

NOTHINGNESS AND SCIENCE (A PROPAEDEUTIC)

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ABSTRACT: We characterize science in terms of nihilism: the nihilism of science is something faced not in what science implies, but as the very essence of science as such. The nihilism of science is the birth of the truth of Nietzsche's announcement "God is dead" from within science as it must now face its repressed subjective core. But in truth, as the Psychoanalytic tradition has determined, it is subjectivity itself that is a bottomless searching—the subject is itself born from nothing. In this way it becomes clear that the nihilism of science is in fact the birth of a nothingness as the essence of science insofar as it embraces the nothingness of its own (repressed) subjectivity. Therefore, we show that the proper determination of the crisis of science is not made via phenomenology, as Husserl attempted in the early 20th century, but can only be made properly in a philosophical-psychoanalytic register. This nihilism is encoded within science in its very modality of thought (which also indicates its existential condition as a whole), as Heidegger well understood: science thinks by means of "representation", and it is this "representational thinking" which prevents the expression of the repressed core of subjectivity. Therefore, by overcoming representation, it is seen that science will no longer be in despair to determine itself as a self, but come to see that this self, grounded in nothingness, in fact becomes its greatest and final expression, that is, as a self rooted not in an unending yearning (desire) for the transcendent certainty of a ground, but in a productive desire (a "groundless" becoming)—self as will-to-create, will-to-power (to return to Nietzsche). This transition from the self as rooted in Desire *qua* lack to a self as determined by an infinitely productive desire is shown to be, in fact, the transition from Lacan to Deleuze. Once this transition is accomplished, it becomes clear that the anti-representational mode of thinking, accompanied by the productive self as will-to-power, determines science not from a transcendent metaphysic (i.e., as a metaphysically "grounded" *praxis*), but as an aesthetically determined modality of pure creativity—i.e., as an *art*. We then conclude by speculating on the proper form of art that this new science should take. We see that anti-representational thinking,

¹ I should immediately acknowledge my intellectual debt to the great Japanese philosopher Nishitani Keiji (1900—1990) whose work has been of profound importance to me. The title of his masterpiece *Religion and Nothingness* is the inspiration for the title of this essay.

rooted in the self as infinite creativity (as will-to-create), is determined not by concepts, but by play (“agon”) or performances (performance *as* concept). Perhaps, then, we should consider music as determining the proper artistic form of this new kind of science? In this way we finally come to see the possibility for the first time of music as a new kind of science.

Keywords: science, crisis, nothingness, nihilism, representation, subjectivity, desire, Lacan, psychoanalysis, Nietzsche, Deleuze, Heidegger, phenomenology, music, performance

Introduction: Revolutions. We are coming to realize how significant the year 1900 was in the history of science. The three sciences that would come to define most, if not all, scientific research in the present (in the year 2014) had their origins in 1900: quantum theory, molecular biology, and psychoanalysis.² But in each case, something much more significant can be witnessed in the emergence of these sciences, something that signals not just an extension of a pre-existing scientific framework, but an epochal shift—in the very nature of science *as such*, a shift which at the same time indicates a fundamental crisis in the very meaning and possibility of science. Only as the year 1900 recedes further from us do these three sciences (that of the Quantum, the Genome and the Unconscious) come to represent not the greatest triumphs of the Scientific Revolution, which brought with it a renewed inquiry into the physical, biological and psychical worlds, but its *terminal point*. Indeed, these three sciences together imply the *coordinates of an impossibility*: science in a certain sense can no longer function as it had. It can no longer deny to itself its own necessary subjectivity—the constitutive dimension of its own activity. But it cannot simply become “subjective” either; it must preserve its *independence* from “mind”, and its “objectivity” would seem to be transpersonal, trans-subjective. Caught in this way between idealistic subjectivism and pure materialistic objectivism—the two poles that establish the coordinates of *modernity* as a whole—science had entered, by 1900, into a period of *dysfunction*, a time when this inner conflict (between the subjective and the objective) could no longer function. We are still, in the year 2014, struggling to come to terms with this state of dysfunction.

Perhaps the opening act of the long history of attempts to redress this inner crisis of science was Edmund Husserl’s founding of the “science” of Phenomenology, roughly around the year 1900. Husserl was one of the first to even recognize that there *was* a crisis in science, and that its roots could be found in the Cartesian legacy. To this day

² Zwart (2013). Zwart picks out the year 1900 as an “annus mirabilis” for science, singling out the work of Max Planck for the quantum hypothesis; the rediscovery of the work of Gregor Mendel; and the publication of Sigmund Freud’s *The Interpretation of Dreams*: we have the quantum, the genome and the unconscious as the investigative and “ontological” units of analysis. One can easily argue that *only* these three fields have defined 20th and 21st scientific research agendas.

some variety of phenomenology (whether Husserlian or not)³ informs most if not all of the attempts to heal what we should call, in general, the psychical *traumas* of the Cartesian subject: the *rift* between subject/object, self/other, inner/outer, ideal/material (etc.) that came to structure the conception, practice and development of science—and society in general—from the 17th century on.⁴ However, this essay will *reject* Husserlian phenomenology as posing an adequate solution to the crisis inaugurated by those sciences that emerged at year 1900. Husserl's concern with the “irrationality” of science, and his concern to find a place for human consciousness as the foundation of science, and in general the concern of phenomenology as a whole with the study of perception (and other such modes of the appearance of a world to consciousness), overlooks the more fundamental nature of the “crisis”. We shall see, rather, that it was Heidegger who managed to perceive the much more profound problem with science: its being caught in what he called “representational thinking” (something that even phenomenology cannot escape from).

Heidegger was able to break himself free of the tradition of Husserlian (or even Hegelian) phenomenology, and thereby oriented himself in a much more challenging direction. We therefore aim to *detach* Heidegger from the tradition of phenomenology⁵

³ We can speak of Husserlian, Heideggerian, Sartrean, and Hegelian varieties of phenomenology, to name just a few. Each form takes the Cartesian subject as an essential reference point and is inconceivable without it.

⁴ Many phenomenologists and phenomenological traditions can be mentioned: for example, Evan Thompson in the field of “cognitive” science; Patrick Heelan and Henri Bortoft (a student of physicist David Bohm) in the philosophy of science; Hubert Dreyfus as a critic of artificial intelligence. Beyond this list, the cultural historian and social critic Morris Berman has provided a detailed analysis of the Cartesian legacy as it played out in Western culture as a whole, emphasizing both its philosophical and psychical elements. Of course, as Berman (and many others) have shown, there is no linear relationship between Descartes' philosophy and (for example) genetic engineering or sociological *anomie*; rather, what these cultural and intellectual historians show is that what Descartes managed to chart out in his philosophy was a kind of psychical standpoint, an *existential* orientation to the world as a whole. In a philosophical register, it was Heidegger who clarified the latter. Berman's “consciousness trilogy” (1981, 1989, 2000), while a product of its time, is nonetheless still highly relevant for providing a detailed overview of the Cartesian legacy and its psycho-social ramifications, beginning in the 16th century. The last (Berman 2000) is a fascinating study of possible alternative, “post- Cartesian” societies that is remarkably critical, balanced and free from the usual communistic/Marxist, liberal-democratic or neo-spiritualist dogmas.

⁵ Heidegger was not, finally, a phenomenologist at all, despite his necessary path *through* a phenomenology of his own design. He was always moving *beyond* phenomenology proper. Heidegger of course *begins* as a phenomenologist of some sort (but only after *abandoning* Husserl's notion of the “intentionality” of consciousness for the more encompassing conception of ‘Dasein’—the human self); but at the *end* of his philosophical work, following his “turn” (*Kehre*), he had managed to orient his thinking towards a standpoint that already tries to *abandon* the last vestiges of the human (Dasein), and to think *Being* from a more primal source (not the *appearance* of beings, but Being as *presence*). As the Japanese philosopher Masao Abe writes, “before the turn [*Kehre*]”, Being is understood to be revealed primarily through the

and to place him with his true philosophic equals: with Nietzsche before him, and with Deleuze after. We intend to argue that only by accepting the *nihilism* inherent to science (considered as a *subject in search of itself*), will it be able to yield to a truly *devastating* and catastrophic possibility that is the final *expression* of this very inner nihilism: the possibility of music (or in general, *art*) as a new kind of science.

To reach this point, the point where what is called in a Nietzschean register the “aesthetic conception of life” becomes the *ground* for an aesthetic conception of science, we must traverse the inner nihilism of science, that is: we must explicate its repressed core—precisely what it refuses to become: a subject. Thus, we must begin in a psychoanalytic register, for, as a science, it was psychoanalysis that managed to find a “functional” (or if you prefer “rational”) form of scientific *praxis*: one that did not despair of being truly a self to itself and to (and for) others. Precisely in its recognition of the essential dimension of subjectivity did it manage to find a functional *praxis* as psychoanalysis: the study of the structures of the psyche of the subject of the analysis, brought forth for “objective” study only by the subjective activity of the analysis itself (i.e., the analytical determination of the *meaning* of dreams, *parapraxis*, humor, and so on *as constituted linguistically*). The most important feature of this analysis is the realization, articulated gradually in the work of Lacan,⁶ of the inherent emptiness or nothingness of the subject as such: its unconscious structures are what we constitute through language itself; the subject is *constituted* by the very “gap” first indicated clearly in Descartes. Thus, the Cartesian legacy had, as it were, already understood the only possible “rational” form of subjectivity. Yet, not only did science in the shadow of Cartesianism reject the subject as being constitutive of the truth of science (it sought always to eliminate it—this is Husserl’s “irrationality”), but the tradition of phenomenology, stemming from Husserl, seeks to find a place for what is already and necessarily a vacuity, a nothingness.

Only having found itself first on this psychoanalytical ground (the nothingness of the self) will it be possible for science as such—as a *concept*, and not as a *praxis* wed to a

phenomenological analysis of Dasein (the human self). Whereas after the turn, by giving up the Dasein-centered approach, Being is understood to reveal itself from a deeper root source called ‘Appropriation’ (*Ereignis*), or the ‘It’ that ‘gives’” (Abe 1992, p. 124). Abe comments (pp. 125ff) that this turn opens up what he calls a “transanthropocentric horizon” (though he is less sanguine about whether Heidegger has abandoned subjectivity and anthropocentrism entirely). For a careful analysis of Heidegger and Husserlian phenomenology, see Moran (2000) who understands Heidegger as *radicalizing*—not breaking away from—*Husserlian* phenomenology. I place the break at the *end* of Heidegger’s philosophical work, after the *Kehre*, an issue Moran does not address.

⁶ See esp. Lacan (1997), (1998), and (2008). When I refer to ‘Lacan’ it is generally these three works that we will keep in mind. See also Evans (2003) and Fink (1995) for important discussions of key Lacanian notions, especially the Lacanian subject and the concept of Desire as rooted in *lack*.

particular sub-field, or enamored of one singular *object* of inquiry—to fulfil its desire to negate its own necessary subjective ground. The proper form, however, of this negation is the abandonment not of the Cartesian legacy, with its litany of dualities (which, from a psychoanalytical standpoint, has already been overcome for the *self*)⁷, but the rejection of what Heidegger called “representational thinking”. Yet this is what cannot be thought from within science; indeed, it cannot be thought within philosophy either, for to think without representation is to think precisely what remains unthought within thought—the dimension of absolute *difference*. Both Heidegger and Deleuze must usher us into this realm, one that challenges thinking in a fundamental way, leaving nothing that could be familiar to us. In order to begin to think absolute difference—to think “difference in itself” as Deleuze will call it—in a “scientific” manner, we must first accept that the very transcendent *ground* presupposed by the sciences that operated within the scope of the Scientific Revolution has already been overturned *from within science itself*, with the supposed “irrationalism” of science as Husserl understood it, concealing a deeper, emancipatory, possibility. In this way we are called not to nuance the relation between “consciousness” (subject or “observer”) and measurement (of “the real”, as object); or “embody” the perceiving mind (the consciousness) that engages in the work of science in order to rid science of its irrationality (as Husserl and his disciples hoped). The only true resolution of the “irrationality” of science is to show that *only* in its “irrational” form is it able to give birth to a radically new possibility: the possibility to *become a subject* for the first time. Only in this event of becoming a subject is it possible for science to think what Deleuze calls “difference in itself” and thereby break free of its repressive “metaphysical” form, and thus break free of Representation (and *common sense*, and the “lifeworld”) altogether.

In this essay we aim to merely to show that this *is the trajectory that must be taken*, if science is to realize its “repressed” nihilistic *essence* (Cartesian subjectivity), and find

⁷ Indeed, the Cartesian self, as distinct from the more amorphous cultural and social *legacy* of Cartesianism, when embraced through the psychoanalytical standpoint, is seen as in fact the first moment in a long attempt to come to terms with the self’s constitutive negativity—its profound *nothingness*. If the “death of God” means anything, it means not only the death of the transcendent source of Being, but also for the transcendent security of a *self* beyond habit, language, and so on. Of all thinkers today, it must be Slavoj Žižek who *champions* a return to the Cartesian self, following Lacan. See for example Žižek (2012). For Lacan and his Hegelian disciple Žižek, Descartes articulated the coordinates of our *attempt* to affirm a self; what Descartes himself could not see was perhaps how, at the same time, this affirmation is *futile* but which nonetheless, in dialectical fashion, reveals the “true” form of the self. As Fink (1995) summarizes the Lacanian self (arrived at dialectically from the Cartesian): “The self is nothing but this very split” between “being” (the ‘am’ in the famous “Cogito”) and thinking (p. 45). In the gap between the two rests the *unconscious*.

some “functional” form: the trajectory that takes us from science in despair to become a self, through the self as such, the realization of its nothingness, and the birth of a new self out of the spirit of music, which finally gives us an indication as to the *form* this science (i.e., that which presupposes a self transfigured by the nothingness—the “irrationality”—of the Cartesian self) must take. Given limitations of space, we can end only with some (speculative) suggestions in connection with this possibility.

The necessary movement: from Husserl to Heidegger. As Merleau-Ponty summarized it, the problem to which Husserl devoted his new “phenomenological” method of analysis was the growing “irrationalism” of science. “The crisis of science in general, and of the sciences of man, and of philosophy,” he wrote in 1961, “leads to an irrationalism. Reason itself appears to be the contingent product of certain external conditions.” He continues:

From the beginning of his career, Husserl recognized that the problem was to give a new account of how all three—philosophy, science, and the sciences of man—might be possible. It was necessary once again to think them through to their foundations. He saw that these different disciplines had entered into a state of permanent crisis which would never be overcome unless one could show how, by a new account of their mutual relations and their methods of knowing, not only how each alone might be possible but how all three might exist together. ... The conflict between systematic philosophy and the advancing knowledge of science must cease.⁸

The solution to the crisis, for Husserl, would not require the abandonment of Cartesian subjectivity; rather, a more penetrating understanding of it. Cartesianism eventuated in a detached subjectivity, a radically disembodied “mind” over against a material world for which no place could be found. And this would seem to eliminate the very *origin* of science itself—the rational subject and its consciousness of the (external) world. Clearly this split could not go unaddressed. The two must be reunited. In a perhaps paradoxical move, Husserl returns to the subjectivity determined by Descartes and founds a “science” of the analysis of the coming-to-be of appearances— a science of the structure and constitution of *phenomena*, i.e., a “Phenomenology”. Husserl in effect aimed to *complete* what Descartes left unfinished. This structure would determine the real conditions under which a science, which presupposes the finished products of consciousness (i.e., a duality of subject and object), is possible. Already implicit in Descartes’ analysis of “ideas” in his *Meditations* in their inherent

⁸ Merleau-Ponty (1964), p. 44.

“intentionality”, their directedness to that reality which stands outside the idea—i.e., the reality to which the idea is itself directed. Husserl in effect *begins* with this as a primitive relation: “ideas” are the *intentional objects* of the constituting *subject* of consciousness (the “ego”—or the “I”). By eliminating the specificity of an individual’s own particular act of constituting intentional objects—the technique of “*epoche*”—Husserl attempts to elevate this inquiry (the study of the activity of consciousness “intending” objects) to the status of a *science*, that is, the *study of invariant structures of the phenomenological activity of intentional consciousness*. In this way, Husserl was able to study “consciousness intending objects not as an event happening to a certain person in the world but as a pure phenomenon—‘*ein Schauspiel nur*’”.⁹ But the important discovery of Husserl—that all ideas are already *intentional* in nature, and therefore already presuppose a *directedness* to an external world to which ideas stand always and already *open*—required the introduction of a transcendental Ego, not unlike what Kant had already introduced under the heading of the “transcendental unity of apperception”. Naturally, if there were in fact invariant structures of the phenomenology of human consciousness (structures that determined the *emergence and form* of objects for consciousness), and if the sciences could be understood to simply *begin* with these already-formed structures, then the true basis in experience of the sciences could be clarified; moreover, what we would then have is a rigorous scientific *foundation* for the “sciences of man” (one that does not eliminate consciousness, but affords it primacy without collapsing into mere subjective idealism). Husserl’s “Crisis” in science would then be resolved by restoring the thinking subject to its rightful place, as the *ground* of all science. It would then be assured of its “rationality”.

But this “rationality” would be achieved only through the introduction of a transcendental Ego. Through this Ego, phenomenology thinks it has found a place *prior* to the emergence of the Cartesian duality of subject and object (now in Husserl understood as a *phenomenological*, not ontological, dichotomy). Phenomenology from then on would always seek to think this “pre-theoretical” or “pre-reflective” realm in order to see the appearances *appearing*; but this appearing activity always had to be referred *back* to some constituting *ground*—back to *consciousness*, or Husserl’s transcendental Ego. In this way phenomenology became in effect an investigation into the conditions of the possibility of *knowledge*, drifting, it would seem, naturally towards Kantian philosophy.¹⁰ Thus, all that was accomplished by Phenomenology was an

⁹ Williams and Kirkpatrick (1960), p. 17.

¹⁰ As Williams and Kirkpatrick (1960) write: “The intentional *object* ... will be considered a product of the activity of the transcendental ego upon [the] directly given contents of consciousness, usually called ‘sense data’. And the true study of the intentional object in phenomenology—contrary to the original intention of Husserl’s philosophy—will be a study of the principles governing the activity of the transcendental ego by which the object is constituted out of such contents. In sum, a phenomenology that admits a

understanding of the *origination* of the Cartesian duality in such a way as to disabuse Cartesianism of its ontological pretensions.

What is this “rationality”, however, that Husserl desperately wanted to restore to science? As already Sartre had realized in his seminal essay rejecting Husserlian phenomenology,¹¹ the deeper question is whether a kind of pure *immanence* is possible here, a philosophical investigation that does *not* appeal to any transcendental field that lifts itself out of the realm for which it wants to in turn offer the *ground*. The true enigma at the heart of Cartesian philosophy was precisely the “otherness” that would seem to be *constitutive* of consciousness itself. Cartesian-inspired materialistic science posits a radical otherness as “matter” (Descartes’ *res extensa*) but does not address itself to the otherness of consciousness itself, as Husserl rightly understood;¹² in this way Cartesianism *does* yield a kind of irrationality. What if, Sartre asks, “there is no ego ‘in’ or ‘behind’ consciousness”?¹³ If this is the case (something Husserl could only see as an “irrationality”), then, write the translators of Sartre’s seminal essay, there would only be “an ego *for* consciousness. The ego [would be] ‘out there in the world, an object among objects.’”¹⁴ And so:

The question now may be asked: by whom or by what shall the *contents* of consciousness be fashioned into intended objects for consciousness, since this duty was performed in the phenomenology of Husserl by the transcendental ego? The answer for Sartre is that nothing shall constitute contents of consciousness into intended objects, for the important reason that *consciousness has no contents*. All content is on the side of the object. Consciousness contains neither transcendental ego, nor anything else. It is simply a spontaneity, a sheer activity transcending towards objects. There are no mental entities whatsoever, no ‘whats’ which are of the ‘stuff’ of consciousness, but function as representatives of the outside world. ... To use the metaphorical language sometimes employed by Sartre, ... consciousness is a great emptiness, a wind blowing towards objects. Its

transcendental ego standing behind the acts of consciousness must also discover that consciousness has contents and must end by referring the character of every object to the activity of consciousness. To many disciples of Husserl, this outcome of phenomenology was simply another version of the philosophy of Kant, notwithstanding the initial tendency of phenomenology in a seemingly new direction” (p. 20). Presumably, this “new direction” is precisely what Merleau-Ponty intended to accomplish.

¹¹ *The Transcendence of the Ego*—a marvellously ambiguous title, originally published in French in 1936-37 (i.e., just before Husserl’s death).

¹² Husserl understood that consciousness is already other-directed (“intentional”) but—and this was Sartre’s insight—he did not follow this logic out to the end, instead opting for the security of the transcendental Ego. *See* below.

¹³ *Op. cit.*, p. 21.

¹⁴ *Ibid.*

whole reality is exhausted in intending what is other. It is never 'self-contained,' or container; it is always 'outside itself'.¹⁵

As Deleuze (and Guattari) would later realize, "Sartre's presupposition of an impersonal transcendental field restores the rights of immanence".¹⁶ "When immanence is no longer immanent to something other than itself," they write,

it is possible to speak of a plane of immanence. Such a plane is, perhaps, a radical empiricism: it does not present a flux of the lived that is immanent to a subject, and individualized in that which belongs to a self. It presents only events, that is, possible worlds or conceptual personae. The event does not relate the lived to a transcendental subject = Self but, on the contrary, is related to the immanent survey of a field without subject; the Other Person does not restore transcendence to an other self but returns every self to the immanence of a field surveyed. Empiricism knows only events and other people and is therefore a great creator of concepts. Its force begins from the moment it defines the subject: a *habitus*, a habit, nothing but a habit in a field of immanence, the habit of saying

I.¹⁷

The "irrationality" of Cartesianism is merely its own repressed subjectivity; once expressed, its "irrationality" becomes precisely rational, the negation of the transcendental *ground* of ego or 'consciousness'. This is not "materialism" for even this would posit *matter* as transcendental ground of all reality. This is the *challenge* that immanence poses for thinking as such, and for science in particular. The "Crisis" is far worse than Phenomenology could imagine. The true Crisis, rather, is that *transcendence as such* is called into fundamental question, for with a transcendental Ego (or the security of a conscious self embedded in a common lifeworld), the elimination of the self (its disembodiment) is simply displaced to a different register. And with Phenomenology we know in advance that in the end the old transcendental form of *Truth* will in fact be preserved: to catch the appearances appearing in the perceptual act—this is what Phenomenology will determine, in reference to a consciousness *appeared to* (the transcendental self). The possibility of a purely *immanent* science, one that presupposes *no* transcendental field, no "ground" outside of itself (*neither* one of consciousness *nor* of the ontological security of "matter"), is entirely beyond the scope of both Phenomenology and Cartesian/Newtonian science.

In order to consider this possibility (which, in the end, goes even beyond Sartre's standpoint), it will be necessary to think what cannot be thought by either Descartes or Husserl (or the Phenomenologists): the very condition for the emergence of *difference*

¹⁵ *Ibid.*, pp. 21-22. See also Lawlor (1997), esp. pp. 18-19.

¹⁶ Deleuze and Guattari (1991), p. 47.

¹⁷ *Ibid.* pp. 47-48.

(between subject/self and object/other), one never referred to a transcendental self or “ego”—that is, the very being of *difference in itself*. It was to this “ontological difference” that Heidegger was to turn, arguing that this (the ontological differential in Being) was what could never be thought in the Western tradition, and what Husserlian phenomenology (naturally) overlooked. There was, even for “consciousness” a fundamental condition for the emergence of ontological difference as such, and this is the essential dimension of *temporality* (the very theme of Modernity as a whole), the incessant flow of Being as such that cannot be thought as either object or subject. The ground of this thinking of difference and temporality, however, posits *no* ground for subjectivity prior to its own awakening as such. It is a *pure opening* with *no* ground—an opening *from nothingness*. From Heidegger’s more fundamental understanding of the “Crisis” of science (its entrapment in what he will call “representational” thinking, which persists in transcendence), we will eventually return to the standpoint of Deleuze (and Guattari) who attempted to think difference and temporality most directly (and most importantly not *as* such).¹⁸

From Heidegger to Nietzsche. Heidegger found a more fundamental and essential “Crisis”. Already for Husserl and for Phenomenology as a whole, there was an implicit determination of the general structure of Being as constituted by beings, that is, by entities in possession of properties. This constitutes a prior Identity to which are referred all the objects that emerge on account of the activity of their *appearing to* consciousness. The appearances for Phenomenology are the appearances of *objects for and of consciousness*. This appearance (the phenomenology proper) is already, therefore, *determined in advance*, most especially in relation to the common-sense realm of the “lifeworld” (indeed, the phenomenologist *begins* with common experience and tries to enter into a pre-reflective domain *from which* the common arises as what is already known and to be expected—the supposedly new and surprising element being the transcendental apperception of the constitution of the objects appearing to consciousness, the *act of perception itself*). Heidegger realizes that, even for Phenomenology, Being is determined as beings or entities. In the case of Descartes, we find merely a simplification (and clarification) of this mode of thinking Being as entity:

¹⁸ What makes their thought outstanding and important is precisely its difficulty: Deleuze and Guattari have attempted to *let* thinking think *as* difference in itself, as a differentiating activity, rather than referring itself back to the familiar structures of meaning, the “fourfold bark” that is used to *crucify* difference, by “subordinating it to the identity of concepts, ... to the resemblance of perception, the opposition of predicates and the analogy of judgement” (Deleuze 1994, p. 288). Such a liberation of difference is pure schizophrenia, and therefore presupposes another form of being (another subjectivity altogether), and another form of analysis—a “schizoanalysis”. This will turn out to be a self given over to pure temporality, an excessive overflowing self of affirmation, a *Nietzschean* self. See discussion below.

there are just two fundamental *kinds* of being, the “thinking substance” (*res cogitans*) and the “extended substance” (*res extensa*). This “substance dualism” in turn renders the thinking substance—the self—problematically related to a world of pure *res extensa*, and therefore the “irrationality” of science was its tendency to eliminate the subject itself from the physical world of extended substances, making its own basis in human reason itself wholly mysterious. But this dualism was itself a consequence of the deeper standpoint which Western thought, according to Heidegger, adopts towards Being as a whole, a standpoint he calls “representational” thinking. And in this form Western thinking persists as *metaphysical* thinking. Indeed, representation is what *identifies* Western thought as essentially “metaphysical”: Being is always determined as *a* being among beings, the “highest” being one that, from a transcendent standpoint, *determines* all beings in their own being, which also *governs* their fundamental movement in time, all the while staying *outside* of this system of beings-in-motion. Thus, this highest Being is left in the unfortunate position of having to be an uncaused causer, an unmoved mover, and an uncreated creator. What is not thought, however, is Being as such— Being as what is *not* “a being” or “an entity” or “a highest Being” and so on. This is the thinking of Being as pure presence or openness, the place of which is what Heidegger calls the “ontological difference”: that which *fails to be thought* (and indicated) by thinking Being in terms of beings. Representational thinking merely formalizes this failure to think ontological difference: it presents a structure of thinking in terms of subject *over against* object.

In a series of important essays¹⁹ Heidegger shows that science reproduces the basic “representational” mode of thinking that characterizes the history of Western thought since the Greeks. Whenever it attempts to think, the Western tradition thinks *representationally*, that is, it thinks in such a way as to re-present to itself an object to which its thinking, as subject, corresponds. (And in this way we are lead to the basic form of representational truth: adequation of subject to object, through the mediation of propositions, or in general, language.) Heidegger explains that “modern representing ... means to bring what is present at hand before oneself as something standing over against, to relate it to oneself, to the one representing it, and to force it back into this relationship to oneself as the normative realm”.²⁰ He continues:

Whenever this happens, man “gets into the picture” in precedence over whatever is. But in that man puts himself into the picture in this way, he puts himself into the scene, i.e., into the open sphere of that which is generally and publically represented. Therewith man sets himself up as the setting in which whatever is must henceforth set itself forth, must present itself, i.e. be picture. Man becomes

¹⁹The Age of the World Picture” and “Science and Reflection” in Heidegger (1977).

²⁰Heidegger (1977), p. 131.

the representative of that which is, in the sense of that which has the character of object.²¹

But what is crucial here is to recognize that science thinks in terms of a fundamental *conflictual* relationship (of one *subject* “over *against*” another *object*). Husserl simply corrected for the strict (and indeed paradoxical and inoperable) separation of subject (knower) and object (known). On the other hand, moving away from a strictly Husserlian phenomenology and towards a more “existential” phenomenology²² influenced very deeply by Heidegger, Merleau-Ponty aimed to “situate” or “incarnate” the subject, so that, as Steven Rosen writes “physics and philosophy alike [can] learn to start their work not from the lofty abstractions of Cartesianism [disembodied, detached subject-who-tries-to-know], but from the lived experiences of subjects who share a common world” where, in this “lifeworld”, “[p]erception has primacy”.²³ In this way a world truly can *appear* with a certain characteristic coherence and organization. In general, therefore, phenomenology (Husserlian or otherwise) primarily allows for a more clarified *dialectic* between subject and object, rather than putting an end to this dualism itself,^{24,25} In this way phenomenology merely rearticulated the problem of representation, perhaps even making it more acute. In the

²¹ *Ibid.*, pp. 131-132.

²² Something perhaps already implicit in Husserl himself. *See* Welton (2000) for a particularly illuminating discussion.

²³ Rosen (2013), p. 2.

²⁴ The dialectic has for Rosen a certain determinate structure, the topological structure of a “Klein bottle” (*ibid.* pp. 7- 11). With it, we have the absolutely enfolded structure of a purely *one-sided surface*, where: the “part uncontained” corresponds to the standpoint of the (Cartesian, detached) subject; the “part contained” corresponds to the standpoint of the object exterior to it; and the “part containing” corresponds to the *space* within which subject and object jointly *stand* (which in the Cartesian philosophy would have to *be* their *topos*—the place where they come together *oppositionally*, which is to say, *as one thing exterior to, and “against”, the other*).

²⁵ Marsh (1988), for example, develops an explicitly “dialectical phenomenology” that finds its origins in Hegel, Marx, Husserl, Heidegger and Merleau-Ponty. Husserl’s phenomenology, as painstakingly reconstructed in its entirety by Welton (2000), seems to indicate a general dialectic that *eventuates* in that between subject and object, but which would seem to originate in a more primal relation that involves both temporality and difference. But the problem is that phenomenology must always bring itself *back* to a “lifeworld”, the familiarity (and predetermination) of the realm of common sense, the intersubjective and so on. Precisely because it must eventuate in subject/object it does not allow the radical dimension of temporality to allow *difference* in itself to simply *differ*, to allow the subject to *decohere* and to enter into the anarchic schizophrenia of difference-in-itself. This is always the realm of *art*. It *alienates* in order to enter into the “It” which “gives”. It traverses the realm of *sense* by means of the realm of *nonsense*. *See* Deleuze (1969), esp. the 14th—16th “Series”. For phenomenology, everything is (pre)determined precisely in relation to the *future* determination of the coherence of subject in relation to object; if anything, it is this *relation* that is crucial for it.

end, Husserl never succeeded in *eliminating* Cartesian dualism²⁶ so much as he managed to show that Cartesianism erroneously tried mapping *one half* of a duality *onto everything else* (i.e., *everything* was supposed to be a function of matter-in-motion, a consequence of the movements of the “extended substance”), in the process confusing the nature and scope of science. Merleau-Ponty’s “situated” subject, a supposedly re-embodiment of the disembodied Cartesian subject had the advantage of moving from the Kantianism of the Husserlian project to the much richer “existential” project of Heideggerian phenomenology.²⁷ But at the end of his project, we have the “lifeworld” and so all the activities of perception are referred back to a transcendently constituted set of *existential conditions*. As Deleuze (and Guattari) realized, this fails to meet the challenge of difference.²⁸ All the perceptions that “would make us give birth to the world” are referred ultimately back to what Merleau-Ponty calls an “*Urdoxa*”—a “primal faith”, a realm of common sense opinions (“doxa”) which is the realm of communal intersubjectivity, the realm of the already- familiar.²⁹ In this way, “phenomenology could not prevent the subject from forming no more than opinions that would already draw the cliché from new perceptions and promised affections”.³⁰

What is the form of the “Crisis”, then, from Heidegger’s standpoint—that is, the standpoint of representational thinking? We know that it is the collapse of the transcendent standpoint, and the opening of the possibility of pure *immanence*. Nietzsche opened up to Heidegger the sign under which the sciences operate, the sign overhead that indicates that they have reached a terminal point, a point of dysfunctionality. Thus we should turn briefly to Nietzsche, the one who bridges Heidegger’s thinking of the *ontological difference* (and the horizon of temporality that it presupposes) to the thought of Deleuze (and Guattari), and determines, finally, the trajectory this loss of the transcendent in science must inevitably trace for us—a trajectory through the *nihilism* that is, in fact, the essence of science.

Nihilism as the essence of science. In the decades prior to 1900, that revolutionary year in science, Nietzsche had announced something that would seem terrible. What was suddenly gone was the belief in a certain kind of reality, the kind of reality that was formed from the ruins of the ancient world during the middle ages: a relatively closed world carefully designed by a transcendent *Deity* upholding eternal moral and material

²⁶ How could he really? At a conceptual level, Husserl is dialectically wed to it: he *presupposed* the Cartesian meditation itself, and extends it to its logical, which is to say *phenomenological*, conclusion.

²⁷ A shift from the concern with the conditions of the possibility of knowledge, to the *conditions of existence* — i.e., the *situatedness* of the subject.

²⁸ Lawlor (1998), p. 16.

²⁹ See for example, Merleau-Ponty (1962), pp. 364-365.

³⁰ Deleuze and Guattari (1991) as quoted in Lawlor, *op. cit.*

laws. It was this belief in the *transcendent* that Nietzsche saw completely *vanquished*, in the blink of an historical eye. He announces it as the “death of God”—a deicide at the hands of humanity itself. “God is dead” the madman in his *Joyful Science* announces under the futile light thrown off by the lantern he carries through the town, in the middle of the afternoon, raving mad—“...and we killed him”. Science would seem to be the place where this faith could be reconstituted—as faith in the immutability of the Laws of Nature. Yet, the shroud of the theological had not been given up—even this Nietzsche saw: science was also secretly a theology.³¹ What remained as the God of the explicitly theological died was the reliance upon *some* transcendent structure of meaning, and truth, some absolute power to which the subject could appeal to be reassured that its world was stable, coherent, *real*. Could *this* transcendent structure have *itself* died—devastating *all* such reliance? This is precisely what Husserl’s early diagnosis of the supposed “crisis” in the sciences *failed* to realize: that Nietzsche’s “death of God” not only signaled a problem for the religious dimension of society, but also, perhaps much more seriously, for the sciences themselves. This question has not been thought within science itself; thus “nihilism” seems to be what science implies, not what it in a very fundamental, and revolutionary sense, *already is*.

The question that this essay addresses is this: what kind of science arises once one *begins* from the “death of God” as an immanent event within science? If the “death of God” is the death of the Transcendent *as such*, and therefore no reliance upon those structures which presupposed it is any longer *possible* (or only possible through a *scholastic faith—through sclerosis*), then the question we are exploring is what kind of science would arise without a Transcendent Ground. I propose to call this a “science from the standpoint of Nothingness”—a science that *presupposes the nihilum of the death of God*. In order to arrive at the point where we can see what form science must take if it *presupposes* the nihilum of the death of God (that is, the form science takes when it no longer begins or ends with a Transcendent structure of meaning, truth, and so on—when it has lost all *anxiety* about such things), we must first determine that presently-existing science has already given birth to this *nihilum*—that nihilism is already its essence. We see this nihilism as the very *form of truth* that science, ever since those Cartesian Meditations, has assumed, but which no longer functions as a viable *internal* possibility, which Husserl found to have become deeply “irrational”.

Science is dysfunctional, and has been since its origins. At the level of its truth, Science has always tried to *eliminate* in principle the practicing subject as *constitutive of*

³¹ For Nietzsche, the Enlightenment was nothing more than a brief transition between two faiths: from a faith in God to the faith in Reason. The theology of Modernity would even become Trinitarian, with Reason enshrined within Science as the *Father*, technology as its *Son* (indeed, is not “techno-science” promised to us as only *true* salvation?), with global capitalism, finally, as its *Holy Spirit*.

the truth in any substantially important way: all that the subject really does (as a matter of its practice) is to discover what is already *there*, prior to the subject's activities. The subject ("man") simply re-presents "that which is [already present], in the sense of that which has the character of [an] object," as Heidegger described it. If it is discovered that neither subject nor measuring apparatus (or experiment) can in principle be eliminated, then this immediately destroys the "objectivity" of its determinations in the sense that it would fail to present some *invariant* structure (the condition of invariance being *the* essential condition for scientific objectivity, something that even Husserl sought to achieve through his "rigorous" science of phenomenology).

In this way do we come upon an insidious dialectic, what we should call *the dialectic of science*: the objectivity of its practice is possible only by eliminating the *actuality* of the subjective constitution of its objective knowledge; the truth of science is only possible because of the "untruth" of the elimination of its own constitutive activity as a practice that determines what it knows. The condition for the possibility of this *dialectic of science* is, however, the *very framework of Representation* as determined by Heidegger. This dialectic is possible, therefore, only because science persists in a "metaphysical" form, what Heidegger always referred to as "onto-theology" in light of the fact that it thinks at once Being as entity which, in turn, drives it towards a Highest Being (a transcendent Source), at which point we have the basic form of the *dialectic* we outlined here: the determinate of the system of the beings as a whole is at a complete *remove* from the system as such. In science, what we of course find is that the world first appears to as object (a coherent locus of properties— i.e. an "entity"); yet, then, the subject *for whom* this object appears as object is treated as eliminable, that is, as an essentially neutral or passive conduit through which what is and has been *already present* is merely *re-presented*. But, given its transcendental orientation, the paradigm of Representation is itself always pushed towards *complete representation*. It is not enough for science merely to represent; it must be the case that the very standpoint of the representation (and at the end of the day, it must be the representing subject) be itself, in principle, included *within the representation* as just another (objective) element. Yet, precisely because of this representational mode of thinking in which the objects it determines must always be referred back to some prior Identity, representation can never be complete—*total* representation is excluded by representation itself. The constitutive activity of representation must always stand outside the representation (outside the grasp of the subject, always *beyond* its epistemic or even its linguistic *horizon*). Representation is doomed to be *always* be incomplete, unfulfilled, a subject both present and always yet absent.

The dialectic of science is this *paradox* of Representation, and this is the very essence of science. It displays an inner *nihilum*, a nothingness insofar as there lies within it this perpetual *disavowal* of subjectivity, the repressed core of its own constitutive subjectivity, an aporia, the very negativity of the self that is the result (the “irrationality”) of the Cartesian split. But it is this nothingness that is so fully embraced *as* the subject itself, by Psychoanalysis. By not making the transition into an embrace of itself as an aporic subject, this unacknowledged dialectic of science indicates in fact the *first* stage of the realization of the essence of science *as nihilism*. As a subject, it has not yet encountered the traumatic fact of its own nothingness—that what it repressed all along *does not exist*. From out of this *nihilum*, science therefore awaits its rebirth as a praxis without the presupposition of the substance of subjectivity, precisely what it always yearned for, but which it only harboured as a *repressed* element. The only solution to this paradox is to become a *pure* subject—to realize itself as *already a subject*.³² It already pursues truth as the inextricable enfoldment of subject and object, in Möbius fashion—exactly homologous, I claim, to the structure of psychoanalytical “truth” clarified in the Freudian tradition. The true “ground” of science is, then, a psychoanalytically determined one.

Notice that this paradox implies the ultimate *impossibility of a transcendent ground*: of truth, meaning, and so on. We might even hazard to put it in terms of Gödel’s famous incompleteness theorems (of formal logic): for *any* sufficiently complex representational system,³³ there will always exist truths in that system for which no *internal proof* exists—for proof, another non-equivalent system must be introduced relative to which one might find the proof. For the paradigm of Representation, this establishes the limit of reflexive truth, that is, truth that is defined in connection with the subject/object duality. In fact, what Gödel’s theorems show is that a necessary element of *difference* is necessary for truth: there is always something that escapes a representational system—that system itself, considered as a totality. The totality can only be considered *from a different* system altogether. Thus, no totality (no total representational system) can be determined. Thus we find that science, in order to be “objective”, can be so only by *eliminating* the subjective constitution of its own activity, which activity, however, must become another objective element in its representations—something that is impossible.

³² Or rather, as a *praxis* that fundamentally (which is to say, essentially) recognizes that, to borrow from a formula Lacan like to quote, “substance is already the subject, before it becomes the subject”. See Lacan (2005), p. 89; see also Fink (1995), pp. 42-48.

³³ Shall we not *just here* abide by the once-fashionable theory of mind favoured by many in the so-called “analytic” tradition of university philosophy? Is the mind not often enough taken to be a complex representation-generator—was this not Descartes’ basic *idea*?

It follows that science can be itself (“objective”) only by denying something essential about itself. We come, therefore, to the inner contradiction that drives science forward. It is a kind of inflection point, where the subject and object *must* come together, but, because of the “objectivity” of science, can never become itself scientific. This impossibility is *immanent to science*: this is an impossibility that arises from within the internal order of science itself.

In each of the three sciences we mentioned at the outset of this essay—quantum theory, molecular biology and genetics, and psychoanalysis—we find this dialectic in operation, and finally posing to these sciences the true meaning of its own inner nihilism—the absurdity of its own Representational framework. Beyond this, these revolutionary sciences of the beginning of the 20th century suggest that this coming together of subject and object—that is, that there is no absolute, unambiguous distinction—*must* become scientific. There can no longer be the presupposition of an absolutely transcendent “view from nowhere” relative to which a clear distinction between subject and object can be made, allowing science to operate as if the subject could always and everywhere be eliminated from its determinations. We have, therefore, a radical moment of the “death of God”—the utter loss of a transcendent ground—emerging from *within* science itself.

In quantum theory, all three of the presuppositions of classical Newtonian science have become dysfunctional (in the very least, the subject of an exasperating and nearly century-old interpretive quagmire): (i) that it is always possible in principle to find a fundamentally non-statistical and deterministic mathematical description of the physical processes of nature; (ii) that all physical quantities, including space, time (together which constitute the coordinating structure for all descriptions) and matter/energy are *continuous* quantities; and (iii) that it is always possible to extend a (fundamental) physical theory to include a consistent and unified description of the *process of measurement* (and even of observation) as itself *merely another physical process the theory can exhaustively describe* (at least in principle). There are reasons to believe that (i)—(iii) are entirely overturned by quantum theory: that (i) statistical descriptions *must* enter into fundamental theory and while certain aspects of the theory (like Schrödinger’s wave equation) are deterministic, experimental predictions (it would seem) must remain indeterministic, that is: *purely probabilistic*; (ii) fundamental physical quantities cannot be considered continuous, but must be regarded as discrete and therefore not necessarily amenable to a strict spatiotemporal description, this is: a description which characterizes the evolution of the system *continuously* through space and time; (iii) as a consequence of (i) and (ii), it must be the case that there exists no non-arbitrary distinction between the process of measurement or observation and the

deterministic evolution of the system under measurement or observation (given by, for example, Schrödinger's wave equation)—which is to say that 'measurement' and 'observation' must now be introduced into the theory as *fundamental* concepts which do not allow for further physical analysis by the theory (of quantum mechanics) itself, as von Neumann realized early on.³⁴

In molecular biology and genetics, we perhaps await an acute form of the problem of Representation as is faced now in quantum theory (probably because the latter is about much more elementary phenomena); but if we can simply speed up the process of conscious intervention in, and manipulation of, the biosphere, and the manipulation of, and intervention in, the elementary structures of life, including the *human* genome; then, in a very direct sense, the biology of the year 1,900,000 would be very much the study of the inextricable interrelation between the subject and object—the study of merely the form of our own participation with, and structuring of, the biosphere. Already such a thing is termed “anthropogenesis” in climate science. The dialectical irony here is that the more we are able to alter the realm of nature, the more nature becomes nothing but our alterations. Yet, the form of the truth of science would seem to have eliminated the constitutive element of subjectivity altogether. In other words, now we must face the constitutive standpoint of subjectivity: the “objectivity” of science had led to its becoming a factor in the objective constitution of reality itself (let alone the obvious fact that this biogenetic alteration itself inconceivably alters the very nature of this subjectivity, and with it, the “science”).³⁵ We must, however, realize that this is merely the absurdity of the inner contradiction of science, for which there

³⁴ See Max Jammer, *The Conceptual Development of Quantum Mechanics*, pp. 370ff, on von Neumann's consideration of the serious conceptual problem of measurement and observation for the quantum theory. This in turn touched off one of the most long-standing problems with the theory, the infamous (and endless) “measurement problem”. Many interpretations of quantum theory are either directly or indirectly responding to this problem first realized by von Neumann in the late 1920s and early 1930s. The measurement problem is still discussed to this day, heatedly, in most academic philosophy of physics and science circles.

³⁵ Clearly, the same situation is true for the fundamental physical sciences, and on a grander scale. If we suppose, quite in the manner of science fiction, that in the distant future physical science is able to truly *master* the fundamental forces (gravity, electromagnetism and the strong and weak nuclear forces) to such an extent as to be able to create spacetime singularities of arbitrary gravimetric density, one could be created that precipitates another Big Bang—or is the precipitating singularity of *this* universe. The point is well-known in the physics literature on General Relativity (GR) and time travel. According to GR, a closed causal loop such as the self-generating universe of the sort contemplated here, is a possible solution to the Einstein Equation which determines the large-scale structure of the universe (modulo present concerns about the exact nature of the relation between gravitation and quantum mechanics). This would be a more “physical” or even literal version of Rosen's Klein bottle, i.e., one allowable by present physical theory. And in fact astrophysicist J. Richard Gott has studied such self-generating spacetime structures in detail. See Gott (2002).

simply is no resolution within the framework which it presupposes—and that is, of course, the framework of Representation.

We come, lastly, to Psychoanalysis. Of the sciences of the epochal year 1900 that we have thus far briefly examined, only Psychoanalysis would seem to have managed to “function” well—but just because it constituted itself *out of* subjectivity. Freud’s *self-analysis* structured the formative matrix of this science, in relation to his previous neurological studies of the pathologies of the human mind. Freud’s breakthrough was in the *interpretation of dreams*, as the title of his most famous work indicates. Yet, it was soon necessary to posit some underlying structure—the “Unconscious”—relative to which a distinction could be drawn between a well-functioning human subject, and its dysfunctional counterpart. Even so, the subject/object distinction in Freud was fruitfully ambiguous, and allowed for the important development of a “meta-psychology” in which the encounter of analyst (considered as itself a psychoanalytical subject) and analysand (treated as the clinical object of the psychoanalysis) could be structured in order to allow the interrelation between the subject/object at the clinical level to be clearly orientated towards some form of a “cure” in which a dysfunctional object was brought into a state of subjective functionality (which in any case turns out to mean: adjusted to accept the essential nothingness of the subject as such). In this way, the distinction between subject/object was relative and important only in certain situations, and could be subordinated to the curative goal of the practice itself. We can say, then, that of the three sciences of year 1900, it was Psychoanalysis that was to become the most “functional” because it opened up the dialectical negativity of the Cartesian self to itself. This is important, for it suggests that a science is only possible once it can exist comfortably with itself *as a self*.

In despair, to become a self—speculative nothingness. We have come, therefore, to the point where science is being challenged to become aware of itself *as a subject*—as a “self”. Precisely this is what it has constantly sought to disavow. Therefore, we suggest that the proper way to address the crisis of the “death of God” is to address it exactly for what it in truth is: a *psychoanalytical* crisis in a strict sense. Science, as it experiences the “death of God” from within, is losing the transcendent guarantee it had for its inner desire as a subject—“objectivity”. Nihilism is not an implication of science, or of the scientific paradigm—it is its inner essence, its “perverse” and repressed core, an “other” within its own being that it refuses to encounter in a *fundamental* way, but which, precisely at year 1900, can no longer be avoided. Can it survive this loss of transcendent security in order to truly *become a self*? This is the question. The answer is “yes”—but not without first having become radically transformed. Our question therefore becomes: what does it mean for science to become a self?

The solution, then, to the problem of the dysfunction of science—the inner contradiction of its “metaphysical” form, the repressed core of its constitutive subjectivity that now insists on becoming thematic in science itself—is only possible if this inner contradiction, the dialectic of science, transitions from a merely implicit, dysfunction form to an explicit “functional” form. The functional form of science already has been indicated by Psychoanalysis. The procedure of Psychoanalysis is the procedure of the Möbius: subject transitions into object, object into subject, actively eliminating the Cartesian “split”, ambiguitating it *beyond recognition*, to the extreme point to where, in Lacanian psychoanalysis for example, the very nonexistence of the *ground* of subjectivity is itself encountered in a fundamental way. That is, in Hegelian fashion, *the very primitive polarity between subject and object is destroyed*. This is a moment of profound *nothingness*—a “nihilum” is born. This in turn occasions the emergence of a “pure” subjectivity—a subject without “subjectivity”, without *ground*. Here, the subject transitions from an unproductive subject constituted out of a fundamental lack which, in vain, it seeks to fill with some object (“negative” subjectivity), to a productive subject which constitutes itself out of its own (unproductive) activity (a “positive” subject). This is the movement from Freud (and Lacan) to Deleuze and Guattari, from psychoanalysis to what the latter called “schizoanalysis”. This takes us from the regime of Representation to the place of a fundamental encounter with *difference* in itself. Because of the fundamental *nothingness* or groundlessness of the subject here, no prior identity can be referred to. The subject is “pure” in the sense that it must, almost monadically, constitute itself *from* difference—it must itself divide.

The subject at this stage is “pure” in the sense that its activity is that of what Deleuze and Guattari call the “body without organs”: a purely liminal subject that continually dissolves, yielding monadic, “larval” selves in pursuit of the very differentiation of differences, configured around difference—configured *as* differentiation.³⁶ This is not an “individual” but a “dividual”, that is: a self-becoming-

³⁶Of the “Body without Organs” (or BwO), Deleuze and Guattari (1987) write:

A BwO is made in such a way that it can be occupied, populated only by intensities. Only intensities pass and circulate. Still, the BwO is not a scene, a place, or even a support upon which something comes to pass. It has nothing to do with phantasy, there is nothing to interpret. The BwO causes intensities to pass; it produces and distributes them in a *spatium* that is itself intensive, lacking extension. It is not space, nor is it in space; it is matter that occupies space to a given degree—to the degree corresponding to the intensities produced. It is nonstratified, unformed, intense matter, the matrix of intensity, intensity = 0; but there is nothing negative about that zero, there are no negative or opposite intensities. ... Production of the real as an intensive magnitude starting at zero. That is why we treat the BwO as the full egg before the extension of the organism and the organization of the organs, before the formation of the strata; as the intense egg defined by axes and vectors, gradients and thresholds, by dynamic

divided. Representation is simply not a possible mode of activity for the dividual (becoming-divided).

It is this trajectory towards anti-representational thinking, and the philosophy of Deleuze (Heidegger's true philosophical *heir*) that is consistently missed in the phenomenological critiques of Cartesianism in science, these *nostalgists of the 'things themselves'*. All that phenomenology accomplishes in the end is the *furtherance* of representational thinking—now reorganized around the mere *dialectic* of subject/object—rather than its *destruction*. Making the inner contradiction of representational thinking explicit means that science can only function as non-science, that is, it can only go on if it sheds its former self, and allows its own (repressed) subjectivity to emerge. But the *form* of this is the form of the “productive self”—that is, the self as “will-to-power”, the Nietzschean *übermensch*.

This description of the pure subject from the philosophical standpoint of Deleuze and Guattari is a roadmap to the abandonment of representation, the end of subjectivity as such, and the impossibility of the stable organization of a representational system. It operates in the opposite direction of phenomenology, which seeks to reinstitute and elevate the old form of science in new representational form. Whereas, for example, Rosen wishes, with his “Kleinian” “topo-phenomenological” roadmap, to merely understand (literally, to stand underneath, armed with the stability of phenomenological *concepts*) a microphysical world, one of course *already determined* from the standpoint of the Cartesian detached observer, the schizophrenic “dividual” (the pure subject *qua* BwO) *enters into* the “chaos” that permeates the microphysical realm as an immanent moment in its own constitution—not in order to understand, but in order to “play” along with it.³⁷ From *this* basis, which requires not concepts but

tendencies involving group displacement, by migrations: all independent of *accessory forms* because the organs appear and function here only as pure intensities. (p. 153).

³⁷We are tempted to align this thought, which in essence returns us to the profound question of *methexis* and the *chorismos* (the theatric *participation*, and the hierarchic *divide*) that haunts the Platonic field, to Heidegger's *ontological difference*: Being is *not* being(s); it is Being that *withdraws* and refuses representation, which *differentiates* itself from beings and will not be named. “But,” as Heidegger's translator Albert Hofstadter (1982) writes in his Introduction to *The Basic Problems of Phenomenology*, the significance of this distinction between Being as such and beings “is more profound. To exist,” he continues, “means to be in the performing of this distinction” (p. xviii). In this connection, we should briefly consider Deleuze's remarks, at the end of a chapter of his *Difference and Repetition* called “Difference in Itself”. Quoting a remark from Heidegger's postscript to “What is Metaphysics?” (i.e.: “The Ontological Difference is the Not between being and Being”), Deleuze comments: “This difference is not ‘between’ in the ordinary sense of the word. It is the Fold, *Zweifalt*. It is constitutive of Being and of the manner in which Being constitutes being, in the double movement of ‘clearing’ and ‘veiling’. Being is truly the differentiator of difference—whence the expression ‘ontological difference’. ... Understood in this manner,” he continues, “difference is not an object of representation. As the element of metaphysics, representation subordinates

thinking *as pure performance*, a new science is born as an art—but only if the individual is able to *transition* into a stable form once again. From this literally (not merely figuratively) *detached* standpoint, a representative system can be designed. But this system, to be clear, is not a mere system of conceptualization; it would be primarily a *system of performative indications*. If we choose our art to be *music*, then in this case we are describing merely a system of musical notation or, for example, a *score*.

Thus I claim that a new science which has abandoned altogether Representation is possible only if science is given over to *art*. This would indeed have as its basis the Nietzschean *übermensch*—a pure subject whose standpoint is the so-called “aesthetic conception of life”. Here, it means: science lived as art. The ambiguation of self/other and subject/object that phenomenology lauds *is* already of this primarily artistic nature; yet—and do we not come to the re-articulation of the very psychological repression contained within “Cartesian” science reproduced in its dialectical twin, in phenomenology?—it cannot give up the Cartesian subject. Traditional phenomenology gives pride of place to *perception*—to the perceiving and “embodied” Cartesian subject. In a way we are proposing the proper negation of the subject *and* the object: it is not a matter of “embodiment” and perceptual awareness; if anything, it is about the dissolution of the subject as such, and the proliferation of the subject into what Deleuze called “larval selves”, configured around the various points of sensory intensity found on the body, *and* the expansion/contraction of these sensory intensities in order to give rise to a conceptual space of *abstraction* no longer tied to the realm of the visual/perceptual, and no longer to mathematics as such. Sensory intensities should themselves determine the form and trajectory of abstraction, just as the visual/spatial determined the trajectory of abstraction from numbers and geometry, to algebra, functions, analytical geometry, calculus and beyond. Absolutely nothing in this new, radically “empirical” form of science, will appear as a science as we understand it now. Rather, all that we can hope for is some form of a “Correspondence Principle”: that the classical (Cartesian/Newtonian) science is at best a limiting case of the anti-representational science we are imagining. Indeed, here is where phenomenology is relevant: it shows the connection, in the visual regime, among subjectivity, objectivity and spatiality/temporality (we can say, the co-

difference to identity, if only relating it to a third term as the centre of a comparison *between* two supposedly different terms (Being and being). ... But metaphysics is unable to think difference in itself, or the importance of that which separates as much as that which unites (the differentiator). There is no synthesis, mediation or reconciliation in difference, but rather a stubborn differentiation. This,” Deleuze concludes, “is the ‘turning’ beyond metaphysics: ‘Being itself can open out in its truth the difference of Being and beings preserved in itself only when the difference explicitly takes place’,” quoting Heidegger’s “Overcoming Metaphysics” (Deleuze (1964), p. 65 quoting Heidegger (2003), p. 91).

constitution of these categories). But when *nothing* can be referred back to a prior scheme of visibility, or perception—when the subject is challenged to think *difference* in itself—phenomenology is of no help, for what is eventuated is a new self out of a basically devastating regime of the new, for which a new concept and conceptualization is required.

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