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Peter Sloterdijk's Philosophy of Technology: From Anthropogenesis to the Anthropocene

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Abstract:

In this article, we aim to expose the central tenets of the philosophy of technology which underlines the work of the German philosopher Peter Sloterdijk. Beginning from his early works and also mapping his philosophical influences, we show how he incidentally started theorising technology while still profoundly engaged with critical theory in the 1980s, but along the 1990s passed through an anthropological turn, which made possible a concept of technology that has its foundations in both Heidegger's existential philosophy and German philosophical anthropology in general, but also emphasising the long biological-evolutionary process of the human species itself. This perspective then enables us to formulate—starting from Sloterdijk's work—a powerful philosophical techno-anthropology that deals with the genesis of the human as a sphero-poietic species having evolved into a bio-sphero-poietic geoforce and with the future planetary challenges put in front of us by the Anthropocene. We thereby aim to contribute to current debates in the philosophy of technology, offering a techno-philosophical reading of an (in our view) decisive and yet underexplored author in this field.

Keywords:

Philosophy of Technology; Peter Sloterdijk; Anthropocene; Philosophical Anthropology; Contemporary Continental Philosophy.

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Nous sommes sur un plan où il y a principalement la technique.
Peter Sloterdijk, *The Domestication of Being*

1. Introduction

While the German philosopher Peter Sloterdijk (Karlsruhe, 1947) is most generally known today as a theorist of culture, history and politics approached from an anthropological perspective, less attention has been given to the fact that his anthropology is decidedly informed by the premise that the *anthropos* as a cultural, historical and political being is fundamentally and irreversibly a *technical* creature. The grand sphero-logical and immuno-logical narrative of the evolution and history of humanity and the human condition in general that he develops in particular in his monumental *Spheres* trilogy is in fact a tale, as we will argue, of progressive *technical* distancing, insulation, mediation and immunisation of the evolving human species vis-à-vis the natural environment, a process that has thoroughly denatured the pre-human organism from which the human originated. Through this process, the human species increasingly expanded the artificial "interior spaces" or "immuno-spheres" in which it gestated over time as an ever more intelligent and cunninger, highly improbable yet utterly successful creature. However, this process also progressively increased its dependence on these technical interiors, which—moreover—have negatively affected the Earth's ecological systems to such an extent that today, in the so-called Anthropocene age, the very survivability of the human species has been called into question.

In this article we will delve into the (in our view) decisive yet somewhat underdeveloped technological dimension of Sloterdijk's understanding of the human endeavour, presenting him explicitly as a philosopher of technology. We thereby aim to make two basic contributions, both to the readers interested in Sloterdijk's work by itself and to those involved in recent developments in the philosophy of technology. Firstly, indeed, the literature devoted to expounding on Sloterdijk's philosophy is rich and diverse, ranging from monographs[1] to edited volumes[2] and journal special issues[3]. However, while some

1 Jean-Pierre Couture, *Sloterdijk* (Oxford: Polity, 2015).

2 Stuart Elden (ed.), *Sloterdijk Now* (Oxford: Polity, 2012); Willem Schinkel and Liesbeth Noordegraaf-Eelens (eds.), *In Medias Res: Peter Sloterdijk's Spherological Poetics of Being* (Amsterdam: Amsterdam University Press, 2011).

3 Patrick Roney and Andrea Rossi (eds.), "Sloterdijk's Anthropotechnics," *Angelaki: Journal of the Theoretical Humanities* 26, no. 1 (2021); Various Authors (eds.), "Special Issue on Peter Sloterdijk", *Cultural Politics* 3, no. 3, (2007); Various Authors (eds.), "The Worlds of Peter Sloterdijk", *Environment and Planning D: Society and Space* 27, no. 1 (2009).

contributions[4] set out to discuss particular aspects of Sloterdijk's understanding of technology, we are not aware of any work aiming to review his conception of technology throughout his whole oeuvre or to thematically interpret the latter as a philosophy of technology, as we set out to do here. Secondly, we aim to outline a theoretical framework exhibiting a strong and thorough conceptualisation of technology, both in ontological and anthropological terms, which shall allow us to engage with the hypothesis of the so-called constitutive technicity of the human as a species[5] and contribute to discussions related to the interface between philosophy of technology and the question of the Anthropocene, as it has been broadly discussed recently[6].

To achieve this objective, the current work is divided into three main sections. In the first one, we will show—very concisely—how Sloterdijk's work has become progressively more anthropological in focus since his bestselling 1983 debut *Critique of Cynical Reason*, a book that was still very much a work of historical and cultural criticism resonating with but also (meta-)critical vis-à-vis the Frankfurt School's tradition of critical theory. We will also briefly illustrate how in subsequent works such as *Thinker on Stage: Nietzsche's Materialism* and *Infinite Mobilization: Towards a Critique of Political Kinetics* Sloterdijk shows an increasing interest in theorising what Max Scheler referred to as "the human place in the cosmos" as well as what Hannah Arendt called "the human condition", only to make what might be called a genuine "anthropological turn" in the early to mid-1990s in crucial transitive books such as *Weltfremdheit* and *Im selben Boot: Versuch über die Hyperpolitik*. Then, we will explore Sloterdijk's main philosophical influences regarding his view on technology, such as Nietzsche, Heidegger, Foucault, Mühlmann, Günther and several evolutionary biologists and philosophical anthropologists. With this, it will be possible to observe how Sloterdijk's *onto-anthropology* is both a complex tapestry composed of manifold references and a discussion about the historical and ontological "nature" of the *anthropos* in terms of what Heidegger called *Dasein* as resulting from a technologically driven evolutionary process that produces the human as a progressively *aletheic*, i.e., world-open and world-forming creature "uncannily" open to the Being of beings.

4 Sylvia Blad, "The Impact of 'Anthropotechnology' on Human Evolution", *Techné: Research in Philosophy and Technology* 14, no. 2 (2010): 72–87; Sane van der Hout, "The Homeotechnological Turn: Sloterdijk's Response to the Ecological Crisis", *Environmental Values* 23, no. 4 (2014): 423–442; Sjoerd van Tuinen, "Transgenous Philosophy': Post-Humanism, Anthropotechnics and the Poetics of Natal Difference", in *In Medias Res: Peter Sloterdijk's Spherological Poetics of Being*, eds. Willem Schinkel and Liesbeth Noordegraaf-Eelens (Amsterdam: Amsterdam University Press, 2011), 43–66.

5 Véronique Havelange, Charles Lenay and John Stewart, "Les représentations: Mémoire externe et objets techniques", *Intellectica* 35, no. 2 (2002): 115–129.

6 Pieter Lemmens, Vincent Blok and Jochem Zwier, "Toward a Terrestrial Turn in Philosophy of Technology", *Techné: Research in Philosophy and Technology* 21, no. 2 (2017): 114–126.

In the second section, we will discuss how the concepts of immunology, spherology and anthropotechnology can be explored taking the technology question as the central perspective. It is in his magnum opus *Spheres*, a trilogy comprising no less than 2573 pages in the original German version (its three volumes appearing consecutively in 1998, 1999 and 2004), but also importantly in his 2001 book on Heidegger, *Not Saved: Essays after Heidegger* and in *You Must Change Your Life: On Anthropotechnics*, published in 2009, that Sloterdijk mainly and extensively elaborates on those three central concepts. He does so in the form of a grand-scale "re-description" (Richard Rorty) or a "fantastical reconstruction"[7] of the human condition from its very origins with the first Hominins until the present moment when humans are about to become a planetary species, presenting this sphero-immunology as a post-metaphysical, indeed also post-Heideggerian theory of human existence or being-in-the-world as a thoroughly technically constituted and conditioned mode of being.

After providing this overall, although necessarily concise picture of Sloterdijk's philosophy of technology, we will move to a different topic in the third section. In it, we will zoom in on how Sloterdijk conceives of the current global ecological crisis and the planetary challenges presented by it while we enter the Anthropocene age from his sphero-immunological and onto-anthropological perspective, also explaining his understanding of planetary technology in terms of the technosphere. It will also become clear how the discussion about the so-called "globalisation" deeply relates to technology, the new climatic regime we are entering (as theorised by the French anthropologist and sociologist of science Bruno Latour) and the consequential necessity to switch from local cultural immune strategies to a global co-immunitary structure. According to Sloterdijk, this switch should give up on taking the planet as a passive background and initiate a transformation in what Heidegger would have called the essence of technology, from a brutal, exploitative and imperialistic *allotechnics* alien *to* and alienating *from* nature to an intelligent, caring and non-dominating *homeotechnics* mimicking and extending upon nature's own ways, which also implies the advent of a new, planet-oriented anthropotechnics, as we will show.

2. Foundations of an Onto-anthropological Perspective

2.1 The Presence of Technology in Sloterdijk's Early Work

Already in the *Critique of Cynical Reason*, a book that for the rest engages much more with literature, poetry and the visual arts in the social, political and economic context of the Weimar era, Sloterdijk presented critical remarks vis-à-vis the nascent philosophy of technology during the Interbellum,

7 Peter Sloterdijk, *Not Saved: Essays after Heidegger* (London: Polity, 2017), 97.

pointing out the role of technology and the philosophical reflection on it in the complex psychosocial scenario unfolding during this era—a scenario he characterised as that of a "technical surrealism"[8]. Still following in the footsteps of the tradition of the Frankfurt School, exemplified by Theodor H. Adorno and Max Horkheimer's seminal work from 1947, *Dialectic of Enlightenment*, there is an effort to point out the obscenity and mystification intrinsic to the enlightenment process, which could lead to the barbaric events of the first half of the 20th century[9]. Using a quite caustic language and style, *Critique of Cynical Reason* engages in a kind of philosophical performance inspired by Diogenes of Sinope and Friedrich Nietzsche, arguably the two authors closest to Sloterdijk's temperament and critical (i.e., kynical[10]) intent. Themes like the relation between the Third Reich propaganda and the marketing of prostheses for disabled people can illustrate what is developed there. At that moment, moreover, what was particularly interesting for Sloterdijk was seeing how technology is also an essential factor in producing a *critique* of culture and how it was ambivalently present in the discourses surrounding the emergence of totalitarian regimes in the Twentieth century.

Sloterdijk mentions in particular authors such as Hans Freyer and Friedrich Dessauer, who wholeheartedly embraced technology as quintessentially human and human-empowering, the former glorifying the technological will to power of the modern subject as marking the nobility of European mankind as "Man the Conqueror"[11], the latter presenting technology as the fourth human realm next to the three Kantian realms of natural science, ethics and aesthetics, i.e., that of inventions pre-existing in the realm of ideas but realised through human ingenuity and creativity[12]. Sloterdijk accuses these hyper-Promethean Weimar philosophies of technology of their reluctance to acknowledge any neediness or suffering as inseparably belonging to the human condition and of remaining blind to the destructive impacts of technology, instead presenting it as the panacea for all of humanity's problems[13]. He agrees with Dessauer though that technical inventions are to be understood as "ontological enrichments in the inventory of existence"[14], a thought that he will later submit against Heidegger's verdict of technologies as essentially impoverishing and undermining human existence[15]. However, in

8 Sloterdijk, *Critique of Cynical Reason*, 457.

9 Theodor W. Adorno and Max Horkheimer, *Dialectic of Enlightenment* (London: Verso, 1997).

10 It is worth highlighting that Sloterdijk's conceptual difference between *cynicism* (a reading of modernity as production of split and melancholic individuals) and *kynicism* (a possibility of a genuine social and plebeian *critique*) is heavily influenced by: Heinrich Niehues-Pröbsting, *Der Kynismus des Diogenes und der Begriff des Zynismus* (Berlin: Suhrkamp, 1979).

11 Sloterdijk, *Critique of Cynical Reason*, 450.

12 Sloterdijk, *Critique of Cynical Reason*, 808–809.

13 Sloterdijk, *Critique of Cynical Reason*, 457.

14 Sloterdijk, *Critique of Cynical Reason*, 456.

15 Sloterdijk, *Not Saved*, 247.

his critical observation that at the heart of Dessauer's theory of technology "stands a subject who can no longer suffer because it has become wholly prosthesis"[16], he is suggesting that this thought preludes at least to some extent the current high-tech fantasies of transhumanism and extropianism to create an invulnerable technologically enhanced "superhuman", fantasies which the later Sloterdijk rejects as highly impractical and implausible[17].

This critique of a subjectivity entirely geared towards empowering itself and transcending its finite nature through science and technology—in essence the project of modernity as formulated by Descartes: "becoming masters and possessors of nature"—is developed at full scale in Sloterdijk's paradigmatically postmodern 1989 book *Infinite Mobilization: Towards a Critique of Political Kinetics*. In this tome, entitled *Eurotaismus* in German, he renews the diagnostic of critical theory as a "critical theory of being-in-the-world" and an "analytics of coming-into-the-world"[18] by wedding it with Heidegger's existential analytic and thinking of Being, thereby also taking the essential critical "principle" from the "Freiburg School"' rather than from the Frankfurt School. Describing the basic process of modernity with a famous notion derived from Ernst Jünger in terms of *(total) mobilisation*, he argues that only the Freiburg School offers the resources for developing an effective critical theory—as both diagnostic and therapy—of mobilisation, to wit: Heidegger's thought of releasement *(Gelassenheit)*, as it fundamentally repudiates mobilisation *as such*, as opposed to suggesting an alternative counter-mobilisation, as per the Neo-Marxists[19].

The turn towards Heidegger and his Freiburg "school of serenity"[20] (*Schule der Gelassenheit*) manifests itself in the critique that the book offers of the modern, activist and productivist subject as the principle *movens* or active centre of—and, therefore, the source of both the danger of and the salvation from—all mobilisation[21]. Salvation from the catastrophic dynamics of modernity's runaway mobilisation presupposes subjects that stop agitating as the ontological agents of movement towards more movement and come to understand themselves not as the active perpetrators of mobilisation but instead as released "guardians" of the right movement[22], an expression echoing Heidegger's notion of *Dasein* as the "shepherd" or "guardian" of Being[23].

16 Sloterdijk, *Critique of Cynical Reason*, 458.
17 Sloterdijk, *Not Saved*, 127–128.
18 Sloterdijk, *Infinite Mobilization*, x.
19 Sloterdijk, *Infinite Mobilization*, 50–51.
20 Sloterdijk, *Infinite Mobilization*, 14.
21 Sloterdijk, *Infinite Mobilization*, 7.
22 Sloterdijk, *Infinite Mobilization*, 23.
23 Martin Heidegger, "Letter on Humanism", in *Basic Writings*, ed. David Farrell Krell (New York: Harper Perennial, 2008a): 245–246.

In order to understand the possibility of such a "turn"[24]—a notion again obviously referring to Heidegger—Sloterdijk interprets the project of modernity with Heidegger as the poietic, foremost in the sense of technological and productivist, response of human beings to their precarious and burdensome existential condition of being-in-the-world as thrown into an indeterminate *open*, whereby he emphasises not so much the condition of mortality or being-towards-death, as Heidegger did, as that of natality or being-from-birth[25], i.e., of being-born and birthing-oneself understood in the existential sense of coming-into-the-world. Moreover, unlike Heidegger, Sloterdijk does not identify this open in a temporal sense with the future. Instead, he suggests understanding it in terms of the existential tension or uneasiness resulting from humanity's "ex-centric positionality"[26], thereby adopting a key term from Helmuth Plessner's philosophical anthropology[27].

It is this anthropological *Ur*-condition, preceding any temporal or spatial orientation, that prompts and accommodates human *poiesis*, doing both as technology and art, the former a pure production blind to the open and bent on domination, ultimately leading to total mobilisation, the latter a poetic creation attuned to the open and continuing by artistic means the natural and "motherly" or natal creativity from which it sprang itself[28]. When Sloterdijk asks the question in this context of whether something like a more gentle "poetic technology" would be possible[29], he might have been anticipating his later thought of a conatural and non-dominating *homeotechnics*, a notion to which we will return below.

What such a non-dominating technology would at least presuppose from his onto-kinetic existentialist perspective is the arrival of an "ontological ebb of subjectivity", an ebbing away that is of its mobilising fury[30]. Onto-kinetically as well as onto-anthropologically reinterpreting Heidegger's "turn" in this way as the coming to pass of "the subject's relaxation from its self-birthing overstretches"[31], he thus clears it from the "religious reverberation" it still possesses in Heidegger[32] and understands it as the subject's becoming aware of its original but forgotten "being-carried" by that from which it is itself birthed, i.e., from nature as *physis*—and not from Being, as Heidegger always insisted. This would allow for the overcoming of its "forgetting of letting oneself be carried" (better translated as "forgetting of being-

24 Sloterdijk, *Infinite Mobilization*, 81.
25 Sloterdijk, *Infinite Mobilization*, 54.
26 Helmuth Plessner, *Levels of Organic Life and the Human: An Introduction to Philosophical Anthropology* (New York: Fordham University Press, 2019): 267–321.
27 Sloterdijk, *Infinite Mobilization*, 55.
28 Sloterdijk, *Infinite Mobilization*, 56–57.
29 Sloterdijk, *Infinite Mobilization*, 57.
30 Sloterdijk, *Infinite Mobilization*, 81.
31 Sloterdijk, *Infinite Mobilization*, 82.
32 Sloterdijk, *Infinite Mobilization*, 81.

carried" [*Getragenheitsvergessenheit*]), Sloterdijk's onto-kinetic reinterpretation of Heidegger's forgetting of Being[33]. This condition of being-carried by nature, *physis* or the Earth is in a sense the revelation conveyed by the current global ecological crisis—as "the geological sublation of world history"[34]—which Sloterdijk describes in the penultimate chapter of the book.

In this section, he writes that for the historical process of infinite mobilisation that is modernity, the Earth appears as nothing but a stage and resource serving its own endless dynamism. Modernity as "metaphysics in action" and as "detachment of nature through technology" is radically anti-symbiotic with the biosphere, which gets ruined in the process as a consequence[35]. Anticipating the contemporary discourse on the Anthropocene by some two decades, Sloterdijk foresees the current crisis if not ultimate demise of modernity's project of infinite expansion as it runs itself into the ground by being confronted with the planet's finitude when he writes that "it is only in the moment when the play threatens to ruin the stage that the players are forced into a new self-perception"[36].

As an anthropocenologist *avant la lettre*, Sloterdijk writes that "what was once the scene becomes the theme of the plot. What served as a background comes to the forefront. What was present as a raw material emerges as product. What was previously stage becomes the play itself"[37]. No longer tolerating technological humanity's ignorance vis-à-vis its life-supporting role and potentialities, as he writes many years later in *What Happened in the 20th Century?*[38], this new scenario forces future humans to become symbiotic with the Earth again and to actively take care of its life-supporting capabilities. The human as the technically conditioned onto-logical creature must become the technically conditioned *and* conditioning eco-logical creature[39], or in the later terminology of *Spheres*, humanity's technological modus vivendi on the planet must be transformed from a sphero-poietic self-immunisation *against* "nature" into an oiko-poietic co-immunisation *with* "nature". As we shall see, this entails for Sloterdijk the transition from allotechnics to homeotechnics (notions that are explained below).

2.2 The Anthropological Turn

Although *Infinite Mobilization* already appeals to philosophical anthropology in a quite substantive manner to explain the project of modernity in all its multiple manifestations, it is only in the early

33 Sloterdijk, *Infinite Mobilization*, 80.
34 Sloterdijk, *Infinite Mobilization*, 133.
35 Sloterdijk, *Infinite Mobilization*, 138.
36 Sloterdijk, *Infinite Mobilization*, 139.
37 Sloterdijk, *Infinite Mobilization*, 139.
38 Sloterdijk, *What Happened in the 20th Century?*, 23.
39 Sloterdijk, *Infinite Mobilization*, 144.

1990s that Sloterdijk makes an explicit move towards anthropological thinking, whereby technology still remains in the background but is implicitly assumed as the key to understanding the *anthropos* and the process of anthropogenesis. We will show this through a brief excursus into two exemplary publications of this period: *Weltfremdheit*, a book that addresses the varieties of humanity's existential "escapism", and *Im selben Boot: Versuch über die Hyperpolitik*, an essay on the political evolution of the human species.

Weltfremdheit aims to outline a "historical ontology of human facts"[40] and develop a "historical anthropology"[41], indeed "radical historical anthropology"[42]. This anthropology also understands itself explicitly—and in paying tribute to Nietzsche and Heidegger—as a "noble anthropology", which means an anthropology that studies the "phenomenon of man" (Teilhard de Chardin) from the perspective of its highest possibilities. It concerns itself, therefore, with the most eminent exemplars that the history of humanity—in both East and West—has seen appearing on the stage of history, i.e., foundational religious, philosophical, political or artistic figures such as Jesaja, Buddha and Christ, representing the extremes of human potential and operating at the frontiers of human transcendence. The latter is a phenomenon that Sloterdijk prefers to understand in terms of "excessive tension" (Überspannung[43]) or what he later in *You Must Change Your Life* describes—and tries to explain following Nietzsche in a purely immanent sense (in terms of "exercise")—as "vertical tension" (*Vertikalspannung*[44]).

Anticipating a central thought elaborated more fully in the *Spheres* trilogy, Sloterdijk argues in *Weltfremheit* that the human is a creature that "comes from the inside"[45], meaning first of all, very concretely, that it comes from the womb, indeed that it enters the world as the outside in exiting a prior, protective interior that is the uterus. Before "being-in-the-world", human beings exist as "being-in-the-mother"[46] and the *conditio humana* cannot be truly understood, therefore, without considering it a "uterodicy"[47]. We might characterise this as an interpretation of the existential meaning of the condition of "coming-into-the-world"[48] as a "coming-from-the-womb", which is exactly the goal of the project he will develop on a grand scale in his *Spheres* trilogy, in particular in the first two volumes.

40 Sloterdijk, *Weltfremdheit*, 11.
41 Sloterdijk, *Weltfremdheit*, 27.
42 Sloterdijk, *Not Saved*, 276 n59.
43 Sloterdijk, *Weltfremdheit*, 28.
44 Sloterdijk, *You Must Change Your Life*, 12–13.
45 Sloterdijk, *Weltfremdheit*, 191.
46 Sloterdijk, *Weltfremdheit*, 64.
47 Sloterdijk, *Weltfremdheit*, 190.
48 It is worth noting that this notion is already developed in a previous book (Sloterdijk, *Zur Welt kommen—zur Sprache kommen*), albeit in a different context.

Most generally, Sloterdijk understands the human as a being that is fundamentally characterised in its Being as a "being-in" (*In-sein*) that originates as a "being-in-the-womb" and attempts to reinstall this intrauterine condition postnatally in the outside world through the projective creation of artificial interiors or spheres—collectively constituting what we traditionally refer to as "cultures"—functioning as extrauterine protections or immune systems. This "sphero-poiesis", as he will later call it in the *Spheres* trilogy, is both a symbolic and a technical affair (as we will explain below) through which humans project the smaller inner spaces from which they originate, first of all the womb but in a general sense all microspheric environments such as a house or village, onto the larger outside world in the form of macro-spheres such as a city or a nation-state. As such, it can be described as a process of spatial "metaphorics", the projection or "carrying-over" of smaller and familiar interiors onto the uncanny exterior, in both symbolic-linguistic and constructive-technical sense.

Sloterdijk claims that human beings are "inner world beings" (*Innerweltwesen*) that do not exist, as Heidegger suggested, as "nakedly" standing-out-into-the-world as the transcendental clearing of Being (*Lichtung des Seins*), but who always reside in concrete, utero-mimetic and technically equipped spheres that mediate between "inside" and "outside" and that as such condition the clearing which Heidegger conceived of as the irreducible, unconditional condition of possibility of their existing Being (as *Dasein*). As Sloterdijk contends in *Weltfremdheit*: "although the physical and psychic life of humans presupposes that it abandons the womb behind it, existence is at the same time directed towards finding and preserving a 'being-in', and thus a womb-relation towards an embracing-surrounding (*Umgreifenden*), also in the waking state"[49]. The ongoing creation of ever more elaborate and encompassing artificial, womb-like interiors or envelopes and the fact that throughout their evolution and history human collectives have, therefore, constantly relocated into changing environments, uniquely distinguishes humans from all other animals as creatures of *metoikesis* or "resettlement" (*Umsiedlung*), condemned to the "ontological adventure" of being-there within the movement of coming-into-the-world[50]. The radical historical anthropology that Sloterdijk envisions based on this insight considers humans as deeply structural "element-changers" whose being-in-the-world, therefore, is struck with a permanent and insurmountable ambiguity[51].

Near the end of *Weltfremdheit*, Sloterdijk introduces a concept that will become crucial in later works for his radical historical understanding of the *anthropos* and the process of anthropogenesis, which is the concept of "luxury" (*Luxus*)—also referred to as "pampering" (*Verwöhnung*)—meaning a condition of comfort and abundance of which he argues that it is the key driver of hominisation or in other words

49 Sloterdijk, *Weltfremdheit*, 65, our translation.

50 Sloterdijk, *Weltfremdheit*, 84.

51 Sloterdijk, *Weltfremdheit*, 198.

forms the quintessential explanation for the ontological and *aletheialogical* exceptionality of the human animal. He explains humanity's openness for what Heidegger called the clearing or "unconcealment" of Being (*aletheia*) as the outcome of a long evolutionary process of "luxuriation", by which humans mutually protect, pamper and safeguard one another in collectively constructed and sustained "incubators"—*Brutkasten* (a term derived from Dieter Claessens): the cultural immuno-spheres in their anthropogenic operativity—through which they maintain a durable "secession from the old nature" (also a phrase from Claessens[52]).

This permanently maintained condition of *luxury* and *distance* vis-à-vis external nature has produced humans as the beings in which the Being of beings can "light up" so that beings can manifest themselves. These two phenomena—luxuriation and distancing—explain the gradual metamorphosis within the evolving human species from an animal wakefulness to a human world-openness[53]. What we usually call "cultures" are the late consequence, Sloterdijk argues, of thousands of years of such progressive intraspheric luxuriation and distancing from nature[54]. As we will see further below, these two processes are not only symbolically but also eminently technologically induced and supported.

Im selben Boot looks at humanity's political evolution from an anthropological perspective and starts from the assumption that politics has always been a matter of people adhering to "fantasies of unity"[55], arguing that political history, therefore, is the history of "self-fulfilling ideas'' and "operative fictions"[56]. In the creation and perpetuation of such fictions, media technologies play an increasingly crucial role. The first or original stage of politics is called *paleo*politics by Sloterdijk and is understood as "the reproduction of humans through humans"[57]. It appears when our ancestors start to distance and insulate themselves from "ancient nature" in what Charles Darwin called "hordes" through the use of "distance-technologies" such as palisades, fireplaces, torches and all kinds of tools and weapons[58]. These first human collectives represent "social islands" and can be understood as "ensouled spheres" lifted out from the environment through an invisible "distance-ring" protecting their inhabitants from external selection pressures—thereby producing a naturally improbable being that prevents conflict from outside and luxuriates internally[59]. It is in such spheres that proto-humans start to breed themselves through technically and symbolically enabled luxuriation, slowly developing larger brains

52 Sloterdijk, *Weltfremdheit*, 334.
53 Sloterdijk, *Weltfremdheit*, 334.
54 Sloterdijk, *Weltfremdheit*, 335.
55 A concept further developed in Sloterdijk, *Der starke Grund, zusammen zu sein*.
56 Sloterdijk, *Im selben Boot*, 12.
57 Sloterdijk, *Im selben Boot*, 17, our translation.
58 Sloterdijk, *Im selben Boot*, 17.
59 Sloterdijk, *Im selben Boot*, 17.

and transforming their paws into hands capable of evermore sophisticated operations. Thus, Sloterdijk understands *homo sapiens* as the result of a "revolutionary breeding of anti-naturalness in nature" via a "horde-internal incubator-evolution"—characterising the process of anthropogenesis as a successful history of luxuriant evolution[60].

The second stage of politics, which emerges with the arrival of the so-called "advanced civilizations" (*Hochkulturen*) and their theological and metaphysical worldviews, is interpreted by Sloterdijk as the reproduction of the goals of paleopolitics on a larger plane (that of cities and empires), i.e., as the art of "belonging together at large"[61]. It is here that politics in the *classic* sense of *politeia* enters the stage and what this entails anthropologically and anthropotechnically is the reshaping of the familial herd animal *homo sapiens* into a *zoon politikon* equipped to exist in the extensive "social uterus" (Adolf Portmann) that is the city-state, through an assemblage of educational anthropotechnics (term explained further below) which Plato in his *Politeia* has referred to as *paideia*[62] and which Sloterdijk characterises here as a "shepherd's craft" (*Hirtenkunst*)—anticipating the remarks on Plato made in his controversial lecture *Rules for the Human Park*[63]. The age of advanced civilisations is also the age of class structures dividing collectives into lords and servants, the former elevating themselves via privileged literary "technologies of the self" while subjecting and instrumentalising the latter through "technologies of power" (both theorised explicitly by Foucault), thereby raising the intensity of luxuriation within the upper classes to a hitherto unprecedented level, giving rise to the exceptional individuals described in the noble anthropology explored in *Weltfremdheit*, but also causing immiseration and massification in the lower classes[64].

The third stage of politics emerges when the size of human groupings grows exponentially with industrialisation and globalisation (the terrestrial stage of which for Sloterdijk starts already in the Sixteenth century with the so-called Age of Discovery) and the collapse of classic metaphysical orientations. This third stage, *hyper*-politics—appropriate for the age of a planetary techno-industrialism which has engendered the so-called Anthropocene—is still to a large extent *in statu nascendi* and resisted by collectives persevering in traditional, local political arrangements such as the nation-state[65]. Humanity currently experiences the "format stress" that accompanies every expansion of spheres which for Sloterdijk forms the key dynamic of human evolution and history as "planetarisation

60 Sloterdijk, *Im selben Boot*, 19–20.
61 Sloterdijk, *Im selben Boot*, 27, our translation.
62 Sloterdijk, *Im selben Boot*, 32–33.
63 Sloterdijk, *Im selben Boot*, 37.
64 Sloterdijk, *Im selben Boot*, 42–45.
65 Sloterdijk, *Im selben Boot*, 57.

stress"[66]. The great task our planetarising species is confronted with as it endangers the very conditions of its survival on the planet as its ultimate life support system is to transform itself from the careless and destructive mass of "last men" (Nietzsche) constituting the current "monster-international of end users"[67] with its entropic, ego-centred and short-term consumerist lifestyles, into a genuine planetary collective that is able to envision and craft new ways of life—understood as exercises for acquiring and reproducing "good habits"—that allow its sustained presence on the planet, i.e., a new art of reproducing humans through humans.

Such planetary hyperpolitics would be a continuation or rather resumption of paleopolitics by other means[68]. This would entail the universal duty of a renewed "practicing oneself in the forgotten art of enduring"[69] from now on pursued on the largest scale possible, in the sense of a truly planetary or planet-oriented anthropotechnics. This presupposes a transformation of the global consumerist technosystem of levelling mass media towards a diverse panoply of massively distributed yet individuating digital network technologies supporting the required coming-into-being of caring and co-perceptive, eco- and geo-conscious "glocal" collectives capable of establishing a true "world culture"[70] or "world civilisation", the advent of which is something that Sloterdijk[71] considers unavoidable and also explicitly affirms.

In *Medien-Zeit: Drei gegenwartsdiagnostische Versuche*, indeed, he argues that the ultimate task and meaning of today's digital mass media thusly considered lies in their sphero-immunological vocation to function as the imminent medium of a global "informatic synchronisation". Moreover, this synchronisation—which will be later developed in *In the World Interior of Capital*—enables the singular world-horizons of all the regional cultures of the past to be brought together and politically-existentially coordinated within a *common*, *inevitably technically constituted world-horizon*—which is the only possibility for humanity's collective future on the planet to be effectively imagined and designed[72].

From all of the above, we can see that during the 1980s and 1990s there is a progressive distancing from the Frankfurt School in Sloterdijk's thought and an increasing interest in the human as a long-range process of biocultural dimension. This change has a great impact on his perspective on technology, which opens for a consideration of it in an evolutionary-anthropological sense. However, this transition

66 Sloterdijk, *Im selben Boot*, 53, our translation.
67 Sloterdijk, *Im selben Boot*, 59, our translation.
68 Sloterdijk, *Im selben Boot*, 80.
69 Sloterdijk, *You Must Change Your Life*, 489.
70 Sloterdijk, *Rage and Time*, 229.
71 Sloterdijk, *Medien-Zeit*.
72 Sloterdijk, *Medien-Zeit*, 89.

alone is not sufficient to clearly explain what is Sloterdijk's understanding of technology, since there is still no discussion about what are his major influences and how he engages with them.

2.3 Philosophical Influences

Sloterdijk's intellectual and literary sources are diverse and multifarious. In this section, we will briefly overview the philosophical references which, we believe, exert a major influence on his philosophy of technology. Thus, we will address, firstly, his reception of the thought of Nietzsche, Heidegger and Foucault. Secondly, we will discuss his interest in philosophical anthropology. Thirdly, we will touch upon his reception of two relatively less-known thinkers whose thought exerts a significant influence on Sloterdijk nonetheless, i.e., the German philosophers Heiner Mühlmann and Gotthard Günther.

Nietzsche is arguably Sloterdijk's most important philosophical reference. Starting from his monograph *Thinker on Stage*, devoted to a kynical reinterpretation of Nietzsche's philosophy in the light of cybernetics, references to Nietzschean thinking appear in virtually all of Sloterdijk's texts, as well as Nietzsche's humour and literary style. What Sloterdijk calls Dionysian materialism in that book, he claims, has "become virtually second nature to me, and if I didn't use the expression often, that's because I'd formed the habit of considering all my problems and all my interventions in the *affective* light of this concept"[73]. Relative to Sloterdijk's philosophy of technology, we believe that Nietzsche's influence is especially relevant in at least two regards.

Firstly, Sloterdijk[74] takes inspiration from texts such as *On Truth and Lies in a Nonmoral Sense*[75] to highlight what he calls the "autoimmune" function of intellect. According to Nietzsche, indeed, human intelligence is mostly devoted to crafting reassuring illusions granting sense to our otherwise meaningless existence, thereby preserving and enduring life. However, it may sometimes also debunk these beliefs' illusory and relative character, thereby exposing our lives to the groundlessness of our knowledge about the world. Here, inspired also by Sigmund Freud's concept of narcissistic offence[76], Sloterdijk draws an analogy with technoscientific development. As he argues in his essay *Wounded by Machines*[77], some advances in science and technology, such as the neuroscientific insights into the

73 Sloterdijk, *Living Hot, Thinking Coldly*, 320.

74 Sloterdijk, *Living Hot, Thinking Coldly*.

75 Friedrich Nietzsche, *On Truth and Lies in a Nonmoral Sense* (East Sussex: Delphi, 2017).

76 Sigmund Freud, "A Difficulty in the Path of Psycho-Analysis", in *The Standard Edition of the Complete Psychological Works of Sigmund Feud*, ed. James Strachey (London: Hogarth Press, 1955), vol. 17, 137–144.

77 Sloterdijk, *Not Saved*, 217–236.

foundations of cognition, may jeopardise our anthropocentric narcissism by relativising our place in the world and downplaying our cognitive faculties' alleged uniqueness and exceptionality. Thus, while technoscientific development is usually deemed to improve our living conditions, it may also render us more insecure about what it means to be humans.

Secondly, Sloterdijk attributes to Nietzsche the major merit of having discovered the pervasiveness of the phenomenon of ascesis, "one of the most wide-spread and long-lived facts there are"[78], which Sloterdijk[79] aims to generalise and positively reconsider in terms of anthropotechnics. According to him, indeed, "asceticism in the fundamental sense does not reject the will; it is, on the contrary, an expression of a strong pooling of will, an energetic summary of all partial drives in a single ray of will"[80]. Following Nietzsche, Sloterdijk interprets, therefore, ascetic practices as systems of anthropotechnics, thereby highlighting our capability to mould our own psychophysical constitution through the feedback effects of such technically supported exercises.

Heidegger also exerts a major influence on Sloterdijk, arguably second only to Nietzsche's impact, and Sloterdijk's philosophy may be regarded as a thorough reinterpretation and critical appropriation of Heidegger's main intuitions, especially those coming from *Being and Time* as well as his later meditations on the essence of technology in *The Question Concerning Technology*. Firstly, indeed, Sloterdijk[81] aims to fill in what he believes to be some hermeneutic gaps in Heidegger's existential analytic, balancing off Heidegger's emphasis on temporality with an appreciation of spatiality as a constitutive feature of human existence. Or his appraisal of mortality with a reconsideration of natality and the movement of "coming-into-the-world" as an equally important feature of *Dasein*'s existential kinetics, discussed above.

Secondly, Sloterdijk[82] aims to short-circuit Heidegger's distinction between the ontic and ontological dimensions of human existence, showing how ontic, i.e., empirical, concrete and accidental dynamics may bear ontological value, that is to say, contribute to constituting our existence's fundamental structures, both temporal and spatial[83]. And, in turn, how *Dasein*'s ontological traits are grounded on and originated from ontic phenomena. Starting from this perspective, Sloterdijk criticises Heidegger's

78 Nietzsche, *On the Genealogy of Morality*, 85.
79 Sloterdijk, *You Must Change Your Life*, 29–39.
80 Sloterdijk, *Infinite Mobilization*, 74–75.
81 E.g., Sloterdijk, *Not Saved*, 1–48.
82 Sloterdijk, *Not Saved*, 89–148.
83 In this respect, Sloterdijk's work strongly echoes that of Bernard Stiegler, as we hope to show in a later article.

notorious acrimony towards the empirical sciences, especially biology and anthropology[84]. According to Heidegger, indeed, such "positive" sciences would not contribute to philosophical inquiry, but would rather receive from it their foundation. Conversely, Sloterdijk regards the relationship between science and philosophy as more mutually constitutive and beneficial, integrating and corroborating his philosophical analyses with scientific finds.

Thirdly, as we have already touched upon above, in "thinking with Heidegger against Heidegger"[85], Sloterdijk sets out to overturn one of the main tenets of Heidegger's philosophy, i.e., the originary, irrecoverable and, therefore, inexplicable character of the *Lichtung*, i.e., human existence's receptiveness to the difference between beings and the event of Being as what renders these beings manifest to us. Thus, Sloterdijk inquires into the evolutionary origin of our ontological condition, investigating how a prehuman environment (*Umwelt*) could become a human world (*Welt*) "only under the retroactive effect of spontaneous proto-technologies"[86]. While, according to Heidegger[87], the question of the becoming-human of the animal can only be posed subsequently to having conceptualised the respective essences of "the human" and "the animal", Sloterdijk[88] aims to understand the difference between the human and the animal lifeform starting from the (techno-)evolutionary emergence of the former out of the latter.

Sloterdijk[89] has been concerned with Foucault's philosophy since the beginning of his intellectual itinerary. In particular, he regards Foucault's insights as pivotal to understanding how individuals subjectivize and *are* subjectivised thanks to their relation to technologies[90]. In *Discipline and Punish*, for instance, Foucault emphasises how disciplinary power segments, organises, domesticates and homologates bodies, eliciting coercive collective subjectivation. Instead, in later lecture courses such as *The Hermeneutics of the Subject*, Foucault focuses on how techniques of the self may also yield to the empowerment and emancipation of individual subjectivity. Thus, Sloterdijk recognises in Foucault's work the whole spectrum of what he calls anthropotechnics, i.e., the production of subjectivity through the repetition of technical practices.

Philosophical anthropology, an approach developed in Germany starting from the first half of the Twentieth century and canonically featuring thinkers such as Max Scheler, Arnold Gehlen and Helmuth

84 E.g., Heidegger, *Pathmarks*, 39–62.
85 Sloterdijk, *Not Saved*, 96.
86 Sloterdijk, *Not Saved*, 96.
87 Heidegger, *The Fundamental Concepts of Metaphysics*, 178–180.
88 Sloterdijk, *Not Saved*, 89–148.
89 Sloterdijk, *Michel Foucaults strukturale Theorie der Geschichte*.
90 Sloterdijk, *You Must Change Your Life*, 148–159.

Plessner, is another major source of inspiration for Sloterdijk. We believe one may regard Sloterdijk himself as representative of a contemporary reappraisal of philosophical anthropology. Especially, borrowing this approach's more confident attitude towards the empirical sciences, Sloterdijk[91] aims to combine Gehlen's[92] concept of world-openness—coming, in turn, from Scheler[93]—with Heidegger's existential analytic, investigating the evolutionary origin of our capability to appreciate beings in their manifestation *to* us *as* beings.

Relative to the philosophy of technology, Sloterdijk[94] takes inspiration especially from Gehlen's emphasis on the role played by cultural practices[95] in shaping and moulding our psychophysical constitution to submit his theory of human constitutive technicity. Moreover, Sloterdijk is also influenced by relatively less well-known representatives of philosophical anthropology. For instance, he borrows the paedomorphic understanding of the human lifeform as underdeveloped at birth and thereby requiring extrauterine gestation from the Swiss zoologist Adolf Portmann[96]. And from the German sociologist Dieter Claessens[97], who is inspired, in turn, by the analyses carried out by the German anthropologist and bacteriologist Paul Alsberg[98] and by the US evolutionary biologist Hugh Miller[99], Sloterdijk draws the fundamental idea of human evolution as triggered by distancing and insulation from exogenous selection pressures by technical means—a viewpoint already expressed in *Weltfremdheit* and *Im selben Boot*, as we have seen above. Starting from this perspective, Sloterdijk submits that technologies exert organic functions in place of biological organs and thereby transform these organs accordingly.

Importantly, Sloterdijk aims to overturn one of philosophical anthropology's main tenets, i.e., what he calls *miserabilism*, i.e., the understanding of humans as deficient beings[100]. According to this viewpoint, championed by Gehlen[101], humans would lack the means of biological adaptation to their environment

91 Sloterdijk, *Not Saved*, 89–148.

92 Arnold Gehlen, *Man: His Nature and Place in the World* (New York: Columbia University Press, 1988).

93 Max Scheler, *The Human Place in the Cosmos: Studies in Phenomenology and Existential Philosophy* (Evanston: Northwestern University Press, 2008).

94 Sloterdijk, *Not Saved*, 89–148.

95 Gehlen, *Man*.

96 Adolf Portmann, *A Zoologist Looks at Humankind* (New York: Columbia University Press, 1990).

97 Dieter Claessens, *Das Konkrete und das Abstrakte: Soziologische Skizzen zur Anthropologie*, 2nd ed. (Berlin: Suhrkamp, 1993).

98 Paul Alsberg, *In Quest of Man: A Biological Approach to the Problem of Man's Place in Nature* (Oxford: Pergamon, 1970).

99 Hugh Miller, *Progress and Decline: The Group in Evolution* (Oxford: Pergamon Press, 1964).

100 Sloterdijk, *Weltfremdheit*, 56.

101 Gehlen, *Man*.

and would, therefore, need to resort to culture in order to survive. Sloterdijk[102] thoroughly criticises this conception and submits that the human lifeform should rather be conceived of as a "luxury being"[103], i.e., as a "pampered" organism benefiting from enhanced unburdening from environmental selection pressures—a perspective, as shown above, that is prefigured already in his early works. Thus, our biology is the evolutionary outcome, rather than the cause, of our technical behaviour, which has selected for a biological setup suitable to produce, use and transmit artefacts.

The analyses carried out by Mühlmann[104] also exert a great influence on Sloterdijk's philosophy of technology[105], insofar as they prompt him to conceive of cultures as domesticating systems, which tame their members and thereby render them suitable to shared living and cooperation at the expense of exteriorising hostile, warlike behaviours towards other cultures, to whom interindividual competition and rivalry are transferred. Finally, Günther's informational theory of cybernetics[106] also bears a significant value on Sloterdijk's philosophy of technology[107]. Indeed, inspired by this reinterpretation of the history of western metaphysics, Sloterdijk claims that we should revise our logic and ontology in order to philosophically understand technology, which is considered an interstitial and irreducible third within the traditional dichotomy between spirit, mind or form, on the one hand, and matter, body or substance, on the other. Thus, Sloterdijk submits that a nonbinary logic and a polyvalent ontology are required for a philosophical understanding of artificiality.

Hence, after delimiting Sloterdijk's understanding of technology from his early trajectory towards the so-called "onto-anthropological turn" and also discussing his main philosophical influences, we can point out what are the main concepts of his philosophy of technology. To structure our argumentation, three concepts will be respectively addressed: immunology, spherology and anthropotechnics.

3. Main Concepts of Sloterdijk's Philosophy of Technology

3.1 Immunology

One of the main characteristics of Sloterdijk's anthropological turn, as should have become clear by now, is the conciliation of the human as a being that has to be understood from an existential *and* biological

102 Sloterdijk, *Foams*, 651–662.

103 Sloterdijk, *Foams*, 657.

104 Heiner Mühlmann, *The Nature of Cultures: A Blueprint for a Theory of Culture Genetics* (New York: Springer, 1996).

105 Sloterdijk, *What Happened in the 20th Century?*, 23–34.

106 Gotthard Günther, *Das Bewusstsein der Maschinen: Eine Metaphysik der Kybernetik*, 3rd ed. (Baden-Baden: Agis, 2002).

107 Sloterdijk, *Not Saved*, 133–148.

perspective, with an attention to the different *origins* of the entanglement between the biological and the existential. To do so, he points out how we could investigate the *emergence of the clearing*[108], something that remains unthought in Heidegger, who does not address the question of the genesis of *Dasein*'s world-openness or worldliness. If we start from Heidegger's strictly phenomenological-hermeneutical standpoint, Sloterdijk submits that "if the human being is in-the-world then this is because he belongs to a movement that brings him forth and exposes him to the world"[109]. Our main claim here is that this "movement" is deeply related to technology.

Since the notion of "world" is deeply ontological but has implications in various fields of research, such as history, biology, anthropology and psychology, in Sloterdijk's work, it is possible to see how this movement of world-formation or "coming-to-the-world must be understood in multiple ways"[110]. For example, in the first volume of the *Spheres* trilogy, *Bubbles*, we find several debates with psychoanalysis—for instance, with the so-called mirror stage thematised by Jacques Lacan[111]—to reinterpret the "act" of being born and the development of subjectivity as *co-subjectivity*. In other moments, Sloterdijk will address this question in terms of coming into the world politically, with issues such as power struggles[112] and the first gregarious political communities[113] [114]. Nevertheless, here, since we aim to highlight the question of technology in Sloterdijk's thinking, our direction will be that of developing the question of *coming-into-the-world*. This interpretation, as we aim to show, takes the immuno-spherological paradigm and the concept of anthropotechnics (which will be outlined below) as central. Immunology and spherology are two completely intertwined concepts, but we will delve first into the former for schematic purposes.

Sloterdijk has not been the first or the last one to develop the concept of immunity into a framework that we could define as contemporary continental philosophy—authors such as Donna Haraway[115], Jacques Derrida[116], Roberto Esposito[117] and Byung-Chul Han[118] use it in multiple directions. However,

108 Sloterdijk, *Not Saved*, 96.
109 Sloterdijk, *Not Saved*, 206.
110 Sloterdijk, *Not Saved*, 176.
111 Sloterdijk, *Bubbles*, 533–538.
112 Sloterdijk, *Rage and Time*.
113 Sloterdijk, *Im Selben Boot*.
114 Sloterdijk, *Globes*, 187–198.
115 Donna Haraway, "The Biopolitics of Postmodern Bodies: Determinations of Self in Immune System Discourse". *Differences* 1 (1989): 3–43.
116 Jacques Derrida, "Autoimmunity: Real and Symbolic Suicides", in *Philosophy in a Time of Terror: Dialogues with Jurgen Habermas and Jacques Derrida*, ed. Giovanna Borradori (Chicago: University of Chicago Press, 2003), 85–136.
117 Roberto Esposito, *Immunitas: The Protection and Negation of Life* (Oxford: Polity, 2011).
118 Byung-Chul Han, *Psychopolitics: Neoliberalism and New Technologies of Power* (London: Verso, 2017).

Sloterdijk will connect it originally with the history of humanity itself, showing how humans always dwell in immunising interiors with defensive or protective qualities, giving special attention to their technological constitution. Nevertheless, as highlighted above, his reading also includes an interpretation of technology from an ontological and existential perspective, pointing out—following but also critically engaging with Heidegger—how technology is also a mode of unveiling since, as we have seen above, the very opening of the question of Being itself has a technological (pre)history. Sloterdijk offers a reinterpretation of the Heideggerian history of metaphysics—as the history of forgetting of Being that finds its last moment in a techno-cybernetic consummation—which could be seen as a "burning away of a conceptual fuse that winds from Athens to Hiroshima"[119]. Introducing the immunological perspective, this trajectory could be extended from the first hominin tools protecting primitive protohuman groups to the complete insulation achieved through the building of spaceships and beyond, since the whole history of metaphysics and its fulfilment, as developed by Heidegger[120], could be seen as one chapter of the history of the immune systems.

However, this whole trajectory must be understood in various ways, with particular epochs and discontinuities. For instance, since modernity, key events started to shake the western onto-theological immunity constructions, such as the Copernican revolution and the Great Discoveries of the Sixteenth century. As Sloterdijk[121] points out, these two "abysses"—respectively the cosmological and the ethnological one—revealed that the immunological catastrophe of the Modern Age is not the "loss of the centre", but rather the "loss of the periphery", since these events reshaped the *frontiers* of our understanding concerning both the universe and ourselves.

With this turning point, the history of modernity could be seen as a progressive adoption of science and technology as the leading western attempt at immunisation against the threats of the outside and the unknown by its empirical and conceptual *explicitation*[122]. This ability to "make the invisible visible" provides a centrality to defensive strategies based on manipulation and unveiling of reality through disclosing causal relations, since there is no more "closed world" whose borders we can clearly see but instead an "infinite universe" susceptible to mobilisation and transformation. Thus, in a scenario of progressive lack of metaphysical unity due to the secularisation process of modernity, western societies need to find another form of dealing with the tension of their surroundings, since their traditional theo-symbolic immunity is not as effective as before anymore. Thus, cultural self-identification via mass consumerism or insurance policies are examples of how contemporary technology can turn into

119 Sloterdijk, *Not Saved*, 135.

120 Heidegger, *The End of Philosophy and the Task of Thinking*.

121 Sloterdijk, *In the World Interior of Capital*, 29.

122 Sloterdijk, *Foams*, 70–81.

"the campaign to achieve progressive relief from that anonymous stress resulting from oppression by the real"[123].

3.2 Spherology

As previously mentioned, spherology is a central concept within Sloterdijk's articulation of the question of technology. First of all, we can clarify how the concept of space is unequivocally related to the concept of sphere. Sloterdijk[124] begins the discussion of spatiality with a debate with Heidegger, more precisely on the spatiality of *Dasein* and the existential called "being-in" (*In-sein*) outlined in the first section of *Being and Time*[125]. By declaring the need for a broader discussion of the character of spatiality, the developments made in the *Spheres* trilogy point to the radical relationship between (co)existence and spatiality, or how the possibility of creating the world in an ontological sense always occurs in relationship with others, in a successive movement of establishing intimacies and alliances, linking them to a form of interior dwelling. As Rüdiger Safranski paraphrased the famous Sartrean quote from *Existentialism Is a Humanism* to explain Sloterdijk's effort, in the construction of any immuno-sphere, "coexistence precedes existence"[126]. In this way, if we want to delve into human existence, we must go through psychological, anthropological, biological and technological elements underlying how we inhabit the world and construct spaces of coexistence.

However, to highlight technology's central role in the spherological paradigm, it is crucial to demonstrate how the concepts of spherology and immunology are complementary and thoroughly interrelated. Taking the question of technology in perspective, while immunology is about how humans permanently inhabit an interior space by developing defence strategies in the face of an uncanny exterior, spherology is about how these defence strategies are intrinsically spatial. To gain more clarity on the points discussed above, we can make a short digression into some of Sloterdijk's constructions. This will also help us emphasise how broad his formulations are, insofar as they combine empirical aspects related to technical artefacts with ontological considerations on technology, reinforcing the already discussed thesis of human constitutive technicity.

Firstly, we can mention the relationship between spherology and the production of the conditions of habitability—which implies the delimitation of an exterior and an interior and the production of means by which a world can emerge and stabilise itself within a space, if we interpret the latter in a

123 Sloterdijk, *Stress and Freedom*, 29.
124 Sloterdijk, *Bubbles*, 333–342.
125 Heidegger, *Being and Time*, 97–105.
126 Sloterdijk, *Burbujas*, 16.

co-existential reading. Taking this perspective, one exciting development highlighting the question of technology in immuno-spherological terms is the production of habitable spaces through "air conditioning"[127]. Interpreting the concept of mood (*Stimmung*) initially developed in Heidegger's *Being and Time*, Sloterdijk shows that this word can have two different meanings—one related to the often-reminded existential-ontological perspective and another related to the "ontic" climatological aspect. With this, the onto-climatic reading of existential analytic reveals that one could understand the ekstatic character of *Dasein* (as a being that always exists in projecting itself towards the outside) as revealed spatially by a shared atmosphere, in which being-in-the-world can be understood as "being-in-the-air"[128]. In this way, it is possible to offer a reading of twentieth-century technology as technical manipulation of dwelling units via the explicitation and management of atmospheric conditions, or as he writes, "where there was 'lifeworld', there must now be air conditioning technology"[129]. The figure of the Crystal Palace recovered from Fjödor Dostoyevsky's writings[130], shopping malls[131], technoscientific experiments such as Biosphere 2[132] and space stations[133] are some examples by which techno-immuno-spherological design currently takes place through the explicitation and control of the "lifeworld" conditions, giving our epoch a topology highly influenced by technology, making possible an ambiguous and complex morphology of the present made by co-isolated units[134].

Secondly, as already demonstrated earlier in this article, there is a progressive distancing from the natural environment through the abovementioned process of production of the conditions of habitability. Such distancing can be understood as an amplification of the technological mediation during human evolutionary trajectories, as it will be further developed in the section on anthropotechnics. Thus, the complexification of the Heideggerian ontological difference between human and nonhuman animals will also be an important issue for Sloterdijk, since for him, humans can be understood as a long-range process with existential and biological aspects[135]. In this way, the spherological paradigm features a description of what are the enabling techno-anthropological mechanisms of the conformation of a world (*Welt*) from an environment (*Umwelt*), to put in the words used by Heidegger in his lecture course *The Fundamental Concepts of Metaphysics*.

127 Sloterdijk, *Foams*, 144–178.
128 Sloterdijk, *Globes*, 138.
129 Sloterdijk, *Foams*, 66.
130 Sloterdijk, *Globes*, 171.
131 Sloterdijk, *Foams*, 168.
132 Sloterdijk, *Foams*, 327.
133 Sloterdijk, *What Happened in the 20th Century?*, 106–110.
134 Sloterdijk, *Foams*, 52–61.
135 Sloterdijk, *Not Saved*, 89–148.

This discussion is synthesised in two moments. The first one is developed in the essay *The domestication of Being*[136], where Sloterdijk provocatively twists the Heideggerian concept of "enframing" (*Gestell*) into "enhousing"[137] (*Gehäuse*), showing that the essence of technology can be interpreted as a mode of unconcealment, but also taking into consideration an evolutionary-anthropological perspective. This interpretation also changes the Heideggerian characterization of the essence of technology as related to a challenging (*herausfordern*) of beings[138] into technology as "the" original possibility of human becoming and their primal condition as space dwellers. The second one is elaborated in *Foams*[139], where the phenomenon of anthropogenesis is approached as the combination of "nine anthropogenic islands"[140]. Consequently, the genesis of the human is understood in one of its dimensions as a process of creation of spaces through the handling of tools, playing a central role in the evolutionary drift of the species through a cybernetic greenhouse effect. In this process, two different forms of equipment can be highlighted. The first is the throwing equipment, insofar as with it there is the beginning of the question of distance in the humans' dealings with their surroundings[141]. The second are the sharp instruments and their consequent possibility of separation and distinction, impacting (ontically and ontologically) the relationship between humans and their spatiality during anthropogenesis[142].

The third point concerns the unavoidable role of "the other" in the technical constitution of spherology. As in all other perspectives developed throughout *Spheres*, Sloterdijk operates his conceptual construction of technology on the premise that being-with (*Mitsein*) is the primordial existential horizon through which humans inhabit the world. With this, all processes of production of the conditions of habitability and distancing from the natural world through technology occur based on establishing relations with one another at the most different moments in the narrative of the human being. For example, in the process of anthropogenesis—which is a techno-anthropological question through and through, as we explore in this article—the space inhabited by the first groups is not the space of physicists and geometrists but an interior provided by "walls and roofs of solidarity"[143], made possible by the simultaneous opening of the world of its participants through technological mediation. To put it another way, taking human groups as always existing in sphero-poietic spaces, "without their simultaneous opening, the coexistence of humans with their own kind and the rest in a shared whole would be inconceivable"[144]. At another

136 Sloterdijk, *Not Saved*, 89–148.
137 Sloterdijk, *Not Saved*, 110.
138 Heidegger, *The Question Concerning Technology*, 320.
139 Sloterdijk, *Foams*, 340–353.
140 Sloterdijk, *Foams*, 333–340.
141 Sloterdijk, *Foams*, 347–348.
142 Sloterdijk, *Foams*, 351–352.
143 Sloterdijk, *Foams*, 337.
144 Sloterdijk, *Foams*, 336.

extreme, when Sloterdijk diagnoses the present time in topological terms, addressing contemporary issues such as the tensions and contradictions of our technosphere, his central concept of foams has a close relationship with how we are simultaneously isolated and connected to each other—or in other words: technologically co-isolated: "foams thus constitutes a paradoxical interior in which, from my position, the great majority of surrounding co-bubbles are simultaneously adjacent and inaccessible, both connected and removed"[145].

3.3 Anthropotechnics

Sloterdijk introduces the concept of anthropotechnics in his essay *Rules for the Human Park*[146], initially delivered as a lecture which occasioned a heated public debate in 1999, confronting him with some representatives of the Frankfurt School, in particular Jürgen Habermas, Axel Honneth and their allies in the German press (e.g., Thomas Assheuer), who were accusing Sloterdijk of covertly supporting a eugenicist politics favouring human genetic enhancement[147]. However, at a closer look one may easily appreciate how, despite some cursory references to genetic engineering, the stakes of the *Elmauer Rede* are both less controversial and more radical than what these unfounded allegations may lead one to believe.

Indeed, combining insights coming from Nietzsche's conception of ascesis with Foucault's reflection on techniques of the self, Sloterdijk aims to draw our attention to the human anthropotechnical constitution: "the concept of anthropotechnics designates nothing but that no *Homo sapiens* has yet fallen from the sky, that this creature is therefore attained only by means of technogenic effects, which react to their own evolutionary drift"[148]. Our morphology, cognition and behaviour are shaped by the feedback effects of our technical practices. As it is further elaborated upon in the essay *The Domestication of Being*[149], every human group puts in place sets of pedagogical, ritual and biopolitical apparatuses devoted to framing its members' behaviours and thereby rendering them suitable to live within their sociocultural environment. These self-referential practices or exercises (Übungen) are characterised by sequencing, iterability and recursion: "in every performance of practicing, an action is

145 Sloterdijk, *Foams*, 54.

146 Sloterdijk, *Not Saved*, 193–216.

147 Heinz-Ulrich Nennen, *Philosophie in Echtzeit: Die Sloterdijk-Debatte. Chronik einer Inszenierung* (Würzburg: Königshausen & Neumann, 2003).

148 Sloterdijk, *After God*, 137.

149 Sloterdijk, *Not Saved*, 89–148.

carried out in such a way that its present execution co-conditions its later execution"[150]. They thereby retrospectively produce the subjects who perform them, enacting "the basic anthropotechnic law: the repercussions of all actions and movements on the actor"[151].

As Sloterdijk extensively argues starting from his book *You Must Change Your Life*, devoted to developing a "general anthropotechnology" or the comparative study of historical systems of anthropotechnics, these practices initially concern the collective dimension, leading to disciplined and homologated behaviours that are mostly nonteleological and unintentional. The elders' subjectivity, Sloterdijk claims[152], is thereby faithfully and forcefully reproduced over the younger ones. Subsequently, concomitantly with the advent of advanced civilisations, anthropotechnics also involve single individuals—whose subjectivity is thereby enhanced and differentiated—and increasingly manifest themselves as goal-directed and premeditated programmes of action.

Thus, anthropotechnics are those practices devoted to forming subjectivity through repeated actions. They involve, therefore, all sorts of habits, rituals and exercises, regardless of whether they refer mostly to a bodily, spiritual or ecological dimension. Hence, one major merit of Sloterdijk's anthropotechnology, we believe, is to reunite under a common theoretical paradigm and methodology of inquiry all subjectivity-shaping practices, thereby grouping together phenomena as different as kinship structures and meditation techniques, plastic surgery and esoteric cults, literary media and etiquette. Regarding the philosophy of technology, we now aim to stress two implications of Sloterdijk's anthropotechnology, thereby also connecting it to the other major topics of his thought reviewed above.

Firstly, anthropotechnology prompts us to regard humans as plastic organisms whose subjectivation depends on their developmental routes and environmental interactions rather than on some "intrinsic", genetically determined criterion or their passive adaptation to the "external" environment alone. Humans are those animals who can act upon their biology through technical means and thereby accordingly shape their behaviour and cognition. Consequently, anthropotechnology bears political stakes: once subjectivity's constructed character is considered, we shall become mindful of the decisional and selectional processes determining which systems of anthropotechnics may be adopted by a given community, i.e., which kind of individuals that community wants to produce.

This process's *cybernetic* recursion should not be overlooked: we adopt a given set of anthropotechnics; these anthropotechnics mould a given type of subjectivity; the individuals undergoing this process of

150 Sloterdijk, *The Art of Philosophy*, 8.

151 Sloterdijk, *You Must Change Your Life*, 320.

152 Sloterdijk, *Die schrecklichen Kinder der Neuzeit*, 222–242.

subjectivation, in turn, will accordingly operate decisions over which kinds of anthropotechnics should be adopted; these anthropotechnics will produce other subjects and so on, via reciprocal causation where humans are both the subjects and the objects of their own, self-forming practices. Adopting anthropotechnics, therefore, amounts to apprehending programmes of actions and inscribing them into our biology, overwriting the formerly learned programmes and thereby altering our psychophysical and behavioural mechanisms through differential repetitions.

Secondly, Sloterdijk distinguishes[153] between anthropotechnics, i.e., reiterated practices ontogenetically moulding our subjectivity, and what he calls anthropogenetic technics, i.e., phylogenetic mechanisms evolutionarily producing the human lifeform across multiple generations—exemplified by technical insulation and distancing from external selection pressures, as reviewed above. Indeed, we may only shape our subjectivity through sequences of anthropotechnics provided that we are endowed with enhanced plasticity, which enables us to modify our cognition and behaviour based on environmental interrelations. Now, as submitted by his sphero-immunological approach outlined above, Sloterdijk regards the human environment as artificially climatised and immunised from exogenous selection pressures. Since this artificial environment's conditions of usage, maintenance and reproduction need to be learned during development, those individuals who, displaying enhanced plasticity, prove more suitable to cope with its constructed character and take advantage of it will thrive and consequently gain better chances to reproduce and pass on their genes.

Importantly, a cybernetic recursion obtains also between anthropotechnics and anthropogenetic technics. The technical engineering of the human environment and consequent dampening down of external selection pressures is acquired through anthropotechnics, which produce subjectivities suitable to take care of this environment and thrive within it. Anthropogenetic technics, enacted through anthropotechnics, evolutionarily selects, in turn, for those traits which better fit in with its endogenous selection pressures. Sloterdijk[154], therefore, submits that anthropotechnics are necessary, firstly, to preserve the pampered conditions where the human offspring can thrive, i.e., to endure and secure our artificial environment. Secondly, to cope with the drawbacks of our developmental plasticity, i.e., our exacerbated receptiveness to multiple, undetermined stimuli. Thus, while humans produce their own environment through systems of anthropotechnics, this artificial environment selects for the individuals more suitable to enhance and endure this construction.

Now, after discussing the *genesis* of Sloterdijk's onto-anthropological perspective and his main philosophical concepts regarding technology, we can investigate how it is possible to look not only to

153 Sloterdijk, *Not Saved*, 126–127.

154 Sloterdijk, *Not Saved*, 126.

the *past* of our relationship with technology but also to the *future*. This will imply characterising the ecological crisis in which we are immersed and its relation to technology on a global scale, since our planetary species seems to have technology as its primary way of dwelling on the Earth.

4. Technology and the Ecological Crisis in Sloterdijk`s Thinking

4.1. The Anthropocene and the Technosphere

In *Not Saved*, Sloterdijk explicitly endorses the idea of the human condition as a technical condition through and through by rephrasing Jean-Paul Sartre's famous statement from *Existentialism Is a Humanism* that "*Nous sommes sur un plan où il y a principalement la technique*"[155] ("We are on a plane where there is principally technology"). It is not first of all Being, as Heidegger claimed in his equally famous rephrasing of Sartre's statement in the *Letter on Humanism*[156], that makes humans possible but technology, which opens up *Dasein* in the human organism and thereby renders this organism human in the emphatic sense of being the exceptional noetic (i.e., thinking and knowing) creature that is open to the openness or clearing of Being. It is technology that is the plane on which the human as the onto-logical being Heidegger referred to as the *homo humanus* is first of all possible. This means for Sloterdijk that "*Humanitas* depends on the state of technology"[157] and this implies for him that technology is far from the alienating and dehumanising force traditional humanists accuse it to be. Nonetheless, technology is the very thing through which humans have always and will forever tinker with their own evolving humanity, a coevolutionary process that is currently about to enter, as already discussed above, the profoundly invasive stage of direct *molecular* modification of human biology and that is also dramatically intervening—e.g., through geoengineering—in the natural environment in which this sphero-poietically and immunologically driven evolution takes place[158].

Indeed, contemporary technology not only intervenes more directly in human biology—due to its increasing precision and power. It is also interfering in ever more direct ways with other forms of life and with the whole biosphere. The latter has been affected in the last two centuries on a global scale by the impacts of technological development to such an extent that today the biosphere is threatened in its functioning as humanity's ultimate life support system by a rapidly expanding global technological system of which geologists have recently argued that it has become a geological phenomenon itself. It is on a par in its material and energetic throughout and, therefore, in its Earth-systemic pertinence, with

155 Sloterdijk, *Not Saved*, 142.
156 Heidegger, *Letter on Humanism*, 237.
157 Sloterdijk, *Not Saved*, 142.
158 Sloterdijk, *Not Saved*, 142.

the biosphere as well as with other geospheres. This new geosphere has been called the technosphere by the American geologist Peter Haff[159], who argues that it will be the crucial geosphere of the emerging Anthropocene age, both decidedly impacting on the planet as well as on the planetary feedback on human existence.

In Sloterdijk's terminology we could say that the technosphere represents the result of the planetary extension of human sphero-poietic activity. We could argue from his perspective that humans have only become capable of significantly affecting their biospheric residence since their entrance into modernity. From this moment on, western culture and gradually virtually all other cultures across the planet transitioned in a decisive way from symbolic (and for Sloterdijk ultimately impotent and illusory) immunisation strategies to technical (and for Sloterdijk powerful and effective *because* explicative and causal-operational) immunisation strategies—this substitution being the hard core of the modernisation process, in his view[160] [161] [162].

Given that the technosphere as a collective human construction is now crucially affecting the biosphere, it is becoming clear that through it humanity has gained *de facto* responsibility for its future destiny, as Sloterdijk also emphasises[163]. Some three centuries of technoscientific explicitation, extraction and exploitation of what was perceived to be the "natural environment" have resulted in its effective transformation from an inoperative background into an increasingly unstable, active and provocative foreground possessing its own inherent dynamisms and operations, such that the whole distinction between (natural) background and (human-cultural) foreground in fact collapses and the traditional "backstage ontology" of western metaphysics and anthropology needs to be replaced by an ecologically informed ontology of profound interconnectedness and interdependence. This represents an onto-anthropo-technological caesura that also implies the end of modernity's "cosmic carelessness"[164] and inevitably heralds a new age of collective care for the Earth as our unique cosmic ark—care that is "for the cohabitation of the Earth's citizens in both human and nonhuman form"[165].

The future of technology, therefore, will decidedly *not* be that of continuing modernity's course of conquering nature but, on the contrary, of keeping open the very possibility of continuing the process

159 Peter Haff, "Technology as a Geological Phenomenon: Implications for Human Well-Being". *Geological Society London Special Publications* 395, no. 1 (2013): 301–309.

160 Sloterdijk, *Living Hot, Thinking Coldly*, 319.

161 Sloterdijk, *Der ästhetische Imperativ*, 241.

162 Sloterdijk, *Globes*, 845.

163 Sloterdijk, *What Happened in the 20th Century?*, 7.

164 Sloterdijk, *What Happened in the 20th Century?*, 22.

165 Sloterdijk, *What Happened in the 20th Century?*, 42–43.

of civilisation[166]. Despite acknowledging the fact that modern technology and the will to power behind it can to a large extent be held responsible for the damage afflicted to the biosphere and are, therefore, frequently attacked in a fundamental way by those who want to "save the planet", Sloterdijk generally displays remarkable confidence in the potentials of technology, claiming, for instance, that technology has not yet spoken its final word, regarding its future new configurations and modes of relation to nature[167]. Indeed, as the technically advanced and thoroughly technically dependent creature that it is and increasingly becomes, the human is forever condemned to technology's "alchemy"[168] and bound to the further deployment of its will to power, which for Sloterdijk inextricably and necessarily belongs to the inherently negative and deviant stance vis-a-vis nature that typically characterises the human species' evolutionary trajectory[169].

The only possibility for humans to be saved not only from outright extinction but also from their ontological demise (which was Heidegger's greatest concern as we know) is not to wait for a "divine intervention", as the late Heidegger notoriously claimed. It is no other than our reviled and admittedly reprehensible will to power, understood by Sloterdijk as the striving to match the creative potential of God as *natura naturans* through technical knowledge of creation[170]. If "God" in this sense means "the capacity to create natures", as Sloterdijk proposes with Spinoza in a creationist-technicist fashion utterly different from Heidegger's onto-historial understanding of the divine, the technology to come should emerge from a transformation of this capacity in "the capacity to cooperate with natures"[171], which is to say in the transition from allotechnics to homeotechnics, as we will discuss below. Only if the technosphere is reimagined and reengineered to switch from a framework engendering careless and reckless extraction and exploitation of "old nature" towards a structure supporting a careful and intelligent co-operation and co-production with the biosphere, will humanity have a chance of continuing to survive and possibly thrive on the Earth. Indeed, such a homeotechnological and as such non-domineering turn of what Heidegger theorised as the essence of technology, which also assumes a less imperious and more refined and playful subject[172], might lead to a "multiplication of the Earth", as Sloterdijk suggests[173], i.e., an enrichment and diversification of its potentials as a life support system.

166 Sloterdijk, *What Happened in the 20th Century?*, 31.
167 Sloterdijk, *What Happened in the 20th Century?*, 20.
168 Sloterdijk, *Not Saved*, 192.
169 Sloterdijk, *Not Saved*, 187–188.
170 Sloterdijk, *What Happened in the 20th Century?*, 20.
171 Sloterdijk, *What Happened in the 20th Century?*, 20.
172 Sloterdijk, *Not Saved*, 146.
173 Sloterdijk, *What Happened in the 20th Century?*, 38.

4.2 Globalisation and Global Co-immunisation

Heading now to the issue of globalisation and its relation to the ecological catastrophe, one of the crucial features of Sloterdijk`s thinking is his position in the debate on postmodern scepticism regarding the modern philosophical and technoscientific grand narratives, as they are understood by Jean-François Lyotard[174]. Taking a Nietzschean perspective, Sloterdijk rejects any resignation in small, local and situated narratives, instead going in the opposite direction. For him, to face the challenge of dwelling in the technosphere, we need even bigger narratives, since we do not any longer need to fully trust those kinds of narratives as foundations to reveal a sort of hidden truth about the world, for instance, as modern thinking often required[175].

Sloterdijk claims[176] that globalisation can be seen as a historical trajectory of grand proportions, unlike the limited concept formulated by contemporary sociology as something recent. The process of globalisation would have already begun mainly with Ancient Greek philosophy in the thoughts of Parmenides and Plato with the "geometrisation of the immensurable"[177]—a metaphysical attempt to build a transcendent immune system—being followed by the imperialist colonial expansion of the West in which "no point on the earth's surface, once money had stopped off there, could escape the fate of becoming a location"[178]. The progressive change from the metaphysical immunological paradigm to the technological one takes us towards the third and final moment of consummation of terrestrial globalisation through the planetary synchronisation performed by the information and communication technologies appearing at the end of the Twentieth century. With this, technology as the construction of habitable interiors gains enormous importance. For instance, using the metaphor of the Crystal Palace, the globe can be seen as an expanding greenhouse in which its inhabitants pursue technological immunisation strategies, for example, with insurance policies and biotechnology[179].

However, as the process of terrestrial interconnection is completed through the unstoppable flux of capital and information, we finally become aware of the fragile structure of our biotechnological life support systems and of the Earth as the foundation of all possible "life, thought and invention", i.e., the realisation of *monogeism*[180]. Modernity and its "side effects" are dramatic if we consider our planetary

174 Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge* (Minneapolis: University of Minnesota Press, 1984).

175 Sloterdijk, *In the World Interior of Capital*, 4.

176 Sloterdijk, *In the World Interior of Capital*, 9.

177 Sloterdijk, *Globes*, 45.

178 Sloterdijk, *In the World Interior of Capital*, 140.

179 Sloterdijk, *In the World Interior of Capital*, 154.

180 Sloterdijk, *In the World Interior of Capital*, 6.

situation, leaving a challenge for us to develop a *prospective* intelligence since the emerging "world society will be a society of foresight, or it will not be at all"[181]. Furthermore, the climate crisis and the struggles between different "societal units" or immune systems challenge the possibility of civilisational coexistence since the "coexistence of humankind is no more an abstraction of the Enlightenment"[182], but a real issue of our global village, leading to a warning about the necessity of developing a resolutely post-metaphysical general immunology[183] or, as stated provocatively, co-immunism[184].

Considering now more directly the relationship between globalisation and the climate catastrophe, developing a fruitful interface between these two themes shows itself as a challenge of our time, which is evident in the paraphrase chosen by Latour—of Sloterdijk's work—to *Facing Gaia*, which states that "it is no longer politics *sans phrase* that is destiny, but rather climate politics"[185]. Such a task can be better answered if we consider some of Latour's interpretations regarding the concepts developed by Sloterdijk.

One of Latour's primary concerns[186] is to give materiality to the representations of the mode of existence of the Moderns, which are heading us towards an unprecedented ecological crisis, and also to offer an alternative theoretical framework for the entangled reality we live in, using, for example, his famous approach to Actor-Network Theory to describe globalisation[187]. Besides the criticisms made by Sloterdijk[188] of Actor-Network Theory, for instance, because of its bidimensional thinking and consequent neutralisation of existential space, spherology shows itself to be a theoretical ally to the Latourian project regarding the ecological crisis. This occurs because in both approaches the globe is not only understood as a "modern" representation of the planet we live on or as a kind of background, but it is the real and local habitat that provides the technical conditions of possibility for us to think and act upon it, embedded with local histories and conditions of its agents, or as Latour states, "the global is part of local histories"[189]. Moreover, in addition to the physical materiality of the immunological envelopes in which we are inserted, the globe also has a natural history inseparable from human history due to the advent of the Anthropocene, as discussed by several anthropocenologists, such as Dipesh Chakrabarty[190].

181 Sloterdijk, *Not Saved*, 192.
182 Sloterdijk, *Selected Exaggerations*, 258.
183 Sloterdijk, *You Must Change Your Life*, 451.
184 Sloterdijk, *Selected Exaggerations*, 259.
185 Sloterdijk, *Globes*, 333.
186 Bruno Latour, *An Inquiry into Modes of Existence: An Anthropology of the Moderns* (Cambridge: Harvard University Press, 2013).
187 Latour, "Spheres and Networks".
188 Sloterdijk, "Spheres Theory".
189 Latour, "Spheres and Networks", 142.
190 Dipesh Chakrabarty, "The Climate of History: Four Theses", *Critical Inquiry* 35, no. 2, (2009): 197–222.

Furthermore, Latour's interpretation of co-immunism in Sloterdijk's philosophy takes into consideration the concept of Gaia, as it highlights the interactivity and response of the environment in which we are involved, demanding a mode of inhabiting the globe that is responsive and sensitive to "these multiple, controversial, mutually entangled loops"[191]. Adding technology to the previous problem, it is clear that both Latour and Sloterdijk converge in considering the fundamental role of discovering new forms of hybridisations between technology and nature that escape the dualisms established by modernity, whether through a compositionist perspective—trying not to separate ourselves from nature but assuming and radicalising our entanglement with it[192]—or homeotechnics (as discussed below in this paper). So, for both authors, it is not a question of denying technology or finding "moral limits'' towards its use. Instead, the main task is how we could develop philosophical reflections that could enable technology to go beyond the modern dichotomies and allow for our (more and more real) global coexistence in the face of the ecological catastrophe.

However, the receptions of Sloterdijk's elaborations received the most varied reactions. On the one hand, Latour[193] considers Sloterdijk an ally, categorising immunology as the first anthropocenic discipline, since the Anthropocene would be the event of "divine" proportions that would enable us to rediscover a common vertical attractor or anthropotechnics necessary for global co-immunity[194]. On the other, authors with a Marxist-psychoanalytical background, such as the Slovenian philosopher Slavoj Zizek, are critical of the previous ideas because they have a greater reliance on solutions that start from the problem of political organisation and a pessimism concerning the "human nature"[195]. Another criticism that deserves to be highlighted is the one made by the French philosopher Bernard Stiegler[196] due to the lack of a pharmacological understanding of technology in Sloterdijk's diagnosis, insofar as the former regards technology as essentially ambiguous in the Ancient Greek sense of the term *pharmakon* (i.e., both a poison and a medicine) and that the latter would succumb, therefore, to a *hybris* when seeing "existential opportunities" in the catastrophe we are going through.

191 Latour, *Facing Gaia*, 141.
192 Latour, "Love Your Monsters".
193 Latour, *Facing Gaia*, 123.
194 Sloterdijk, *You Must Change Your Life*, 442–452.
195 Sloterdijk, *Selected Exaggerations*, 263.
196 Stiegler, *The Neganthropocene*, 114.

4.3 Homeotechnics

Sloterdijk[197] submits that the transition from traditional and local immunity to global co-immunity may only occur as a transition within the way we conceive of and perform technology. Indeed, traditionally technology has always or almost always been what Sloterdijk[198] terms allotechnics, i.e., the imposition of extrinsic goals on natural substances and processes, thereby conceiving of nonhuman natures as generic, servile and inert matter. The technology to come is termed homeotechnics, meaning a cooperative, co-natural and "non-domineering form of operativity"[199], which should cooperate with natural substances and processes according to their intrinsic potentials.

Inspired by Günther's insights, outlined above, Sloterdijk submits that allotechnics is based on a monovalent ontology and a bivalent logic, while homeotechnics rests on a nonbinary and polyvalent conception of reality and truth, where the allegedly sovereign and active mind is not opposed to the allegedly submissive and inert matter anymore: "in the traditional concept of matter it is assumed that, on the basis of its resistant and minimal qualities, it will only be used heteronomously"[200]. Thus, Sloterdijk[201] argues, allotechnics manifests itself as a break with natural processes, i.e., as their simplification and, therefore, violent domination, while homeotechnics amounts to a novel understanding of the relationship between humans and their multispecies and artefactual environments based on intermingling, cooperation and co-information.

Admittedly, Sloterdijk's conceptualisation of homeotechnics risks remaining overly vague and unduly optimistic. However, we believe it is noteworthy to point out, in this regard, that this transition towards a novel configuration of technology is rendered possible, in turn, by the constitutive ambiguity of Sloterdijk's conception of technology itself, whose essence is not given once and for all but rather coevolves with the human lifeform. And indeed, in his latest book, *Die Reue des Prometheus*, dedicated to Latour's memory, Sloterdijk submits that, in order to avoid the looming ecological catastrophe, a change in our worldview towards an "energetic pacifism" should be accompanied by a thorough restructuration of our socio-political institutions as well as the substantial implementation of novel kinds of technologies. Even if, in this context, Sloterdijk[202] does not explicitly labels as homeotechnics these practices, such as renewable energies generators, microbially produced food supplies and

197 Sloterdijk, *What Happened in the 20th Century?*, 1–23.
198 Sloterdijk, *Not Saved*, 133–148.
199 Sloterdijk, *Not Saved*, 144.
200 Sloterdijk, *Not Saved*, 143.
201 Sloterdijk, *Neither Sun nor Death*, 326–330.
202 Sloterdijk, *Die Reue des Prometheus*, 57–69.

microdevices transforming the kinetic energy yielded by our daily gestures into storable electric energy, we believe that they would fit in with the homeotechnological paradigm nonetheless, thereby rendering it more concrete.

5. Conclusion

Sloterdijk's philosophy exhibits multifarious directions of inquiry and with the present, necessarily limited overview we do not aim to expound the enormously wide-ranging spectrum of his thought. However, by focusing on Sloterdijk's concepts and analyses more directly related to the question concerning technology, we believe to have cogently shown how Sloterdijk should be considered a philosopher of technology proper, although he does not understand himself that way and has hardly addressed the question of technology head on.

As reviewed above, indeed, Sloterdijk starts to deal with technology sporadically and nonthematically in his early works in the 1980s but, from the early 1990s onwards, he clearly develops an anthropological focus leading him to investigate how technologies subjectivise and actually produce humans—indeed "hominise" and "humanise" us—in works such as *Weltfremdheit* and *Im selben Boot*, eventually elaborating an arguably full-fledged philosophy of technology in his most important works such as the *Spheres* trilogy, *Not Saved* and *You Must Change Your Life*. Finally, this explicit interest in the study of technology prompts Sloterdijk to devote special attention to the use and conception of technology when discussing pressing contemporary issues, such as global warming and geoengineering, in recent works such as *What Happened in the 20th Century?*.

Thus, we submit that Sloterdijk's philosophy should be considered a philosophy of technology strictly speaking, firstly, because he develops thematic analyses of concrete, individual technologies—ranging from contemporary housing units[203] and early modernity's ships and containers[204] to prehistoric lithic industry[205] and late twentieth-century space stations[206], just to name a few. Secondly, because he sets out to elaborate a systematic and explicit conceptualisation of technology "as such", thereby taking into account the philosophical challenges posed by understanding it as an anthropologically universal phenomenon. Thirdly, because the core tenets of his philosophy display a technological dimension which binds them together and organises them into a coherent conceptual paradigm, where the production

203 Sloterdijk, *Foams*, 529–563.
204 Sloterdijk, *Globes*, 237–248.
205 Sloterdijk, *Not Saved*, 111–133.
206 Sloterdijk, *Foams*, 296–315.

of interior spaces (spherology) through self-forming, iterating techniques (anthropotechnics) leads to their climatisation against external selection pressures (immunology), as discussed above.

Hence, in light of the above, we believe that (at least) two main insights from Sloterdijk's philosophy of technology deserve particular attention. Firstly, his strong conceptualisation of human constitutive technicity[207], i.e., the idea that humans could neither evolve nor survive or be conceived of regardless of their relation to technologies. According to Sloterdijk, we are technical organisms, insofar as our cognition, morphology, ecology and behaviour are enabled, supported and mediated by technical practices through and through. From this perspective, the human lifeform results from the intertwinement between biological and technological processes. Secondly, his focus on the evolutionary origins of our relation to technology. Indeed, in texts such as *The Domestication of Being*[208], Sloterdijk investigates how the relationship between the most ancient technologies and the (pre)human lifeform originated, thereby engaging in a fruitful and critical dialogue with evolutionary biology, psychology and palaeoanthropology.

This methodological emphasis on the evolutionary dimension of our relation to technology should prompt us to consider the latter as something more originary and encompassing than "humanity", which is rather produced and transmitted by it. In this regard, Sloterdijk's work shows many parallels with that of Stiegler[209]. Indeed, the latter's notion of originary technicity resonates strongly with Sloterdijk's core conception of technology as the anthropic-anthropogenic operator par excellence, albeit the former lays more emphasis on the temporal, onto-chronological aspects while the latter highlights the spatial, onto-topological dimension[210]. This strong resonance obviously invites further reflection.

In conclusion, we believe that it would be worth investigating how Sloterdijk's thought should be contextualised within the broader debate in the philosophy of technology. Contemporary historiography[211] usually identifies an "empirical turn"[212] within this field of study, which would amend the overly abstract, pessimist and determinist elan pertaining to so-called classic philosophers of technology such

207 Havelange, "Les représentations".

208 Sloterdijk, *Not Saved*, 89–148.

209 E.g., Stiegler, *Technics and Time 1*.

210 Lemmens and Hui, "Reframing the Technosphere".

211 E.g., Maarten Franssen et al., "Editorial Introduction: Putting the Empirical Turn into Perspective". In *Philosophy of Technology After the Empirical Turn*, ed. Maarten Franssen et al. (New York: Springer, 2016): 1–10.

212 Hans Achterhuis, "Introduction: American Philosophers of Technology". In *American Philosophy of Technology: The Empirical Turn*, ed. Hans Achterhuis (Bloomington: Indiana University Press, 2001), 1–9.

as Jacques Ellul, Martin Heidegger and Herbert Marcuse[213]. Nowadays, the empirical turn, championed by authors such as Don Ihde and Peter-Paul Verbeek, is the dominant approach in the field and has inspired several debates about its influence and recent developments[214]—despite criticisms have also been raised against its tendency, for instance, to eschew from the elaboration of a general concept of technology[215] or from an analysis of the challenges posed by the global technical system[216]. And indeed, the empirical turn is not the only extant approach to the philosophy of technology. Other ways to deal with technology have also been developed in the last decades by authors such as Latour, Stiegler, Gilbert Simondon and Yuk Hui.

Hence, how shall we position Sloterdijk's thought relative to this debate? On the one hand, we argue that Sloterdijk's approach is hardly considerable as belonging to the classic philosophy of technology, not only for obvious chronological reasons but most importantly because it does not exhibit the stigmata usually labelled to this approach by supporters of the empirical turn and evoked above. On the other, it is also not easily identifiable with the empirical turn in the philosophy of technology, firstly, because Sloterdijk considers technology throughout the entire human history, thereby not limiting his focus of inquiry to modern technology alone—as is usually the case not only with representatives of the empirical turn but also with Latour, who is arguably closest to Sloterdijk in his general conception of technology. Secondly, because he does not give up on investigating questions of constitution, i.e., to inquire into the conditions of possibility and impossibility (Derrida) of both technical behaviour and the lifeform exerting it, contrary to what seems to be the case in the empirical turn.

Finally, regarding the "philosophical temperament" of this article, it should have become clear to the readers that our main concern is to present the general aspects of what could be called Sloterdijk's philosophy of technology, thereby leaving aside the question of an in-depth philosophical critique of its main tenets. Consequently, we hope that our attempt may foster a wide range of debates about the limits and tensions found in Sloterdijk's conceptual framework. Hence, we submit that an appraisal of Sloterdijk's thinking as a significant contribution to the philosophy of technology proper and, indeed, one of a particular kind may prompt scholars to revise and enrich the terms of this already diverse and exciting field of study and demands, therefore, further research.

213 Philip Brey, "Philosophy of Technology After the Empirical Turn", *Techné: Research in Philosophy and Technology* 14, no. 1, (2010): 36–48.

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