

Gas and Blas(t)

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Abstract: This is an article on the critical philosophy of nature. It takes a critical-dialectical approach to primary natural phenomena, such as gases and particles (viruses, atoms). These phenomena make up the framework of the ongoing crisis in our relationship to nature, surrounded as we are by the wrong atmospheric gases and organic particles. The question, for us, is not why those are wrong, but what gases and particles are in general. In fact, both of these phenomena are constituted through a latent negative effort of the subject, both epistemic and practical. It turns out that this effort is the same in our construction of nature and of our socio-economic world; therefore, the article speaks of “capitalism” as a general attitude of infinite fragmentation, used to understand nature, society and, at their point of encounter, technology. We call this effort *blas*, using a neologism by Joan van Helmont. Negativity allows humans to create a second, presumably safe environment for themselves and to isolate matter in easily cognizable chunks. However, the same negativity turns back on us since it cannot be complete: in the process of being rarefied and neutralized, matter resurfaces, dialectically, in a spiritual form, gases and viruses being both *material spirits* and *demonic objects*.

Keywords: Philosophy of nature, gas, dialectics, negativity, capitalism, van Helmont.

1. Of Gases, Ghosts, and Viruses

Two recent encounters with nature have affected humanity, body and soul. First, there is a relatively rapid transformation of climates through the emission of the carbon dioxide (CO₂), triggering changes in our immediate environment with its habitual temperature and comfort. Second, there is the novel coronavirus (SARS-CoV-2019) pandemic, which emerged as an apparent sign of globalized humanity’s major vulnerability to viruses – particles too small to be successfully eradicated with the help of contemporary drugs. These interventions of inhuman nature seem to stand apart, and Slavoj Žižek has even observed that there is an implicit contradiction between the gases we produce ourselves and a foreign virus that has traveled into our bodies from wild animals.¹

However, if we explore the situation phenomenologically and conceptually, we see a dialectical unity of the two crises and of the ways they are framed.

Both encounters are still ongoing; their uncertain duration and lack of clearly marked spatial boundaries are only fitting, given the

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1 “[W]hen nature is attacking us with viruses, it is in a way sending our own message back to us. The message is: what you did to me, I am now doing to you” (Žižek 2020a). This statement also appears in Žižek 2020b, p. 85, but see a possible contradiction at p. 95, where the author warns against anthropomorphism: “I find problematic the use of the term “war” for our struggle against the virus: the virus is not an enemy with plans and strategies to destroy us, it is just a stupid self-replicating mechanism.”

medium, wherein they take place. In both of them, we deal with an *invisible* and *suprasensible* threat, perfectly matching an advanced state of our deterritorialization, the abstraction of existence itself, and, indeed, our ungluing from the earth, be it the earth of agriculture, the substratum of life, or, at the extreme, the planet as a whole. Are the invisibility and the suprasensible character of the twin threats not the omens of metaphysics, which lingers with, around, and in us long past its due date in shapes that are, by now, barely recognizable? And are they not, by the same token, the mementos of industrial and postindustrial capitalism that has never been anything other than a reinvented, revamped form of metaphysics?²

“All that is solid melts into air”³ but not without dangerously transforming the element, into which it has melted. We need not take this statement metaphorically, the way Marx and Engels intended when they referred to the indifference of capitalist value to use-values as much as to established customs, ways of life, entire worlds. Mass incineration of fossil fuels in the course of the Industrial Revolution and well after it burned and actually threw parts of the earth (the petrified, liquified, or gaseous remains of past life that the earth contained, that it became, and that became it) into the air. Smog and global warming are at once the *material* and the *spiritual* legacies of metaphysics that, masquerading as economic activity, elevated the earth and suffused with its bits entire regions where they do not belong. A “bad” gas, like carbon dioxide, is a paradoxical but not infrequent case of *material spirit*, the spirit of matter itself, with which we are also familiar in the phenomenon of fermentation.

The dialectical unity of the two threats now appears in a new light: carbon dioxide is a gas, and coronaviruses also come to us through the air, pulverized as though in the mode of a gas. We learn of their identity through scientific tools and frame it within our imaginary, which stems from Greek atomists. We identify the disease with the particulate pathogen that provokes it and the air with its atomic composition. The very word *gas* probably comes from *chaos*,⁴ referring both to the ancient mythical savagery of the invisible void and to the atomistic understanding of gas, which “really” is the disorderly movement of dispersed particles (atoms). Gas is material being at its most abstract, spreading through the air, often inaccessible to the senses – “a *negative* universality” with “insidious and consuming power over what is individual and organic.”⁵ In global warming and airborne viruses we are faced, precisely, with such a “*negative* universality” of a gaseous substance that loosely unites particles and a void, matter and its abstraction.

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2 For more on this theme, see Marder 2020.

3 Marx and Engels 1976, p. 487.

4 The word was invented in the early 17th century by Joan van Helmont (see more below).

5 Hegel 2004, p. 108.

Furthermore, in both cases we deal with the hyperbolic polarity of scale, if of inverse proportions. Viruses are not only invisible; they are the smallest living beings, themselves situated at the threshold of life and death. And then we, the Gullivers, are afraid of these Lilliputian soldiers, the viruses, which are the scarier the less tangible they are. The same happens, symmetrically, with climate change and the so-called Anthropocene: we, the minuscule creatures, are causing troubles on a planetary scale, becoming the viruses of Earth. The diffusion of by-products from our economic life-activity and of the viruses themselves in the air – in which they circulate, which they suffuse and transform – turns us and them into agents of negative universality, wielding the “insidious and consuming,” ghostly and gaseous, power that goes along with such universality.

Gas is a neologism, the proper name of a *spirit*. Henceforth, to spiritualize is to gasify and to gasify is to spiritualize, including the guest and the host, as well, in anonymous hosting by the medium of negative universality.⁶ The author of this name, the sixteenth-century Dutch alchemist Joan Baptista van Helmont (who, incidentally, is a key character in a recent cartoon *Hotel Transylvania* where he unsuccessfully fights monsters) simultaneously produced another, parallel one, *blas* (from “blow”), for the moving impulse of bodies. “*Gas et Blas nova quidem sunt nomina, de me introducta, eo quod illorum cognitio veteribus fuerit ignota*.”⁷ What is this *blas* of things, if not the consequence of an explosion, a *blast* (a word of the same root), which disperses matter all around and which, like Marx’s bourgeoisie, “makes everything solid melt into the air”?

To van Helmont, matter consisted not of inert atoms but of spiritual *archeia*,⁸ and gases particles were clear instances of these. While living in a presumably secure and protected environment – of the atmosphere, of light, of language, of houses –, humans are exposed to the demonology of the small and the wild.

Some claimed that van Helmont derived *gas* not from chaos, but from *Geist*, or, in Dutch, *geest*.⁹ This is probably not entirely true, but he does call gas a spirit, and the word *gas* – a “new word,” so that the cross-contamination of two sounds in a *portmanteau* word is likely. Van Helmont

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6 On the interrelation of guest, host, and ghost, see Derrida 1994.

7 Partington 1936, p. 372.

8 “The kernel of every seed is the archeus, the active principle of every individual material object. It can only be mentioned in passing that van Helmont identified the archeus with ‘gas’ and thus believed to have made it empirically accessible.” Heinecke 1995, p. 66.

9 See, for instance, Draper 1861, p. 178, or Knott 1905. See also the OED entry for “gas.” The “geest” theory is now considered dated, but is still listed in the Wikipedia entry on gas.

also calls his gas a *gas sylvester*,¹⁰ which means, a savage gas, sending us back to the notion of the woods, the very epitome of the wild, dangerous, and, at the same time, enveloping, nature.¹¹ Gas is a forest spirit, a ghost of the densest material existence it, in some way, commemorates.

Statically speaking, gases are the *embodied void*, while, dynamically speaking, they are an ongoing event and the force of *dissolution*. We need this force to make space for ourselves inside matter, to make matter roomy and capacious for our existence at the zero point of a world, to induce comfortable spontaneity that works as a ground for the figures produced by our creativity. And, at the same time, gases are the entropic waste of our creative activity, the consequences of the ongoing destruction and pulverization of matter in a search for its stable units. The very force and event that open the world close it, foreclose existence in the too-much of space, an aperture that is too wide and that, as such, surpasses all boundaries with the negative universality of light and emptiness. The lethal play of de-vastation, at once negating and affirming vastness, commences.

Gaseous units, too – when we manage to identify them – appear as though they were only half-real. Descartes, not as poetically minded as van Helmont, called them *materia subtilis*, subtle matter, sub-matter. The small and subtle seems to be only a quantitative determination of atoms and viruses, but in fact, given that we keep splitting the atom and that the virus itself is only a fragment of a cell, there is reason to believe that they are ways, through which we can empirically speak of a nothing and can touch the void itself.

Viruses are pernicious demons, but with atoms, our first association is the atomic bomb: the destructive, demonic machine, which is based on the fact that an atom is not an *a-tomon*, that it is further divisible into particles or fragments, and that this dispersion annihilates everything around it. The bomb is atomic, because an atom is not really an ultimate kernel of being, but a half-nothing; it hypostatizes emergence-into-being, but an immediate and direct hypostasis of such emergence can only be a potentially destructive negativity that, at the extreme, vaporizes everything in the vicinity, turning all into gas. An atom is, itself, a small bomb, a secret terrorist device that explodes all by itself whenever it is tracked down. Isn't it the same with the viruses that show how a cell is not a *kutos*, that it is not a closed or a self-enclosed vessel, and that the DNA code it contains may be recoded, changing the vessel as much as its contents? Just as, in physics, atoms are not the ultimate kernels of being, so in biology, cells are not the ultimate building block of a living body. Viruses that, by definition, “contain either RNA or DNA genome

10 Partington 1936, p. 369.

11 For a philosophical theory of the woods, consult Bibikhin 2020.

surrounded by a protective, virus-coded protein coat”¹² disclose the truth of cells.

The philosophical point of atomic and viral fragmentation¹³ is that splitting is the underside of an identity, through which this identity is constituted and through which it is, with equal success, undone, since the negative moment of constitution does not pass, but lingers on as a shadowy double of the one (including at atomic and subatomic, cellular and organelle, levels) – a ghost, a spirit, or a gas. With regard to an identity, fragmentation follows the non-linear and non-circular temporality of *Kairos*. Viruses fashion out of replication or doubling their very life-activity (if a *life*-activity it is), tirelessly replayed on an ever-expanding scale. And the fragmentariness of their physical makeup matches the partiality of the process, as far as identity-formation is concerned. Not only do they constantly mutate, borrowing bits of DNA code from the hosts they pass through, but they also bypass the phase of consolidation, not reuniting with themselves, not circling back to themselves across the gap of splitting and divergence. That is why, on a linear timescale, which is not entirely suitable to them, the fragmentation of atoms and viruses may seem infinite.

Hegel¹⁴ and, especially, Engels¹⁵ interpreted the Leibnizean calculus of the infinitely small as a way to understand the negative itself and turn it into positivity. The relative smallness, along with the very hyperbolic contrast between the very big and the very small, allude to an *absolute* negativity and *incorporeal* spirituality, which, in addition to abandoning the category of quantity, switches temporal registers from linear-chronological to punctual-kairotic. The animalculi are small devils, “diaboli,” the barely positive bearers of the negative spirit of dissolution. Hegel, in his *Logic*, makes a remark on what he calls “porosity”, that is, the penetrability of bodies, seen as containing holes. He claims that this quantitative structural understanding hides a more fundamental truth, that of a simultaneous co-presence of several matters, or elements, in a body: the very distinction between them was artificial to start with.¹⁶ In our case, this is true with a twist: a virus is, of course, foreign to a human body, but in penetrating it, it attacks its “soul,” the identity coded into the DNA, by forcing cells to become virus-generating machines. Producing multiple copies of itself and changing the script of its host's cells, it “wants” the entire body to become a virus of sorts, while

12 Gelderblom 1996, p. 529.

13 On the theory of infinite fragmentation in semiotics, see the original philological work by Thomas Schestag (2015), pp. 11-95.

14 Hegel 2010, pp. 218, 271 (Book 1, Section II; Chapters 2-3).

15 Engels 1947, pp. 84-85.

16 Hegel 2010, pp. 434-436 (Book 2, Section II, Chapter 1, Remark).

remaining a human being. In fact, viruses tend to attenuate their lethal force over time, so as to parasitize on their hosts for longer periods and not to debilitate them in a way that would prevent them from passing the pathogen on to others.

This is where some of the proponents of contemporary ecological thought fail to account for the negative, destructive side of symbiosis, where the witness (*sym*) of various kinds of life (*bios*) signifies the tying *and* the dissolution of a bond. At the most basic level, this conjunction of the bond's ligature and dissolution is the work of spirit; it is spirit at work, not least as a ghost or a gas. Therefore, the praise of humanity's "companion species," such as cuddly puppies and kittens,¹⁷ or of the synergies of other-than-humans, such as the bacteria dwelling in our guts,¹⁸ misses the forest for the trees – and not just because it valorizes positive affective attachments or the benefits we reap from constructing and sharing our lives together with members of other species. A more significant aspect they overlook is the cut, repulsion, disjointedness, maladjustment, or harm (in a word, negativity) that makes spiritual and symbiotic bonds possible. Viruses are, in this respect, not an aberration from cross-species cohabitation; they are the case-in-point, in which the negative element of symbiosis is simply more pronounced. But so is, also, the ghostly, gaseous, and, for all intents and purposes, spiritual nature of the bond they forge with us, as well as with other animals and even plants.

2. Capitalism and Gas

As we've already mentioned in a literal take on Marx and Engels, capitalism makes everything solid melt into the air, considerably polluting, solidifying this air as a result. There are two stories unfolding here. First, there is an idealist and spiritualist drive. Capitalism, as Lukacs has shown,¹⁹ aims to create an ideal, formal, legalistic and instrumentally rational social world with quantitative *value* for the sole standard and measure. But, dialectically, this ideality can only be achieved through an ongoing destruction of the material remnants of other categories that do not conform to the quantitative yardstick. To single out and hunt down an empirically given object, constant negative effort is needed, which does not end even in atoms. The newly found invisible micro-objects become proxies for what had previously been thought of as objective idealities. Modern technology exhibits tendencies towards minituarization and towards the use of airwaves, rather than material carriers. In both cases, the ultimate horizon is an idealistic

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¹⁷ See Haraway 2008.

¹⁸ See Morton 2019.

¹⁹ Consult Lukacs 1971.

victory over matter, as well as an intrusion into the demonic world of invisible micro-objects, now humiliated and used as couriers.

The obverse of this process is, however, the *exploitation* of the positive forces of material objects, destroyed by incineration. Their heat is supplanted with the heat of idealization, which burns away the compounds it does not ontologically trust. What is aimed at, demonically, in exploiting both human labor and atoms, is the immaterial energy of creation, supposedly located at the threshold of nothing. But, materially, what is gained in destruction is, rather, the force of development and completion (the other side of energy) that had been spent for ages in forming complex chemical links. Labor is another matter, because, though it does build and develop, it is constantly denied its fruit, like the ancient Danaides, and is, thus, made into a quantifiable resource.

When Adam Smith gives one of the first accounts of what will have been called "capitalism," he pays special attention to money. Money, he writes, is a perfect matter for exchange, because it is infinitely *divisible*:

Metals can likewise, without any loss, be divided into any number of parts, as by fusion those parts can easily be re-united again; a quality, which no other equally durable commodities possess, and which more than any other quality renders them fit to be the instruments of commerce and circulation. The man who wanted to buy salt, for example, and had nothing but cattle to give in exchange for it, must have been obliged to buy salt to the value of a whole ox, or a whole sheep at a time.²⁰

It follows, implicitly, that exchange mediated by money allowed for the fragmentation of property and for the destruction of qualitatively complete objects, now gathered into a quantitatively defined homogeneous entity. Long before Marx, Smith alludes to a material *negative* force, acting as the engine of bourgeois economy.

Jean-Paul Sartre, in his *Critique of Dialectical Reason*²¹, searches for an objective material correlate to the spiritualizing element of *Nothing*, which he had previously identified with consciousness (but, then, where would this ephemeral and phantasmatic milieu obtain any force to exist?). He finds it in the "rarity," which in English is rendered as "scarcity," and he literally means a lack of resources. It is, for Sartre, the *cogito* principle of capitalism. And yet, the French word also sends us back to anything *rarefied*. For example, a gas. There needs to be dispersion in matter, so that a consciousness and an agency could emerge, and, pace Sartre, this dispersion does not just happen on its own.

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²⁰ Smith 1976, pp. 38-39.

²¹ Sartre 2014, pp. 122-152.

Gases and viruses, in their turn, are *the agents of rarefaction*, with their material-spiritual agency prefiguring that of consciousness, which they continue to disturb and haunt after it has cropped up.

Contemporary capitalism is hard to describe only as scarcity; it is also characterized by the oversaturation of society with consumer goods (and “bads”). It is, nonetheless, crucial for these goods and bads, represented in commercials, to be omnipresent in the background mode, hovering, smoke-like, around a subject in whom they create an artificial longing. The psychic environment they stimulate corresponds to the phenomenological hypothesis, drawn by Husserl, that a massive and nebulous halo overhangs and surrounds the sphere of attention, nourished in its singularizing dynamism by its vague milieu. Under capitalism, the focused regard of consciousness—the focus that *is* consciousness understood in terms of intentionality, directing itself toward and zooming in on something in particular, a *this*—is unfocused and dispersed. Instead of shining the flashlight of consciousness onto the dynamic sphere of attention, we live directly in the halo of experience, which does not lend itself to being experienced, and miss out on what is surrounded by it. The background mode of mental life prevails over the singularity of what is (or what may be) foregrounded, if only for a fleeting instant. That said, capitalism does actually realize its utopia of turning figure into ground: the reality behind it is that of commodity fetishism with its obsessive attention to something between background and figure, the Lacanian marginal *objet petit a*. The too-little of rarefaction coincides with the too-much of hyperstimulation by the shreds of things and fragments of thoughts that comprise the atmospheric conditions of capitalism.

The rarefaction of the world goes hand in hand with the gasification of consciousness, its dispersal into permanent distraction that does not lend itself to temporary gathering in the finite movement of attention. It turns out that the underside of the idealization of consciousness, unmoored from a foregrounded *this*, is its diffusion into the unconscious or the semi-conscious. Our senses are, more and more, modeled on an abstraction, their subtler discernments voided by the massive stimuli that assault them on every register, from sight to hearing, from smell to taste. (Is it by chance that some of the common symptoms of COVID-19 include anosmia and dysgeusia, an assault on the senses also provoked by very large doses of radiation?)

Benjamin famously associated communism and contemporary art with “reception in a state of distraction,” akin to the attention paid to an architectural work of art.²² This utopia of non-thematic experience is, for Benjamin, a dialectical response to the “aura,” which is also an enveloping milieu, but a heavy and a stuffy one. Instead of the greenhouse

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²² Benjamin 2019, p. 193.

of an aura, humanity needs the “open air of history.”²³ Today, in place of Benjamin’s communist distraction, we get a capitalist distraction, which synthesizes aura and architecture, *Erlebnis* and *Erfahrung*, in a state of anonymous and impersonal hyperattention (first and foremost, by capital as an “automatic subject,” to recall Marx’s words²⁴) to nothing other than value and its self-augmentation. The dialectic comes to a standstill much earlier than Benjamin thinks it does, well before the formation of an image. It now gets stuck at what corresponds to the earliest stages in Hegel’s *Phenomenology*, that is, the abstractions of sense-certainty, the apparent wealth of empirical sense data rendered *actually* identical to the poverty of a gasified consciousness.

In political practices, diffuse and nearly indifferent targeting has replaced the art of precise aiming that, until the twentieth century, defined the exercise of military skills. Sloterdijk makes this point with respect to the first chlorine gas attacks by the German troops in World War I: “The 20th century will be remembered as the age whose essential thought consisted in targeting no longer the body, but the enemy’s environment.”²⁵ Neoliberalism, too, does not directly kill its victims; rather, it denies the material conditions necessary for them to go on living, such as food, drinkable water, shelter... (In this sense, wasn’t Creon the prototypical and hardly surpassed neoliberal in his approach to Antigone, whom he confined in a cave, targeting not her, but her environment?) While the medium became the message, the background passed into the foreground: gas is no longer a mere means, but also the end of political activity.

3. The Greenhouse Effect

A little like Antigone herself, we wouldn’t be able to survive without the atmosphere of our planet, as much as of our social and psychic lives. If we look at this fact phenomenologically, we start appreciating the structure of the “figure-ground” relation and what it means for a being to be not a thing but a milieu, a sphere. To move something to the background of your attention used to require a negative effort, when living in and with the focused regard of consciousness, strictly equivalent to a direct targeting of the enemy, was still possible. Lacan, speaking of such acts in the aesthetic context, compares them to a “castration” of the gaze by a painting. The gaze, he says, is “laid down” into the picture, to prevent the anxiety of being seen, to liberate the “eye” from the gaze, the non-thematic *seeing* from the thematic *looking*.²⁶ Now, the cumulative

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²³ See Benjamin 2003, p. 395, where he advocates a dialectical “leap in the open air of history” as opposed to a closed “arena.”

²⁴ Marx 1992, p. 255.

²⁵ Sloterdijk 2009, p. 14.

²⁶ Lacan 1981, pp. 101-102, *passim*.

outcomes of past negative efforts at the backgrounding of attention give us the illusion of immediacy – of a natural cause, rather than the effects, of psychic life in a certain politico-economic setting. Again, the castration of the gaze implies a castration of the world as the world of things and, above all, of images (of things).

In parallel to how direct targeting is supplanted by undercutting an enemy's environment (an undercutting that cannot help but also harm one's own), poison gives way to toxicity. Besides being intended for an adversary it was meant to kill or at least to incapacitate, a poison could offer beneficial, curative properties if taken in the right amount in its capacity as a *pharmakon*. Toxicity, however, is an indifferent and diffuse threat that may backfire on those who unleash it, lest they be careful to prepare protective gear in advance. In a war setting, this preparation is a part of the strategy; in our agricultural and energy-production practices, we slowly kill ourselves by releasing toxins into the earth, underground water sources and plants, or by dumping massive amounts of greenhouse gases into the planet's atmosphere.

Toxicity is, of course, also an effect of porosity. Gases, like viruses, are toxic because they refuse to be self-contained things and, instead, penetrate human bodies under the guise of air and may initiate pernicious reactions within cells. In a way, the "airiness" of matter on both sides (an organism and gas, or a virus) is responsible for this interface, which would not have been possible if our bodies were not, at least in part, gaseous – if they did not engage in an exchange of gases with their milieu. It is this diffuse, not easily circumscribed, nature of physical and physiological existence that has come to the fore today, both practically and theoretically.

Many twentieth century authors, such as the aforementioned Husserl, Heidegger, or Sloterdijk, concentrated on a peculiar category of beings: not objects that are tangible and easily circumscribed, but large, enveloping horizons, milieus, with their moods and atmospheric conditions. Not the invisible micro-, but the inexhaustible macro-. Their overwhelming nature does not prevent the human subject from learning how to modify or technologically reproduce them, by creating all sorts of "micro-climates." The reproduction itself, however, backfires, given the unintended and unforeseen interactions between these micro-climates (treated, precisely, not as climates but as objects handed over to manipulation, control, and adjustment) and the climate, in which they are enveloped.

The very term "greenhouse effect" is an ironic one, with a Heideggerian touch, because it evokes the human tendency to build artificial and highly controlled environments, displacing the threatening void of space. Sloterdijk describes this tendency in his multibook project,

Spheres.²⁷ As a cumulative outcome of industrial activity, humanity pollutes a very large sphere – the atmosphere – with the half-destroyed matter of gases, thus endangering the *void* which, as it turns out, is also indispensable for living. We do need greenhouses, but humans themselves cannot have a greenhouse as their habitat. In the final analysis, humans are not *domestic* animals or plants, but savage ones, and, therefore, the "greenhouse effect" flips an "artificial paradise," set over and against "the silence of these infinite spaces," into a hellish experience that seems to synthesize the worst of both worlds (or unworlds).

The tendency of a human to surround herself with freely floating "spontaneous" objects – the gases – is by no means innocent. The existence of such spontaneous objects, their transformation into a milieu for other more important things, and the ultimate victory of the milieu over whatever and whomever it envelops: all of this requires an unconscious negative effort of neutralization and fragmentation, neutralization via fragmentation (a splitting that blurs our attention). Capitalism is not the only system that relies on the miracle of "spontaneous order" (supposedly emerging out of chaos); so does, also, liberal democracy, with its insistence on individualism, pluralism, and the spontaneity of political action, vital for its legitimacy. There is at least a constant anti-monopoly effort, in both cases, which is meant to prevent an integrative crystallization. Society and commodities must, in the last instance, be transformed into gas, which imbues with a fresh meaning Thatcher's famous statement, "Society does not exist," consistent with her atomistic understanding of human ontology.

It is here that "benign" ground-producing activity intersects with the danger of pollution: both in the sense that gas remains all-too-material, not spiritual enough, and in the sense that gas particles turn from nicely neutralized fragments of matter into *waste* as the by-product of negative-idealizing activity. The danger inherent in this double endeavor is, apart from the depressive material weight again bearing down on us instead of the near-void, that deliberate attempts at ignoring and neutralizing matter are not successful. A horrific remainder of underkilled nature emerges from the background of the void, from inside a seemingly secure space: a toxic gas or, worse, a virus – a spirit.

In bourgeois economics, those things that have not yet been incorporated into the totality of self-augmenting value are called *externalities*. Essentially, capitalist economic theory agrees with Lukacs: these externalities (let us say, these not-yet-gases) are only temporarily external to the totality of capital that, given enough time, will incorporate them into itself through the labor of translation into the language of quantitative value. Though not much can be said about them from the standpoint of capital, they are the sites of opportunity, of an ongoing

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²⁷ See Sloterdijk 2011; 2014; 2016.

expansion and intensification of capitalist dynamics and the concomitant processes of rarefaction or gasification of that which stood outside them.

The dangers of pollution and of ground-producing activities evince the persistence of externalities within the abode of capital – not even on its margins, but right in its core. To be sure, the danger of the externalities within does not preclude the opportunities of profiting from them; today, perhaps, this is one of the most promising areas of capitalist growth, namely through investments into a desired reincorporation of such externalities. (Think of the medical industry and vaccination costs in the context of the new coronavirus, or of big-scape projects in geoengineering in the case of global warming.) Nonetheless, this reincorporation is powerless, when it comes to correcting the deficiencies of the negative-idealizing activities of capital: it is unable fully to eliminate the material remainder and, in addition, it triggers an exponential increase of the dangers inherent in the neutralization of matter.

With the combustion of fossils and of everything that falls into the amorphous category of biomass, the air is impregnated with particulate matter and with gases, such as carbon dioxide, that trap the Sun's heat in the atmosphere of the Earth. That is the basic operation behind the greenhouse effect. As smog, air is also rendered dense and even colored and visible, while visibility *in* it is drastically reduced. A medium, wherein things in the world were to be seen, has itself become an object of vision, canceling out the seeing of all else. In this, smog corresponds to the nebulous halo surrounding the sphere of attention and experience, the halo that is now the stuff of our semi-conscious quasi-experience.

The *material* rarefaction of matter through incineration, among other negative-idealizing activities, is responsible for densification in regions that had previously been more rarified. Receiving the remnants of burnt organic (mostly vegetal) matter, the air is a mutilated forest, a cemetery for past life perversely reanimated by the *blas* of industrial capital, the cemetery of the earth. The air, then, is filled with the ghosts of the earth, the earth as a ghost that, no longer contained in its own bowels, is released into an elemental region where it did not belong. Humanity amplifies the effects of its own physiological breathing with a techno-economic breath that expels massive quantities of the same gas our bodies exhale into the atmosphere, making the air unbreathable (for humans, though not for plants).

The density of air, filled with particulate matter that has migrated into it thanks to the failures of idealization, is a milieu propitious for the spread of disease and, not least, of viruses. It has been found, for instance, that the new coronavirus catches a ride not only on our skin and the surfaces of inanimate objects, but also on air pollutants, from which transmission to humans is possible.²⁸ Targeting our respiratory systems,

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28 Coccia 2020; Domingo 2020.

greenhouse gases and viruses – the ones *with* the others – announce the return of matter, the airborne cemetery of the earth and of the woods obtruding uninvited on the project of matter's negation, neutralization, and spiritualization. If, as Levinas has it, spirit is “the longest breath there is,”²⁹ then these different, albeit interrelated, ways of suffocating choke spirit itself.

4. Conclusion: To Rarefy or Not to Rarefy? That Is the Question.

Dialectical criticism has provided us with the methodological guiding thread in this essay. This means, concretely, three things. First, our targeted critique of capitalism and its ideology has engaged with atomistic science as a synecdoche for the object under critique. Second, we have provided an account of the theological, demonological, and medical symptoms that emerge when this ideology meets its limits. And, third, with a measure of irony, we have tried to uncover the general conditions of possibility, thanks to and in which capitalism exists, but of which it is not fully cognizant.

To sum up:

1. Capitalism tends to fragment, rarify, and miniaturize reality in order to reduce it to a historical minimum, to make it actually compatible with the abstraction of value that is the governing principle of all life under its regime. (It logically follows, then, that nanotechnologies and nanoscience are, above all else, the minuscule embodiments of capitalism in a nutshell.) The utopia of an idealized life involves, at the same time, a comfortable cloud of spontaneous chaos (gas), in which vitality would take its place, but which proves to be unworkable as a milieu for human physiology.

The language of capitalism, misleadingly, takes the form of nominalistic atomism, which replaces negative activity with its result: a particle, an individual “household,” a virus. The process of rarefaction is mystified and obscured, the scaffolding dismantled, and only the outcome available to sight (or not even!). In this capacity, the process inherits many of the features Marx ascribed to commodity fetishism. The energy of fragmentation is publicly accessible only in its objective form and, often, attributed to the ahistorical forces of physics, such as entropy.

2. Consequently, the negative activity in question remains largely unconscious and occasionally surprises public opinion with such things as a general upsurge in depression, on the one hand, and an obsession with the material fragments that happen to resist the frenzy of activity, on the other. Žižek nicely describes these fragments as objects that are

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29 Levinas 1974, p. 182.

“less than nothing” and rightly emphasizes that their role, for us, is to embody the very negation that has spawned them.³⁰ Pollution is a case in point here, because it comes from the material remainder of a number of idealizing and destructive operations; the void, in which we live, gets endangered precisely through the efforts to reproduce and control it. The material, taken as gas, is here nothing but a trace of the immaterial. The *toxic* effects of both gases and viruses are the living counterargument to the atomistic, positivistic, and capitalist picture of a world where everything is set apart and divided through “social distance” or discrete quantitative measures applied to reality as a whole (i.e., two variations on the theme of alienation).

A theological outcome of this situation is the new world of incommensurability (and, hence, of wonder, often mixed with dread), born from the one that claimed to consist of utterly commensurable, measurable, and controllable entities and processes. The incapacity of modern science to reunite the micro- and the macro-universes gets mimicked in the lifeworld of the everyday by two main obsessions with the outside: the uncanny spirits of viruses and the enveloping enormity of the endangered climate that metaphorically stand for the divine spheres of the universe itself. The combination of these two awes (the virus inside me and the starless sky above me) produces a breathtaking effect of uncanny proportions, a proxy for an infinite measure and an omen of a complete split between the (whatever actually corresponds to) gods and (whatever actually corresponds to) vermin. (Guess where we belong, then!)

3. Now, the critics that we both are might pause and wonder whether we should not just consciously assume what we have been doing unconsciously anyway: cut, break, isolate, while also re-introducing the very large and the very small into the orbit of our understanding, by taking into account their *absolute* scale and showing reservations with regard to these limiting experiences. The analytic and destructive activity of humans – the peculiar *blas* of our species – will probably always remain; we just need to remember the experience of being and nothing that makes it possible.

However, we should also look beyond the Kantian style of critique and seek, in the company of some of those working at the cutting edge of contemporary natural sciences, to reform our ideology of nature, for instance, by contesting organ- and molecule-based medicine in favor of a contextual, milieu- and symbiosis-oriented understanding of the body. In plant sciences, an analogous move rejects the mechanistic framework of traditional botany in favor of a study of plant intelligence, forged in cross-species and cross-kingdom alliances (say, with fungi and microbes in “transition zones” at the root apex). The same applies to contestations

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30 Žižek 2012.

of monetarist and individualistic economics that tend to operate in a more or less tacit positive feedback loop with the bourgeois understanding of evolution, of fitness, selection, and survival.

After all, the gasification of existence threatens and destroys not only the atmosphere and things in their phenomenological integrity; it also, and in some sense even more drastically, disrupts the subjective substrate of capitalist production and consumption: the utility-maximizing individual and her private fraction of property. In and of itself, extreme individualism (or social atomism, which amounts to the same thing writ large) is already a by-product of bourgeois ideology, but it is not the absolute end result, only a point of transition, a way station. The various contestations we have briefly alluded to are instances of an immanent undoing of individualism that, exacerbating the very energies that have produced it, end up at the other extreme of a symbiotic, context-dependent, and milieu-based interpenetration of rarefied existences. We may no longer recognize a plant as a discrete phenomenal unity, once it has been reduced to calcium pathways, emitted and received biochemical substances (some airborne; others circulating in the soil), hormonal networks, and so forth. But it is this rarefied reductionism, exacerbated manifold by contemporary plant science, that surfaces on the other side of the vegetal organism’s embeddedness in and mutual constitution with its milieu, with other plants and forms of life different from its own.

There is no reason why a similar line of reasoning would not hold for human beings. Marx’s dialectical thesis that, at the height of its success, capitalism fatally undermines itself with the very means that facilitated its success should be extended to the rarefaction, atomization, or gasification of our world and of human ontology, whether social or individual. Who could have put it better than Shakespeare in *Julius Caesar* (I, 3, 590-4)?

O, he sits high in all the people’s hearts:
And that which would appear offence in us,
His countenance, like richest alchemy,
Will change to virtue and to worthiness.

BIBLIOGRAPHY

- Benjamin, Walter. 2003. "On the Concept of History," pp. 389-397. In *Selected Writings*, Volume 4. Cambridge, MA: Harvard University Press.
- . 2019. *Illuminations: Essays and Reflections*, edited by Hannah Arendt. Boston, MA: Mariner Books.
- Bibikhin, Vladimir. 2020. *The Woods*, translated by Arch Tait. Cambridge: Polity Press, in press.
- Coccia, Mario. 2020. "Factors determining the diffusion of COVID-19 and suggested strategy to prevent future accelerated viral infectivity similar to COVID." *Sci Total Environ.*, August 2020; 710: 138474; DOI: [10.1016/j.scitotenv.2020.138474](https://doi.org/10.1016/j.scitotenv.2020.138474).
- Derrida, Jacques. 1994. *Specters of Marx: The State of the Debt, the Work of Mourning, and the New International*, translated by Peggy Kamuf. New York: Routledge.
- Domingo, J.L. et al. 2020. "Influence of airborne transmission of SARS-CoV-2 on COVID-19 pandemic. A review." *Environ Res.* September 2020; 188: 109861; DOI: [10.1016/j.envres.2020.109861](https://doi.org/10.1016/j.envres.2020.109861).
- Draper, John. 1861. *A Textbook on Chemistry*. New York: Harper and Sons.
- Engels, Friedrich. 1947. *Anti-Dühring*, translated by Emile Burns. Moscow: Progress Publishers.
- Gelderblom, Hans. 1996. "Structure and Classification of Viruses." In S. Baron (ed.), *Medical Microbiology*, Fourth Edition. Galveston, TX: University of Texas Medical Branch at Galveston.
- Haraway, Donna. 2008. *When Species Meet*. Minneapolis: University of Minnesota Press.
- Hegel, G.W.F. 2004. *Philosophy of Nature: Encyclopedia of the Philosophical Sciences, Part II*, translated by A.V. Miller. Oxford: Oxford University Press.
- . 2010. *The Science of Logic*, translated by George di Giovanni. Cambridge, UK: Cambridge University Press.
- Heinecke, Berthold. 1995. "The Mysticism and Science of Johann Baptista van Helmont." In *Ambix*, Vol. 42, Part 2, pp. 65-78.
- Knott, John. 1905. "Jan Baptista van Helmont," *Dublin Journal of Medical Science (1872-1920)*, Vol. 120, pp. 132-148.
- Lacan, Jacques. 1981. *Four Fundamental Concepts of Psychoanalysis. Seminar*, Book 11, translated by Alan Sheridan. New York-London: Norton.
- Levinas, Emmanuel. 1974. *Otherwise than Being, or Beyond Essence*, translated by Alfonso Lingis. Pittsburgh, PA: Duquesne University Press.
- Lukacs, George. 1971. *History and Class Consciousness*, translated by Rodney Livingstone. Cambridge, Mass.: MIT Press.
- Marder, Michael. 2020. *Dump Philosophy: A Phenomenology of Devastation*. London & New York: Bloomsbury.
- Marx, Karl. 1992. *Capital: A Critique of Political Economy*, Volume I, translated by Ben Fowkes. London: Penguin Classics.
- Marx, Karl & Friedrich Engels. 1976. "The Manifesto of the Communist Party," pp. 477-519. In *Marx and Engels, Collected Works*, Vol. 6. London: Lawrence and Wishart.
- Morton, Timothy. 2019. *Humankind: Solidarity with Non-Human People*. London & New York: Verso.
- Partington, J.R. 1936. "Joan Baptista van Helmont," *Annals of Science*, 1:4, pp. 359-384.
- Sartre, Jean-Paul. 2014. *Critique of Dialectical Reason*, translated by Alan Sheridan-Smith. London: Verso.
- Schestag, Thomas. 2015. *para-*. Tegernsee: Boer Verlag.
- Sloterdijk, Peter. 2009. *Terror from the Air*. Los Angeles, CA: Semiotext(e).
- . 2011. *Spheres*. Vol. 1: *Bubbles*. Los Angeles: Semiotext(e).
- . 2014. *Spheres*. Vol. 2: *Globes*. Los Angeles: Semiotext(e).
- . 2016. *Spheres*. Vol. 3: *Plural Spherology*. Los Angeles: Semiotext(e).
- Smith, Adam. 1976. *An Inquiry into the Wealth and Causes of the Wealth of Nations*, Volume 1. Oxford: Oxford University Press.
- Žižek, Slavoj. 2012. *Less than Nothing. Hegel and the Shadow of Dialectical Materialism*. New York & London: Verso.
- . 2020a. "Monitor and Punish? Yes, Please!", *The Philosophical Salon, LA Review of Books*. <https://thephilosophicalsalon.com/monitor-and-punish-yes-please/>, last visit 2.08.2020.
- . 2020b. *Pandemic! Covid-19 Shakes the World*. New York & London: OR Books.

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