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# **Web 3.0 and The Web of Life. Attuning the Noosphere with (the Intelligences of) the Biosphere in the Context of the Anthropocene**

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## **Introduction**

In an interview published in 2012, the French philosopher Bernard Stiegler states in a response to the question what he means with his notion of an ‘ecology of spirit’ that

‘If we want meaningful transformations to happen in the future of the planet in terms of the climate, for example, individual behaviors need to be transformed. These individual behaviors must become more conscious, more attentive, more caring towards that which surrounds them. And they must turn that which surrounds them into an object of desire. This happens through an elevation of collective intelligence, *that is to say through a relaunching of desire*’ (Stiegler 2012, 14).

For Stiegler, the notion ecology of spirit refers to the idea that the human spirit or mind is always dependent on and embedded in a technical environment that makes human thinking and reasoning as both an individual and a collective affair first of all possible. The human spirit or mind is fundamentally and from its very first beginning shaped, constituted and conditioned by technologies, most specifically by what Stiegler calls *mnemotechnologies* or what may also be termed media here. It always presupposes a technical *milieu* of the mind and the study of the interdependence and interaction between the mind or spirit and its technical milieu is what the ecology of spirit is all about.

And he studies this ecology of spirit through what he calls an *organology*, based on the fact that all spiritual ecologies consist of constantly evolving configurations and articulations of three kinds of *organs* or *organ systems*: the psychic or psychosomatic organs of human beings, the many technical or artificial organs that make up the technical milieu and the social

organs or organizations that are formed through the articulations of individual psyches via the shared system of technical organs. These three organ systems, as said, constantly co-evolve through a threefold process of psychic, social and technical *co-individuation*. Although all three individuation processes are of course equally important, Stiegler is mainly interested in the way the development or the individuation of the technical organs affects the individuation processes of the psychic and the social organs. Think here of the way digital network technologies have completely changed – and are still in the process of changing – both our individual life patterns and our collective enterprises in the last two decades.

It is within such ecologies of spirit that our individual as well as our collective behaviors are formed, cultivated and transformed. Currently this process is going faster everyday, due to a constantly accelerating dynamic of permanent innovation, to such an extent that both individuals and collectives have increasing difficulty to keep up with the pace, and not only that but also with the very characteristics of this innovation, which predominantly serves to increase the speed, codification, control and calculability of information exchange. There is no need to elaborate in detail on what is behind this acceleration, which is nothing other than globalized capitalism, which has annexed the global technical milieu of the mind to enable ever more and ever faster production of commodities and to create ever more consumption and that is to say ever more consumers so as to satisfy its unconditional and today virtually sacred imperative of increasing profits. And the most important commodity nowadays is maybe not so much the information anymore that is needed to grab and hold our attention – movies, videos, games, commercials, facebook postings, ‘likes’, etc. – but human attention itself, which has become the ultimate metamarket (Stiegler 1998, 2-3).

### **Libidinal ecology**

Now it is patently obvious, to return to Stiegler’s quote from the beginning, that the individual behaviors he mentions are none other than the behaviors of us consumer subjects. And I explicitly say subjects because for Stiegler consumerism is a process of subjectivation, the still dominant process of subjectivation of our time. More accurately, it is a process of *de-subjectivation* or rather disindividuation, individuation being his Simondonian term for the more familiar notion of subjectivation. Now what characterizes consumerist (de)subjectivation in Stiegler’s view is that it is precisely *not* attentive to, *not* caring and in an important sense *not* conscious of what surrounds it. It is therefore also irresponsible, and not so much in the moral sense but foremost in being *unable* to respond. True care and true attention requires that one has an *affective* relation to what one cares for and attends to, indeed every object of real attention

and every object really taken care of is an object of *desire*, or of *love*. And that is what the consumer is unable to do since the relation of the consumer subject to its objects is generally not one of desire according to Stiegler, but of drive, and that is to say of craving and ultimately addiction (Stiegler 2006, 106).

As one of the few philosophers nowadays who still draw substantial inspiration from Sigmund Freud, for Stiegler there is a crucial distinction between desire and drive. With Freud, he understands the human psyche as constituted by drives, which are distinct from animals' instincts in that they have no particular goal. It is not nature but culture that gives humans their goals and this occurs through a process that Freud has called sublimation, through which drives are bound and deflected toward social and cultural investments and are as such transformed into desires. And whilst drives are typically short term and finite, bent toward immediate satisfaction and the devouring, indeed consumption of its objects, desires instead are long-term and potentially infinite, attentive and patient and feeding and augmenting itself as it were through the cultivation of their objects (Couze Venn et al. 2007, 337).

Thus understood, sublimation is a process of accumulating and directing what Freud called *libidinal energy*, which is so to speak the energy of the psyche, both the individual and collective psyche, and which expresses itself in all kinds of affective and cognitive or noetic dispositions, like love, tenderness, passion and dedication or wonder, curiosity, puzzlement and the will to know. It forms the psychic potential of human intelligence, attention and care in the broadest sense and is also very much a bodily thing. You can *feel* it running through your 'system', in more or less subtle ways.

Now human civilizations, for both Stiegler and Freud, are basically ways of capturing and directing the libidinal energy of individuals toward collective social and cultural goals and any civilization is as such a process of sublimation through which the egoistic energy of drives is transformed into non-ego-centered socialized and cultivated psychic energy (Stiegler 2008, 19-20, Stiegler 2006, 15). Sublimation thus gives rise to an elevation of the psyche, whilst what Marcuse later called desublimation causes a regression of the psyche in that it reverts desire back into drives. Now what crucially distinguishes Stiegler's view from that of Freud, and this is what I want to lay emphasis on here and explore a bit more in the current context of the Anthropocene as the age of planetary crisis, is that these processes of sublimation and desublimation as the transformation of libidinal energy are fundamentally 'modulated' or 'mediated' by technologies or let us say media in front of this audience, and that means by a technical system or milieu of mnemotechnologies, indeed by an ecology of spirit, which must

thus be understood in terms of an ecology of desire or a ‘libidinal ecology’ (Stiegler 2013, 71, Stiegler 2014a, 4, 77ff).

It is this intimate relation between desire or affectivity and especially media technology and that means the fundamental link between desire as sublimation and *techne* (Stiegler 2015, 95) or in other words ‘the artefactuality of desire’ (Stiegler 2014a, 49), that is insufficiently if at all recognized today in philosophy of technology. Yet thinking this link is of the utmost importance especially in the current context of the Anthropocene in which the fate of the planet is becoming dependent on ‘us’ humans *and vice versa* (Hamilton 2017, 5, 52), which means that our responsibility is called to rise to a whole new level, indeed that of the planetary. And this is the case because, as suggested by Stiegler, in the age of the Anthropocene it is the ecology of spirit – which is today an *industrial* and *digital* ecology as all global organological configurations are becoming industrialized and digitalized – that ultimately conditions any possibility of solving the problems in the ecology of nature.

Of course we need to revolutionize our economies and our current energy dependencies but what we need primarily is a spiritual revolution, indeed a libidinal transformation of industrialized human behavior from a still dominant irresponsible and careless consumerism to a responsible and intelligent care-taking of our planetary *oikos* and a wholesome practice of what object-oriented eco-philosopher Timothy Morton has called ‘ecological coexistence’ with all the other residents of the biosphere (Morton 2010, 4). As such, the prime ecological crisis that needs to be solved is not that of the ecology of nature and the energies of *subsistence* that it contains (say the fossil energies) but that of the ecology of spirit and that is to say of libidinal energy or the energy of *existence* (Stiegler 2013, 91), since it is there that the root of the problem lies. And this spiritual transformation has to be thought organologically for Stiegler, and that is to say in concert with technological transformation.

Now Web 3.0. as the supposedly third digital revolution that will implement artificial intelligence and the Internet of Things into the existing World Wide Web can be understood as a new system of technical organs that will inevitably engender a new ecology of spirit. And indeed we should think about the kind of media literacy that is needed to navigate and thrive in it. However, and this is the claim that I want to defend and elaborate here, we should also think about the way in which the so-called Web 3.0. that is starting to spread around the globe now will be integrated in and can somehow be designed to support integrating humanity in a much more conscious, attentive, conscientious and caring way into the much older web out of which humanity itself has sprang and on which it is still (and most probably forever) vitally dependent and that is the Web of Life or what is also known as the biosphere. We should in a way combine

media literacy with ecological literacy or ‘ecoliteracy’ (Orr 1991, Capra 1993) or better yet a planetary or Earth System literacy. And although most of us have become quite media-savvy in the 21<sup>st</sup> century, we have barely started learning to read and understand our ecological and even less our planetary situatedness.

### **Enter the Anthropocene**

And this is particularly important in the context of the Anthropocene, in which it is no longer the case, whether we like it or not, that we are just one of the threads in the web of life. We have become, willy-nilly, the most dominant if not its determining thread, yet it is still true, and even more so now, that what we do to the web of life we ultimately do to ourselves. Our modern will to dominate and control nature has been mostly destructive of this fragile web that we called ‘nature’ and therefore, as we now start to realize, self-destructive. This cannot go on, however, and so we need to educate ourselves in a very profound way in ecological thinking, and this possibly means at its most elementary, as Morton conveys in *The Ecological Thought*, to realize that everything on this planet is deeply interconnected (Morton 2010, 1) and therefore deeply interdependent (ibid., 30) and that to live in a biosphere means to live together with many nonhuman others, biotic and abiotic, within a huge and infinitely complex ‘mesh’ (ibid., 28), a mesh that is also familiar under the name of Gaia and that is very robust yet so thoroughly disturbed by human action now that it has started to become a threat to human survival. Contrary to what the word suggests, ecological thinking means realizing that the Earth is not, or at least not only and certainly not in the first place, ‘our home’. It means acknowledging, as the German philosopher Peter Sloterdijk has pointed out, that what 20<sup>th</sup>-century phenomenologists have called the ‘lifeworld’ and considered to be the ultimate bedrock of human existence, should be rethought in terms of increasingly precarious ‘lifeworld-implants’ in an earthly non-lifeworld (Sloterdijk 2016, 458-9).

Although a lot of authors, in particular a quite vociferous group affiliated with so-called ecomodernism or ecopragmatism, present the Anthropocene anthropocentrically as the ‘human age’, in which our species will sovereignly shape the future of the planet, I tend to have more affinity with those authors that rather emphasize the uncanny ‘return’ of the Earth as a decisive if not *the* decisive factor in human affairs and that is to say as something to be reckoned with from now on as the ultimate object – or matter – of our concern, though decisively *not* anymore as something that is silently pliant to our will but that is actively responding to our actions yet *not* particularly concerned about ‘us’ humans. Whether those authors speak of a ‘revenge of Gaia’, like James Lovelock (2008), an awakening of the giant (McGuire 2012), an ‘intrusion of

Gaia’, as Isabelle Stengers does (2015), of the need for our planetary civilization to ‘face Gaia’, like Bruno Latour (2017), of the emergence of a ‘defiant Earth’, like Clive Hamilton (2017) or of the ‘ecological trauma’ of the ‘end of the world’, as Timothy Morton does (2013), the mantra is invariably that the earth is taking center stage and is putting our current *modus vivendi* radically into question, forcing us to fundamentally re-consider, re-orient and re-design our lives under the conditions that *she* poses and that *first of all* means ‘*paying attention*’ to her, as Stengers pointedly puts it (2015, 45). *Struggling* against her makes no sense (ibid., 53), while struggling against capitalism’s assault upon the Earth makes all the sense of the world, despite the fact that we all seem to be convinced, After Thatcher, that ‘There Is No Alternative’ to it. As Stengers assures us: ‘*We will always have to reckon with Gaia*, to learn, like peoples of old, not to offend her’ (ibid., 58). My immediate reaction to this latter clause is: why not also learn *from* peoples of old? But I will come back to this at the end of this article.

Despite my sympathies for the terra-centric view of the Anthropocene, as I would like to emphasize here in line with authors such as Sloterdijk and recently also Peter Haff (2013) and David Grinspoon (2016), what seems to be downplayed a little or at least receives no serious attention in the diagnoses of the authors just mentioned despite their obvious awareness that technologized humanity has brought about the current shift in the Earth System is the fact that today’s Earth, is endowed not just with a litho, atmo-, hydro- and biosphere but also with a *technosphere* as well as a *noosphere* which animates – and is in its turn animated *by* – this technosphere. I will here not go into the fascinating origin of the notion of ‘noosphere’, which was introduced in 1922 by the French paleontologist and Jesuit scholar Pierre Teilhard de Chardin and adapted by the Russian geochemist Vladimir Vernadsky, but what is lacking in these earlier conceptions is an explicit linking of the noosphere to technology and that is to say to the technosphere. Yet while these two ‘meta-physical’ spheres (as I am tempted to call them) are co-original from a Stieglerian perspective that theorizes the noetic as fundamentally enabled and conditioned by the technical and therefore thinks *noesis* essentially as *technesis* (Stiegler 2015, 31, Stiegler 2016, 132), I propose to talk explicitly about the *techno-noosphere* here.

### **The Techno-Noosphere**

This notion of the techno-noosphere, I also want to suggest, may be considered a new way of thinking what Martin Heidegger started to call enframing or *Gestell* in the 1950s and was in essence considered by the latter already in the 1930s – in terms of ‘machination’ or *Machenschaft* – as an explicitly planetary phenomenon (Heidegger 2016, 13), though only in a strictly ontological sense and not as a truly geological or geophysiological sphere in its own

right, also interfering physically and that is to say thermodynamically with the other geospheres. Be that as it may, such an Earth is very different indeed from the, let us say, pre-anthropocentric ‘biosphere-only’ Earth. As suggested by Sloterdijk, such an Earth may harbor unimagined potentialities that may drastically change the future prospects of human habitation as well as the flourishing of the biosphere at large, notwithstanding the fact that it is now the sphere that is depleting and deteriorating all the older spheres on which it fundamentally depends and is therefore still hurtling toward self-destruction (Sloterdijk 2016, 38).

Now with this techno-noosphere we are back with Web 3.0 as the emerging global ‘ecology of spirit’ as it increasingly conditions the ecology of nature – the web of life – without ever being able to control the latter of course but nonetheless inevitably forced to start taking care of it – albeit in a still unimaginable and largely unfathomable way – and that is to say on penalty of rendering its own very presence within this web of life forever impossible. I agree with Peter Haff that the technosphere is the ‘defining system of the Anthropocene’ (Haff 2017, 103) and even more so that it has become the *decisive* system within today’s Earth System, i.e., the geosphere on which the future of the planet as a life-sustaining planet, and *a fortiori* of a *human* life-sustaining planet, now substantially hinges. Without going into the intricate and fascinating question of humanity’s ultimate place within the technosphere, this assertion seems to put humans at center stage again and this conflicts with the widely shared and undoubtedly correct notion that it is precisely our anthropocentric ideology that has been largely responsible for creating the global ecological crisis. This is without doubt true, yet the anthropocentrism of industrialized modernity was precisely an *irresponsible* anthropocentrism.

What is on the agenda of the Anthropocene, on the contrary, is the coming into being of a *responsible* anthropocentrism, interiorized by an *anthropos* that explicitly takes care of its earthly habitat based on the realization that it now has become, as Hamilton rightfully argues, the ‘*central agent on a new kind of Earth*’ although an agent that is fundamentally ‘delimited by the newly activated and countervailing power of the Earth System’ (Hamilton 2017, 49). Such a responsible, benign anthropocentrism may usher in what the American astrobiologist David Grinspoon has beautifully called the ‘mature Anthropocene’, in which, as he writes in his book *Earth in Human Hands*, we would ‘fully incorporate our human powers of imagination, abstraction, and foresight into our role as an integral part of the planetary system’ so as to switch to ‘conscious, purposeful global change from the inadvertent, random changes that have largely brought us to this point’ (Grinspoon 2016, 226).

It is true I think, as Hamilton writes, that the Anthropocene has burdened humanity with an unprecedented ‘amplified responsibility for the Earth’ (ibid., 53). And this is where the

ecology of spirit comes in again as that which increasingly conditions the planetary ecology of nature. To put it bluntly: we have reached a stage in human as well as in planetary history, which now in fact converge, where the fate of the Earth System as a (human) life support system is becoming dependent on human knowledge and desire as they are conditioned by the global technical system – of which the digital system of information and communication media, now evolving into Web 3.0., is probably the most crucial. And so it is increasingly true, as Sloterdijk observed already in 1993, that ‘[t]he fate of the inhabitants of the Earth hinges today – more than in the age of cities and empires – on higher metamorphoses of the attention-coalitions’ of mankind (Sloterdijk 1993, 376).

When the noosphere can be described as the feedback effect of collective human attention on the planet, the prime focus of care-taking for our future planet is therefore *attention*, in the sense of the awakening to a *new* attention, indeed to a whole new *level* as well as a whole new *quality* of attention – an attention carefully attuned to our planetary residence. And in that sense one can argue that the noosphere is for the moment still largely an ‘ignosphere’ – still only *in itself* but not yet *for itself*, to put it in Hegelian terms – the majority of earthlings still persisting in what Stiegler has diagnosed as a ‘*global attention deficit disorder*’ (Stiegler 2010, 57, 179), its libidinal energy captured, absorbed and exhausted on a massive scale in the dispiriting and addictogenic media ecologies of global consumer capitalism.

This new planetary attention or consciousness obviously necessitates an elevation of collective intelligence, but I would argue that it first of all requires that the Earth becomes an object of affection and care – indeed ‘an object of desire’ in Stiegler’s terminology (Stiegler 2012, 14). And with that he means an object of *collective* desire, to be acquired by a humanity on its way to becoming a planetary collective. Yes, we might even state that the Earth is to become the *ultimate* object of collective desire —the latter expression being Stiegler’s postmetaphysical, libidinal redefinition of what in metaphysics or ontotheology was always called ‘God’ (Stiegler 2013, 78).

If the future of the planet now depends on humanity’s collective libidinal energy, and if this energy is indeed shaped and modulated by technical milieus, first of all the mnemotechnical milieus that have now become overwhelmingly digital and constitute today’s techno-noosphere, the big question regarding the emerging Web 3.0. and the new digital devices and algorithms it will implement (again: big data, artificial intelligence, ambient computing, machine learning, the Internet of Things, etc.), is whether it can eventually serve as the collective platform, the common instrument as it were, of this necessary awakening of planetary consciousness and care, of this elevation of the global libidinal economy or the ‘relaunching of desire’, as Stiegler

puts it in an admittedly somewhat awkward fashion (Stiegler 2012, 14) toward a wholly new, planetary level.

### **Web 3.0 and the Web of Life**

I think it is not all that difficult to imagine that Web 3.0. could – and indeed *should* – evolve in the longer run into a genuinely intelligent global techno-noosphere that will allow humanity as a global collective to engage in what Grinspoon describes as ‘intentional, deliberate interactions with the planet’ (Grinspoon 2017, xv) or ‘self-aware global change’ (ibid., 262) in order to become a truly ‘planetary intelligence’ capable of ‘more globally coordinated cognitive activity’ (ibid., 142) through which to take care of the planet. Indeed, it may evolve into a shared ‘mechanism for global control’ (ibid., xv) that allows us technologically to acquire the totally unprecedented ‘global scale intention’ (ibid., 426) that is necessary for any intelligent future management and care-taking of the planet.

Web 3.0. technologies could within this context even evolve into new ‘techniques of the self’ in the sense of Foucault, supporting new modes of ‘care of the self’ and others, yet now also including non-human others, and become as such ‘techniques of sublimation’ (Stiegler 2010, 172) instead of only intensifying the currently still dominant trend of desublimation and regression into drive-based and careless behavior patterns as they mostly do in the context of contemporary cognitive and consumerist capitalism. The possibility for this is grounded for Stiegler principally in the pharmacological nature of digital technology – and of *all* technology for that matter – which teaches their irreducible ambiguity and states that the currently deeply toxic, i.e., denoeticizing and disempowering impact of the digital techno-noosphere can and must be transformed into a remedy through the invention of new social and individual practices around it.

However, and this will conclude my all too brief exploration of the relation between the emerging Web 3.0. and the web of life, it is less clear, I think, whether the digital, electronic and essentially algorithmic technologies of Web 3.0. can also serve to support a cultural project that I deem equally important for an anthropocenic humanity and that is to (really) ‘reconnect’, as one calls it frequently, with the biosphere or the web of life *at the local and personal level and in a deeply felt, sensorial and ‘intimate’ way*, and in particular insofar, as it is increasingly recognized today, this web must be regarded as a *noosphere in its own right*, albeit obviously a *non-techno-noosphere*, i.e., a non-organological but organic noosphere, yet one that is definitely sentient and possibly also conscious in some sense.

I am less and less convinced, as I tended to be earlier, that the new digital media, properly practiced as *noot*technologies, can also serve to re-weave us into the web of life and to support a planetary awakening in the sense of a deeply felt experience of our implication in a biosphere that we share with many non-human others. I now hesitate whether digital media can be the right means of accessing such ‘experiences of immersion’, as I would like to call them, although on a closer look it all depends on what kind of immersion we are talking about or in other words what aspects of the biosphere as the element in which we are immersed are taken into account here.

Prima facie it seems far more plausible that intensified use of these media in the context of Web 3.0. will only increase our existential estrangement from the fact that we are fundamentally immersed in the biosphere, a now increasingly precarious and uncanny situation that Morton has recently described in Lacanian terms as the ‘symbiotic real’ (Morton 201, 1), meaning the ‘ecological symbiosis of human and nonhuman parts of the biosphere’ (ibid., 13), which today of course is largely unconscious. The reason is simply that digitization is a further progression of what Stiegler has called the ‘grammatization’ of human symbolic comportment, realized first through writing technology, then printing, next analog mnemotechnologies and now through the digital (Stiegler 2014b, 53-6).

As the American eco-philosopher David Abram has shown convincingly in his book *The Spell of the Sensuous*, the invention of writing, and in particular the alphabetic writing that inaugurated and sustained first the Greek and later the whole Western process of individuation (ibid., 49) has progressively separated Western humanity from its more ancient, orally based immersion in the natural environment, an immersion as he shows that had the character of a reciprocal relationship with the natural world that was basically animistic and closely resembled the ‘being-in-the-world’ of most of today’s indigenous, tribal communities (Abram 1996, 137).

Whilst oral cultures live in an intimate sensory reciprocity with the ‘more-than-human-ecology’ (ibid., 22), and that means animistically, literate cultures have increasingly distanced themselves from meaningful contact and communication with nonhuman nature and this might be one of the crucial factors behind the global ecological crisis that is now reaching a point of climax. According to Abram, literate cultures are actually still animistic but instead of experiencing the natural environment as expressive and alive, they are spoken to by the letters on the pages of their books, which is even more mysterious if you think about it. The animating interplay of the senses has simply been transferred from the enveloping biosphere to another, artificial medium, that of phonetic writing (ibid., 131). Indeed it has been captured under the spell of that ‘strange and potent technology’, as he writes, that is the alphabet (ibid., 95). How

much more potent, then, is the spell exerted by today's *digital* writing, which possesses the power to keep us all glued to our screens day in and day out, confronting us with a sheer infinite and ever changing abundance of symbolic, visual and auditory stimuli that permanently solicit our attention, frequently to the point of exhaustion. And it has all the potential to further alienate us from our immersion in the biosphere.

On the other hand though, it cannot be denied that it is precisely digital technology in the form of satellite imagery, computer models and much more that allows us to 'experience', although in a very abstract way, complex planetary phenomena like carbon cycles and climate change and offers us the possibility of rigorously theorizing and accurately mapping the Earth in terms of a unitary system in the first place. But indeed this knowledge remains abstract and hardly helps, or so it seems, to attain what Thomas Berry describes as an 'intimacy with the natural world' (Berry 1999, 26), which seems a prerequisite for a *modus vivendi* on the planet that is mutually enhancing and truly caring.

When Morton characterizes the emerging 'ecological thought' as the awareness of sharing the biosphere with 'a multitude of entangled strange strangers' (Morton 2010, 15) and emphasizes the 'weirdness' and 'uncanniness' of our newly discovered implication in a vastly complex biosphere, one might from Abram's eco-phenomenological perspective argue that this feeling of strangeness and uncanniness are easily explained from the deep estrangement of us digitized postmoderns from the biosphere and the fact that we have completely lost an intimate, sensorial attunement to it. Yet interestingly, Morton also characterizes the ecological thought explicitly in terms of an '*intimacy with the strange stranger*' (ibid., 46; my emphasis). But *his* notion of intimacy does not so much pertain to beings that we encounter with our senses, as it does for Abram, but more to those that we can *not* perceive with an unequipped sensorium and that earlier oral and animistic peoples have never been familiar with, like the bacteria in our guts, the DNA in our cells, the ultraviolet light that burns our skin, the oxygen and carbon dioxide in the atmosphere, global ecological cycles, nuclear radiation, and all those other things that he calls 'hyperobjects' (Morton 2013), like plate tectonics, styrofoam and plutonium pollution, global warming and the human species itself. These 'phenomena' are mostly products of technoscientific *explication*, to use a term by Sloterdijk (2016, 66) and would never manifest in the original clearing opened up by our senses and our symbolic-linguistic signification, the one the late Heidegger associated with 'natural nature'. They only manifest thanks to advanced technology, which opens up a technical clearing (ibid., 77).

## **Towards a Homeotic Techno-Noosphere**

I assume that Morton's ecological thought wants us to awaken primarily to *this* clearing, to *this* biosphere, which is totally different from the phenomenal and sensorially experienced biosphere of Abram. And it is to an enhanced intimacy with and a more profound attention and attunement to *this* biosphere, that the new digital tools of Web 3.0. might indeed contribute a lot, I would imagine, although their usefulness is obviously restricted to those aspects of it that lend themselves to digitization. Possible examples being real time biological, ecological and geological big data-based profiles on things like biodiversity, ocean acidity, radioactivity, climate change, ecosystem health and carbon dioxide levels accessed through apps, microbiome monitoring devices, ecological footprint monitoring and optimizing gadgets, in fact all kinds of digital tools that keep us informed about our ecological immersion and allow us to monitor and calibrate our actions.

These technologies might thereby also help to foster a new kind of *solidarity*, a term invoked by Morton in his recent book *Humankind* (2017), with the many strange, nonhuman residents of this symbiotic real, which would enable, organologically, to bring into being a new and expanded, more ecological 'ecology of spirit', and accordingly also a new, again more ecological 'libidinal ecology' through which we could allow these other residents to play a more profound role in our technically conditioned psychic and collective processes of individuation. Such an ecology of spirit could make possible an ecological coexistence with the other residents of the biosphere in some, albeit limited sense as 'subjects to be communed with, not as objects to be exploited' (Berry, x). It would make for a less anthropo-exclusivist noosphere much more attuned to the highly complex and still largely unknown biosphere, one that would allow for a genuine geo-ecological perception of the Earth in which we could truly experience our deep connectedness with all the other earth residents and earth systems and attune our lives to it.

Yet I would like to claim in closing that the digital Web 3.0. technologies, which are all still ultimately functioning on the basis of calculation and deeply belong to what the Belgian philosopher of technology Gilbert Hottois calls the 'technocosmos' and its operative relation to the world (Hottois 1984), are only of partial use in supporting us to become more ecological, or better to help us realize that we always already *are* ecological, as Morton likes to emphasize (Morton 2018, 215). The way Web 3.0. technologies can connect us to the Web of Life has certain, specific characteristics – which we may call grammatological with Stiegler – and can therefore be anything but exhaustive. They can obviously never open us up to what Heidegger once referred to as 'the essential fullness of nature' [*Wesensfülle der Natur*], no more than the objectifying stance of the natural sciences can (Heidegger 1977, 174) and no more in fact than *any* 'access mode' (Morton 2018, 18) can for that matter. With respect to the biosphere and *a*

*fortiori* the Earth System at large, we have to acknowledge that despite all our advanced knowledge we are ultimately still quite ignorant about what it is all about.

On that note, finally, we should start acknowledging that also the *noosphere* is much richer and stranger than we can imagine, as we should recognize that it is also an *ethnosphere* (Davis 2009, 2) in which many more and very different anthropic ‘access modes’ to the biosphere have been pursued and are being pursued right now than the scientific or naturalistic one that originated in the West and is today by far the dominant mode. The recent so-called ‘ontological turn’ in anthropology has started to take seriously these other interpretations or enactments of being-in-the-world, like animism, totemism and analogism (Descola 2013), which can be thought to result from different ecologies of spirit and thus different libidinal ecologies. Of course it makes no sense in the age of the Anthropocene and the time of hyperobjects to revert wholesale to such indigenous ontologies but when it comes to our future task of attuning the noosphere more with the biosphere and its inherent intelligence(s), we might do worse than taking inspiration from what those ontologies, which generally display a profound solidarity if not true community with the non-human others in their ‘environments’, have to offer.

A viable and truly geo-ecological Web 3.0. noosphere should therefore be one that is explicitly designed to be compatible, i.e., co-constructive and co-operative not only with the biosphere but also with the indigenous parts of the ethnosphere instead of further deteriorating or eliminating both. Only such a *homeo*-techno-noosphere, carefully attuned to the biosphere and respectful of the wider ethnosphere, could function as a viable support for the ‘global scale intention’ that is needed to take care of the planet, without further aggravating the catastrophic ‘unintended consequences’ that have been produced by the industrial or even the ‘agrilogistical’ (Morton 2016) noosphere and have led to the Anthropocene in the first place. A truly ‘wise Earth’ (Grinspoon 2016) should accord its global scale intentionality with all the other earthly intentionalities and agencies so as not to blindly destroy long evolved ecological and ethnic wisdom but to intelligently and carefully cooperate with it. Web 3.0. should ‘enliven’ (Weber 2016, 3) the Web of Life, not further liquidate and deteriorate it.

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