness was conceived before.

As discussed above, starting with Plato and the Academy, it was starting to be realized that the structure of the mind reflects (not refracts) the reality of the actual world. Besides the usual interpretation of the Ideas as perfect templates for the construction of the real, one may view the introduction by Plato of such ethereal, highly abstract "concept-objects" as a technical solution for the problem of knowing and perception in the following version:

$$\text{knowing perception} = \text{being}.$$

This idealistic interpretive ontological prescription, which is neither true nor original, sheds some light on how the disconcerting lack of solid ground for establishing the celebrated isomorphism between mind and nature did not prevent the deliberate invention of such isomorphic correspondence in the form of a *third* world, the universe of the Platonic Ideals, which serves, epistemologically speaking, as a *mediator* between the embryonic germ of the subject (mind) and the corresponding germ of the object (nature.) It is indeed the Idea that transfers reality into the images formed via sense perception by ascribing "objectivity" to the latter but in the inferior state of a *copy* qua the defective mode of bare *similitude* to the original perfect design laid safely in the absolute realm of this third sphere [31, 245].

Platonism, like Cartesianism, is a variant of that notorious species of contemplation known as 'common sense philosophy'. It is therefore no great surprise to see here how the example of the craftsman and the maker of tools and things, the artisan of the Athenian state,

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[29]Ironically, the latter project (neo-Kantianism) was masterfully dissected by the Hegelian Adorno himself [118, 148, 161]!

supplied the aristocratic Platonic academician with the bread and butter of his philosophical resolution: the making of things according to *designs* conceived *in advance*, the ideal form toward which real, perceived objects comport themselves in the cosmic endeavour of being and becoming.[30] Sensed-being *becomes* object only through the Idea of objecthood, which is neither exactly the sensed nor the final perceived object, but a most noble "third party" that transcends the two major Kantian players, intuition and concept.

### 4.3. Idealism and the Object

We can see then that explicating the genesis of the concept of object had been the essential content of Plato's theory of Ideas. Common-sense philosophies, mainly Platonism, Cartesianism, British Empiricism, Kantianism, Hegel's theory of essences, Husserl, and modern mathematical physics (Weyl, orthodox quantum mechanics, general relativity, neo-Darwinism), are all different solutions of basically the same problem formulated very carefully, for the first time, by the Platonic Academy in Athens. Here the existence of the object is posed as a problematic pole that should be explained away by generating a certain body of philosophical analysis. For example, empiricism strives for a solution that grounds objecthood in direct experience, which is expressive and relational [42]. Kant, on the other hand, goes a bit further and suggests that the concept of object must be based *not* on experience itself, but the *structure* of experience [84]. Hegel's concept of *essence* in *Logic* [213] is a direct development of the Kantian key idea of *invariance-in-multiplicity*, while Husserl's transcendental phenomenology [90,91] and Weyl's group-theoretic relativistic invariance [179,246] are very close to the same Kantian core.[31]

It is, after all, the signature trait of modernism that the grounding of objecthood has been sought in a strange, fluid, and fuzzy structure called *ego-consciousness* resembling nothing we may observe in the world of "real objects out there." The paradoxical import of this fundamental discursive transformation passed unnoticed by early modern Western thinkers, with the exception of Spinoza and Leibniz in the seventeenth century [159,178,199,247]. In the twentieth century, the most important critics of the dogma of the subject were Carl Jung [192,193,248] and Heidegger [18,249]; Russell and Bergson [1,250,251] (Whitehead as a synthesis of Russell and Bergson); Foucault [245,252] and Deleuze [31,43] (Althusser as an imaginary mediator between Foucault and Deleuze and a seer for both.) The combined effort of their titanic undertakings have now convinced us of the fatal flaws of the philosophical program of idealism, particularly the specific modernist solution given under the guise of a *subject* modeled on ego-consciousness.

The noted "ontological incongruence" of the philosophical concept (subject) on one hand, and the psychological basis of ego-consciousness on another, seems to have been grasped in a fundamentally correct manner by Jung [192,193] although he did not couch his criticism of Freud's personal unconscious in philosophical terms [253–256]. It is also possible to include Bergson's thinking in this direction if the 'intellect' severely attacked throughout his main writings [1] can be associated with a form of reason or mind developed in the wake of the Enlightenment and its canonical Cartesian heritage. On the other hand, Russell himself has been always critical of Descartes and Kant, consistently avoiding both naive and sophisticated theorization about consciousness. The system of Whitehead combined the best of Bergson and Russell in a unified edifice where feelings and perception where detached from their contingent human carrier and ascribed to the totality of being. Following the grand critique of metaphysics by Heidegger, both Foucault and Deleuze developed, via very distinct modes of research, the *nonhuman* forms of philosophical experience deliberately designed for displacing the center of ontological seeing from the subject to nature itself. All these directions of

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[30]Cf. Heidegger's destructive construction of this history of Platonism in [41].

[31]If the parameters of this epistemological problem are to be rigoursly fleshed out by means of a traditional metaphysical jargon, then we may invoke term-pairs such as *permanence* and *change*, *being* and *becoming*, the *one* and the *many*, and so on.

thought will be explored and further expanded in future works by the author.

In the history of subject ontology, the conviction that the ultimate roots of that philosophical elaboration aiming at unlocking the secret of objecthood as such must be located at the level of the ego-consciousness pole had lead, quite naturally, since Descartes and via Locke, Berkeley, Hume, culminating in Kantianism, to the notorious concept of *phenomena*, one of the most confusing and misleading terms in the history of Western thought. The direct meaning conveyed here is "appearing," and hence the connection with the seeing function exercised by an agent, the subject. 'Phenomena' implies the manner of showing itself or the inner possibility of disclosure in the world. Framed in nonsubjective language, the phenomenal should really be interpreted as the enactment of a fully-fledged *relational dynamics* within the unique zone of interaction confronting the organism and environment. However, throughout its history, the term had been employed in multifarious modes of expressions; not infrequently, different usages implied contradictory conclusions and results.[32] Since idealism puts the focus on the *knowing* subject, the systematic deployment of the expression 'phenomena' blends smoothly with the reductive manner in which the world according to this philosophy is referred back to ego-consciousness, the latter viewed as a "center of emanation" legitimizing *existence* itself by the use, or rather abuse, of the theory of objecthood.

In Idealism, We don't have the object-in-itself, but instead its bundle of associated modes of appearing, or zones of visibilities, perpetually forming, fading, and getting extinguished, then popping out again, all amid the continuous perspectival flux of subjective experience. However, "reason" desperately looks amid this madness of permanent change for a permanent nonchange, fixedness, or constancy. The dialectic of change and rest has been a revered recurrent theme in philosophy since the dawn of human civilization, in fact probably going back to the earliest formations of primitive religions and mythologies. The Greeks had certainly mastered the problem using the pregnant power of their philosophically rich native language and handed it down to Plato who transformed the topic into a central tenet of his thinking (and consequently ours.)

### 4.4. The Adumbration of the Real

The modernist turn, Kantianism, presents the onset of the search for a solution that is *formal and relational*. In a style of thinking dominated by the ego's vantage point, the inherent multiplicity of appearing – characteristic of perception as such – was elevated into the status of the "stuff" of reality, while the essence of the object was bracketed and taken as the ultimate unknown X, the *residual* effect remaining after "performing" all possible modes of perspectival *adumbrations*, to use a favorite Husserlian terminology [87–92]. The subject *acts* by performing this necessary change of perspective. 'Change' here symbolizes variability in manifestation within the ego-consciousness's experience, and hence phenomena are generated by the multiplicity of angles, sides, views throughout which the unknown X let itself be given to the subject. But how do we get a unified "thing" out of this flux of change? It is here we find the Kantian signature of the solution, the theory of *reason*, intellect, or the cognitive core of the human mind. Kantianism attributes to the subject a forming power capable of fixing the violent stream of multiplicity of appearances and eventually creating a static object, a *thing*. Dynamics is overcome and a static conception of the world is enthroned. The technical apparatus of this fixing process is the theory of categories that Kant borrowed from Aristotle and logic. *Formalization* then takes precedence over the relational dynamic dimension of modernism by ascribing to the psychological process of judgement an ontological status.

Eventually, the global picture of the world constructed by the Kantianism of Kant and

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[32]The Heideggerian project of the destruction of the history of Western metaphysics contributed significantly to clarifying the context and meaning of such innocently-looking words such as *object*, *phenomena*, and *world*, and how they are entangled with *ideology*, although the last term is not used by Heidegger.

Husserl boils down to two classes of concepts, phenomena and ego-consciousness. The world is essentially a cluster of appearances and views that become comprehensible only in relation to that enigmatic, inexhaustible central pole of knowing-perception. Phenomena, according to this view, *are* nature, and the study of the "real" world is reduced to the organization of our knowledge of the structure of happenings "out there" as they reveal themselves to us through measurement. Consequently, the Galilean celebration of observation and experiment is in perfect harmony with the new transformation of philosophical thinking distinguishing modernism, incidentally explaining the hostility of modern science to the scholastic concept of substance. According to the mainstream understanding of this problematic term, the *substantial* persists in existence without anything else, in particular, it does not need a knowing subject to appropriate its ownmost being. In direct contrast to substance, *phenomena* are what is nothing in itself except that it comes into life only through interaction with ego-consciousness. Nature is then equated with some "proper residue" obtained by processing phenomena using the intellectual apparatus of mind, most prominently mathematics and empirical observation. This completes in Kantianism the bifurcation into nature and mind, no doubt an echo of the dualistic outlook inherited from Christianity and Descartes. Although the parallelism between the two pairs of bifurcations, nature/mind and phenomena/ego-consciousness, is not straightforward, the salient feature of this historical presentation of the genesis of the modernist (now dominant) conception of the world follows closely the idealistic core implicated by the ideological apparatus of perception and introspection, which also generates the classical subject/object structure and its numerous offsprings and offshoots. By reflecting nature through the mirror of mathematical physics and its concomitant doctrine of measurement, a form of personal consciousness was infused into the totality of external things under the dangerous label of 'phenomena.' While the new science was openly combating anthropomorphism, a personal, certainly subjective, element was smuggled back into nature under the guise of *methodology*: experimental observation and the paradigm of Euclidean geometry (geometrization of nature.)[33]

From the perspective of event ontology and its critique of Idealism, the most fundamental methodological principle in Kantianism is the following:

> **Kantianism**: *The real is not the phenomenal, but what remains after subtracting or bracketing all perspectival fluctuations and variations of visibility.*

But whereto an unchecked application of such maxim takes us now? Nothing less ambitious than the *modernist theory of essence par excellence*, developed in various ways by Kant, Hegel, neo-Kantianism, Husserl, mathematical physics (Weyl, Dirac, von Neumann, etc), and still evolving up to date by others. We believe that the germs of this theory can be traced back to the multiple interpretations of Plato's dialogues known as *Platonism*, which unfortunately have not been paying serious attention to the great efforts excreted by Aristotle to combat this understanding of the popular writings of his teacher. There has been from the beginning an emphasis on the "eye" and the way its owner, the human subject, views the outside world by direct observation. Although Platonism is a fluid, unregulated, inarticulate whole that is sometimes self-contradictory in character, there is, after all, a fundamental priority, reserved by the Greeks in general, and Plato in particular, to the function of *seeing*.[34]

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[33]As will be studied in details somewhere else, there is a very strong connection between *ideology* and *methodology*. If we accept the proposal that idealism is one (ontological) outcome among others created by the machination of the subject ideology [30, 249], then the entire affair of the classical dualism of nature/mind utterly collapses, revealed in its true essence as not really a genuine philosophical dilemma in the world of ideas after all, but rather a problem in the "meta-world" of the *production* of ideas, something very different indeed. Highly theoretical concepts such as meta-world, second-order world-historical concept formations, spaces of idea productions, etc, to be delimited from within a rigorous ontological framework, are outside the scope of this paper. This is a very interesting subject to explore that deserves more attention from philosophers working within the continental tradition.

[34]Augustine would later expand the technique found in Platonism and Neoplatonism into the

This apparently unremarkable personal trait of humans shared with many other animals fascinated the ancient mind and provided the motivation for the unusual prominent position played by optics, the science of light, in the evolution of intellectual history. *Light*, the medium of seeing *par excellence*, is the carrier of knowledge and the generator of reality as experienced in the perceptual orgy of perpetual daily life encounters. It also envelopes the almost surreal nocturnal realm of our private sleep and dream spaces, making contact with different worlds again through a mental eye that captures images of incorporeal beings. Even the elusive spheres of fantasy and imaginations, different from both dreams and the perceived, are exemplary visual meetings with self-created entities although belonging to a distinct phenomenological category. This primordial precedence of seeing supplied the context in philosophy for perception and then cognition. Hans Jonas (1966) writes:

> Since the days of Greek philosophy sight has been hailed as the most excellent of the senses. The nobelist activity of the mind, *theoria*, is described in metaphors mostly taken from the visual sphere. Plato, and Western philosophy after him, speaks of the "eye of the soul" and of the "light of reason." Aristotle, in the first lines of the *Metaphysics*, relates the desire for knowledge inherent in the nature of all men to the common delight in perception, most of all vision ... Sight, in addition to furnishing the analogues for the intellectual upperstrucutres, has tended to serve as the model of perception in general and thus as the measure of the other senses.[35]

Now, how did this methodological preference for *vision* and *the visual* impact the theory of essence? From seeing we now derive new "categories," the *visible* and the *invisible*. The philosopher's artfulness resides in the subtle manner in which such seemingly banal terminological issues can be turned into a serious theoretical edifice. What is the best model to examine the philosophical problematization of *seeing* and *vision*?

In fact, it is in a place like Kant's First Critique where one may find the best philosophical model. Suppose a subject is facing something, a "thing" that is *not* yet a comprehensible *object*, for objecthood is the very aim of the theory of essence. This "thing" is a source of multiple rays of light, or the cause of sensations created internally within us while interacting with the rays, waves, surfaces, etc, of the entity under consideration. Following the rules of the realm within, intuition and intellect develop interpretations of the induced sensations and attempt to build an overall conception of the thinghood of the thing. But how? Each mode of seeing is at the same time a concrete mode of *viewing* the scene. In other words, visual perception is inevitably connected with a *perspective* along which the knowing (now the seeing) subject locates himself within an opening field of vision engulfing both the yet-to-be-object of cognition and the carrier of the organ of seeing, the eyes.

Perspective presupposes a conception of *space*, hence we may appreciate the necessity of ascribing the Kantian *a priori* structure of space into intuition itself. The spatial conditions of the external world (distribution of surfaces, angles of incidence and reflection, diffraction at the corners, luminosity, etc) interact with the spatial conditions of the internal world (color perception, image unfolding, discrimination of shapes and outlines, etc) and lead to the existence of *multiple* perspectives instead of a unique one. As is typical in philosophy books, whether popular or sophisticated, the renowned example of the table serves as a good demonstration of how the same entity appears differently under variable conditions of illuminations.

Let us deal with a set of perspectives $P_i$ indexed by $i$. For example, if there exists a countable number of such modes, we speak of perspectives $P_1$, $P_2$, ..., etc. Each perspective is connected with another, and possibly with all others, but the subject does not yet know it. Kant [84], following Hume's analysis [83], realized that the problem of establishing, with apodictic certainty, a universal law regulating the complex manner of variability, suffered by

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domain of introspection [95]. The model here is still the eye which describes through language happenings hidden deep inside the soul.

[35] Jonas [257], page 135.

all possible perspectives throughout the flux of dynamic experience, is in principle impossible. He then *changed* the formulation of the problem itself: Instead of looking for a way in which such a law can be established given the violent flux of seemingly disordered experience, Kant posited that this very experience, on its own, is to be considered the *product* of an *a priori* law regulating its various modes of unfolding; in a nutshell, this is the celebrated order of intuition (aperception) that he famously called space and time.

The basic idea behind Idealism's technical solution of the problem of seeing goes like this:

(i) We don't know what perspective $P_1$ in itself is; we don't know what perspective $P_2$ in itself is; and so on.

(ii) But the *relation* between these modes of seeing can be obtained by *intellectual cognition*, in this case simply by changing the conditions of illumination in order to *transform*, for instance, $P_1$ into $P_2$, and vice versa.

(iii) Next, even after establishing all these interrelations between the totality of $P_i$ for all $i$, we still don *not* know what the 'relations' *are* in themselves.[36]

(iv) It is precisely here where a leap of imagination comes to rescue: the thing-in-itself, the relation-in-itself, the perspective-in-itself, are not important (later will be announced *unknowable*), but what is truly significant for philosophy is the *formal* pattern of connection between the elements of experience.

(v) The 'object' is merely the residue remaining after performing all the above mentioned transformations between perspectives, the outcome of the *dynamic* process itself in which the central pole of seeing, the subject, actively changes the conditions of viewing the entity under consideration in order to reach a sort of collective compromise, a synthesis of sensations and cogitations generating, from the teeming flow of phenomenal data and perceptual stimuli, the very *object* as such.

(vi) Objecthood, then, deals with an unnameable X we posit after the performance of seeing as analyzed above into its active components.

In this we meet one of the earliest arguments pointing to a *relational dynamics* in philosophy, however this time not in nature itself but rather inside the knowing subject. Kant shifted the problem of the object away from external reality and situated it instead within the confines of an *empirical* ego, exactly in line with the Cartesian modernist heritage as developed by Locke, Berkeley, and Hume. It is true that the *German* Kant did not want to reduce the ultimate essences of reality to anything empirical like a personal contingent ego, so he went into the laborious – never convincing – efforts, of hypostatising a sort of abstract *transcendental* ego, the Kantian subject, who is the condition of possibility of the empirical ego. This tedious procedure was never even detailed by Kant, but the attempt to actually implement it was carried out by Husserl in a long series of investigations that were not destined to materialize into conclusive results. The transcendental subject is essentially an idea that Kant took from Western Christianity and its long theological metaphysics of God in contrast to the immanence of nature. The subject, being transcendental or empirical, is essentially a *psychic* being and hence belongs to *applied* ontology, a field or region in nature where personal consciousness/uncoinsness managed to show its signs for the first time in humans. In a certain sense, there is no fundamental ontological difference between the empirical and transcendental subjects, both being modes of viewing the so-called 'ego' through introspection and techniques of observations sometimes modeled on perception as in natural sciences. Husserl's achievements suggests, convincingly in our opinion, that perception-based methods are *not* adequate for the *ontological* task, and that the human lifeworld, following Dilthy [14] and later influenced by Heidegger [18], is irreducible to the

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[36]the problem of the being of the relations, which event ontology must solve. Nor the 'thing' as such is known or knowable.

present-at-hand mode of concernful dealings with the surroundings encountered in daily life. Instead, the phenomenological approach developed by Husserl goes back to the innovations of Fichte, probably the real founder of modern phenomenology, who singlehandedly created an entirely new "method of seeing" based on introspection and not perceptual cognition [197].

However, we should notice that Kant's elusive formulation of the above embryonic relational dynamics foundered from the beginning and was not able to evolve into the philosophy of nature that Leibniz, in the privacy of his unpublished manuscripts, unknowingly to Kant and most Kantians, had already taken into a very advanced stage starting from Aristotle. The detailed story of Leibniz cannot be given here, but few additional remarks are given below to complete our analysis of the concept of essence in Kantianism. This will bring us into the fundamental concept of *time* and its subtle relation to dynamics.

### 4.5. Brief Remarks on Time and Temporality

By the 'time of dynamics' we don't refer to *time* in the celebrated pair *space and time* appearing in the *transcendental aesthetics* of the First Critique [84]. In addition to the fact that the latter consolidated the lion's share of scholarly and academic attention, very little is said about the temporal dimension of *experience*, although such topic belongs to the core of the Kantian canon. It was part of the legacy of Husserlian phenomenology and the people who reacted to it, for example Heidegger and Weyl, that the notorious issue of temporality was brought back to the picture. Heidegger's book *Kant and the Problem of Metaphysics* [203] is probably the best account of dynamics in Kant. Its profound analysis of the obscure doctrine of *schema* in Kant's First Critique presents the most focused engagement with the original impulse of Kantianism up to date. Unfortunately, the book was not fully appreciated by immediate contemporaries like Cassirer, who (justly in my view) declared Heidegger's treatment as an overinterpretation [59]. However, the truth is that even if Heidegger's book put into Kantianism much more than what has been originally there, the fact remains that the concept of essence (based on the technique of perception) does presuppose a deep concept of temporality that is fundamentally lacking in the literature of idealism. The "temporality of viewing" does not show up with sufficient depth in Husserl's writings, although his program is supposed to deal essentially with new analysis of the matter. Moreover, the tendency initiated in Kant's original writings to "freeze" the problem by constructing a static model of a permanent essences was taken up and maintained in most subsequent Kantian literature, including even Hegel. There has been an increasing tendency in the technical literature to look at the phenomenon of 'invariance-in-multiplicity' as a static structure that does not involve genuine temporal development. The Husserlian term 'adumbration' is designed exactly to convey this meaning. Instead of examining the movement of fluctuating-appearing in itself, idealism treats perspectival changes, created by the will in a fictitious manner, just as if they constitute an integral part of the process of seeing *per se*. Why do things have to be like that? Because Kant's lack of understanding of Leibniz' dynamism forced him to endorse a "logical" approach to the problem even after grasping the roots of the dynamic process of seeing. Kant did not want to study a process, but rather a fixation by the mind modeled on consciousness following the exemplary accounts set in motion by Descartes but armed by the formal apparatus of Leibniz mathematics.[37]

The distortion of the meaning of temporality in Kantianism has reached its peak in the modern formulation of mathematical physics, especially following the relativity theory of

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[37]Even Hegel's famous "process philosophy" turned out to be an empty refashioning of hardcore Kantian idealism. Although Hegel finds occasionally very original things to say about Kant in particular and metaphysics in general, his thinking is constrained within narrow confines and the straitjacket of logic and dialectics did not allow him to travel far enough, actually not even as far as his mentor Fichte had done. In particular, we fundamentally disagree with Marcuse's overinterpretation of Hegel's ontology [258] and consider the dynamism attributed to the Hegelian system there more in line with Marcuse's teacher Heidegger's ontology than Hegel's. For a penetrating critique of Hegel's metaphysics, see Deleuze's *Difference and Repetition* [43].

Einstein and Weyl. In the hand of the latter, the group-theoretic approach was applied to reformulate the topic in a way that reflects how mathematicians usually think. Indeed, the very fundamental concept of *transformation group*, discovered and rediscovered by many in the nineteenth century, including Klein [225] and Lie [259], was elevated by Weyl [179, 246] to the status of the first organizing principle of our knowledge of the natural world. A transformation group acts on a space, transforming an object to another; for example, it rotates a triangle, displaces a line, stretches a figure, etc. However, no explicit awareness of the temporal aspect of this transformation process itself is taken into consideration. Even in the special cases where "time" is injected into the picture, for example, the concept of one-parameter group of transformation [260], we still don't find an adequate philosophical and conceptual treatment of the subject in the mathematical literature. It seems that the very *process* of *applying* a transformation by operating on its domain of definition is still taken by the majority of mathematicians as a *mental* act whose inner structure's theory is not a big concern for science. For example, if we consider the idea of a *symmetry group* [261], we find something very similar to the Kantian concept of essence. The *possibility* of applying the elements of the symmetry group of the figure is taken for granted, and it is only the *emerging invariant structure*, obtained *after* performing the totality of all those possible symmetry operations (transformations), what counts as the "essence of the figure" (its "symmetrical form.")

There is no doubt that all elements are utterly confused in this Weylian version of "dynamical Kantianism": logic, empirical experience, metaphysics, epistemology, and physics. Behind the entire scene lurks the ideological factor guiding the overall intellectual effort by bridging its contradictions and filling the inevitable gaps. For what is this "reason" but a shadow of ideology created by the Enlightenment thinkers for causes that are essentially social, collective, and intersubjective? One can never find in Kant's books or Husserl's voluminous writings any conclusive proof that something ontologically coherent and fundamentally apodeictic or logico-formal can be found at the core of the ego-consciousness pole's temporal structure. Instead, we merely encounter powers *attributed* to the subject. Or, in the Hegelian reinvention of Kantianism, a *positing* of what the philosopher *sees* in ego-consciousness. By *attributing* and *positing*, ideology discreetly works its way through the theoretical architectonic of the thinker, erecting a system of propositions and analytical statements loosely organized around the fantastic/fanatic theme of ego-consciousness and the delirium of its imagined centrality in every discourse.[38]

### 4.6. The Strange Figure of Underground Fichte

A first serious departure from Kantianism can be found in Fichte's work interpreted in an anti-transcendental fashion. Although he himself kept the signature Kantian terminology circulating in his philosophical system, the essence of Fichte's method remains *phenomenological* and *introspective*. In this sense, he departs from Kant who based his formal thinking on the ideology of perception (the transcendental aesthetics.) However, the real genius of Fichte is the technical details of his dense and complex argumentative prose, while the "results" themselves appear to us of minor ontological value. His work can now be judged – as with Husserl's phenomenology [90, 92] and the later Wittgenstein [262, 263] – a contribution to philosophical psychology and cognitive psychology, rather than philosophy and metaphysics. The approach is in fact *immanent*, not transcendental. Nowhere else do we find a strict "derivational" mode of presenting philosophy other than in Fichte, not

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[38]An ironic observation suitable at this juncture is the need to start studying *Critical* Philosophy itself in a historico-critical fashion aiming at disclosing the very complex sociocultural process dominated by systems of ideology shaping the discourse of thinking and controlling its production and reproduction. Idealism is a generative system that has its own political economy and peculiarities, which may prove not much different from capitalism as seen nowadays. A second-order ironic observation: Adorno, who is typically considered one of the greatest critical philosophers of the twentieth century, is a fanatic – though no orthodox – Hegelian, appearances to the contrary!

even Hegel's *Logic* [213] or Heidegger's *Being and Time* [18]. Although he expounded an introspective phenomenological reading of the subject's inner consciousness, the manner in which the mechanisms of cognition, seeing, induction, are disclosed throughout this reading manifests a deep grasp of the process of dynamics in nature going far beyond Kant's First Critique and probably surpassed only by Heidegger. There is no Hegelian dialectic in the real "official" sense of the word, but rather a world of virtual fields and continual actualization of the latent dynamic possibility of the soul. This is why Fichte's thinking appears to us closer to the Aristotle of *De Anima* [240] than the canonical idealist figure of Descartes [78, 79].[39]

In Fichte, the exact significations of most terms familiar in the discourse of idealism, such as freedom, force, feeling, concept, will, etc, are rigoursly rederived on a basis that resembles nothing in the Kantian text itself. With Kant everything is *presupposed* when it comes to the definition of the main concepts with which he operates [143, 264–266]. Not so with Fichte, who in [197] provided a truly "dynamic deduction" of all the concepts based on movement, motion, change, potentiality, which parallels the treatments of Aristotle and Leibniz. The concepts of I and the Other are not hypostatized and concretized in advance as in Schelling and Hegel, who exploited his "results" for their own philosophical program, but in fact re-imagined based on new foundations: instead of dealing with a Cartesian subject, the phenomenological method begins with an *abduction* based on introspection: the movement or perpetual dynamics of the mind is taken – ontologically speaking – to represent a "model" of something more originary: the 'virtual/actual' couple, termed in his text 'determinable/determined'. Although this is by no means always clear in Fichte's lectures and books, careful reading reveals a work that – in spite of its self-restriction to the empirical sphere of the psyche – remains extraordinary fresh and relevant even today, and especially for the project of event ontology.

Some might find it strange to associate the name of Fichte with a philosophical narrative ending with event ontology and postmodernism. After all, isn't it true that German Idealism had completely bypassed Fichte in the aftermath of the dissolution of the Hegelian system since the mid 1830s? The real story of Fichte, the underground anti-Kantian dog, has not been told yet, and we are not going to attempt one here. However, there is something more enigmatic and troublesome in the line of investigation going back to early Greek philosophy. The late Greek thought of Aristotle gave rise to the profound conjuncture that being is *potential* being, and that the so-called "possible," understood here as an *interpretation* of 'potentiality,' is more than a pure fiction invented by a cognitive subject in his quest to understand the world. Later antiquity and the classic age both grappled very seriously with problems of ontology initiated by the recovered Aristotelian manuscripts, and this interest in the ontology of the "possible" in contrast to the "actual" had been very much alive throughout the middle ages in the Western intellectual world, both the Arabic and Latin literature.[40]

It is one of the many enduring Descartes legacies that the founder of modern philosophy was able to shake off the venerated earlier tradition and entirely change the orientation of philosophical thinking by rejecting the so-called "system of Scholastic Aristotelian metaphysics," in particular the ontologies of potentiality, energy, actualization, and so on. Indeed, such categories of ontological meaning were deemed "unworthy of a scientific metaphysics" based on direct observation of nature. In outline, the main thrust of Descartes' and Galileo's efforts had been to shift the focus away from the medieval preoccupation with *explanation* to the modernist interest in *description*. The goal of science is to record the *facts* of the world, to jubilantly document the radiant "visible truth" emanated by the beings inhabiting this world, a process that prides itself in accuracy, rigour, and precision,

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[39]Fichte himself, being a child of the Enlightenment, might not like such evaluation, preferring to be "publically" aligned with Plato and the "progressive" Descartes.

[40]The Hellenic culture was the foundation of the rich and sophisticated philosophical medieval traditions prospering in *both* Europe and the Middle East/Central Asia throughout the extraordinary five-hundred-year period 900-1400 AD [267–269]. Greek was the main literary and administrative language in the Middle East for about a thousand years, only displaced by Arabic after the sudden rise of Islam in the seventh century AD [270].

denouncing 'profundity' and 'depth' as rhetorical redundancies not needed in a pragmatic approach to nature concerned essentially with "results" and "outcomes."

At exactly this point, the strange appearance of the underground writings of Fichte disrupts the flow of our story, for in building an ontology of the human psyche based on the determinable/determinate, or the virtual/actual, Fichte did reintroduce into Idealism the element in Leibniz that Kant intentionally avoided in his fundamental work: The Aristotelian dimension of being as dynamic possibility. Kant in fact kept the term 'possible' but totally changed its meaning. 'Possibility' in Kant no longer means ontological potentiality (Aristotle) or virtuality (Bergson, Heidegger, Simondon, Deleuze), but rather the vacuous concept of the *logical* potential as manifested in cognitive processes taking their course inside the human subject, i.e., a Cartesian Ego. Kantian possibility is something that can be understood only with respect to *us*. Outside the intellect, there are no possibilities, but only hard truths or rigid facts. But since – according to Kant – the object is not comprehensible without *a priori* conditions of possibility making it graspable *for* a *mind*, 'possibility' now enters into metaphysics as a key term but only in the way it departs from the original Aristotelian understanding of 'being as something more fundamental than a subject or a process of subjectification.'

After his groundbreaking lecture course on ontology [197], Fichte continued to work within the recently-discovered domain of transcendental and empirical psyches [198], but the formal methods he developed were much more original than the orthodox Kantianism of Descartes and Kant. Hegel would later exploit Fichte's results but eventually he returned to the modernist dogmatic dualistic pre-assumptions of subject and object (plus their dialectic [213]) taken as fundamental starting point [271]. Even though Hegel never reduced objects to Subject (in fact Kant never did that too), the overall inclination of the Hegelian imagination toward metaphysics was essentially *psychological* and *subjective* in nature. The founder of German Idealism, Fichte, was never surpassed by his famous pupil Hegel.

## 4.7. Will, Flow, and the Ontology of the Real

The emergence of a first truly postmodernist conception of reality can be traced back to the metaphysics of Schopenhauer [272, 273] when interpreted as the immediate reaction of Late Modernism to the rise and fall of German Idealism. The decline of interest in Schopenhauer, characteristic of our time, is well known though hard to understand. The startling rise of Nietzsche to philosophical and cultural stardom not only managed to wipe out the short-lived universally-acclaimed reputation of Schopenhauer as the greatest Western philosopher in the post Napoleonic world, but even worse tended to obscure the origins of many of the fundamental philosophical concepts swarming through the space of the present world of ideas. The Jungian concept of the unconscious as a cosmic nonpersonal desire [192, 193] finds its root in Schopenhauer's Will. Nietzsche's Will to Power [231, 274] is unthinkable without Schopenhauer's famous concept of pervasive will-to-life.

An ontological model of nature inspired but not based on the human psyche can be found first in the work of Schopenhauer, not Hegel, though in embryonic form. To make things even worse, Heidegger, who rarely expressed personal judgements on other established philosophers, maintained a consistently negative attitude toward Schopenhauer, whom he did not even acknowledge as a fellow thinker. We will not enter here into a historiographical analysis of the reasons or motivations behind this decline of the status of Schopenhauer in the twentieth century. It is probably enough to mention that nowhere can we find an attack on academic philosophy as powerful and serious as in Schopenhauer, not even Nietzsche. This might partially explain the matter, since most philosophers tend to rely on the university institution, their life-support system, which means they cannot criticize it in a direct manner. Moreover, Schopenhauer's relaxed method of writing, which mixes personal opinions with simplified prose exposition of complex problems, tends to alarm "professional" philosophers who usually like to think of themselves as hard-working folks struggling for the composition

of every passage. But, strangely, Nietzsche – who inherited this very same style from Schopenhauer – has *not* been equally condemned by his commentators for the same reasons. The history of philosophy written in the future will require a new way of interpreting the Schopenhauer-Nietzsche relation, effectively transcending the current oversimplified version. Nothing like this will be provided here, anyway. After this brief digression, we plunge directly into the heart of our topic.

*Will is a flow.* It is a formative power of creation that can be expressed in myriad forms and various shapes. The Will is a force, or better still, a *field of power relations* as we will find out later (Foucault.) In Schopenhauer (and Nietzsche), the Will is understood in a metaphysical, nonpersonal sense where it does not refer to any concrete given or a quantum of feeling as in Kantianism. Schopenhauerean Will can be compared with the Greek flux of becoming (Heraclitus, Aristotle, Epicures.) During the process of nature enacted through the Will, there is a perpetual metamorphoses of being into beings called *objectification.* Jung would later develop a parallel concept for psychology, *individuation.* Both objectification and individuation will be taken up later by Simondon and Deleuze. Will as the abstract but fully real principle of formation (virtual field), while objectifcation/individuation is the process of actualization of the virtual by building observable strata of the real, the visible, the sayable, the voiced and touched, and so on. This is why *causality* in Schopenhauer has a wider meaning than the narrow understanding found in modern physics and mainstream mathematics. Similar to Russell [3], causality for Schopenhauer signifies an ontological structure of diagrammatic connectivity (Pierce [275], Guattari [276], Deleuze [8]), a "method" without a user, a practice enacted in the absence of a practitioner. Causality is not the underlying structure of a pregiven "law of nature," but the fountainhead of reality itself is causality understood dynamically as the giving out of phenomena in the form of objectified being. To be sure, with Schopenhauer we are still not totally disconnected from his idols Plato and Kant: deep occupation with the Cartesian subject and the mechanics of appearing, as manifested in the notorious term 'phenomena', remain with us in Schopenhauer's system; but the first decisive step needed to break away from Kantianism was *already* taken here. Later on, Russell will formalize the process of nature by providing mathematical philosophy as the basis for an ontology of nature, and Whitehead (influenced by Bergson) will take care of the ontology of life. But when it comes to who started with challenging the ontological centrality of the subject-hood when the latter is understood based on models derived from the personal mind, the important initial attempt's credits, we believe, must be traced back to Schopenhauer's philosophy.

Both Wagner [277] and Nietzsche [97,278] understood the deep significance of the break with idealism initiated by Schopenhauer and unhesitatingly chose to follow the lead. So why did everybody forget the name of Schopenhauer in our history books? Certain shortcomings and problems in Schopenhauer's text are to blame for that. His lack of interest in the writing process itself is another factor. But, most importantly, because his main ontology was passed almost unchanged into the late writings of Nietzsche, even while the ethical philosophy was rejected. But did the Stoic outlook of Schopenhauer go unnoticed because of its lack of originality or for other reasons? We are not so sure about the ultimate status of Nietzsche's and Deleuze's life affirming philosophies. We don't know if the metaphysical optimism of their thinking will stand the test of the times. Although the vast majority of great philosophers were indeed optimists, that does not mean that there are very good reasons to be an optimist as person. The case of Schopenhauer is not yet closed. Neither that of Wagner.

Leibniz had developed a dazzling panorama of thinking, a vast landscape of theories and concepts later condensed into a very compact form published under the broad banner 'monadology' [10]. We cannot so easily compare Leibniz and Schopenhauer. The former was an "atomist," the latter universalist: global, and "all-encompassing," provided one does not romanticize the terminology. The Will is a universal force. The monads are local: a fundamental rupture in the whole shattering Being into a mosaic of infinite little tiny beings. The Will is the Jungian Unconscious, the collective libido of nature fueling the

advance and decline of history. But with the monads, Leibniz will struggle in vain to re-insert totality, a sense of the globally-absolute Being, God or Desire, whatever you like, so that no eventual fragmentation of reality can be held responsible of the observable consequences of life. Boscovich followed Leibniz's lead and developed an ontology of nature based on atomic beings lying at the bottom of the phenomenal world [279]. The story became *dynamic*, not physically, but ontologically. Boscovich is the new prophet of postmodern physics and mathematics who is yet to be unearthed. Nietzsche, of course, did read Boscovich [280], and hence his famous ontology of Will to Power. Schopenhauer did not atomize Being. Nietzsche had done so. This is why the latter is deservedly a larger-than-life figure. For with Nietzsche the grand synthesis of Western philosophy has reached its climax: Leibniz and Schopenhauer combined in one complete system. Yes, Nietzsche *did* leave a *finished* body of thought. He never wrote the projected *Will to Power* for the simple reason that his notes for the work in progress in essence finalized Western metaphysics and prepared the stage for the post-metaphysical philosophy of Heidegger [122, 123].

With Kierkegaard [131–133], the psyche's interior monologue is brought to the fore while setting metaphysical introspection against the classical background of the Cartesian reflective Subject that reached its climax in Hegel's *Logic* [213]. Kierkegaard should probably be compared with Fichte, never with Descartes. Following the remarkable analysis in Althusser's *The Spectre of Hegel* [281], it is now well-known and in general accepted that Hegel's philosophy is extremely close to the so-called problems of "existence," such as fear, anxiety, emptiness, and so. Sartre's work *Being and Nothing* [215] is understood within this framework. The importance of Althusser's book, however, is that it codified the depth-psychological connection in Hegel by showing how the logical categories in the latter were originally motivated by problems of personal encounter with real life. The conditions of modernity reached their first disturbing conclusion in the early decades of the nineteenth century following the French Revolution and the devastation of the General European War that followed, where we find that, in a certain sense, Hegel [271] represented a specific philosophical response to the upheavals that the Napoleonic wars brought to Europe by that time. But in the unique work by Kierkegaard one finds a deeper involvement with the inner world of *Geist* that is simultaneously both original and anti-Cartesian in spirit. In a certain sense, Kierkegaard anticipated both Nietzsche and Heidegger, although the consequences of this anticipation are yet to be worked out. Now both Kierkegaard and Schopenhauer can be considered two very different ways to move beyond orthodox Kantianism and the Hegelian version, an approach to reality that is inspired by introspective investigations but never reducible to reflection and subjective knowing.

This was the first half of the nineteenth century. In the second half, Richard Wagner [277] and Karl Marx [230, 282] took the lead by introducing into philosophy – probably for the first time in history[41] – the *sociological* and *political* dimension of being. They worked independently of each other, Marx through political economy and Wagner through art, but they were united in their militant activities against capitalism and the old traditional Prussian state [285]. Marx inaugurated his philosophical journey by criticizing the Hegelian system [282] (already dissolving by the late 1830s), while Wagner started totally alone then later discovered Schopenhauer [285]. Wagner became Nietzsche's mentor (and intellectual Godfather) [280], while Marx befriended Engels. This lead to the birth of sociology, cultural theory, and a new way of viewing history. Most importantly, it gave rise to the twentieth-century invention of *social ontology*, a topic essential for understanding postmodernism and a central objective in event ontology.

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[41]We follow a minority of opinions believing that Hegel's social ontology, for example as reconstructed by Marcuse [283] or Lukacs [284], was in fact an *overinterpretation* of Hegel filtered through Marx and Marxism. Marx essential thinking is non-Hegelian, e.g., see [21].

## 5. Interlude: Social Ontology

Now, what is it this "Sociological Turn" which we attributed its discovery to figures such as Wagner and Marx? First of all, previous thinkers like Kant [286–288], Herder [289], Fichte [290–292], and Hegel [293], all saw clearly and explicitly the importance of society in forming a balanced and well-articulated concept of the individual. Nowhere does one find this clearer than in Fichte, who wrote extensively on the topic, for example deriving the structure of the Subject by means of the equilibrium resulting from dialectic exchanges between the ego and the other, 'I' and 'You', 'Us' and 'They', and so on [130, 291]. Hegel even went further by making the study of history, in particular the history of human civilization [294], that is, *society*, his main new contribution beyond Fichte [283, 284]. However, in our opinion, something totally new emerged in the wake of Wagner and Marx that is not easily reducible to anything Kantian: *The social nature of being as such*. Wagner's theoretical writings in the late 1840s, early 1850s, formulated in a very direct and explicit fashion a primordial significance of human relations transcending the personal and private sphere of Christianity and Kantianism. The formulation of this subtle and extremely elusive viewpoint is not easy to pin down in the vast corpus of Wagner's prose and verse writings, but it appears that something very similar to Marx's ontological assumption has been already working its effect on Wagner's mind throughout this period. Wagner was aware of the Hegel movement in the history of philosophy. Although he does not go into direct polemical attack as in Marx, his texts suggest that the overall scheme of the (German) idealist stand was in the main familiar to him. Moreover, he was in fact *critical* of this very orthodox philosophical position. The return to the Greeks in Wagner took a shape very different from the other famous endorsement of the ancient world by Hegel and the Romantics. Wagner did not advocate a naive return by interpreting the Greek lifeworld based on the modern stand of human consciousness, but rather, as Nietzsche later will also do, he reformulated Attic tragic drama in forms and expressions that are essentially postmodern. Since he did not have at his disposal the Jungian concept of collective unconscious, the only alternative was to first develop a social understanding of nature and life, and second to rely on myth as a reservoir of collective knowledge accumulated through the long-term evolutionary advance of human culture.

The first move, that regarding the social nature of being, is very similar to Marx's own conviction. As was also the case in *Capital* [230], Wagner did not write a full *philosophical* account in detailed fashion, but hints and remarks about the inter-subjective force of social interactions can be found everywhere in his writings. To be more specific, Wagner postulated that the effective approach toward the mastery of the inner world of the human psyche/soul/Geist, enacted in a manner that resists the bourgeois tendency to overemphasize the private ego, is to acknowledge the *social character* of our values, beliefs, inner emotional states. *Politics shapes Reason*, not the other way around as was claimed by the Enlightenment. The social field of existing culture affects our habits, even the biologically-based ones like eating, drinking, copulation. The ideal universal Mind or Pure Reason found in modern philosophy and reaching its summit in the classic thinkers of the eighteenth century is here rejected by both Wagner and Marx. Instead of Universal Reason, there is random and fluctuating field of forces existing in society and modifying and shaping the behaviour of the individuals living within close range from each other. Yet true, neither Marx nor Wagner did provide any serious attempt to explicate the laws of these social phenomena (this had to wait till Tarde [295], Simmel [232], and Weber [296]), but the basic idea, that *politics comes before being*, can be already found there. It is precisely in this sense that Marx should be considered a true revolutionary in the history of philosophy. Before his work people tended to overlook the social dimension of the process of thinking, highlighting, instead, the typical image of the abstract thinker contemplating reality from behind closed doors and in isolation from the Real. Wagner for instance would expand this formulation by building all his opera dramas on a concrete and actual ground. In the *Ring Cycle*, just to give one example, the

entire history of capitalism and industrialism is encapsulated within the boundary domains of the carefully crafted realm of myth and fantasy [285, 297, 298]. Even in other dramas where a critique of capitalism is not prominent, Wagner always had in mind some well-defined social context of interaction, say the erotic, where the philosophical content of the music and verse unfolds the radically new and original understanding of the social nature of being.

Regarding the second move by Wagner, the utilization of myth, this can be compared to Marx's occupation with political economy. The social ontologies of Marx and Wagner may appear at first glance totally disconnected from each other though this is only illusory. Wagner used myth exactly like what Marx had done in his voluminous economic writings, that is, as a medium of explanation of what seems to be basically one idea: Social relations create the individual and direct the flow of thinking and even envelope private speculations and inner thoughts.

What myth and economy share in common is both being *trans*-subjective total structures with no localizable centers to be found in the individual psyches belonging to well-defined social groups. Capitalism *as such* is not to be located inside the capitalist's psyche, and myth-making is not the personalized literary creative power of priests and shamans. *Capitalism and myth predate the unique individual and surpass him.* Mythical narratives and capital are objective formations, say products forged by the Will (Schopenhauer, Wagner, Nietzsche), the collective unconscious (Jung), desire (Spinoza, Deleuze, and Guattari), power relations (Foucault), or relations of production (Marxism). But this kind of "objectivity" is not defined with respect to a corresponding "subjectivity" as in Kant and Hegel. Otherwise, we fall back on either a private subject creating the world (Berkeley) or a universal Subject (the Absolute in Schelling and Hegel), both being extreme variants of idealism. Economy and myth can function as "objectivity-without-subject" if the social nature of being is brought to the fore as an essential ontological clue for the understanding of the genesis of culture and life. Indeed, it is the social *field* that creates objective formations, capitalist field of power relations or the priestly shamanism of symbolic and ritualistic relations. The *infrastructure* of both processes, economy and myth, is *semiotic* in character.

But neither Marx nor Wagner were fully aware of the *ontological* concept of the social field, which had to wait for more than a century before receiving its first embryonic formulation in Althusser, Deleuze, and Foucault (Heidegger, as usual, anticipated the whole storey much earlier, but we cannot examine this in details here.) The absence of such field theory led the Marxists immediately following Marx's death to a return to Hegel, or idealism, in order to develop the canonical infra-/super-structure dichotomy (Lenin in the East [299], Luckacs in the West [284]), in effect copying the Cartesian dualism in an inverted form:

$$\text{Materialism} \longrightarrow \text{Inverted Idealism} \longrightarrow \text{Idealism} \tag{1}$$

One of the main objectives of event ontology is to counteract this inversion by developing a non-Marxist, non-dialectical version of materialism. To accomplish this, social ontology must be treated as a branch of the philosophy of nature, i.e., not as a part of the "human sciences" and hence not falling within the science and philosophy of nature. Against the latter separation between "nature" and "the human," event ontology endorses a version of cosmic monism by which *all* nature, including human or nonhuman societies, can be treated on equal footing. This radical viewpoint requires then a careful reexamination of the very concept of the *social* per se.

The discovery of the *social nature of being* introduced into philosophy the most important development of the initial criticism of idealism found in Schopenhauer's main work. Society is understood in terms of *collective wholes* comprised of individuals. *Relations* ensue among those individuals taking the form of social *interactions.* The important thing to observe here is how this modern grasp of society fundamentally involves a version of "atomism," or at least "corpuscularism," together with the immediate classical problem of how to relate those little parts to the encompassing whole. Schopenhauer's metaphysics lacks this "atomic understanding of being," although it was developed previously by Leibniz

in his monadology and other texts [10, 300]; this is why, generally speaking, we tend to find the original metaphysical concept of Will somehow vague, and even at times mystical (compare also with Bergson's *elan vital* [1].) This might be explained by the strong affinity that Schopenhauer felt toward Plato and Kant, who in the main favored the Universal and the Complete against the Singular and the Open. In any case, Marx and Wagner provided us with a first "repair" of the postmodernist inception point found in Schopenhauer. Nietzsche will soon supply a more refined formulation in the working notes of the *Will to Power* [231,274,301]. The first synthesis of Nietzsche and Marx is the work of Georg Simmel, one of the founders of modern sociology [232,302–304]. Gabriel Tarde, another pioneer of the same field, will also construct an atomic theory of society based on *imitation* as a fundamental form of interaction between individuals [295].

Finally, though Russell did not create a fully-fledged social ontology, his mathematical philosophy of *events*, especially the manner it was used in *The Analysis of Matter* [3] and *Human Knowledge* [4], presents one of most profound "atomic ontologies" ever created in Western thinking. The Event will become the cornerstone of the missing social ontology yet to be constructed by event philosophy. Fields, social fields and ideological fields and many others, are defined and articulated in terms of events, not subjects or objects. Both the Subject and his subordinated objects emerge only later as secondary or derivative solutions of problems posed in a pre-individual world consisting of events and events alone [6, 7]. The social field is a virtual field of forces acting on events, and through a context of interaction between various events, some of them will separate and "condensate" into a Subject, while others – still connected all together – will form the "objects" subordinated (symbiotically, semiotically) to the Subject. In other terms, the social field precedes the formation of the individual. Individuals are defined and created by non-personal relations of power that out-exist the total sum of persons taken together. This is how sociology becomes ontology: Instead of thinking in terms of fully-formed subjects later entering into social interactions among each other, we start with a social relation that exists even without relata (Russell [39, 226, 305, 306], Simondon [6, 7]), a relation that subsists in absence of human or individual factors entering into it. *Relations* in fact – these abstract schema of power – are the very reason why Subjects can come into being in the later phase characterising the emergence of ego-consciousness with its certificatory subjecthood. Relations in the form of social and ideological fields are the formative power in society and life, the *morphogenetic field* of the ontogenesis of culture and matter.

## 6. On the Event

### 6.1. A historical preparation

What are events? One may best start by historically examining how the new concept was created in reaction to old problems in the Western philosophical tradition. But what is the Western tradition? We define this intellectual domain to start with the death of Aristotle in 322 BC. Everything before and including Aristotle is considered Greek philosophy proper. Therefore, starting with the early pre-Socratic sages and philosophers [307], one does not find a continuous long history called "Western thinking," but rather two distinct traditions, the Greek and the Western. Between the two there exists both rupture and continuity. *Continuity* because the major instrument of research, the Greek language, was the same, though it was gradually "upgraded" to Latin [308], then the modern vernaculars of German, French, Italian, English, and others [270]. And there is a historical *rupture* because following Aristotle's death, philosophy directed itself – first slowly, then almost exclusively – toward the problem of subjectivity and the individual.

We say "almost" because there existed that extraordinary brief movement that employed the Arabic language to reinvent philosophy again starting from Aristotle [309]. The major stars are Avicenna [241, 268], Averroes [242–244, 310, 311], and Ibn Khaldon [312], the

three being very well-known figures but rarely read. In contrast to the Western tradition (Hellenstic, Roman, and European), the Arabic philosophers did not react to Stoicism, Cynicism, and Epicurism, but focused most of their energy on the Aristotelian writings. In fact, they did not pay much attention to Plato and the Academy, although Neoplatonism was taken seriously but through its Aristotelian prism (Plotinus) as in Avicenna's system for example [241]. We still don't possess any complete understanding of the Arabic-language philosophers (most of them were not even ethnically Arabs [267]), and the topic is further complicated by the difficulties of editing and reading their entire range of reflections and teachings (much of it lost, some preserved in Hebrew or Latin translations.) Given that there has never existed an environment well conductive to philosophical research in the contemporary "Arabic-speaking world" itself, the classic "Arab philosophers" remain as enigmatic and poorly understood in the present-day Middle East as they have ever been in the West. In this work, we will not develop any fundamental reconsideration of this now forgotten philosophical tradition, even though (we hope) this will probably happen sometime in the future.

Coming back now to the Graeco-Western tradition, event philosophy can be viewed as the first major attempt to revitalize Greek philosophy in reaction to the dominant Western philosophy centered on the Subject. For this reason, both conceptually and chronologically, it is not possible to grasp the significance of what an event refers to without at the same time fully understanding the historico-cultural context of Idealism.

But Idealism has been continuously evolving in a very complex fashion since Aristotle's death, going through Epicurism, Stoicism, Cynicism, Skepticism, Neoplatonism, Christianity, and then modernism (Kantianism.) We certainly don't imply that the roots of Idealism can be found in, for example, Stoicism, to which event ontology owes much (Whitehead [313], Deleuze [31].) The discourse of subjectivity first began to take shape in the thinking of the Stoics and Epicurean, but without having in full form the modern Cartesian Subject [79] or the Freudian Ego [314, 315], which were unknown to Antiquity. However, as Heidegger [41, 119, 120, 122, 123, 203] and Foucault [316–320] had convincingly demonstrated in their respective groundbreaking studies of Western intellectual history, the "Modern Subject"[42] is unthinkable without the long and laborious preparation made available by the post-Aristotelian Greek and Roman philosophers [99, 102, 103, 211, 321], including Christianity [105, 111].

In agreement with both Heidegger and Foucault, we find that the presence of Aristotle in history is a unique *singularity* in the complex chain of historical philosophical development started by Hesiod, Thales, and the first philosophers: Everything that is typically Greek and Western is exactly that which is *not* Aristotle! Indeed, while reading the commentaries of a "pre-Modern" philosopher like Averroes [242–244], one sometimes gets the uncanny feeling that in Aristotle there had already been a fully-fledged event ontology similar to Leibniz and Russell, Whitehead and Deleuze. The similarity should not be very surprising given the fact that Leibniz, the first creator of event ontology, was among the minority of philosophers in the Western tradition who *did* read Aristotle (probably Heidegger and Averroes remain the greatest readers of Aristotle up to date.) However, it will be difficult to travel into event ontology through Aristotle, at least we cannot do so in a direct fashion. Our hope is that in future research it will be possible to reconstruct an "event-ontology version" of Aristotelian thinking, but only gradually, while working from the most recent formulations back to the chronologically correct inception point of the actual Aristotle.

## 6.2. The Logical Construction of the Event

A negative definition of the event would construe it as something like "counter-Subject" or "non-perception." Therefore, the event may be viewed as that which is *not*. In fact, this is a return to an extreme version of Idealism that is still popular even today: Hegelianism. But the

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[42]Regardless to what exactly we do agree on understanding these days by this term.

Nothing is not irrelevant to being, and no true beginning in philosophy can kick off without an encounter with the notorious operator of negation.[43] Let us then start by examining the event as a negative being in contrast to subjectivity. With the risk of oversimplifying, the event can be provisionally viewed as an "anti-subject."

If subjecthood is all about the Cartesian Subject, then logic and categories come into the picture as the required apparatus needed to establish the Subject. This is because a Subject in the classical sense of Idealism is intimately connected with universality and the Universal. From this universalism, Idealism proceed to derive

(i) the modern concepts of *essence* (Kant [84], Hegel [213]) in metaphysics;

(ii) the mathematical ideas of *invariance* [179], *global* [325], *at-the-large* [164];

(iii) and the laws of nature in physics, chemistry, biology (Descartes [202], Kant [143], Hegel [326], Husserl [15].)

As a first approximation, a negation of the Universal would involve the opposite (yet classical) concept of the Particular. So a clever – but by no means correct – solution will be to posit a scenario of "dynamic equilibrium" between the two opposing poles, the Universal and Particular.

Hegel did exactly this, no doubt inspired – like all other Idealists – by the *geometrical* metaphor of the big Circle: The celebrated return of the Self to the Self. In the larger *Logic* [213], there is a perpetual movement, the now canonical "dialectic flux of experience," continuously taking place between the *immediate* and the *mediated*, the *concrete* and the *concept* (universal), the Subject and Object, and so on. Though very meticulous technical distinctions between all these pairs can be found in the torturous system of Hegelian ontology, the basic idea is always the same, that discussed earlier in connection to Kant's theory of essence as the dynamics of appearing/reappearing, where it is found that something illusory is generated by movement such that while there is nothing but pure relations (no subject-in-itself, no object-in-itself, but only *relations* between Subject and Object) in constant whirl and flow, a *fixed* essence is nevertheless generated from this immanent dynamics: Being as the residue remaining after exhausting *all* illusory movements.

This is why any philosophy of the event that goes through Hegelianism, for example Sartre [215], Marcuse [258, 283], Adorno [116, 117], Merleau-Ponty [327], Badiou [328], will eventually collapse back into Idealism. The reason for this curious trap is that this entire business of the dialectic in Hegel logically presupposes a "thinking substrate" very different from the postmodern concept of thinking to be found in Heidegger [210], Jung [193, 248], and Foucault [245]. The Hegelian form of thinking was originally proclaimed by the Master to be non-subjective but, in fact, by examining the actual technical detailed implementation of Hegel's philosophy, the entire structure of the return-to-the-self is based on a *personalistic* conception, hence ultimately grounded in subjectivity [21, 124].

Our use of the term 'logic' above is not accidental, for the signature of a *personalistic* Subject is the existence of an elaborate apparatus of normative rules, mainly logic and axioms. On the other hand, non-personalistic endeavors to understand thinking such as those found in Bergson, Heidegger, Simondon, Jung, Deleuze, and Foucault, impute a quasi-"objective" value to the existence of a productive force "exterior" (ontologically prior) to the individual but shaping and creating a fully-formed Subject only *later*; that is, the subject would emerge as the *outcome* of an ontogenetic *process* [6, 7, 43]. During this process, there are no logical rules, no axioms, no Subject and Object in constant dialectic dance with each other, no ontological illusion (for otherwise, to *whom* this illusion would appear?), no self and other, and no big metaphysical "Return" to anything whatsoever.

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[43]See for example Heidegger's famous lecture *What is Metaphysics?* [128]. The relation between Heidegger and Hegel is complex and obscure [121, 124, 322–324]. It is not very well understood even today. Though Heidegger always maintained a great personal respect for Hegel, he rarely quotes him approvingly.

*6.3. The Ontological Approach to Events: Post-Hegelian Thinking in Russell and Heidegger*

From the above, we conclude that in order to protect the concept of the event from any potential contamination with Idealism – whether Kantianism or Hegelianism, phenomenology or modern mathematics – one must abstain at any cost from flirting with the apparatus of *negation*, especially negative dialectic. Obviously, the most immediate difficulty facing us in doing so is the consequent need to abandon dualistic thinking. This may explain why dialectic, since Socrates and Plato and through Hegel up to Marxism and present-day academic "philosophy," has been a very popular favourite in Western philosophy, both the continental and Anglo-American traditions included. Mankind is just enamoured with pairs, couples, and doubles. It is not a Pythagorean-style number mysticism, in this case the number 'two', but rather the two-fold-ness-in-itself what allures the philosopher into thinking the double as such. By becoming two, the given can be dominated and apprehended. Compare with the division of the One into Two, as we find in the conception of the solitary in Nietzsche's thought [329]. How do we come to associate every single object with another? Logic provides the easiest clue: Negation. Affixing an operator 'Not' before the name of the given object will generate, by nothing but the power of personal thought itself, another different object, the negated one. The very model of logical negation might be traced back to the earliest form of language. The technology of writing itself, whether idiographic or alphabetical, supplied probably the first implementation of negation; it is easy to distinguish between any given object, represented by its written name, and the negation of the object, represented in turn by adjoining a mark to the original name: $A$ becomes Not-$A$, and so on. Even the infamous suspension of the law of the excluded middle in Intuitionism [330] does not supply a genuine advance beyond *that* dualistic thinking so characteristic of Idealism.

Instead, there is an urgent need to look at the problem of nature (society, creation, thought and aesthetics) from a new angle that transcends the very concept of 'law' or 'rule' as such. Events, being supra-logical, trans-subjective, do *not* follow normative rules or formal axioms such as those employed by mathematics and Idealism. The unfolding of events is immanent and, strictly speaking, self-moving or autogenetic without needing dualistic thinking. This is the fundamental problem that faces postmodernism: How to construct pure immanence free of dualism? [331]. Fichte, who supplied the first post-Kantian critique that can be considered genuinely postmodern, developed the mechanism of the virtual/actual (determinable/determinate) as an ontological foundation upon which the classical concepts of Ego and Other, Subject and Object, with their conventional dualistic tinge, can be erected [197]. Later, Bergson [1, 250, 251], Simondon [6, 7], and Deleuze [31, 43] would also invoke the virtual/actual ontology in the critique of Idealism, each in his own way.

The reason why Fichte is not usually acknowledged in such fundamental critical examination is the widely-held misconstrual of his project in the secondary literature as Idealistic and dualistic in and through. Indeed, the mechanism of the determinable/determinate developed in the very unique Fichtean text [197] has been treated by commentators as a fully-fledged duality isomorphic to other dualities, for example the Subject/Object or Ego/Other. To be sure, some of Fichte's *other* "canonical" writings, e.g., see [130], encourage such – in our opinion inaccurate – interpretation of his entire project. Nevertheless, careful reading of how the 'determinable' is constructed and used in his more technical text [197] reveals something totally different.

Indeed, and independently of Fichte, Heidegger would develop the subject in *Being and Time* [18], where the *determinable* is seen there as more akin to Being when the latter is understood in the manner of an *open virtual field* of "potentials" or "potentialities" (not logical possibilities) that may be *actualized* in various modes. The big project of *Being and Time* is to provide an inventory of those manifold modalities along which the univocal "stuff and flesh" of *Being* materializes into "objectified" *beings*, i.e., actualized things and concretized individuals. There is always a univocal "background," for example Being (Heidegger [18]),

the infinite anonymous murmur (Foucault [245, 332]), the determinable (Fichte [197]). This background acts like an ontological horizon against which the movement of actualization is enacted. The notorious Heideggerian theory of truth as "clearing" is a colorful depiction – in words – of a *naturalistic* process that, strictly speaking, is meta-linguistic and fundamentally non-representable. The movement of creation/production in nature is that which marks out "something" as determinate by bringing forth its presence out of the determinable as such. But Heidegger went farther when he bracketed out even this "something." In some of the esoteric manuscripts of the late 1930s [30], Heidegger would develop the most radical post-metaphysical critique he had ever written by deriving this "something" from the pure *relational* structure of movement in Clearing (Truth of Being, *Aletheia*, etc). Let us never forget that one of the major goals of *Being and Time* was to destroy dualistic thinking by creating a new language, that of fundamental ontology as presented in Division I (usually mislabeled as "phenomenological research"), a language that understands movement and dynamics in a way closer to Aristotle's *Physics* [333] than Husserl's phenomenology [90] or Kant's transcendental philosophy [84].

But instead of having to operate with two concepts in dialectical relation with each other, namely the virtual and the actual, or Being and beings, there is now the entire apparatus of the famous ontological difference in which there is a fundamental asymmetry between Being and beings. Russell, in *The Principles of Mathematics* [226], had a correct instinctive grasp of the problem when he reduced being to a pure field of *asymmetric* relations. Although we don't know if Heidegger did read Russell's book, the project of *Being and Time* overlaps significantly with Russell's, appearances pointing to the contrary. What matters here is that the anti-Hegelian Russell [70], mistrustful of all kinds of dualistic thinking, originally went into mathematical philosophy in order to construct an efficient formal language that may satisfy some of the major requirements and goals that would be spelled out by Heidegger a quarter of century later.

In the Heidegger Universe, the total matrix of Being, the virtual field, is a sort of global source emanating beings through movement (flow.) The pure relational structure at stake here [40], the very mutual "push-and-pull" between the background (ontological horizon) and the emerging beings – the *dynamics* of Clearing in *Aletheia* [41] – is the ultimate form of the event [30]. The event is then flow *per se*, where dynamics is "taking place precisely nowhere"; the flow is differentiated only by reference to its relational topological inner composition. As we will show somewhere else, "space" itself is derived from events [13, 306]. Events do not occur "in" space. In fact, there is space only because there have been events. This, in other words, is the Russellian stand in *The Principles of Mathematics* [226] stating that the *verb* comes ontologically before the *name*, which also influenced Deleuze in his *Logic of Sense* [31].

Traditionally, events are linked to a series of special concepts such as *occasions*, *verbs*, *actions*, *singularities*, *happenings*. Throughout the history of ideas, philosophers had grappled with the enormous technical difficulties encountered whenever there had been a desire to tame and dominate the event within a rigorous scheme based on the Idealist heritage of categories. In the classical ontology founded on logic, the concept of *universality* is contrasted with the *particular* in a way that forces the event to become problematic: Every treatment of the latter brings tension to the whole system. This was realized very early in the attempts to integrate the Aristotelian concept of *accident* into the already vague and open framework of *substance*. Substantial being versus accidental being, or the universal against the event. But certainly the full complex range of meanings associated with the term 'accident' overflows the more specific understanding of 'event' we have in postmodernism. Accidental being includes events, but not the other way around. At the same time, the event is not an examples of a particular being. The most subtle issue involved in event ontology is the distinction between the event and the *particular* when the latter is defined as the "non-universal." In other words, the event is *not* a negation of the universal. This is the case not because events and universals are in harmony with each other (for they are not), but rather for the more basic reason that the entire theoretical categorical framework distinctive of Idealism – the logic of universals –

is being brought under critical examination here.

One of the greatest merits of Russell and Heidegger is that in their quest to overturn Idealism they have tried to construct a new language transcending classical logic and purely axiomatic mathematics. Initially, Russell first contributeed to classical logic by giving it its most rigorous and complete form, modern mathematical logic. However, his anti-classical or postmodern critique was not sufficiently emphasized by him, relegated instead to scattered paragraphs embedded within apparently classical chapters and books. Similarly with Heidegger, his new language, that of *Being and Time*, presented a post-topological approach to the world that surpassed the classic structure of modern mathematics [334]. Albert Lautman [187] was among the very few who observed the depth of Heidegger's engagement with mathematics, but generally speaking a field like "Heideggerian mathematics" remains hidden from the overall view and needs to be developed more systematically. Whether the claimed postmodern Heideggerian mathematics can be adequately taken up in event ontology or not is a question we leave open for the time being. The ambitious scope of *Being and Time* might have contributed to damaging the positive progress that Heidegger achieved with his postmodern Aristotelian-style mathematics since it is quite difficult to concentrate on physics while the evolving structure of the book is fast moving toward the human lifeworld and its nonpersonal ontological matrix, *Dasien*. It is more probable that the pre-Dasien chapters and sections have more to say about the physical world than what has been believed so far, but certainly the disproportionate division of the exposition between Dasien and non-Dasien within the totality of Being, which is another reflection of the incompleteness of the work as a whole, makes a final decision regarding the role of mathematical philosophy in the early Heidegger notoriously difficult.

## 7. The Postmodernist Turn

### 7.1. Althusser, Foucault, Deleuze, Guattari

The most important post-Heidegger thinkers are Althusser, Deleuze, Foucault, and Guattari (the French Quartet?) In their literary output they had collectively invented a "post-classical prose style" suitable for and relevant to the emerging event ontology, an integral component of postmodernism. Louis Althusser had mapped out the general structure of the new language, referring to it as "the missing philosophical method that Marx never found the time to develop" [21, 23, 24, 108, 109, 149, 299, 335–337]. Early in his career, in the Nietzsche book [338], and no doubt indirectly inspired by Althusser the postmodernist *par excellence*, Deleuze developed an original philosophy of nature based on the Nietzschean *Will to Power*'s rhizomatic apparatus of forces and power relations working outside the subject [231, 301]; in a certain way, the aim is surpassing previous orthodox models practiced in psychoanalysis and conventional idealist philosophy [90, 134, 314, 315] by directly confronting the problem of subjectivity at the level of the Simondonian ontogenesis of psychic being [6, 7].

Foucault was influenced by the early 1960s Deleuzean interpretation and appropriation of Nietzsche [332], but he developed in the mid 1960s a different style of critique that was relatively further removed from physical nature than Deleuze's, while closer to the human lifeworld of historical experience [245,252]. For instance, the discovery of the bifurcation of the world into *statements* and *visibilities* parallels the dynamics of Heideggerian Clearing [18,219], the Virtual/Actual (Simondon [6, 7], Deleuze [43]), and the Determinable/Determinate (Fichte [197]). Foucault never fell into the trap of dualistic thinking as did his illustrious modernist French contemporaries Levi-Strauss [339, 340], Sartre [215], and Marleu-Ponty [216, 217]. The new archaeology of knowledge does not divide cultural contents into two categories, statements and visibilities [252], but rather engages in a deep and profound dialogue with the genetic process in which the actual objects of history, the visibles, are generated from the overall background of what Deleuze called the 'anonymous murmur' of sayings and statements existing before and exterior to fully-formed individuals and subjects

[332, 341].

Finally, the extraordinary career of Felix Guattari opened the doors wide open to all previous currents of thought so they can happily mix, mingle, and interact with each other, producing at the end a grand synthesis of the three previous French thinkers but also pushing forward in a way that still has not been exhausted up to date [112, 189–191, 276, 342–346]. With Guattari, the new philosophical language is event ontology at its most direct and explicit form. The formal language [276] is borrowed from Pierce [275], not Russell [226]. The literary style of the presentation is that of Deleuze. The scope is post-Foucauldean. In Guattari, the Subject is produced by nonpersonal forces, and the task of the philosopher is to understand this process in two ways:

(i) The productivity of a subject within a dominant capitalist order.

(ii) The very general process of *subjectivation* and how it can be exploited, for example via art, to resist capitalism and previous forms of the production of the subjectivity.

Here and eslewhere, the technical terms *subjectivation*, *subjectivization*, *subjectification*, and closely related derivatives, are treated as technical ontological expressions. Such terminologies are most commonly used and discussed in the secondary literature of postmodernism [347–349], especially the literature based on Foucault and Guattari.[44] In future places (but not here), when the detailed relation between event ontology and subjectivity is examined in full, we will have more to say about the subtle differences in meaning between various terms and expressions involved with the processes of the production of subjectivity. For our immediate purposes in this article, few additional insights are included below for completeness.

## 7.2. Being and Subjectivity

The "enigma of the subject" is the riddle of Western thought, classical and modern alike. Al solutions produced up to Nietzsche have culminated in erecting the Subject instead of subject. This is *not* a subjectivization process, at least not in the sense understood by the French Quartet. The long and complex process through which the Subject is ontologically produced necessarily involves the full spectrum of two levels:

(i) Molecular subjects (microscopic structure).

(ii) The dominating fields operating on them (macroscopic structure or the molar sphere.)

Since the beginning of civilization, "little selves" (micro-subjects) have been created and annihilated by the perpetual flux of becoming in society [25, 190]. The main line here is the erosion of individuality exactly at the moment an Ego is installed right at the center of the person. Although Deleuze and Guattari had suggested that it seems there are fundamental differences between Primitive, Despotic, and Capitalistic regimes of social organization [25], to us there might be some exaggeration in the way such three "cultural epochs" are postulated in social ontology. Indeed, the dissolution of the self began as early as language and is contemporaneous with the event of language as such. Speaking and pointing already presuppose a highly differentiated and advanced sociopolitical order that had already initiated a preliminary form of exploitation and oppression directed at those to whom one speaks in communication systems. The 'violence of the word' is not only a metaphorical pun, but the authentic expression of a fundamental truth: language is infused with politics right from its inception moment. Idealism then has been in existence thousands of years before Descartes. The signature of the Idealistic worldview is the presence of produced subjects dominated by a universal Subject, for example the Shaman, the King, God, the Market, it does not matter which one as long as the *ontogrammatical* form of domination is that of the subject/object dichotomy. The Kantian recasting of Idealism in terms of being-in-itself and phenomena does

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[44]This literature has grown enormously in recent years and we don't even attempt to be representative with the literature review. However, see some works on subjectivity such as [348–350].

not change the picture since the phenomenal as such, which is the main element of the world in Kantianism, is absolutely founded on the transcendental subject, the Subject.

Even Hegel's infamous alleged rejection of the subjective [213] and his open self-professed interest in nature [326] had consistently failed to completely break away from Descartes and Kant (in spite of the profundity of the Hegelian criticism of Idealism found in many of his admirable texts such as [271].) The truth is that the Absolute in Hegel's ontology, particularly the ritualistic "return to the self," is based on an explicit *ontologization* of Fichte's phenomenology [130], the latter being, in essence, a philosophical *psychology*. Therefore, the subject *did* resurface again in the Absolute Subject of Hegel's metaphysics and we are sent back to Idealism [124].

It is only with Heidegger and Russell that one of the roots of the problem was identified: the bifurcation of the world into subjects and objects. With those two philosophers, the use of traditional terminology appears to have been dealt with either with extreme care (Russell) or open mistrust (Heidegger.) Russell did invent his version of event ontology for precisely the reason of avoiding the formal apparatus of Idealism. Heidegger's *Being and Time* [18] was the alternative formal approach to nature that bypassed the standpoint of Idealism from the very beginning. In the field of psychology proper, Jung did what Heidegger and Russell achieved in philosophy and Marx in sociology: He founded a new science that – for the first time since Aristotle and Leibniz – does not presuppose the Subject as the center of orientation of the whole discipline.

### 7.3. The Process of Subjectification in Nature

We will speak of *subjectification* as a generic term associated with every ontological process that has to do with subjecthood. In contrast to 'subjectification', we also employ the more special key concept of *subjectivization*, which has become popular in the wake of Foucault's famous so-called "ethical turn" starting from 1980 till his death in 1984. The origin of subjectivization, however, could be possibly attributed to Guattari, in particular within the context of his collaboration with Deleuze in writing *A Thousand Plateaus* [8]. It is possible to conjecture that Foucault was one of the very few people around 1980 who were acutely aware of the impact that the revolutionary ideas of Guattari were beginning to make through the powerful literary form that Deleuze's writing style had given them during the 1970s. *A Thousand Plateaus* contained – among other things – the most detailed examination of the production of Subject found in the European literature since Heidegger's *Being and Time* [18]. All mechanisms of subjectification were examined afresh within the perspective of the new ontology of multiplicity that was being also developed in the same labyrinthine book. Those mechanisms gave birth to what we now understand by the term 'subjectivization'. For example, the concepts *facility, segmentarity, capture, striation*, are all fundamental ontological correlates to material mechanisms underlying the processes of the production of both subjects and Subjects in nature. Moreover, not only that this Deleuzeo-Guattarian formulation would overlap with the erection of the Subject, the Despotic Signifier, but also – and here comes the originality of the shamefully underrated post-Deleuze *Guattari* – it does *not* exhaust subjectivity as such.[45]

In my opinion, Foucault's famous turn toward questions of subjectivity by choosing the framework of *ethics* has more to do with Guattari than with Deleuze-and-Guattari. It is the peculiar dimension of the problematic, the elusive, almost imperceptible wavering line between Deleuze, Guattari, and Foucault what we think is best captured by the subtle distinction between subjectification and subjectivization. The former is more classical, and

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[45]By reading Guattari's solo writings, it is becoming increasingly clearer that his understanding of subjectivity is somehow not identical with the one found in the books signed by Deleuze or by both of them together. That does not imply that Deleuze's and Guattari's concepts of the subject are contradictory, but only that Guattari might have been pushing further beyond what Deleuze actually managed to write down in the published versions of their philosophy.

asks about what does it take to make a subject in general. The latter is more specific: It concerns not only the communal environment of the subject, especially that linked to the Subject as a Despotic Signifier, but rather inquires into the modes of existence of marginal selves created right in the middle of the action of society at large, the paradoxical production of marginalized but "central average": The everyman of modern mass consumerist culture, the average Roman citizen in the Empire, the pious peasant in Catholic Europe, the typical mathematician in mainstream universities, and so on. They all have something in common: The subject is not a Subject, it is not the black hole of Guattari and Deleuze [8], but rather the subject as subject-captured by-the-Subject, the subject playing the role of that structure essentially complementary to the Despotic Signifier.

It is for exactly these reasons that Guattari was able to foresee in this type of "marginalized" or plebeian subjectivity the means for establishing an ontology of post-Marxist political resistance. The war with capitalism does not go through a direct challenge of the existing world order, for example a Soviet-style or Maoist revolution, but rather via a method not much different from the one developed by the Roman Stoics during the first and second centuries of the Empire: by reinventing the self, by dominating the inner subject through the integration of selfhood with nature and the others, a process that involves arts and mathematics orchestrated by a philosophical master thought (the Guide with the Pythagoreans and Epicureans, the teacher with the Stoics and Cynics, the priest with Christianity, and so on.)

Subjectivization, then, addresses itself to the total flux of forces forming and creating the self from the outside in contrast to the classical approach that generates the I-hood of the person through a play on infinity and finitude as revealed in the endless series of self-reflections between the Ego and the Other. The genetic method is retained, to be sure, but completely changed beyond recognition: Indeed, the postmodernist turn of Guattari and Foucault rejects the dialectical phenomenological Hegelian model and works instead in a way closer to the philosophy of nature found in Aristotle and the Stoics.

Although the traditional role of the Despot is taken over in the more sophisticated theory of the Despotic Signifier, a more complex (and maybe eventually more fundamental) process runs in parallel, that which forms boundaries for empty vessels called the typical individuals of society, the marginalized subject, and those less frequent techniques in which a positive and refined subject is created via pedagogy. Therefore, subjectivization involves a double act: The production of the *Everyman*, and simultaneously the preparation for the *Overman*; the former is the statistically dominating type, while the later is the philosopher-king, the artist, and the underground mathematician-naturalist of the future. On the other hand, the normal process of subjectification leading to the production of the Subject (the Universal, the Despotic Signifier, the Black Hole, etc) is what we will name *subjection*. Subjectivization is always accompanied by subjection, for in order to have capture there must be a black hole, and no black hole is conceivable without at the same time the potentiality of capture arising for any subject hopping into its horizon.

But that does not imply that the relation between the two ontological processes of subjectification is dialectic; there is no dual opposition between subjectivization and subjection. In fact, the very existence of the possibility of politics of resistance in Guattari strongly suggests that subjectivization is in a certain way an *autonomous* process that is "relatively independent" of subjection although the former depends on the environment created by the latter.

For example, the monastic technique relies on an implicit separation between what the individual participating in the spiritual exercise considers his own "inner world" on one hand, and the real, harsh external order of things lying outside his intimate self, on the other hand. By suspending the presence of the immoral regime outside the monastery's walls, those who withdraw into asceticism presuppose that by embarking on this meticulous reinvention of the self they are about to start, the actual world, the world of the future, will eventually bend to meet their worldview. Both Stoics and early Christians worked this way, and they certainly

succeeded in doing so. Now what is important for us in this example is the way in which the culture of the self (Foucault's infamous "ethical turn" [318, 319]) represents a form of subjectivity very different from the classical scenario studied in great depth by Deleuze and Guattari, that is, the ontological process we called *subjection*. The former is subjectivization, and with the Stoics, early Christians, Nietzsche, it is an organized and systematic pedagogy of the self aiming at preparing the way for a higher human type who is destined to rule the future, the overman.

There is then a great tension between the classical criticism of postmodernism attacking and rejecting the Subject as a philosophical category, and the undercurrent movement of subjectivization that has been working in full power for thousands of years. The contrast between the two can be described by the strange conflict between the vehement critique of the Cartesian Subject found in Nietzsche's late writings and the his parallel, almost exclusive interest in the *human* lifeworld and culture, especially art. Moreover, Nietzsche had been occupied throughout his entire career with the "education of the self," making himself a better, higher human being, a philosopher in the manner of the Greeks and Roman Stoics who is also a *good* man, not just an intellectual.

In this sense, subjectivization is an onto-political process that aspires to produce new forms of subjectivity in opposition to those produced by subjection. The subjectivized subject stands against the subjection's Subject. This is not a war between two subjects or two Subjects, but a revolutionary encounter between *entirely* different forms of subjectivity. Although Foucault never developed a theory of the politics of resistance like Guattari, this may have more to do with his early death than his actual frame of mind. It seems that Foucault's project of the 'hermeneutics of the subject' was essentially a move toward an endorsement of the ancient *polis*, at least the spiritual orientation that guided the Roman Stoics during the High Empire. The failure of commentators and critics to realize the fundamental divide between the Subject produced by subjection and the subjectivity formed by subjectivization explains the continuing puzzlement over the celebrated "ethical turn" of Foucault, the archenemy of the Cartesian-phenomenological Subject.

Guattari's [189–191, 342–344, 346] and Foucault's [318–320, 351] theories of subjectivization operate with new ontological parameters of the problem of I in general that, we think, have not been fully understood, even by the minority who reacted positively to the ontology of *A Thousand Plateaus* [8]. For how can we differentiate between two types of subjects, one, the Subject, is classical yet non-transcendental or anti-Kantian, while the other, the subjectivity leading to the transcendence of *overman*, is completely outside the standard subject/object problematic? The second type, the subject, is closer to the Senecan Self, or the Stoic subject of ancient thought [99]. An initiation of a theory of such formation was attempted by Foucault in the last phase of his career [318, 319], but the ontological scaffolding of the *developmental* process, at least in line of the already available provisional but highly original outline sketched by Jung [248, 352], has not been created yet, hence it remains an open – and very challenging – research problem.

To be sure, this is where we expect to rely on the ontological apparatus of the *theory of multiplicity* proposed by Guattari [190] (possibly originally inspired by C. S. Pierce's ontology of mathematical being [275] and Russell's mathematical philosophy [226]), and extensively further developed throughout the joint collaboration with Deleuze [8, 25, 196, 353].[46] It is

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[46]The recent of publication of hitherto unavailable letters by Deleuze to Guattari [354] appears to suggest (at some places) that the concept of *multiplicity* is due to Deleuze, while the molar/molecular division is Guattari's. It is not my intention to enter into meticulous textual analysis in this paper; however, careful reading of the manuscripts and notes that Guattari composed while working with Deleuze on *The Anti-Oedipus* strongly suggest that the ontological category of multiplicities was highly advanced in his mind in the early 1970s [190]. It is also true that Deleuze's 1969 text [31], which influenced Guattari, does mention and briefly discuss the concept of the multiple at several locations in the book. It is best then to admit that the mutual exchange of concepts between Deleuze and Guattari had been very intense and unusual for typical "academic collaborations." I hope to address this fascinating topic in a separate place. For now, the most comprehensive account of

true that this complex body of thought has been treated with suspicion by many (Foucault included?), who considered it "too speculative," or sometimes "overtly materialistic," but the major problem of how to construct a theory of subjectivity within the new ontological scheme remains unsettled by the actual text of *Capitalism and Schizophrenia* [8,25]. One of the main objectives of event ontology is to address the relation between Nature and the production of the subject in a more detailed and extensive fashion.

It should be noted that Guattari's effort to write down such theory in texts signed by his *solo* name, e.g., see [190,191,276], suggests that the concept of subjectivization could not be further pushed forward within the formal apparatus of Deleuze's ontology. At the same time, Foucault himself was never a diehard ontologist, at least not in the open manner in which Russell, Heidegger, and Deleuze had been. Therefore, after Foucault's death in 1984, we find Deleuze changing course by writing individual small books expounding Guattari's thought as already developed and filtered in and through the 1970s collaboration [196,199,341]. At the same time, Guattari was beginning to experience increasing personal and intellectual difficulties throughout the last decade ending by his sudden death in 1992 [355]. All of this and other evidence point to the fact that, up to date, no sufficiently developed Deleuzeo-Guattarian ontology of the world can be found in the postmodernist literature serving as a background for a theory of subjectivity in line with the map sketched above [348].

## 8. Conclusions: The Event Structure of the World, Subjectivity, and Their Mode of Interrelatedness as Open Research Problems

The attempt to deal with the problem of subjectivity ultimately depends on creating a fully developed ontology of events, the event being more fundamental than subjects and objects and in a certain sense "prior" to them, though no Kantian transcendentalist connotation is implied by using the term. Event ontology is a continuation of the theory of multiplicity already found in Deleuze and Guattari [8, 191], but it has its roots in their sources: Russell, Pierce, Whitehead, and of course first in Leibniz. Note that we do *not* consider ancient atomism [9,356] and medieval corpuscularism [107] as precursors to event ontology. Atoms/corpuscles and events are technically quite distinct natural ontological categories.

As was suggested above, the motivation for introducing events is to dethrone the privileged position in Western philosophy played by *perception*. Perception also calls into mind the other closely related concept of *introspection*, though the former is not reducible to the latter. In any case, considerably larger literature has been written on perception compared with introspection, the disproportionality is probably traceable back to the obscurity of introspective phenomena in general since they are commonly regarded "subjective" and hence controversial or at best ambiguous. Descartes made masterful use of both perception and introspection in his philosophy. Kant somehow pushed the problem back to perception. Fichte and Hegel brought introspection to the fore. Husserl combined both (like Descartes), while Sartre returned to introspection [215, 357] and Merleau-Ponty favored perception [216, 217]. In modern time, it is with Heidegger, Russell, Whitehead, Bergson, Jakob von Uexküll, Mach, that an alternative was sought, an approach to reality that does not pass through the doors of sensation and feelings as experienced by a central human subject, presupposed to play the role of the ultimate ontological model (Idealism.)

The event structure of the world understands the real as an emerging formal pattern created within a context-dependent field of morphogenetic forces. Events, being prior to objects and things, do not presume a subject or Subject, and they themselves are not things or entities, though all such subjects, objects, things, entities will come into being precisely because once upon the time there were events in the world. More importantly, events are prior to space, so if we provisionally define events as "pure movements," then one would

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the relation between Guattari and Deleuze (in English) that I am aware of remains the extensive intellectual biography [355].

come back to the Bergsonian dictum: *Movements precede space* [1]. The event does not replace the Subject by postulating a universal form of matter as often found in mainstream materialism, which is nothing but "inverted Idealism." While the need to think in terms of events instead of physicochemical atoms/molecules is dictated by philosophical reasons, the purely scientific basis of materialism was questioned and shown to be not well established or as solid as sometimes stated. Both philosophically and scientifically, we believe that the advent of the event is ontologically necessary and even inevitable. This is because, first, as we retied to demonstrate in this paper, because of the nature of the unique manner in which the intellectual problematic of nature has been historically evolving so far; and, second, in order to meet the ethico-political need for grounding the politics of resistance upon the foundations of an ontological theory of subjectivization. Ontology will become a philosophy of nature. The philosophy of nature will then metamorphose into social ontology.

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