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Philosophy, Science, Capitalism and Truth

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Abstract

Fascinated by the recent scientific progress, even some philosophers today claim that philosophy is dead and that natural sciences (quantum cosmology, cognitive sciences) can answer questions which were once considered a domain of metaphysics: is our universe finite? Do we have free will? etc. The essay tries to problematize this claims by raising a series of questions. First, it is easy to show that modern science itself relies on a series of philosophical propositions. Second, what accounts for the role of science in our world is its link with capitalism. Third, we should distinguish between knowledge and truth: not only philosophy, other discourses (like Marxism or psychoanalysis) also practice a notion of truth which cannot be reduced to knowledge.

Keywords: science, philosophy, capitalism, knowledge, truth, posthumanism

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From its very inception, philosophy seems to oscillate between two extremes, transcendental and ontological (or, more precisely, ontic). On the one hand, the transcendental approach (which culminates in Heidegger) focuses on the conditions of possibility of reality, on the horizon within which something appears to us as "reality." Heidegger strictly distinguishes between reality and the horizon within which reality appears – he calls the gap between the two ontological difference. For example, reality appears to us, moderns, differently than to premodern people for whom reality was full of spiritual agents and deeper meanings – in modern science, there is no place for this dimension, "real" is only what science can measure and quantify. On the other hand, the ontic approach directly focuses on accounting for the totality of being: what is reality, how did it come to be, what is our place in it, etc. In XXth century, the gap between the two was radicalized: the transcendental approach reached its apogee in Heidegger, while the ontological one seems today kidnapped by natural sciences. In the last decades, technological progress in experimental physics has opened up a new domain, unthinkable in the classical scientific universe, that of the "experimental metaphysics": "questions previously thought to be a matter solely for philosophical debate have been brought into the orbit of empirical inquiry."[1] What was till now the topic of "mental experiments" is gradually becoming the topic of actual laboratory experiments – exemplary is here the famous Einstein-Rosen-Podolsky double split experiment, first just imagined, then actually performed by Alain Aspect. The properly "metaphysical" propositions tested are the ontological status of contingency, the locality-condition of causality, the status of reality independent of our observation, etc. Nonetheless, one should be careful here and not overestimate the philosophical consequences of this "experimental metaphysics": the very possibility of "empirically testing" so-called metaphysical (i.e., basic ontological and epistemological) propositions bears witness to a radical break which cannot be accounted for in empirical terms.

This is where Stephen Hawking gets it wrong when, at the very beginning of his bestseller The Grand Design, he triumphantly proclaims that "philosophy is dead[2]." With the latest advances in quantum physics and cosmology (M-theory), the so-called experimental metaphysics reaches its apogee: metaphysical questions about the origins of the universe, etc., which were till now the topic of philosophical speculations, can now be answered through experimental science and thus empirically tested… Upon a closer look, we, of course, soon discover that we are not yet quite there – almost, but not yet. Furthermore, it would have been easy to reject these claims and demonstrate the continuing pertinence of philosophy for Hawking himself (not to mention the fact that his own book is definitely not science, but its very problematic popular generalization): Hawking relies on a series of methodological and ontological presuppositions which he takes for granted. Merely 2 pages after the claim that philosophy is dead, he describes his own approach as "model-dependent realism," based on "the idea that our brains interpret

the input from our sensory organs by making a model of the world. When such a model is successful at explaining events, we tend to attribute to it /…/ the quality of reality"; however, "if two models (or theories) accurately predict the same events, one cannot be said to be more real than the other; rather, we are free to use whichever model is most convenient[3]" … if there ever was a philosophical (epistemological) position, this is one (at a rather vulgar one at that). Not to mention the further fact that this "model-dependent realism" is simply too weak to do the job assigned to it by Hawking, namely to provide the epistemological frame for interpreting the well-known paradoxes of quantum physics, their incompatibility with our common sense ontology. However, in spite of all these problematic features, one should admit that quantum physics and cosmology do have philosophical implications, that they do confront philosophy with a challenge.

Similar is the position of Nicholas Fearn whose tries to demonstrate the gradual transposition of philosophical problems into scientific ones: philosophy, caught in insoluble dilemmas, reaches its maturity when it cancels/overcomes itself by posing its problem in scientific terms. General ontology thus becomes quantum physics cum theory of relativity, epistemology the cognitive account of our acquisition of knowledge, ethics the evolutionist inquiry into the rise of moral norms and their adaptive function… This is how Fearn[4] elegantly accounts for the fact that, in some philosophical disciplines, approaches out of tune with the scientific version proliferate: it is "what one would expect in a field that has been vacated by philosophy's regular armies and left to partisans who refuse to accept defeat." In short, once the problem is fully transposed into terms which render possible its scientific solution, there is no longer a job for philosophers there, serious philosophers can move elsewhere, and those who remain are only the partisans of the old positions refusing to accept defeat[5] – paradoxically, their very predominance (i.e., the absence of "serious" philosophers) is the sign of their defeat. Fearn's example is that of the problem of free will versus natural determinism: the fact that most of philosophers who today work in this field are incompatibilists simply signals that compatibilists have already won the battle with their naturalistic account of how (what we mean by) freedom can be united with determinism, so "they have better things to do than reoccupy secured ground[6]." What can we say against this clear solution? The first thing to do is to ask the question: how did science came to occupy such a key role in our lives? In order to get an answer, one has to analyze the intimate link between capitalism and modern science.

Science and Capitalism

Capitalist technology cannot be imagined without science, which is why some ecologists already proposed to change the term for the new epoch we are entering from anthropocene to capitalocene. Apparatuses based on science enable humans not only to get to know the real which is outside the scope of their experiential

reality (like quantum waves); they also enable them to construct new "unnatural" (inhuman) objects which cannot but appear to our experience as freaks of nature (gadgets, genetically modified organisms, cyborgs, etc.). The power of human culture is not only to build an autonomous symbolic universe beyond what we experience as nature, but to produce new "unnatural" natural objects which materialize human knowledge. We not only "symbolize nature," we as it were denaturalize it from within.

The mutual implication, complicity even, of science and capitalism is, of course, not seamless, it implies an immanent tension in each of the two terms. Science offers itself to capitalism insofar as it is in itself blind for a key dimension of its existence signalled by Lacan in a couple of co-dependent formulations: science forecloses the dimension of the subject: science operates at the level of knowledge and ignores truth; science has no memory – let's begin with this last feature:

> "the fact is that science, if one looks at it closely, has no memory. Once constituted, it forgers the circuitous path by which it came into being; otherwise stated, it forgets a dimension of truth that psychoanalysis seriously puts to work. I must, however, be more precise. It is widely known that theoretical physics and mathematics - after every crisis that is resolved in a form for which the term "generalized theory" can in no way be taken to mean "a shift to generality" - often maintain what they generalize in its position in the preceding structure. That is not my point here. My concern is the toll [drame], the subjective toll that each of these crises takes on the learned. The tragedy [drame] has its victims, and nothing allows us to say that their destiny can be inscribed in the Oedipal myth. Let us say that the subject has not been studied to any great extent. J. R. Mayer, Cantor - well I am not going to furnish a list of first-rate tragedies, leading at times to the point of madness; the names of certain of our contemporaries, in whose cases I consider exemplary the tragedy of what is happening in psychoanalysis, would soon have to be added to the list[7]."

What Lacan aims at here goes far beyond the psychic tragedies of great scientific inventors (he mentions Cantor whose revolutionizing of the notion of infinity triggered an inner turmoil which pushed him to the limit of madness and even led him to practice coprophagia) – from the scientific standpoint, such tragedies are irrelevant private life details which in no way affect the status of a scientific discovery. Such details HAVE to be ignored if we want to comprehend a scientific theory – this ignorance is not a weakness of the scientific theory but its strength. A scientific theory is "objective": it suspends its position of enunciation - it doesn't matter who enounces it, all that matters is its content. In this sense, the discourse of science forecloses its subject. Lacan, however, who tries to think the subject of modern science, brings out such "psychological" details – not in order to relativize the validity of scientific theories but to answer the question: what shifts

have to happen in the subjectivity of a scientist so that such a theory can be formulated? A theory may be "objectively valid," but its enunciation can nonetheless rely on traumatic subjective shifts – there is no pre-established harmony between subject and object.

What Lacan aims at also goes beyond the so-called "ethical responsibility" of scientists for the (mis)use of their scientific achievements - Lacan mentions a couple of times J.R.Oppenheimer, the wartime head of the Los Alamos Laboratory often credited with being the "father of the atomic bomb." When the first atomic bomb was successfully detonated in July 16 1945, he remarked that it brought to mind words from the *Bhagavad Gita*: "Now I became Death, the destroyer of worlds." Beset by ethical qualms, he expressed his doubts publicly and, as a consequence, he suffered the revocation of his security clearance and was effectively stripped of direct political influence… Commendable as it is, such a critical stance is not enough, it remains at the level of "ethical committees" which proliferate today and try to constrain scientific progress into the straight-jacket of predominant "norms" (how far should we go in biogenetic manipulations, etc.). This is not enough, it amounts just to the secondary control over a machine which, if allowed to run its immanent course, would have engendered catastrophic results.

The trap to be avoided here is double. On the one side, it is not enough to locate the danger into particular misuses of science due to corruption (like the scientists who support climate change denial) or something similar – the danger resides at a much more general level, it concerns the very mode of functioning of science. On the other side, we should also reject the over-hasty generalization of danger into what Adorno and Horkheimer called "instrumental reason" – the idea that modern science is in its very basic structure directed to dominate, manipulate and exploit nature, plus the concomitant idea that modern science is ultimately just a radicalization of a basic anthropological tendency (for Adorno and Horkheimer in their *Dialectic of Enlightenment*, there is a straight line from primitive use of magic to influence natural processes to modern technology). The danger resides in the specific conjunction between science and capital.

To get the basic dimension of what Lacan is aiming up in the passage quoted above, we have to return to the difference between knowledge and truth, where "truth" acquires all its specific weight – to indicate this weight, recall how, today, the anti-immigrant populists deal with the "problem" of the refugees: they approach it in the atmosphere of fear, of the incoming struggle against the islamization of Europe, and they get caught in a series of obvious absurdities. For them, refugees who flee terror are equalized with terrorist they are escaping from, oblivious to the obvious fact that, while there are among the refugees also terrorists, rapists, criminals, etc., while the large majority are desperate people looking for a better life. The cause of problems which are immanent to today's global capitalism is projected onto an external intruder. We find here "fake news" which cannot be reduced to a

simple inexactitude – if they (partially, at least) correctly render (some of) the facts, they are all the more dangerously a "fake." Anti-immigrant racism and sexism is not dangerous because it lies, it is at its most dangerous when its lie is presented in the form of a (partial) factual truth.

It is this dimension of truth that eludes science: in the same way that my jealousy is "untrue" even if its suspicions are confirmed by objective knowledge, in the same way that our fear of refugees is false with regard to the subjective position of enunciation it implies even if some facts can confirm it, modern science is "untrue" insofar as it is blind for the way it is integrated into the circulation of capital, for its link to technology and its capitalist use, i.e., for what in old Marxist terms it was called the "social mediation" of its activity. It is important to bear in mind that this "social mediation" is not an empirical fact external to the immanent scientific procedure: it is a kind of transcendental a priori which structures from within the scientific procedure. So it is not only that scientists "don't care" about the eventual misuse of their work (if this were the case, more "socially conscious" scientists would be enough), this "not-caring" is inscribed into its structure, it colors the very "desire" that motivates scientific activity (which is what Lacan aims at with his claim that science doesn't have a memory) – how?

In the conditions of developed capitalism, a strict division prevails between those who do the labor (workers) and those who plan and coordinate it – these last are on the side of capital, their job is to maximize the capital's valorization, and when science is used to enhance productivity, it is also constrained to the task of facilitating the process of capital's valorization. Science is thus firmly entrenched on the side of the capital, it is the ultimate figure of knowledge which is taken away from laborers and appropriated by the capital and its executors. Scientists who work are also paid, but their work is not at the same level as laborers' work: they as it were work for the other (opposite) side, they are in some sense the strike-breakers of the production process… This, of course, doesn't mean that modern natural science is inexorably on the side of the capital: today, science is needed more than ever in any resistance against capitalism. The point is just that science itself is not enough to do this job since it "has no memory," since it ignores the dimension of truth.

We should thus distinguish two levels of what makes science problematic. First, there is, at a general level, the fact that science "has no memory," a fact that is part of its strength, that is constitutive of science. Then, there is the specific conjunction of science and capitalism – here, "no memory" relates to a specific blindness for its own social mediation. However, Greta Thunberg is right when she claims that politicians should listen to science - Wagner's "*Die Wunde schliest der Speer nur, der Sie schlug*" (»The wound can only be healed by the spear that made it«) thus acquires a new actuality. Today's threats are not primarily external (natural) but self-generated by the human activity permeated by science (the ecological consequences of our industry, the psychic consequences of uncontrolled biogenetics, etc.), so that

sciences are simultaneously (one of) the source(s) of risks, the sole medium we have to grasp and define the threats (even if we blame the scientific-technological civilization for global warming, we need the same science not only to define the scope of the threat, but often even to perceive the threat. What we need is not science that re-discovers its grounding in pre-modern wisdom – traditional wisdom is precisely something that prevents us from perceiving the real threat of ecological catastrophes. Wisdom "intuitively" tells us to trust mother-nature which is the stable ground of our being – but it is precisely this stable ground which is undermined by modern science and technology. So we need a science that is decoupled from both poles, from the autonomous circuit of capital as well as from traditional wisdom, a science which could finally stand on its own. What this means is that there is no return to authentic feeling of our unity with nature: the only way to confront ecological challenges is to fully accept the radical denaturalization of nature.

Science, Marx, Freud

However, it is not only philosophy that asserts a dimension of truth irreducible to scientific knowledge. There are two other practices which also do this: Marxism and psychoanalysis. Let explain this by contrasting Lacan's notion of psychoanalysis and Michel Foucault's notion of truth which can be summed up in the claim that truth/untruth is not a direct property of our statements but that, in different historical conditions, different discourses produce each its own specific truth-effect, i.e., it implies its own criteria of what values as "true":

> "The problem does not consist in drawing the line between that in discourse which falls under the category of scientificity or truth, and that which comes under some other category, but in seeing historically how effects of truth are produced within discourses which are neither true nor false.[8]"

Science defines truth in its own terms: the truth of a proposition (which should be formulated in clear explicit and preferably formalized terms) is established by experimental procedures which could be repeated by anyone. Religious discourse operates in a different way: its "truth" is established through complex rhetorical ways which generate the experience of inhabiting a meaningful world benevolently controlled by higher a higher power. (In his last book, Peter Sloterdijk[9] analyses different modes of theo-poetry, complex forms of rhetoric which "bring gods to speak".) Then there are other discourses: traditional mythologies, art, everyday life, each with its own truth-effect… but what does it mean that discourses themselves are "neither true nor false"? In what sense can the field of discourses be a neutral background with regard to truth? Obviously, a meta-theory is needed here: what is the status of Foucault's theory (of the truth-effects of discourses) itself? In some (which?) sense, it is obviously meant to be true: he argues for it, provides arguments and examples…

Plus science is not simply one of discourses, it touches the real in a different way (based on scientific knowledge we can make biogenetic changes, we can use nuclear energy…), so it's not enough to say it is one of the discourses with a specific truth-effect. And this brings us to the ambiguous relationship between science and psychoanalysis: Freud himself remained a scientist, he thought his psychoanalysis is just a temporary solution which will be left behind when neurobiology will account for the functioning of our mind.

For Lacan, however, psychoanalysis is not science (in the modern sense of a formalized natural science, at least) – to clarify its status, he refers to Aristoteles's distinction of four modes of causality: material cause, formal cause, final cause, efficient cause. If a carpenter makes a table, the wood out of which he makes is its material cause, the idea of the table which he realizes in the wood is ideal cause, his work is its efficient cause, and the use of the table is its final cause, the reason we are making tables. Lacan applies these four aspects of causality to the notion of truth. As Hegel pointed out, truth as adequacy of our notion/judgment to object should be supplemented by a higher mode of truth: truth as the adequacy of the object itself to its notion. Not only is my notion of a table in next room adequate if there really is a table in the next room, this table itself is also "truly a table" if it is a useful table. Therein resides the true content of Hegel's much-maligned claim that, if facts do not fit theory "so much worse for the facts" – if a table doesn't fit the notion of a table so much worse for the table). Maybe this couple fits the Aristotelian opposition of material cause and formal cause: truth as material cause is at work when we verify a statement with a reference to material reality which makes it true, while the fact that an empirical object fits its notion concerns formal cause: a material table is "a true table" when it fits its form/notion. Sciences operate between these two extremes of empiricism and construction of notions – with the exception of mathematics, of course. Let's take quantum physics: notional as it is, it ultimately hinges on the results of measurements (although we must be more precise here, distinguishing between the real and reality: the reality of empirical measurements is not the same as the Real of the unrepresentable quantum universe which is, from our standpoint, also a construct).

In contrast to science, psychoanalysis mobilizes truth as efficient cause – but is the direct causal efficiency of truth not the feature that characterizes magic thinking? In magic thinking, you pronounce a formula (a prayer, a curse), and something happens in reality (rain, health… or the death of your enemy). The shamanizing subject acts within structures and signifiers: "it is in the form of signifiers that what must be mobilized in nature appears: thunder and rain, meteors and miracles." In magic the idea of the truth as cause thus only appears in the guise of efficient causality – the symbolic directly falls into the real. In religion, the causality is different: "Truth in religion is relegated to so-called 'eschatological' ends, which is to say that truth appears only as final cause, in the sense that it is deferred to an end-of-

the-world judgment[10]." That's why religion is faith and not knowledge: faith that there is another place, inaccessible to us, that of God in Himself, where full knowledge can be articulated.

How, then, do things stand in psychoanalysis? One should note here that, while the early Freud naively believed in a direct causal power of truth (if the analyst tells to a patient the correct interpretation of his/her symptoms, these symptoms will automatically disappear or dissolve), he soon encountered a bad surprise: even if correct, an interpretation remains inefficient, symptoms don't disappear. This insight brought Freud to the topics of transference and temporality: to become efficient, truth must be told at the right moment, not only after transference of the patient to the analyst is established but when transference brings the patient into the right psychic state of experiencing the antagonisms that ravage his/her subjectivity. Later, Freud added two further complications: subject's free decision (a "successful" psychoanalysis doesn't restore the patient to a conflictless life, it just brings him to a point where, aware of what goes on in his psychic life, he can decide which way to choose), plus the so-called "negative therapeutic reaction" (since the patient enjoyed his symptoms, their dissolution may trigger a catastrophic depression).

All these complications just confirm that the truth of interpretation is judged on its effect on the subject, so that we are not dealing with a truth-effect - truth itself is the cause which produces effects. This is not simply a pragmatic view ("it doesn't matter if the analyst's interpretation of a symptom is true, what matters is only that it works") - not because Lacan presumes that the truth of a symptom is already there in the depths of the unconscious, waiting to be discovered, but because, as Lacan put it, a symptom precedes what it is a symptom of, it doesn't have a determined meaning before its interpretation. Lacan evokes here the science-fiction motif of travel from future: symptom is like a message sent from the patient's future when its meaning will be determined.

It is crucial that, in order to explain this specific role of truth in psychoanalysis, Lacan draws a parallel with Marxism: modern science derive its power from the fact that it "does-not-want-to-know-anything about the truth as cause[11]" - or, as Lacan put it, science forecloses the subject: in a scientific text, the subjective position of enunciation is totally neutralized, it doesn't matter who said it, anyone can repeat the experiment and verify its truth. Psychoanalysis introduces here the dimension of subjective truth. An example:

> "Feigang Fei, who runs Aunt Dai Chinese restaurant in Montreal, has taken a different approach, with a menu offering bracingly honest descriptions of the dishes on offer. 'Comparing to our general tao chicken, this one is not THAT good,' reads the entry for orange beef. Under 'mouth-watering chicken', Fei writes: 'We are not 100% satisfied with the flavour now and it will get better really soon. PS: I am surprised that some customers still order this plate[12].'"

Such a way of "telling the truth" is, of course, the ultimate lie: truth becomes here the most efficient way of self-publicity. We are here back at the opposition between subjective truth and factual exactitude: the greatest lie occurs when all the data in our statements are factually true. And, in clear contrast to the scientific neutralization, Marxism, along with psychoanalysis, "seriously puts to work" a dimension of subjective truth that science has to forget, since science, once it has been constituted, ignores "the circuitous path by which it came into being[13]." (Note that Lacan's text on science and truth appeared in 1965, a couple of soon after the French translation of Lukacs' History and Class Consciousness was published in 1960.) This dimension of truth gets lost in the orthodox Marxism which reduces its own teaching to objective science – or, to quote Stalin from his "On Dialectical and Historical Materialism":

> "In the eighties of the past century, in the period of the struggle between the Marxists and the Narodniks, the proletariat in Russia constituted an insignificant minority of the population, whereas the individual peasants constituted the vast majority of the population. But the proletariat was developing as a class, whereas the peasantry as a class was disintegrating. And just because the proletariat was developing as a class the Marxists based their orientation on the proletariat. And they were not mistaken; for, as we know, the proletariat subsequently grew from an insignificant force into a first-rate historical and political force.[14]"

In this view, Marxists first objectively analyze social processes and discover that the move in the direction of Communism when the working class will take power; after establishing this as an objective scientific fact, they engage themselves on the side of the working class, putting their bets on a winning horse… This is why they distinguish between Marxist science and Marxist ideology: first, Marxism as an objective science establishes the truth; then, this truth is transposed into ideology which mobilizes masses, explaining them how to act if they want to win. For authentic Marxism this gap has to fall: Marxism theory implies a subjectively engaged position – the path to universal truth leads through an engaged partial position. Lacan quotes here Lenin:

> "In writing that 'Marx's theory is omnipotent because it is true,' Lenin says nothing of the enormity of the question his speech raises: If one assumes the truth of materialism in its two guises - dialectic and history, which are, in fact, one and the same - to be mute, how could theorizing this increase its power? To answer with proletarian consciousness and the action of Marxist politics seems inadequate to me[15]."

True, Lenin is ambiguous here: his claim can be read as "Marxism is based on true scientific knowledge of society, so it is omnipotent" in the same way as modern physics can built nuclear devices. But Lacan's critical question - "how could theorizing this increase its power" – is easy to answer: proletarian self-consciousness

changes what it gets to know, its object (which is itself), into a revolutionary subject, and is, in this sense, precisely not "mute". Lacan (and Lenin) miss this point theorized by Lukacs: Marxism is "universally true" not in spite of its partiality but because it is "partial," accessible only from a particular subjective position – and the same holds for psychoanalysis.

Posthumanism, Transhumanism

What is going on today is that these dimension of truth as irreducible to knowledge is disappearing. From the Heideggerian standpoint, today's global scientific-technological civilization poses a threat to ontological difference - what Heidegger calls a "danger" immanent in our way of life. The popular expression of this threat is a more or less commonly accepted premonition that today, we (humanity) are approaching a radical mutation, the entry into a "posthuman" mode of being. This mutation is sometimes described as a threat to the very essence of being human, while sometimes it is celebrated as the passage into a new Singularity (collective mind, a new cyborg entity, or another version of the Nietzschean Overman). Furthermore, this mutation is both theoretical and practical, felt by all of us—who can measure the implications and consequences of biogenetics, of new prosthetic implants which will merge with our biological body, of new ways to control and regulate not only our bodily functions but also our mental processes?

Two opposed tendencies coexist within this orientation towards "overcoming human," posthumanism and transhumanism, which vaguely refer to the duality of culture and science. "Posthumanists" (Donna Harroway and others) are cultural theorists who note how today's social and technological progress more and more undermines our human exclusivity: the lesson of ecology is that we are ultimately one of the animal species on our Earth, that animality is part of our innermost nature, that there is no clear ontological gap that separates us from the animal kingdom, while contemporary science and technology make more and more visible the extent to which our innermost identity has to rely on technological devices and crutches—we are what we are through technological mediation. So while, for posthumanists, "humans" are a weird species of animal cyborgs, "transhumanists" (Ray Kurzweil and others) refer to recent scientific and technologial innovations (AI, digitalization) which point towards the emergence of a Singularity, a new type of collective intelligence.

This transhumanist orientation stands for the fourth stage in the development of antihumanism: neither theocentric antihumanism (on account of which US religious fundamentalists use the term "humanism" as synonymous with secular culture) nor the French "theoretical antihumanism" which accompanied the structuralist revolution in the 1960s (Althusser, Foucault, Lacan), but also not the "deep-ecological" antihumanist reduction of humanity to just one of the animal species on Earth, the species which derailed the balance of life on Earth through its

hubris and is now facing the justified revenge of the Mother Earth. However, even this fourth stage is not without history. In the first decade of the Soviet Union, the so-called bio-cosmism enjoyed extraordinary popularity: a strange combination of vulgar materialism and Gnostic spirituality which formed occult shadow-ideology, the obscene secret teaching, of the Soviet Marxism.

It is as if today, "bio-cosmism" is reemerging in a new wave of "posthuman" thought. The spectacular development of biogenetics with its scientific practices (cloning, direct DNA interventions, etc.) is gradually dissolving frontiers between humans and animals on the one side as well as between humans and machines on the other, giving rise to the idea that we are on the threshold of a new form of Intelligence, a "more-than-human" Singularity in which mind will no longer be submitted to bodily constraints, inclusive of sexual reproduction. Out of this prospect a weird shame emerged: the shame about our biological limitations, our mortality, the ridiculous way we reproduce ourselves—what Gunther Anders called the "Promethean shame[16]," ultimately simply the shame that "we were born and not manufactured." Nietzsche's idea that we are the "last men" laying the ground for our own extinction and the arrival of a new Overman is thereby given a scientific-technological twist. However, we should not reduce this "posthuman" stance with the paradigmatically modern belief in the possibility of the total technological domination over nature—what we are witnessing today is an exemplary dialectical reversal: the slogan of today's "posthuman" sciences is no longer domination but surprise, (contingent, nonplanned) emergence. Jean-Pierre Dupuy detected a weird reversal of the traditional Cartesian anthropocentric arrogance which grounded human technology, the reversal clearly discernible in today's robotics, genetics, nanotechnology, artificial life and AI researches:

> "how are we to explain that science became such a "risky" activity that, according to some top scientists, it poses today the principal threat to the survival of humanity? Some philosophers reply to this question by saying that Descartes's dream—"to become master and possessor of nature"—has turned wrong, and that we should urgently return to the "mastery of mastery." They have understood nothing. They don't see that the technology profiling itself at our horizon through "convergence" of all disciplines aims precisely at nonmastery. The engineer of tomorrow will not be a sorcerer's apprentice because of his negligence or ignorance, but by choice. He will "give" himself complex structures or organizations and he will try to learn what they are capable of by way of exploring their functional properties—an ascending, bottom-up approach. He will be an explorer and experimenter at least as much as an executor. The measure of his success will be more the extent to which his own creations will surprise him than the conformity of his realization to the list of preestablished tasks.[17]"

The motor of this self-sublation (Selbst-Aufhebung) of man is the ongoing scientific progress in evolutionary biology, neurology, and cognitivist brain sciences which holds the promise of the total scientific self-objectivization of humanity: evolutionary theory can explain how humanity gradually emerged out of animal life, and, in this sense, it can also account for itself (for the rise of cognitive mechanisms which allowed humanity to develop the scientific approach to reality). The question nonetheless persists: does this operation of closing the loop (accounting for oneself) really succeed?

The Limit of Self-Objectivization

Here one should be absolutely clear: these accounts are, in spite of their imperfections, in a certain sense simply and rather obviously true, so one should abandon all obscurantist or spiritualist reference to some mysterious dimension that eludes science. Should we then simply endorse this prospect? In philosophy, the predominant form of resistance to the full scientific self-objectivization of humanity which nonetheless admits science's achievements is the neo-Kantian transcendental state philosophy (whose exemplary case today is Habermas): our self-perception as free and responsible agents is not just a necessary illusion, but the transcendental a priori of every scientific knowledge. For Habermas, "the attempt to study first-person subjective experience from the third-person, objectifying viewpoint, involves the theorist in a performative contradiction, since objectification presupposes participation in an intersubjectively instituted system of linguistic practices whose normative valence conditions the scientist's cognitive activity.[18]"Habermas characterizes this intersubjective domain of rational validity as the dimension of "objective mind" which cannot be understood in terms of the phenomenological profiles of the community of conscious selves comprised in it: it is the intrinsically intersubjective status of the normative realm that precludes any attempt to account for its operation or genesis in terms of entities or processes simpler than the system itself. (Lacan's term for this "objective mind" irreducible to the Real of raw reality as well as to the Imaginary of our self-experience is, of course, the big Other.) Neither the phenomenological (imaginary) nor neurobiological (real) profiling of participants can be cited as a constituting condition for this socially "objective mind."

In the same Habermasian mode, Robert Pippin claims that, even if some day scientists succeed in total naturalization of humanity, explaining how self-consciousness emerged out of natural evolution, this has no consequences for philosophy: "Of course, it is possible and important that some day researchers will discover why animals with human brains can do these things and animals without human brains cannot, and some combination of astrophysics and evolutionary theory will be able to explain why humans have ended up with the brains they have. But these are not philosophical problems and they do not generate any philosophical problems.[19]" What Pippin performs here is, of course, the basic transcendental turn:

the point is not that self-consciousness is too complex a phenomenon to be accounted for in scientific terms but that, in this case, all psycho-neuronal analysis is simply irrelevant since it moves at a totally different level from pure self-consciousness which is not a psychological fact but an a priori that sustains all our activity inclusive of neurological research. Here we reach a certain limit: how do we relativize the truth-domain of science? Is the transcendental approach enough, or does this approach have to be sustained by a limitation at the level of content? In somewhat simplified terms: is it enough to state that positive science cannot account for its own possibility, that it has to presuppose the free argumentative procedure which characterizes science? Or should we supplement this transcendental point with some proof of the empirical limitations of scientific explanations ("no brain science can really explain how human mind functions")?

One has to concede that some scientific experiments lead to results which cannot simply be dismissed as irrelevant. A recent experiment conducted by Karolinska Institutet in Sweden demonstrated that the experience of being inside one's own body is not as self-evident as one might think: neuroscientists "created an out-of-body illusion in participants placed inside a brain scanner. They then used the illusion to perceptually 'teleport' the participants to different locations in a room and show that the perceived location of the bodily self can be decoded from activity patterns in specific brain regions." The sense of "owning one's body" is therefore not to be taken for granted: it is "an enormously complex task that requires continuous integration of information from our different senses in order to maintain an accurate sense of where the body is located with respect to the external world.[20]"

The signification of such experiments is double. First, they provide a clear argument against the spiritualist reading of the out-of-body experiences as a proof that our soul is not irreducibly located in our body since it can freely float outside it: if one can generate the out-of-body experience through technological manipulation of our body, then our "inner" self-experience is strictly immanent to our body. Second, they also render problematic at least the notion, crucial to the philosophy of finitude, that we are irreducibly "emdedded," that our self-experience as constrained to the standpoint of our (mortal) body is the ultimate horizon of our entire experience: the experiment indicates that our self-experience as "embodied" is the result of complex neuronal processes which can also go wrong.

A more nuanced approach is thus needed which leaves behind Habermas's and Pippin's transcendental-idealist position. Wilfrid Sellars gives the duality of (materialist) content and (transcendental) form a decidedly materialist twist. Accepting the gap between methodology (priority of transcendental horizon) and ontology (full naturalization), that is, recognizing that direct naturalization is strictly pre-Hegelian, Sellars, in an unambiguously materialist way,

> "upholds the *priority* of the scientific image by famously insisting that "in the dimension of describing and explaining the world, science is the

> measure of all things, of what is, that it is, and of what is not, that it is not." . . . Yet the manifest image remains indispensable as the originary medium for the normative. To the extent that this normative framework does not survive, Sellars warned, "man himself would not survive." . . . Science cannot lead us to abandon our manifest self-conception as rationally responsible agents, since to do so would be to abandon the source of the imperative to revise. It is our manifest self-understanding as persons that furnishes us, qua community of rational agents, with the ultimate horizon of rational purposiveness with regard to which we are motivated to try to understand the world. Shorn of this horizon, all cognitive activity, and with it science's investigation of reality, would become pointless.[21]"

Along these lines, Ray Brassier defines materialism with the Marxist-sounding notion of the "determination in the last instance," which should be opposed to the similar notion of overdetermination: "determination-in-the-last-instance is the causality which renders it universally possible for any object X to determine its own 'real' cognition, but only in the last instance." Overdetermination is transcendental, that is to say, the point of transcendentalism is that a subject cannot ever fully "objectivize" itself, i.e., reduce itself to a part of "objective reality" in front of him, since such reality is always-already transcendentally constituted by subjectivity: no matter to what extent I succeed in accounting for myself as a phenomenon within the "great chain of being," as the result determined by a network of natural (or supernatural) reasons, this causal image is always-already overdetermined by the transcendental horizon which structures my approach to reality. To this transcendental overdetermination, Brassier opposes the naturalist determination in the last instance[22]:

> a serious materialist has to presume that every subjective horizon within which reality appears, every subjective constitution or mediation of reality, has to be ultimately determined by its place within objective reality, i.e., it has to be conceived as part of the all-encompassing natural process[23].

Is, however, this enough? To conclude, let's return to our starting point: the gap between the ontological (or, more precisely, ontic) dimension and the transcendental horizon which concerns the universal structure of how reality appears to us: which conditions must be met for us to perceive something as really existing? "Transcendental" is the philosopher's technical term for such a frame as defines the coordinates of reality; for example, the transcendental approach makes us aware that, for a scientific naturalist, only spatio-temporal material phenomena regulated by natural laws really exist, while for a premodern traditionalist, spirits and meanings are also part of reality, not only our human projections. The ontic approach, on the other hand, is concerned with reality itself, in its emergence and deployment: How did the universe come to be? Does it have a beginning and an end? What is our place in it?

If the transcendental dimension is the irreducible frame or horizon through which we perceive (and, in a strict Kantian sense which has nothing to do with ontic creation, constitutes reality), how can we move beyond (or beneath) the couple of reality and its transcendental horizon? Is there a zero-level where these two dimensions overlap? The search for this level as the big topic of German Idealism: Fichte found it in the self-positing of the absolute I (transcendental Self), while Schelling found it in the intellectual intuition in which subject and object, activity and passivity, intellect and intuition immediately coincide. Following the failure of these attempts, our starting point should be that the zero-level of reality and its transcendental horizon is not to be sought in some kind of synthesis of the two but in the very gesture of the rupture between the two. Since today scientific realism is the hegemonic view, the question to be raised is: can the transcendental dimension be accounted for in these terms? How can the transcendental dimension arise/explode in the real? The reply is not a direct realist reduction but another question: What has to be constitutively excluded (primordially repressed) from our notion of reality? In short, what if the transcendental dimension is the "return of the repressed" of our notion of reality?

What eludes this transcendental approach is not reality itself but the primordial gap that cuts from within into the order of being making it non-all and inconsistent—a difference which is not yet a difference between two positive terms but difference "as such," a pure difference between something(s) and Void, a difference which coincides with this Void and is in this sense itself one of the terms of what it differentiates (so that we have Something and its Difference). Heidegger aimed at the same paradox with his "ontological difference" which is not a difference between entities, not even the difference between beings and Being as different entities: Being is difference itself.

Notes

1 Karen Barad, Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning, Durham: Duke University Press 2007, p. 25.
2 Stephen Hawking and Leonard Mlodinow, The Grand Design, New York: Bantam 2010, p. 5.
3 Op.cit., p. 7
4 See Nicholas Fearn, Philosophy. The Latest Answers to the Oldest Questions, London: Atlantic Books 2005.
5 Op.cit., p. 37.
6 Op.cit., p. 36.
7 Jacques Lacan, Ecrits, New York: Norton 1997, p. 738.
8 Michel Foucault, "Truth and Power," in Power/Knowledge: Selected Interviews and other Writings, New York: Random House 1980, p. 118.
9 See Peter Sloterdijk, Den Himmel zum Sprechen bringen: Über Theopoesie, Frankfurt: Suhrkamp 2020.
10 Jacques Lacan, Ecrits, p. 872.
11 Op.cit., p. 874.
12 'Not that good': Montreal restaurant's brutally honest menu pulls in the customers | Canada | The Guardian.

13 Ecrits, p. 869.
14 Quoted from 1938: Dialectical and Historical Materialism (marxists.org).
15 Ecrits, p. 738.
16 Gunther Anders, Die Antiquiertheit des Menschen [The outdatedness of human beings], Munich: Beck 1956.
17 See Jean-Pierre Dupuy's contribution in Le Débat, no. 129 (March–April 2004), quoted from Jean-Michel Besnier, Demain les posthumains (Paris: Fayard, 2012), 195.
18 Jürgen Habermas, "The Language Game of Responsible Agency and the Problem of Free Will: How Can Epistemic Dualism be Reconciled with Ontological Monism?," Philosophical Explorations 10, no. 1 (March 2007): 31.
19 Robert Pippin, "Back to Hegel?", quoted from http://www.mediationsjournal.org/articles/back-to-hegel
20 Quoted from http://ki.se/en/news/brain-scan-reveals-out-of-body-illusion
21 Quoted from Ray Brassier, "The View from Nowhere: Sellars, Habermas, Metzinger" (unpublished manuscript).
22 Ray Brassier, *Nihil Unbound*, London: Palgrave Macmillan 2007), p. 138.
23 The question one should raise here is also the one of discourse. Brassier concludes his outstanding Nihil Unbound with speculations about death drive and the annihilation of reality—the type of discourse for which there is simply no place in his later Sellarsian preoccupations. The question is thus: is the duality of scientific discourse and its transcendental reflection the only option, or should we keep the space open for a different type of discourse associated with names like Schelling and Hegel, Lacan and Deleuze, etc.?

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